

UNIVERSITY CATALOGUE 2019-2020



University Catalogue

2019-2020

Notice

The Holy Spirit University of Kaslik Catalogue is a source of information for students, applicants and all stakeholders on student services, resources, academic rules, programs of study, etc.

USEK reserves the right to amend the information contained in the University Catalogue with or without prior notice. It's the student's responsibility to keep updated on the most current information on academic rules and programs of study.

Address

Main Campus

P.O. Box 446 Jounieh, Mount Lebanon – LEBANON

E-mail : usek@usek.edu.lb

Tel.: (+961) 9 600 000, (+961) 9 600 001

Fax: (+961) 9 600 100

Zahle RUC

Main Highway – Zahle, Bekaa - LEBANON

E-mail: zahle@usek.edu.lb

Tel.: (+961) 8 932 132, (+961) 8 932 232

Chekka RUC

El-Rahban Street– Chekka, North Lebanon - LEBANON

E-mail : chekka@usek.edu.lb

Tel.: (+961) 6 543 216, (+961) 6 543 217, (+961) 6 543 218

Fax : (+961) 6 543 219

Rmeich RUC

Monastery of Our Lady of Annunciation - Rmeich, South Lebanon - LEBANON

E-mail : rmeich@usek.edu.lb

Tel.: (+961) 7 470 470

Fax : (+961) 7 471 400

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- Industrial Psychology

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 History
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 Physics
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Academic Minors

Minor in Basic Education
 Minor in Journalism and Communication
 Minor in Photography
 Minor in Psychology
 Minor in Social Intervention
 Minor in Sociology
 Minor in Sound Recording

Graduate Programs

Master of Arts in Cinema and Television

Master of Arts in Education

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- Basic Education
- Administration of Education
- Technology of Education
- Support of People with Special Needs
- Supervision and Pedagogical Coordination

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- Industrial Psychology

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Academic Minors

Minor in Actuarial Studies
 Minor in Applied Chemistry
 Minor in Biochemistry
 Minor in Chemistry
 Minor in Natural Sciences
 Minor in Sports Nutrition
 Minor in Web and Mobile Programming

Graduate Programs

Master of Science in Actuarial and Financial Mathematics
 Master of Science in Biochemistry
 Master of Science in Biology
 Master of Science in Chemistry
 Master of Science in Computer Science
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Bachelor of Arts in Performing Arts

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 Minor in Theater

Graduate Programs

Master of Arts in Music

Emphasis:

- Musicology
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Bachelor of Science in Engineering Sciences - Food Engineering

Bachelor of Engineering in Mechanical Engineering

Bachelor of Engineering in Telecommunications Engineering

Academic Minors

Minor in Biomedical Engineering

Minor in Building Simulation

Minor in Computer Engineering

Minor in Electrical Installation

Minor in Food Packaging and Distribution

Minor in Material Sciences and Engineering

Minor in Petroleum and Natural Gas Engineering

Minor in Process Engineering

Minor in Sustainable Food Security

Graduate Programs

Master of Science in Biomedical Engineering

Master of Science in Chemical Engineering

Master of Science in Civil Engineering

Master of Science in Communication Engineering

Master of Science in Computer Engineering

Master of Science in Electrical and Electronics Engineering

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 Hematology-Oncology
 Internal Medicine
 Internal Medicine and Clinical Immunology
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 Nephrology
 Neurology
 Neurosurgery
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 Minor in Hotel Management

Minor in Management

Minor in Marketing

Graduate Programs

Master of Business Administration

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The University

About USEK

The Holy Spirit University of Kaslik (USEK) is a private Catholic institution of higher education founded and governed by the Lebanese Maronite Order (LMO) since 1938. USEK is located on the cost side of Mount Lebanon with an exceptional exposure to the Mediterranean Sea. Nowadays, USEK welcomes around 7500 students across its 7 Faculties/Schools and 3 Institutes.

USEK is committed to provide students with an excellent learning experience by a strong focus on teaching and learning, quality assurance, research, campus life and facilities. Continuous improvement and excellence are the key points of USEK current activities and strategic planning. USEK has incorporated e-learning to support student learning and provided its faculty with a professional certification in teaching and learning from eminent international institutions. USEK has also created a center of teaching excellence (LTEC) for the continuous development of faculty qualifications and sharing best practices in teaching and learning. In last 3 years, USEK has lead the project "Professional Standards Framework for Excellence in Teaching and Learning in Lebanese Universities / E-TALEB" in Lebanon, funded by the European Union Erasmus+ program, with the collaboration of the Directorate General of Higher Education in Lebanon and 12 other partner universities and organizations from Lebanon, United Kingdom, France and Germany. This project, selected as the most successful Erasmus+ project in Lebanon for 2018, aimed at developing Lebanese Professional Standards in Teaching and Learning and cooperating for innovation and exchange of good practices and experiences relevant to similar frameworks established in Europe.

With a strong focus on the recognition of the students' qualifications, in 2019, USEK has launched the LEBPASS project, funded by the European Union Erasmus+ program. LEBPASS is a new initiative in Lebanon and the Middle East which aims at helping students and graduates making their skills and qualifications clearly and easily understood in Lebanon, as well as across the Middle East and Europe, thus facilitating the mobility of both learners and workers. LEBPASS Project unites universities, graduates, employers and other stakeholders for the sake of delivering a Diploma Supplement that could translate the qualifications and skills of students and refugees graduated from Lebanese Higher Education institutions.

Moreover, in order to enhance students' employability, USEK has adopted a new program framework based on learning outcomes defined in collaboration with local and international employers with a strong focus on general education. In this regard, USEK has also created minors in different disciplines to offer the students a chance to expand their knowledge and expertise. Furthermore, USEK has created new programs and redesigned existing ones to be consistent with the job market needs and with state of the art of the relative disciplines.

USEK did voluntarily seek international external evaluation and accreditation. After a long process of evaluation and enhancement, USEK was granted the European Institutional Accreditation by Evalag-Germany and the reaccreditation was obtained to be valid until 2022. As for the programs' accreditation, 12 computing, engineering and sciences programs are accredited by ABET, and 8 social sciences and humanities programs received the international accreditation by the accreditation commission of Evalag, Evaluationsagentur baden-württemberg. Also, the Business School is an official candidate for the Association to Advance Collegiate Schools of Business (AACSB) accreditation. Additionally, the School of Architecture and Design has received the Substantial Equivalency Designation from the National Architectural Accrediting Board (NAAB) from 2019 to 2025 for its MA in Architecture which is as well recognized by the French Ministry of Culture as being equivalent to the French Diploma in Architecture allowing its holder to practice as a salaried architect in France. As for the School of Medicine and Medical Sciences, it has been granted a full 6-year accreditation by the TEPDAD International Council for Accreditation.

The international academic reputation resulting from quality assurance is embodied by the continuous academic development, and with the internationalization of the university activities through the signature of more than 200 cooperation agreements with renowned universities and associations throughout the world,

has the World Bank to consider USEK as one of the outperforming universities of the MENA region. Our students are the primary beneficiaries from this international academic reputation.

The student's learning and campus experience lies at the heart of the institutional strategy of USEK. The University Students affairs and social services office along with the University Counseling Center provide personal support to student in their educational path to overcome social, financial or educational difficulties. The University Career Service Office aims to build confidence in career planning and mature decision-making. USEK has also a strong rewarding system for student's excellence with a set of scholarship based on outstanding academic records. In 2015, USEK gained Matrix accreditation for its "Student Support Services" to ensure its commitment to offer high quality services to its students for their welfare on campus, and ultimately for supporting them in their learning, career and life goals.

USEK offers to its students as well an outstanding environment for research, entrepreneurship and innovation, continuous learning, and professional guidance and support. In this context, the USEK main library and the laboratories have been renovated to provide better support to all University stakeholders in their research activities and projects. On this same note, the Asher Center for Innovation and Entrepreneurship and the USEK Continuing Learning Center were recently launched and actively working with all university stakeholders.

USEK sows the seeds of a better future across the promotion of a sustainable development culture among the community. This culture being concretized through a closer cooperation with NGOs and the public sector, and also through the organization of international conferences on corporate governance, ethics, and citizenship, sustainable constructions, human rights, quality education, entrepreneurship and innovation, etc.

In 2016, as part of its journey of "Going Green", USEK created a Green committee to promote green practices within the campus, to identify the environmental problems, research solutions, and implement changes that create the healthiest campus life. As a result, for an unprecedented second year running, USEK has been ranked No. 1 for Sustainable and Green University in Lebanon by UI GreenMetric World University Rankings for 2018, making it the 8th most sustainable and green university in the Arab World; and thanks to a steadfast commitment to a fully sustainable campus USEK has advanced up the ranks 59 places this year to 180th out of 718 participating institutions across 81 countries. Also, has been granted in June 2018 the GAIA Award 2018 for the protection of the Mediterranean environment.

From boasting one of the most prestigious and richest Libraries in the Region to the distinctive works of its professors, the institutional path of USEK has been crowned with success and excellence. As a result, the University has validated its international position among HEIs and its openness to the world confirmed by its ranking among the top 650 universities in the world according to QS World University Rankings 2020.

Background, Mission and Core Values

Background

USEK was founded in 1938 as an independent private Catholic institution, by the Lebanese Maronite Order who serves Higher education in monasteries since the 18th century. The University was founded before the first Lebanese Law of Higher Education promulgated in 1961, and by that date, the Lebanese State recognized USEK as a private Higher Education Institution in Lebanon, according to the Law of Higher Education in Lebanon. Since 1997, the university has adopted the North American credit system, in order to facilitate students' credit transfer and recognition and to move toward an American Style institution.

Mission

Since its founding, USEK seeks, in accordance with the Article 92 of the *Constitutions of the OLM (ed. 2012)* and the social teaching of the Catholic Church on universities, to contribute to the development of all its students through quality educational programs and research in various fields of study. By providing a high quality American-style education to its students, USEK intends to prepare future leaders for innovation, professional

growth and life-long learning, in Lebanon, within the Middle East and throughout the world. USEK is committed to a faith-based educational development of its students rooted in the Catholic tradition whereby spiritual values and ethics as well as respect for cultural and religious pluralism are promoted.

Core Values

EXCELLENCE IN TEACHING AND LEARNING

USEK is committed to provide its students an excellent educational and academic experience. Therefore, we promote active learning and use of technology in order to support and enhance educational provision, build teamwork and peer observation in teaching and learning, support research and innovation in teaching, and commit ourselves to insuring continuous professional development to our faculty and staff.

EXCELLENCE IN QUALITY SERVICE

We are committed to roll quality service that impacts our stakeholders, both within and outside the University Campus. We strive to offer the best quality service, acting at all times with integrity and professionalism and are devoted to serving the common good by better understanding and meeting the needs and expectations of our students, faculty, staff, and external constituents.

CREATIVITY AND CONTINUOUS IMPROVEMENT

We assert commitment to continuously improve University stakeholders' well-being through creative ideas, innovation and positive change. We stimulate creativity and innovation by manifesting freedom of thought, autonomy, empowerment and decision making.

INTEGRITY AND ACCOUNTABILITY

We commit to act with honesty and integrity, be open and fair for maintaining the highest relationship trust. We aim to communicate transparently to serve in the best interest of students, faculty, staff, and other constituents. We believe in continuous assessment of our practices and hold ourselves accountable of our own actions that influence the well-being of our students, faculty members and fellow employees.

COOPERATION AND DIVERSITY

We believe in synergy of cooperation and teamwork and provide support to one another. We value diversity, talents, others' views, promoting justice, fairness, equitable treatment, and creating a positive and enjoyable workplace.

STEWARDSHIP AND SERVICE TO SOCIETY

We are socially responsible for the welfare of human beings, through education, social assistance and community support. Thus, we devote ourselves to guide and support our students throughout their higher education. We are keen on cultivating ethics and moral conducts in line with our Catholic social teaching and commit to ensure the safety of our people in a healthy work environment.

Triple Accreditations at USEK

Given that one of the main objectives of USEK is achieving distinction in globalizing the university by complying with international standards, the University has put great efforts in different evaluation and accreditation projects. These efforts resulted in the completion of the below accreditations:

1. Institutional Accreditation:

Institutional Evaluation Program

In September 2009, USEK has completed an Institutional Evaluation Program conducted by the European University Association (EUA) and became the first university in the Middle East that conducts such an evaluation programme.

The Institutional Evaluation Programme (IEP) is an independent membership service of the European University Association (EUA), the representative organization of universities and national rectors' conferences in 47 European countries. IEP is a full member of ENQA (the European Association for Quality Assurance in Higher Education) and is listed in EQAR (the European Quality Assurance Register for Higher Education). Created in 1994, IEP ensures that higher education institutions gain maximum benefit from a comprehensive evaluation conducted by a team of experienced higher education leaders. To date, IEP evaluation teams have carried out nearly to 400 evaluations and follow-up evaluations of diverse higher education institutions in 45 countries worldwide.



This evaluation programme conducted lasted for an entire year. Following the auto-evaluation phase which extended over more than 6 months, USEK hosted, twice, a team of 5 experts from the EUA. The experts did not only evaluate the action plan and the applied practices inside the university, but they have also met the majority of officials, a group of students, as well as different stakeholders involved in the university community (Director of Higher Education in Lebanon, representatives of NGOs and associations, entrepreneurs, etc.).

European Institutional Reaccreditation

Conducting a European Institutional Accreditation was to assure that the university is in a continuous process of improvement and that strategic vision and practices meet the European standards.

The European Institutional Accreditation was initially granted to USEK in December 2012 for a five-year period and in June 2017, the Accreditation Commission of evalag officially reaccredited USEK, thus re-awarding the evalag international label for Institutional Accreditation for another five years until 2022.



The German institution, evalag EVALUATIONSAGENTUR BADEN-WÜRTTEMBERG, is an active member of ENQA (European Association for Quality Assurance in Higher Education), EQAR (European Quality Assurance Register for Higher Education), CEENQA (Central and Eastern European Network of Quality Assurance Agencies in Higher Education), DeGEval (Gesellschaft für Evaluation e.V., German Evaluation Society), and INQAAHE (International Network for Quality Assurance Agencies in Higher Education).

evalag is known as a center of competence for quality assurance and enhancement and a source of support for higher education institutions and other scientific institutions, with commitment for good quality in teaching and learning, research and other services.

2. PROGRAMS' ACCREDITATION:

Applied and Natural Sciences

Two Science Programs are accredited by the Applied and Natural Science Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.

These programs are listed as follows:

Faculty of Arts and Sciences:

- Actuarial and Financial Mathematics (BS)

Higher Institute of Nursing Sciences affiliated to the School of Medicine and Medical Sciences:

- Nursing Sciences (BS)



Computing Programs

In 2016, two Computing Programs were accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.

Faculty of Arts and Sciences:

- Computer Science (BS)
- Information Technology (BS)



Engineering Programs

Also, eight Engineering Programs are accredited by the Engineering Accreditation Commission of ABET:

School of Engineering:

- Agricultural Engineering (Engineering Diploma)
- Biomedical Engineering (BE)
- Chemical Engineering (BE)
- Civil Engineering (BE)
- Computer Engineering (BE)
- Electrical and Electronics Engineering (BE)
- Mechanical Engineering (BE)
- Telecommunications Engineering (BE)



Humanities and Social Sciences Programs

In June 2017, eight Social Sciences and Humanities programs received the International Accreditation by the Accreditation Commission of evalag, EVALUATIONSAGENTUR BADEN-WÜRTTEMBERG <http://www.evalag.de>, known as a center of competence for quality assurance and enhancement and a source of support for higher education institutions and other scientific institutions, with commitment for good quality in teaching and learning, research and other services.

Faculty of Arts and Sciences:

- Education – Basic Education (BA)
- History (BA)
- Journalism and Communication (BA)
- Language and Literature (BA)
- Modern Languages and Translation (BA)
- Psychology (BA)
- Philosophy (BA)
- Social Sciences (BA)



Ongoing Accreditation - Business Programs

USEK is pursuing excellence and continuous improvement throughout all its programs. With regard to the business programs, the Business School is currently engaged with the [AACSB accreditation process](#).



In November 2018, the AACSB Initial Accreditation Committee accepted the Initial Self-Study Report (iSER) submitted by the Business School. Upon the acceptance of iSER, the Business School officially became a candidate for AACSB Accreditation. The school will submit updates to the iSER to inform the committee of its progress toward alignment with the standards (a three-year implementation period is permitted).

AACSB stands for the Association to Advance Collegiate Schools of Business – the global association of leaders in education and business, dedicated to supporting and advancing quality business education worldwide.

Substantial Equivalency Designation - Architecture Program

The term “substantial equivalency” identifies a program as comparable in educational outcomes in all significant aspects, and indicates that it provides an educational experience meeting acceptable standards, even though such program may differ in format or method of delivery. The designation is valid for six years beginning 1 January of the year in which the final visit (visit 3) took place. In order to maintain the designation, the program must be visited again in the sixth year of the designation.



The Holy Spirit University of Kaslik, School of Architecture and Design has received the Substantial Equivalency Designation from the national architectural accrediting board for the following professional degree program:

MASTER OF ARCHITECTURE - (193 SEMESTER CREDIT HOURS) – 2019

Further Information on NAAB Substantial Equivalency procedures and guidelines could be found at: <http://www.naab.org/international/substantial-equivalency/>.

USEK Master of Architecture Diploma Equivalent to the French Diploma in Architecture

By decision of the French Minister of Culture on April 24, 2018, the Diploma of Master of Architecture awarded by USEK’s Faculty of Fine and Applied Arts is recognized as being equivalent to the French Diploma in Architecture.

The French Diploma in Architecture allows its holder to practice as a salaried architect in France and offers the opportunity to enroll in the training course for “the training of the graduate architect to provide services in person”. This training provides those who undergo it with the opportunity to be enrolled in the registry for exercising the profession as an independent architect.

This recognition is valid for a period of 5 years as of the academic year 2015-2016.

3. STUDENTS' SERVICES ACCREDITATION:

In 2015, USEK became the first university in Lebanon and the region to gain accreditation for its student support services, which aims to ensure its commitment to offer high quality services to its students for their welfare on campus, and ultimately for supporting them in their learning, career and life goals.

The student support services at USEK have successfully gained the matrix accreditation, confirming that all areas of the services provided by the following offices met [the matrix standard](#), recognizing that the University is committed to provide students with 360-degree services and support:

- Admissions Office
- Registrar Office
- Student Affairs Office
- Social Service Office
- International Affairs Office (international students' services)
- Careers Services Office
- USEK Counseling Center (UCC)
- Quality Assurance and Institutional Effectiveness Office



Moreover, USEK offers well-established effective partnerships and networks that support and bring added value to the services offered, empowered by the commitment of the staff who provide an impartial and relevant service to students.

[The matrix standard](#) is a unique quality standard established in the UK as a means for organizations to assess and measure their advice and support services, which ultimately sustain individuals in their choice of career, learning, work and life goals.

The accreditation was initially obtained in July 2015 following a 3 day on-site assessment visit undertaken by [Assessment Services Ltd](#), during which the matrix assessor had individual and group meetings with the University administration, directors and staff of the concerned offices, students, and external partners such as schools and employers.

The reaccreditation visit was held in July 2018 for another three years. Annual Continuous Improvement Checks are conducted to confirm that the University is successfully maintaining the Matrix Accreditation.

Board of Trustees

Dr. George Altirs, Chair of USEK Board of Trustees, President & CEO of Capelli New York
Mr. Fady Chamoun, Vice-Chair of USEK Board of Trustees, President and CEO of Seasoned Brand LLC, U.S.A
Bassam M. Deeb, PH.D., Secretary of USEK Board of Trustees, President of Trocaire College

Mr. Elias Nassif Abou-Fadel, Managing Partner, BD Consult
Sister Therese Antone, RSM, Chancellor of Salve Regina University
Dr. Anthony Asher, Chairman of Weston Inc.
Elias Ayoub, M.D., Otolaryngology, U.S.A.
William "Bill" Clements, PH.D., Vice-President and Dean of Norwich University
H.E. Dr. Claudia Fritsche, Former Ambassador
Mr. Ziad Hayek, Secretary General of the Lebanese Higher Council for Privatization
Father Doctor Talal Hachem, President of the Holy Spirit University of Kaslik
Mr. Shadi Antoine Karam, Senior Advisor to the Prime Minister of Lebanon
Mrs. Diane Elizabeth Kelly, Former U.S. Consul General
Mr. Marwan Kheireddine, Chairman & General Manager, Al Mawarid Bank
George E. Kikano, MD, Dean of the College of Medicine, CMU
Father Professor Hady Mahfouz, OLM Second Assistant General
Thomas Sabbagh, Ph.D., Professor of Management & Leadership and Academic Assessment Expert
Joseph Saliba, Ph.D., Professor of Engineering and Former Provost, University of Dayton
Mrs. Moni Sfeir, Consultant and Legal Advisor
Dr. Salim Sfeir, Chairman and CEO Bank of Beirut

Administration

President

Father Doctor Talal El Hachem, President

Vice-Presidents

Father Doctor Elias Hanna, Senior Vice-President

Father Doctor Georges Azzi, Vice President for Finance

Father Doctor Toni Eid, Vice President for Community Life

Provost

Doctor Barbar Zeghondy, Provost

Deputy Presidents

Professor Nehme Azoury, Deputy President for Corporate and Employment Affairs

Doctor Rima Mattar, Deputy President for International Affairs and Global Initiatives

Doctor Céline Baaklini, Deputy President for Students

Mr. Khalil Abboud, Deputy President for Organizational Development

Academic and Research Council

The University Academic and Research Council is composed of the President, Vice-Presidents, Provost, Deputy-Presidents, Deans of Faculties/Schools, Dean of Doctoral College, Librarian and two full-time faculty members.

Members:

- Father Doctor Talal Hachem, President of the Holy Spirit University of Kaslik
- Father Doctor Elias Hanna, Senior Vice-President
- Father Doctor Georges Azzi, Vice President for Finance
- Father Doctor Toni Eid, Vice President for Community Life
- Doctor Barbar Zeghondy, Provost
- Professor Nehme Azoury, Deputy President for Corporate and Employment Affairs
- Doctor Rima Mattar, Deputy President for International Affairs and Global Initiatives
- Doctor Céline Baaklini, Deputy President for Students
- Mr. Khalil Abboud, Deputy President for Organizational Development
- Father Doctor Elias Jamhoury, Dean of the Pontifical School of Theology
- Doctor Danielle Khalife, Dean of the Business School
- Doctor Paul Zgheib, Dean of the School of Architecture and Design
- Doctor Hanna Mattar, Dean of the School of Medicine and Medical Sciences
- Doctor Joseph Al Assad, Dean of the School of Engineering
- Mr. Pascal Damien, Associate Dean of the Faculty of Arts and Sciences
- Professor Joseph Saab, Dean of the Doctoral College
- Father Doctor Joseph Moukarzel, The University Librarian
- Doctor Ghada Karam, Faculty Member
- Doctor Samar Azzi, Faculty Member

Academic Units Founding Dates

Academic Units	Founding dates
Pontifical School of Theology	1950 Pontifical Faculty of Theology 2019 Pontifical School of Theology
School of Law and Political Sciences <i>Higher Institute of Political and Administrative Sciences</i>	1950 for the Canon Law 1988 Faculty of Law 2019 School of Law and Political Sciences 2006 Affiliated to the School of Law and Political Sciences
Business School	1966 Faculty of Business and Commercial Sciences 2018 Business School
School of Architecture and Design	1974 Faculty of Fine and Applied Arts 2019 School of Architecture and Design
School of Engineering	2000 Faculty of Sciences and Computer Engineering 2010 Faculty of Engineering 2019 School of Engineering
School of Medicine and Medical Sciences <i>Higher Institute of Nursing Sciences</i>	2001 1999 Affiliated to the School of Medicine and Medical Sciences
Faculty of Arts and Sciences <i>Faculty of Philosophy and Humanities</i> <i>Faculty of Letters</i> <i>School of Music and Performing Arts</i> <i>Faculty of Agricultural and Food Sciences</i> <i>Faculty of Sciences</i> <i>Faculty of Religious and Oriental Sciences</i> <i>Institute of History & Archeology</i>	2019 1950 2019 merged within the Faculty of Arts and Sciences 1950 2019 merged within the Faculty of Arts and Sciences 1970 Institute of Musicology 1993 Faculty of Music 2019 merged within the Faculty of Arts and Sciences 1988 2019 merged within the School of Engineering and the Faculty of Arts & Sciences 2000 Faculty of Sciences and Computer Engineering 2010 Faculty of Sciences 2019 merged within the Faculty of Arts and Sciences 1969 Institute of Liturgy 2011 Faculty of Religious and Oriental Studies 2019 merged within the Faculty of Arts and Sciences 1972 Institute of History (affiliated to the Faculty of Letters) 2019 merged within the Faculty of Arts and Sciences

Campus and Regional University Centers

Main Campus

The Holy Spirit University of Kaslik is located in the city of Jounieh which borders the splendid Bay of Jounieh on the coast of the Mediterranean Sea.

Jounieh is a cosmopolitan city; it vibrates with its history, archeology, and natural beauty and with its recreational and sport activities, amusement centers and numerous restaurants.

Jounieh is located 15 km north of the Lebanese capital, Beirut, 10 km south of Byblos and 50 km south of Tripoli.

Main Campus Plan



Building A - Bloc AA:	Central Administration, University Board Room
Building A - Bloc AC:	Pontifical School of Theology
Building A - Bloc AB:	Main Library
Building A - Bloc AM:	School of Music & Performing Arts
Building B:	School of Law and Political Sciences, Faculty of Arts and Sciences
Building C:	School of Architecture & Design, Learning and Teaching Excellence Center
Building D:	Business School, Asher Center for Innovation and Entrepreneurship
Building E:	
Building F:	University Residence
Building G:	Administrative Offices
Building H:	School of Engineering, Doctoral College, Higher Center for Research, Office of the Provost

Regional University Centers

Concerned in contributing to a democratization of the higher teaching and struggling against the exclusion of youth living in remote areas, the Holy Spirit University of Kaslik (USEK) has carried out the creation of three Regional University Centers (RUC):

- Zahle RUC located in the Bekaa Valley
- Chekka RUC located in North Lebanon
- Rmeich RUC located in South Lebanon



RUC Zahle



RUC Chekka



RUC Rmeich

Student Services

Admissions Office

Mission

The Mission of the Admissions Office is to welcome candidates, USEK students and their parents or teachers in order to inform and guide them in their chosen major, in their potential reorientation and in their occupational choice. The office organizes orientation days mainly addressed to students in Grades 9 to 12 who wish to know about the different majors and specializations available at USEK and about the education regulations in force. These days are held in local and foreign high schools, as well as on USEK's four campuses. Visitors are provided with helpful brochures during these days, which help guide new USEK students in the administrative process.

Vision

The Vision of the Admissions Office is to reach and attract all Lebanese students in Lebanon, as well as foreign students abroad, and to seek the continuous development of our orientation visual and listening methods, and to coordinate with international Admissions offices, especially in the United States and Europe.

Services to Future Students

- Open doors to greet students and introduce them to the campus, faculties and institutes;
- Guided tours of the Notre Dame des Secours Hospital, which is located in Jbeil, for candidates interested in the medicine and medical sciences curricula;
- Psychology tests to help students choose their specializations according to their preferences;
- Different forms of orientation :
 - General orientation for 9th to 12th grade students through our participation in regional forums, our presence in forums held by educational institutions and our visits to national and international educational institutions;
 - Individual orientation by providing accurate information, consultation, and examples to candidates.
- Spreading awareness regarding the accessible careers determined by the chosen programs;
- “Shadowing”, giving students the opportunity to attend several classes of their choice;
- Updating future candidates and current students with the latest information related to the entrance exams and available programs (calendars, brochures, website and mobile application).
- Admission of continuing education students, free listeners and cross-registration students;

For more information and contacts, check usek.edu.lb.

Registrar Office

Mission

The Office of the Registrar at USEK is privileged to serve students from the moment they apply to USEK to the time of their graduation.

As part of its activities, the Registrar's Office is responsible for issuing student IDs, as well as official academic transcripts and certificates. It manages requests such as readmission, interruption of studies and change of academic program or of campus, in accordance with the regulations in force. Moreover, it supervises the registration process and updates the catalogue, in addition to organizing and managing course and final exam schedules.

The Office of the Registrar takes joy in being the interpreter of USEK's academic policies and the steward of all student records from application to degree conferred.

Services to Students

- Deliver ID cards to students;
- Deliver certificates, official transcripts, course descriptions and diplomas;

- Update and modify the students' personal information;
- Handling of all forms such as: readmission, change of program, change of campus, change in personal information, withdraw, interruption of studies, term withdraw, double major and exemption.

For more information and contacts, check usek.edu.lb.

Student Affairs Office

Mission

The mission of the Student Affairs Office is to further the students' success, help them with any problems they face and involve them in all campus activities based on USEK's mission and rules.

Vision

The Student Affairs Office at USEK strives to provide help and advice to all students on various levels during their academic journey.

Services

- Organize a wide selection of many social and cultural activities;
- Organize Welcome Days for new students;
- Act as a link between students and all departments and faculties;
- Assist students in submitting absence petitions for midterm and final examinations;
- Offer on-campus student jobs;
- Manage the university residence for female students;
- Provide first-aid services through the Infirmary;
- Manage lost and found objects;
- Disseminate information among students;
- Make referrals to appropriate services and assist students in resolving problems involving university policies, systems or procedures.

For more information and contacts, check usek.edu.lb.

Social Service Office

Mission

In keeping with the mission of the Lebanese Maronite Order, USEK is committed to helping every student facing personal, relational, family, financial or medical difficulties without any discrimination related to religion, culture or nationality.

Vision

The vision of the Social Service Office is the well-being of every student registered at USEK. This vision includes giving them a better academic results and improved adaptation capabilities in their professional field.

Services to Students

- Financial aid programs
- Student job opportunities
- Spreading the payment of tuition fees
- Personal and family counseling
- Orientation towards other student support offices on campus
- Orientation towards external specialized experts and/or institutions

For more information and contacts, check usek.edu.lb.

International Affairs Office

The International Affairs Office manages all the partnership and cooperation agreements established between USEK and other local and foreign Higher Education institutions.

The Office is responsible, furthermore, for establishing relationships with potential partners in order to implement new collaborations within a perspective of developing educational offers, cultural exchanges, knowledge, know-how and this for the benefit of lecturers-researchers as well as students.

The establishment of cooperation agreements aims at launching multiple actions placed under the supervision and management of the Office, mainly: joint scientific research projects; joint organization of seminars, colloquiums, conferences, etc.; joint publications; exchange of lecturers-researchers and students; scholarships for USEK students applying for one of the partner institutions in order to pursue their university studies; as well as co-direction and co-supervision of dissertations and theses.

The International Affairs Office welcomes international students to USEK, within the framework of partnerships and cooperation agreements, and encourages students to pursue their studies abroad. Regularly visit USEK website to learn about ongoing calls for applications.

For more information and contacts, check usek.edu.lb.

Career Services Office

Mission

The Career Services Office (CSO) at the Holy Spirit University of Kaslik (USEK) provides guidance as well as resources to current students and recent USEK graduates for their life-long career development by guiding them in their choice of career options and developing effective career life planning skills.

It is further committed to assist organizations in meeting their hiring needs for the joint benefit of students, graduates as well as employers.

Vision

The Career Services Office (CSO) at the Holy Spirit University of Kaslik (USEK) helps current students and recent USEK graduates in their educational and career choices in planning and promoting professional and personal success. Moreover, it encourages them to develop their potential in order to meet market expectations on the national, regional and international level.

Services to Students

The Career Services Office (CSO) supports students with their academic and career paths by offering practical advice and guidance to ensure their success.

It offers students advice about the following career development areas:

- Mapping education
- Exploring all career options
- Understanding the career development process
- Gaining knowledge about adapting to working life
- Identifying local, regional and international opportunities, acquiring internship / work experience, and developing skills to compete in the labor market
- Learning how to foster connections with the USEK Alumni

For more information and contacts, check usek.edu.lb.

Sports Department

As a privileged space of conviviality and solidarity, the Sports department puts forward, among other things, the social and collective nature of any physical activity. The group sports proposed in this Office foster, in particular, the development of a team spirit. The belonging to a group and the convivial atmosphere that prevails within that unit, allows the creation of lasting friendship and solidarity bonds.

The Sports Center at the campus Kaslik has a tennis and mini football field, as well as a dance hall, a chess and table tennis rooms. Moreover, a swimming pool and a basket and volley-ball field are at the disposal of USEK's students, in the Central Club of Jounieh. The project of building a sports complex in the Main Campus of USEK is currently under study.

Within the general requirements program, a credit is dedicated to one of the ten activities proposed by the Sports Office; students will have the choice between: basket-ball, football, volley-ball, tennis, table tennis, dance, chess, swimming, badminton and judo. The assessment of this course takes into consideration the student's participation within the chosen activity, the achieved progress, as well as his knowledge and understanding of the game's rules and strategies.

Mentored by first class trainers, students can, if they wish, join a University team in order to represent USEK in local and international tournaments.

Several university teams, coached by specialized trainers, were formed to represent USEK in national and international university competitions. These teams operate in the following fields: basket-ball, volley-ball, football, futsal, table tennis, ski, tennis, chess, fencing, combat sports and athletics. USEK's Sports Office is also involved in international sports events and training sessions, which are held to maximize the players performances.

USEK New Sport Complex

To complete the picture, the new Sport complex will be built according to the highest sustainable environmental standards, including being powered completely by renewable energy. This will house the University's student sports programs - mini-football, basketball and tennis - under one roof, with facilities including training grounds, sports medicine, and offices for coaches and staff. The complex will also function as a cultural space for USEK community, housing activities such as concerts and giving students a vibrant meeting point.



Outdoor view of the upcoming Sport Complex



Indoor view of the upcoming Sport Complex

For more information and contacts, check usek.edu.lb.

University Chaplain Office

The University Chaplain Office of USEK was founded by the Assembly of the Catholic Patriarchs and Bishops in Lebanon in 1979, and was officially recognized by the Lebanese State in 1988. Registered within the organic statute of the University, the Chaplain's Office is open to all current students.

The objective of any University Chaplain Office within a Catholic Higher Education institution in Lebanon is to propose to the students a space for leading a Christian life and spiritual reflection. The students, who join, have the chance to live a fulfilling human experience of exchanges and encounters.

The main objectives of the University Chaplain Office answer the call of the Pope John Paul II: "In school and university life, it is proper to pay attention to the presence and quality of spiritual activities by means of well-organized chaplaincies, for that the young find moments of reflection and prayer helping them to unify their life of Christian men or women, taking into account the knowledge they acquire from their education program." (A new hope for Lebanon, no110)

In fact, USEK University Chaplain Office is:

- A Christian place for prayer (through community prayers, spiritual retreats, pilgrimages, etc.), of faith, of information and of education for an understanding of the faith;
- A Christian space for meeting, exchange, and contact with others of diverse background;
- A dynamic space of spiritual, cultural, sporting and leisure;
- A space for listening and spiritual fellowship (chaplaincy) such as psychological support.

USEK Chaplain Office regularly organizes:

- Spiritual meetings, religious celebrations and a yearly pilgrimage on the 1st of May to Marian sites, in order to celebrate the worship of the Virgin Mary;
- Cultural events and lectures, on current themes or of general culture, paving the way for a freely practiced reflection;
- Moments of meditation and sharing;
- Sporting and leisure activities (excursions, lectures, evenings, games...) in order to develop a team spirit as well as membership of a group.

For more information and contacts, check usek.edu.lb.

USEK Counseling Center (UCC)

The transition to university is a privileged moment in a student's personal evolution, as it often coincides with changes in lifestyle, relationships, habits, etc. Therefore, this period entails phases of hesitation, difficulties and sometimes even discomfort or acute anxiety. Students may suffer as a result and may find it difficult to share or put their feelings into words, often leading to greater distress.

The intervention of a psychologist is crucial at this point in order to empathize with young people, identify their psychological problems and subsequently offer appropriate help involving listening, counseling, awareness raising and off-campus orientation when needed.

There is no denying the importance of creating a safe haven for students that provides a listening ear and counsel to those who seek advice or guidance in a space where trust and discretion can help them find what they need.

The USEK Counseling Center (UCC) provides the following services to all students of the Holy Spirit University of Kaslik (USEK), whether on campus or in Regional University Centers:

- Crisis intervention and orientation
- Confidential short-term counseling
- Groups and workshops
- Psychoeducational programs (awareness raising and prevention)

University students might find it particularly difficult to go through this period of adjustment without support. The psychologist's mission is to address their developmental, relational, and emotional concerns.

For more information and contacts, check usek.edu.lb.

Library

As a center of intellectual inquiry, the USEK Library shares with the rest of the University an aspiration to "contribute to the welfare of the human being, all human beings, throughout education, research and publication in all fields of knowledge."

The USEK Library aims to enrich the student learning experience; it encourages exploration and research at all levels, and provides access to an array of scholarly resources. The Library seeks to empower students to foster intellectual growth in an information age that produces leaders of the next generation in Lebanon and the Middle East.

The Library continues to embrace change and thrives on diversity to support professional growth and opportunity, and to reward flexibility and innovation.

The USEK Library supports and nurtures the mission and vision of the University, namely, the education of the youth and the building of a humanist culture. As such, the mission of the USEK Library is to support the research, teaching, and learning needs of the University community by providing comprehensive collections, services, facilities and expertise.

The Holy Spirit University of Kaslik Library includes the Main Library at the Kaslik campus, as well as libraries in the Regional University Centers (Chekka, Zahle and Rmeich). Two centers are affiliated to the Library: the Center for Written Heritage Conservation and the Center for Reprography and Digitization.

National and international authorities:

On the national level, the library is a member of the LLA (Lebanese Library Association), and two national consortia: Lebanese Academic Library Consortium (LALC) and Lebanese ILL/DD Services (LIDS).

On the international level, the library is a member of several world organizations pertaining to library science and paleography:

1. e-corpus
2. The World Digital Library
3. Hill Museum & Manuscript Library
4. I-Revues
5. e-ktobe
6. The International Federation of Library Associations and Institutions (IFLA)
7. MELCom International, the European Association of Middle East Librarians
8. Medical Library Association (MLA)
9. North American Serials Interest Group (NASIG)

Premises and Map of the Library:

Located in the main pavilion, south of the campus, the Library occupies a surface area of 3230 m² divided into two basement levels, a ground floor, and one storey.

- a- Ground Floor (Surface area 500 m²)
- b- Basement Level 1 (N-1) (Surface area 1100 m²)
- c- Basement Level 2 (N-2) (Surface area 1170 m²)

Services

- **Borrow & Renew:** To allow USEK users to borrow materials from the Library and intercampus loans
- **Borrow from Other Libraries:** To allow USEK users to obtain books, e-book chapters, journal articles, conference papers not available at USEK Library

- **Place materials on Reserve (faculty members):** To reserve books and other print and non-print items which are required material for coursework. These items are placed behind the Circulation Desk within the Library and are issued for shorten loan periods
- **Suggest a Purchase:** To allow students and faculty members to provide suggestions for the purchase of books and other materials that would improve our collection
- **Reserve a Study Room:** To allow USEK users to make use of rooms for group work, faculty consultations...
- **Request Research Support:** To provide USEK users with the support and assistance needed to meet their information needs:
 1. Research appointments: Make an appointment with a librarian for in-depth help with your research paper or assignment;
 2. Research Workshops: Join a workshop to learn about using library resources, research databases, scholarly research process, citation styles and other topics.
 3. Research guides: Use for help finding discipline specific resources;
 4. Cite your sources: Learn how to cite your references properly;
 5. Avoid plagiarism: Tips and guidance on how to avoid plagiarisms in your research papers.
- **Request Instructional Support (faculty members):** To collaborate with librarians to ensure that students develop the information literacy skills they need to become efficient, effective, and fluent users and producers of information
- **Copy/Print/Scan:** To provide USEK users with copy facilities by recharging their accounts
- **Reserve a Library Tour:** To become better acquainted with the library premises, services and resources
- **Off-Campus Access:** To be able to access the Library electronic databases from anywhere in the world.

IT and Communication Resources

Banner Self-Service

Access to the Banner self-service allows the student to register online and to consult:

- ✓ Student personal academic transcripts;
- ✓ Student studies fees account;
- ✓ Student registration report;
- ✓ The University course catalogue;
- ✓ The University course schedules.

The banner self-service is accessible through the University website, MyUSEK and the mobile application.

Course Evaluation by Students

Students are required to fill, on the BLUE evaluation system adopted by USEK, the evaluation of each course they have completed during a semester. They cannot access their final grade without filling this evaluation.

This evaluation revolves around the following criteria, using a scale from 1 to 4:

- General evaluation of the course
- Teaching organization by the teacher
- Educational abilities of the teacher
- Evaluation of the learning method adopted by the teacher
- General opinion of the course and the teaching method

N.B.: *This evaluation is strictly anonymous and confidential.*

Students are also required to fill the BLUE evaluation “On-Campus Well-Being” at the end of each semester. This evaluation revolves around the administrative services provided by the University: student life, student services, library, restaurant, communication and telecommunication, etc.

Finally, all final year students having fulfilled the requirements to obtain their diploma are required to fill the “Graduation Survey” evaluation when they launch their diploma/degree request at the Registrar Office.

E-learning

Aiming to develop blended online teaching wherein the e-learning technology supports Faculty members in their educational activities, USEK started using the Moodle e-learning platform in September 2012 which facilitates learning through an improved course management discussion and exchange between faculty members and students and between students themselves.

The use of E-learning has contributed to the development of the University’s teaching and learning strategy mainly:

- The teacher-student interaction and student-student (Active learning and group-based learning)
- Improved assessment of student work, Effective feedback to the student
- Improved course management
- Traceability of student progress
- Traceability of educational development and course
- Capacity building for teachers
- Development of computer skills of teachers

It is worth mentioning that, in the academic year 2015-2016, more than 60 classes have been offered exclusively online to more than 1,000 students.

E-Portfolio

USEK adopted the platform Mahara/ E-Portfolio since Fall 2014-2015 to support faculty, students and staff in the process of creating dynamic and engaging digital Portfolios where they will record and highlight their professional, personal and educational development and achievements.

Through E-Portfolio you can post and share your personal information, your Résumé - including your Goals, Skills, Employment and Education History – and your academic and professional projects.

E-Portfolio is capable of storing visual and auditory content including text, images, video and sound.

Why to use E-Portfolio?

- Learning and personal development: It's a space for reflection, review the current achievements and personal development planning
- Showcasing/Promotion: Presenting evidence of achievements, skills and qualities
- Assessment/Student:
 - Collection of evidence to be judged against a standard by an external assessor
 - Could use templates; tutor might access contents

Mobile App

In May 2013, USEK launched their mobile app. With USEK mobile app, students can check for available courses at USEK, access their account balance, view their grades and even get information about their course schedule. They will be notified about the main events, announcements and receive messages from their instructor. They can also find directions to locations and any administrative staff they need for help. Students can also privately chat with each other and publish their personal ad. USEK mobile app will also allow students to have access to USEK sports' events, scores and news, as well as to latest vacancies.

The application is available on android and app store.

MyUSEK

MyUSEK intranet is one of the privileged and official means of communication and collaboration within the University. It offers intuitive navigation, easy access to information, tools related specifically to the role at USEK and many other features:

- Customized homepage: a page that is customized to your role(s) at USEK whether you are a student, faculty, or staff member offering a quick view to:
 - My emails, My tasks, My calendar, My pending workflows (for all users)
 - My Pending Evaluations, My Holds, My Courses (additional features for students)
- Availability of information in English and French
- Exclusive accessibility from outside USEK, reserved for USEK Community <http://myusek.usek.edu.lb/>.

It presents the USEK flowchart, different faculties/institutes, offices/services, employees/faculty members, procedures and workflows etc. Thus, it spreads internal information and offers downloadable and accessible applications, documents, and links to students, including Banner and Webmail.

Quality Assurance and Institutional Effectiveness Office

Mission

The Quality Assurance and Institutional Effectiveness Office (QA-IE) supports the University to achieve its mission through various initiatives such as planning, assessing and improving administrative and academic performance. The QA-IE collects and analyzes data that are disseminated for decision making and reporting purposes.

Vision

The vision of the QA-IE Office is to become a national and regional model in Quality Assurance and Institutional Effectiveness through assessment and accreditation.

Accreditation

The QAIE Office supports International Institutional Accreditation on both European and American levels and promotes and provides support for program accreditation by being an assessment resource, for the academic units, on matters pertaining to assessment and program improvement.

Assessment and Institutional Effectiveness

Keeping improved student learning and institutional effectiveness in the priorities of the Holy Spirit University of Kaslik through developing efficient, sustainable, and integrated assessment processes, USEK has adopted an assessment strategy that includes:

- Support for integrated strategic planning and assessment;
- Management and support for academic programs assessment and evaluation;
- Institutional data collection, analysis, maintenance and dissemination;
- Process management and automation;
- Surveys management (below is the USEK Surveys Calendar).

Survey	Targeted participants	Frequency
Course Feedback by Students	All enrolled students	Week 13, every semester
Course Self-Assessment by Faculty	Faculty members	Week 15, every semester
On-Campus Well-Being	All enrolled students	Week 13, every semester
Full-time Faculty Self-reflection	Full-time Faculty members	May, every year
Employee Self-reflection report	Employees	May, every year
Graduation Survey	All graduating students	End of semester
USEK Alumni	Alumni evaluating Services and Programs	Continuously

For more information and contacts, check usek.edu.lb.

Alumni Relations Office

The USEK Alumni Relations Office is continually seeking to improve its position, in order to enhance interaction between current students, graduates, and the University itself.

The office aims to establish a large social network of post-graduates and previous graduates to keep Alumni involved in the University and its progress. The network also enables USEK to work closely with the community and benefit from its assets and to involve students and Alumni in all upcoming University events. Not only can the office allow Alumni to encourage current students and guide them in the right direction towards their professional career paths, it can also keep the entire USEK community aware of the University's developments and needs and make use of their knowledge and experience.

For more information and contacts, check usek.edu.lb.

Tuition Fees 2019

Undergraduate Studies

Continuing Education	Cost per 1 credit in USD
Music Academy	137
Language Center	220
Theology Center	220
Sports Center Para Universitaire	220

Faculty of Arts & Sciences	Cost per 1 credit in USD
Remedial courses	137
Languages and Literatures	220
Philosophy, Psychology & Social Sciences and Education	220
Sacred Art, Conservation and Heritage	220
History and Archeology	220
Religious & Oriental Sciences	220
Music and Performing Arts	220
Communication - Journalism & E-Journalism	220
Communication - Cinema and Television	320
Nutrition and Food Sciences	305
Computer science and IT	350
Mathematics	350
Chemistry and Biochemistry	350
Biology	350

School of Engineering	Cost per 1 credit in USD
Agricultural & Food Engineering	233
Biomedical Engineering	406
Chemical Engineering	406
Electrical, Telecommunications and Computer Engineering	406
Civil Engineering	406
Mechanical Engineering	406
Petroleum Engineering	406

Business School	Cost per 1 credit in USD
Business Administration all majors	350
School of Law and Political Sciences	Cost per 1 credit in USD
Law	233
Political and Administrative Sciences	220
School of Medicine & Medical Sciences	Cost per 1 credit in USD
Nursing	220
Medicine	442
School of Architecture & Design	Cost per 1 credit in USD
Architecture	340
Interior Design	320
Design & Digital Media	320
Pontifical School of Theology	Cost per 1 credit in USD
Department of Theology	220
Graduate Studies	
Faculty of Arts & Sciences	Cost per 1 credit in USD
Languages and Literatures	309
Philosophy, Psychology & Social Sciences and Education	309
Sacred Art, Conservation and Heritage	309
History and Archeology	309
Religious & Oriental Sciences	309
Music and Performing Arts	309
Communication - Cinema and Television	387
Communication - Journalism & E-Journalism	309
Nutrition and Food Sciences	387
Computer science and IT	450
Mathematics	450
Chemistry and Biochemistry	450
Biology	450

School of Engineering	Cost per 1 credit in USD
Agricultural & Food Engineering	387
Biomedical Engineering	480
Chemical Engineering	480
Electrical, Telecommunications and Computer Engineering	480
Civil Engineering	480
Mechanical Engineering	480
Petroleum Engineering	480
Business School	Cost per 1 credit in USD
Business Administration	480
EMBA - Executive Masters in Business Administration	480
School of Law and Political Sciences	Cost per 1 credit in USD
Law	309
Political and Administrative Sciences	309
School of Medicine & Medical Sciences	Cost per 1 credit in USD
Medicine	557
School of Architecture & Design	Cost per 1 credit in USD
Architecture	387
Interior Design	387
Design & Digital Media	387
Pontifical School of Theology	Cost per 1 credit in USD
Department of Theology	309
Postgraduate Studies	
Faculty of Arts & Sciences	Cost per 1 credit in USD
Sacred Art, Conservation and Heritage	485
History and Archeology	485

Languages and Literatures	485
Religious & Oriental Sciences	485
Music and Performing Arts	485
Philosophy, Psychology & Social Sciences and Education	485

Business School	Cost per 1 credit in USD
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Ph.D - Business Administration	500
DBA - Doctorate in Business Administration	500

School of Law and Political Sciences	Cost per 1 credit in USD
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Law	485
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School of Medicine & Medical Sciences	Cost per 1 credit in USD
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Medicine (only one payment at the beginning of the term)	600
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Pontifical School of Theology	Cost per 1 credit in USD
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Department of Theology	485
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Doctoral College	Cost per 1 credit in USD
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Level III	485
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Academic Calendar 2019-2020

Announcements related to academic, cultural and sports events and activities will be regularly posted online on the USEK website: usek.edu.lb

August 2019

- Friday 2: English Proficiency Test + Math entrance exam
- **Sunday 11: Eid El Adha***
- Monday 12: English Proficiency Test + Math entrance exam (except Medicine) Competitive Exam for Engineering
- **Thursday 15: Assumption**
- Friday 16: Registration put on hold for students with incomplete files
- Monday 19: Entrance Exam for the Graduate Studies (CII) for the Fall Semester 2019-2020.
- Wednesday 21-Friday 23: Validation of the Pre-Registration and Registration for the Fall Semester 2019-2020 for Undergraduate, Graduate and Postgraduates Studies programs (Settlement of the 1st payment of tuition fees for the Fall Semester: 2 working days prior to online registration)
- Monday 26: Registration of readmitted students for the Fall Semester 2019-2020
- Tuesday 27-Wednesday 28: Orientation sessions and registration for new and transferred students for the Fall Semester 2019-2020
- **Saturday 31: New Hegira Year***

September 2019

- Monday 2: Start of classes for the Fall Semester 2019-2020
Application of the \$100 late registration penalty
Start of the period for the submission of the social file for the Academic year 2019-2020 (New students)
- Monday 2-Friday 6: Add/Drop - Late registration for the Fall Semester 2019-2020
- **Monday 9: Achoura***
- Make-up of Monday classes of week 2: to be scheduled by the Faculties
- Wednesday 18: Deadline to submit the application for the Students' Representatives

October 2019

- Wednesday 2: Draw session for the Students' Representatives
- Saturday 5: Deadline to submit a request of exemption from the NSSF membership fees
English Proficiency Test
- Friday 11: Deadline to submit a tuition allowance request for students who are siblings
- Monday 21: Deadline to settle the 2nd payment of tuition fees for the Fall Semester 2019-2020
- Monday 21-Friday 25: Midterm exams (without class interruption) for the Fall Semester 2019-2020
- Tuesday 22: Application of the financial penalty
- Thursday 31: Deadline to submit the social file for the Academic year 2019-2020 (New students)
- Make-up of Friday classes of week 9: to be scheduled by the Faculties

November 2019

- **Friday 1: All Saints Day**
- Saturday 2: English Proficiency Test + Math entrance exam for Undergraduate Studies (except Medicine and Engineering)
- Monday 4- Friday 8: Advising for the Spring Semester 2019-2020
- **Saturday 9: Prophet Mohammad Birthday***
- Monday 11- Sunday 17: Online Pre-Registration for the Spring Semester 2019-2020 for current students
- Make-up of Friday classes of week 12: to be scheduled by the Faculties
- Monday 18: Registration put on hold for students with incomplete file
- Wednesday 20: Deadline to settle the 3rd payment of tuition fees for the Fall Semester 2019-2020
- Thursday 21: Restriction of Banner access for students with unsettled tuition fees
- Thursday 21: Application of the financial penalty
- **Friday 22: Independence Day**

- Monday 25: Deadline for Withdrawal (W) (Academic Rules - Week 13)
- Monday 25: Deadline to submit a request for a double degree, double major, academic minor, and to change the campus for the Spring Semester 2019-2020
- Wednesday 27: Entrance exam for the Graduate Studies (CII) for the Spring Semester 2019-2020
- Friday 29: Open Day
- Saturday 30: English Proficiency Test + Math entrance exam for Undergraduate Studies (except Medicine and Engineering)

December 2019

- Friday 6: End of classes of the Fall Semester 2019-2020
Deadline to submit a request for transfer for the Spring Semester 2019-2020 (4th week before the Registration period)
- Saturday 7: Cambridge CAE exam
- Monday 9- Wednesday 18: Final exams of the Fall Semester 2019-2020
- Friday 13: Deadline to submit a request for readmission for the Spring Semester 2019-2020 (3rd week before the Registration period)
- Friday 20: Deadline to submit the final grades of the Fall Semester 2019-2020
- **Monday 23 - Wednesday 1 January: Christmas and New Year Holiday**

January 2020

- **Monday 6: Epiphany**
- **Monday 6: Armenian Christmas**
- Tuesday 7: Deadline to submit a request to review a final grade of the Fall Semester 2019-2020
- Wednesday 8: Deadline to sit for a make-up final exam for the Fall Semester 2019-2020
- Thursday 9: Deadline to complete the grades (I) of the Fall Semester 2019-2020: Deadline to submit a request to change the academic program for the Spring Semester 2019-2020
- Saturday 11: English Proficiency Test + Math entrance exam for Undergraduate Studies (except Medicine and Engineering)
- Monday 13: Registration put on hold for students with incomplete files
- Tuesday 14-Thursday 16: Validation of the Pre-Registration and Registration for the Spring Semester 2019-2020 for Undergraduate, Graduate and Postgraduates Studies programs (Settlement of the 1st payment of tuition fees for the Spring Semester: 2 working days prior to online registration)
- Wednesday 15: Entrance exam for the Graduate Studies (CII) for the Spring Semester 2019-2020
- **Friday 17: Saint Anthony the Great**
- Monday 20: Registration of readmitted students for the Spring Semester 2019-2020
- Wednesday 22: Orientation sessions and registration for new and transferred students for the Spring Semester 2019-2020
- Monday 27: Start of classes for the Spring Semester 2019-2020
- Monday 27: Application of the \$100 late registration penalty
- Monday 27-Friday 31: Add/Drop - Late registration for the Spring Semester 2019-2020

February 2020

- Monday 3: Start of the period for the submission/renewal of the social file for the Academic year 2020-2021 (Current students)
- Monday 3: Period of admission on File for Undergraduate Studies (except medicine) for the 2020-2021 Academic Year
- **Sunday 9: Saint Maron**
- Make-up of Friday classes of week 3: to be scheduled by the Faculties
- **Friday 14: Commemoration of the assassination of H.E. Mr. Rafic Hariri**
- Saturday 22: English Proficiency Test

March 2020

- Monday 2: Deadline to submit a request of exemption from the NSSF membership fee
- Friday 6: Deadline to submit a tuition allowance request for students who are sibling

- Saturday 14: English Proficiency Test
- Monday 16-Friday 20: Midterm exams (without class suspension) for the Spring Semester 2019-2020
- Friday 20: Deadline to settle the 2nd payment of tuition fees for the Spring Semester 2019-2020
- Saturday 21: Application of the financial penalty
- Make-up of Wednesday classes of week 9: to be scheduled by the Faculties
- **Wednesday 25: Annunciation**

April 2020

- Monday 30 March-Sunday 5: Online Pre-Registration for the Summer Session 2019-2020 for current students
- Saturday 4: English Proficiency Test + Math entrance exam for Undergraduate Studies (except Medicine and Engineering)
- **Thursday 9-Monday 13: Catholic Easter***
- **Friday 17-Monday 20: Orthodox Easter***
- Tuesday 21: Deadline to submit a request for a double degree, double major, academic minor and to change the campus for the Fall Semester 2020-2021
- Tuesday 21: Deadline for Withdrawal (W)
- Wednesday 22: Deadline to settle the 3rd payment of tuition fees for the Spring Semester 2019-2020
- Wednesday 22: Registration put on hold for students with incomplete file
- Thursday 23: Restriction of Banner access for students with unsettled tuition fees
- Thursday 23: Application of the financial penalty
- Thursday 30: Deadline to submit/renew the social file for the academic year 2020-2021 (Current students)
- Thursday 30: Deadline to submit an on File application for the Undergraduate Studies for the Fall Semester 2020-2021 (Except Medicine)

May 2020

- **Friday 1: Labor Day**
- Saturday 2: English Proficiency Test + Math entrance exam for Undergraduate Studies (except Medicine and Engineering)
- Tuesday 5 -Wednesday 6: Make-up of Friday classes of week 12
Make-up of Friday classes of week 13
- Monday 11: End of classes of the Spring Semester 2019-2020
- Monday 11: Cambridge CAE exam
- Wednesday 13: Deadline to submit a request for readmission for the Summer Session 2019-2020
- Wednesday 13-Friday 22: Final exams of the Spring Semester 2019-2020
- Friday 15: Entrance Exam for the Graduate Studies (CII) for the Fall Semester 2020-2021.
- **Sunday 24: Eid el Fitr***
- **Monday 25: Resistance and Liberation Day**
- Wednesday 27: Deadline to submit the final grades of the Spring Semester 2019-2020
- Friday 29: Deadline to submit a request to review a final grade of the Spring Semester 2019-2020
- **Sunday 31- Monday 1 June: Pentecost**

June 2020

- Tuesday 2: Deadline to sit for a make-up final exam for the Spring Semester 2019-2020
- Wednesday 3: Deadline to complete the grades (I) of the Spring Semester 2019-2020
- Wednesday 10- Thursday 11: Validation of the Pre-Registration and Registration for the Summer Session (Settlement of the 1st payment of tuition fees for the Summer session: 2 working days prior to online registration)
- Monday 15: Start of classes for the Summer Session 2019-2020 - Late Registration Application of the \$100 late registration penalty
- Monday 22- Friday 26: Advising for the Fall Semester 2020-2021
- Monday 29- Saturday 4 July: Online Pre-Registration for the Fall Semester 2020-2021

July 2020

- Saturday 4: English Proficiency Test + Math entrance exam for Undergraduate Studies (except Medicine and Engineering)
- Monday 6: Deadline to settle the 2nd and last payment of tuition fees for the Summer Session 2019-2020
- Monday 6: Deadline for Withdrawal (W)
- Tuesday 7: Application of the financial penalty
- Wednesday 8: Restrict Banner access for students with unsettled tuition fees
- Wednesday 8: Competitive Exam in Medicine
- Friday 17: End of classes for the Summer Session 2019-2020
- Friday 17: English Proficiency Test + Math entrance exam for Undergraduate Studies (except Medicine) Competitive Exam for Engineering
- Monday 20-Tuesday 21: Final exams for the Summer Session 2019-2020
- Tuesday 21: Deadline to submit a request for transfer for Fall Semester 2020-2021
- Thursday 23: Deadline to submit the final grades of the Summer Session 2019-2020
- Friday 24: Entrance Exam for the Graduate Studies (CII) for the Fall Semester 2020-2021.
- Friday 24: Cambridge CAE exam
- Monday 27: Deadline to submit a request to review a final grade of the Summer Session 2019-2020
- Tuesday 28: Deadline to sit for a make-up final exam for the Summer Session 2019-2020
- Tuesday 28: Deadline to submit a request for readmission for the Fall 2020-2021
- Wednesday 29: Deadline to complete the grades (I) of the Summer Session 2019-2020
- Wednesday 29: Deadline to submit a request to change the academic program for the Fall Semester 2020-2021
- **Friday 31- Saturday 1 August: Eid El Adha***

August 2020

- Tuesday 4: English Proficiency Test + Math entrance exam for Undergraduate Studies (except Medicine and Engineering)
- Monday 10: Registration put on hold for students with incomplete files
- Wednesday 12: English Proficiency Test + Math entrance exam for Undergraduate Studies (except Medicine) Competitive Exam for Engineering
- **Saturday 15: Assumption**
- Monday 17: Entrance Exam for the Graduate Studies (CII) for the Fall Semester 2020-2021
- **Thursday 20: New Hegira Year***
- Wednesday 26- Friday 28: Validation of the Pre-Registration and Registration for the Fall Semester 2020-2021 for Undergraduate, Graduate and Postgraduates Studies programs (Settlement of the 1st payment of tuition fees for the Fall Semester: 2 working days prior to online registration)
- **Saturday 29: Achoura***
- Monday 31: Registration of readmitted students for the Fall Semester 2020-2021

September 2020

- Tuesday 1-Wednesday 2: Orientation sessions and registration for new and transferred students for the Fall Semester 2020-2021
- Monday 7: Start of classes for the Fall Semester 2020-2021
- Monday 7-Friday 11: Add/Drop - Late registration for the Fall Semester 2020-2021
- Monday 7: Application of the \$100 late registration penalty

ⁱ * Dates to be confirmed

Academic Rules and Student Life

A. Academic Information

A1. Credit System

A1.1 The Credit

The biannual credit is the measuring unit of the number of hours per semester. In the system adopted by the Holy Spirit University of Kaslik, one credit represents one teaching hour (50 minute course) per week during a 15 week semester (including examinations and tests). Therefore, a three credit course generally represents 45 hours of attendance, including examinations. As for practical activities, tutorials, group work or laboratory activities, they represent 30 hours of attendance for every credit.

1 credit = 15 teaching hours / semester

1 credit = 30 hours of practical, directed or laboratory activities / semester

Internships in companies and hospitals, as well as projects are subject to specific regulations. Every diploma/degree has a specific number of credits specified in the University Catalog. Credits facilitate flexibility among various university programs, as well as the mobility of students. Acquired credits are capitalized and can sometimes be transferred from one Academic unit to another; or even from one university to another.

A1.2 The Course

A course is composed of one or more credits and is academically managed by the Academic unit that determines its contents according to the objectives defined by the program of studies. Every course has its own requirements and the student cannot be registered for a course without the valid prerequisite/s, if applicable.

Class sessions are usually 75 minutes for MF and TTH classes. Students are required to wait 15 minutes before leaving if the instructor is late to class.

A1.3 The Semester

The academic year is divided into two semesters, Fall and Spring, in addition to a Summer session. Every semester includes 14 effective teaching weeks and one week of final examinations. The Summer session includes, on average, 5 weeks, with 5 teaching days per week, including intensive courses and final examinations. It is worth mentioning that Summer session courses have exactly the same number of hours and evaluation criteria as Fall and Spring semesters.

A1.4 Student Workload

A1.4.1 Undergraduate Students

For Fall and Spring semesters, the minimum number of credits for a full-time Undergraduate student is 12 and the maximum number of credits is 18. A typical load for a full-time Undergraduate student is 15. Undergraduate students are considered part-time when they enroll in fewer than 12 credits per semester.

Following the approval of the Associate Dean, a student can register in a maximum of 21 credits, in certain circumstances considered as necessary. At the School of Medicine and Medical Sciences, this approval requires the students to have a cumulative AVG of 85/100 (Summer session included).

Students with a cumulative GPA of 3.00 (new grading system) and above are allowed to register a maximum of 21 credits in a semester.

Students with a good academic standing, a cumulative GPA of less than 3.00 but not less than 2.00, and after the approval of the Dean/Associate Dean, may petition to register a maximum of 21 credits if they are graduating. In special cases, the Dean of the Faculty/School may also allow students with good academic standing to exceed the allowed maximum load for a regular semester, within the rules and regulations of the University.

A student on probation can only be registered for 12-13 credits. He/she is advised to register in the course that he/she has to repeat in order to get out of the probation status.

N.B.: A student enrolled in a Double Degree can register in a maximum of 21 credits per semester. However, a minimum of 12 credits should be dedicated to the priority program.

A1.4.2 Graduate Students

For Fall and Spring semesters, the minimum number of credits for a full-time Graduate student is 6 and the maximum is 10. Following the approval of the Associate Dean, a student in certain circumstances can register in a maximum of 12 credits. Additionally, certain programs may require an even greater number of credits.

A student on probation can only register for courses that he/she should repeat and for a maximum of 6 credits. He/she is advised to register in the course that he/she has to repeat in order to get out of the probation status.

N.B.: A student enrolled in a Double Degree can register in a maximum of 15 credits per semester. However, a minimum of 9 credits should be dedicated to the priority program

For the Summer session, Undergraduate and Graduates students can register for a minimum of 1 credit and a maximum of 6 credits. Following the approval of the Associate Dean, a student can, in certain cases, register for a maximum of 9 credits. Students on probation can only register for courses they have to repeat and for a maximum of 6 credits.

A2. Program Framework

USEK offers a wide range of programs leading to a degree such as Bachelor, Master or PhD which defines the students' educational level.

A2.1 Degree

The Bachelor degree is offered according to a predefined structure, consisting of 96 credits at least, and offered in the form of major, elective and general education courses.

Students who fulfill all academic requirements to the sophomore year along with one academic major requirements (overall credits are at least 126 credits including 30 credits from the Lebanese baccalaureate or freshman) will be granted a diploma indicating their academic major and degree.

A2.2 Major

The field of academic specialization within the Bachelor degree. It is defined as the departmental requirements set forth in the catalog, having a minimum of 48 credits. Interdisciplinary majors may include courses from more than one related academic discipline.

A2.3 Emphasis

The Emphasis consists of a set of courses in a "specialized area" within a major and is considered as part of the major curriculum. Emphases are available only to students enrolled in the major under which the Emphasis is listed.

To declare an Emphasis, students submit a Declaration Form to the Registrar Office. The form requires the approval of the Head of the department offering the Emphasis.

Students must meet minimal course and grade requirements, as determined by the Head of the department offering the Emphasis, or have to go through the required admission procedure (when needed) in order to be accepted into the desired Emphasis.

Emphasis requirements will follow the catalog year of the student's primary major. Emphasis cannot be awarded after a Bachelor's Degree is awarded.

A2.4 Double Major and Academic Minor

Students with diverse and multiple areas of interests can consider adding to their primary academic major a double major, a double degree or a minor which will allow them to explore another field of inquiry in parallel to their main subject of specialization.

A2.4.1 Double Degree (two diplomas)

Students cannot apply simultaneously for a minor program and a double degree. The double degree is an academic path that leads to two different diplomas. The students are expected to fulfill the graduation requirements of two different academic majors, not necessarily within the same Academic unit or with similar degree structure. By the end of the academic path, the students will earn two diplomas. Students are requested to fulfill the General Education requirements once. The student cannot register more than 2 programs nor have more than 2 diplomas within the same level. To declare a double degree, students submit a request at the Registrar Office. The request requires the approval of the Head of the department offering the primary major and the approval of the Head of the department offering the second degree.

Students must meet minimal major course and grade requirements, as determined by the Head of the department offering second degree, or have to go through the required admission procedure (when needed) in order to be accepted into the desired program.

The second degree requirements will follow the catalog year of the student's primary major.

A2.4.2 Academic Minor

Students cannot apply for two minor programs at the same time. Academic minors are reserved for undergraduate studies and organized around a specific set of objectives, defined according to each field, which are achieved through a set of structured courses, not necessarily related to exclusively one discipline. Minors are expected to provide students with necessary knowledge and primary competencies.

Academic minor consists of 15 to 21 credit hours depending on the chosen subject, as specified in the catalog, with at least 9 credits chosen from courses at the upper level (code 300 or above). A group of courses are offered to students allowing them to choose the topics that they may be interested in to complete the required credits, while maintaining a degree of flexibility.

Courses taken in a minor may be transferred to fulfill other academic requirement, e.g. majors, general education, without reducing or affecting the minimum number of credits required for a degree. No more than 6 credits may be counted as transferred credits (from another institution). However, students enrolled in a double degree cannot apply for a minor. Students cannot apply for a double minor as well.

To declare a minor, students should submit a request at the Registrar Office or online upon completing 30 credits of major study. The request requires the approval of the Head of the department offering the primary major and the approval of the Head of the department offering the minor. The deadline for declaration of minor is the 13th week of a semester. However, no student can declare a minor in the same discipline of his major.

Students must meet minimal course and grade requirements, as determined by the Head of the department offering the minor, to be accepted into the desired minor. Hence, students are not allowed to register for more than 21 credits per term from which 12 credits pertain to the major and 9 credits to the minor.

The minor requirements will follow the catalog year of the student's primary major. The minor will not be awarded after a Bachelor's Degree is awarded.

The academic minor will be indicated on the student's transcript and not on the diploma. Its AVG is calculated along with the overall AVG of the major.

A3. General Education

General Education aims to endow students enrolled in the Undergraduate studies program with value learning, intellectual inquiry and cultivation of particular skills to become thoughtful and engaged and active citizens of the country, the region and the world while bringing them to a critical and appreciative understanding of religious tradition, ethical theories and more development.

To this end, 30 credits of the Undergraduate studies curriculum are devoted to General Education that includes basic general knowledge, common and proper to USEK while taking into consideration that students who are enrolled in professional fields such as sciences and engineering should be exposed to the humanities and social sciences and students enrolled in humanities fields should be aware of natural sciences and quantitative reasoning:

- English and French Communication (3 to 6 credits)
- Religious Sciences (3 credits)
- Quantitative Reasoning (3 to 9 credits): Mathematics / Statistics / Information Technology
- Civic Engagement (2 credits)
- Sports (1 credit)
- Arts and Humanities (3 to 6 credits): Ethics and Justice / Arts / Philosophical Inquiry / Literature
- Behavioral, Social Sciences and History (6 to 9 credits): Psychology / Sociology / Politics / History of Lebanon and Entrepreneurship & Innovation.
- Sciences and Health (3 to 9 credits): Biology / Chemistry / Physics / Agriculture / Nutrition / Environment / First Aid and Emergency Care

For more details, please refer to the General Education requirements in the University Catalog.

A4. Advising and Academic Support

Upon registration and for the duration of their enrolment, students can refer to their assigned Academic Advisor. This Advisor should be a full-time faculty member appointed by the Dean/Director according to the student's program. The period of the academic advising is fixed during each semester in the Academic Calendar.

The Academic Advisor guides the student's choices and informs him/her about the current regulations.

When the student changes his/her academic cycle or program, he/she refers to the new Academic Advisor assigned by the Dean of the relevant new Academic unit.

This process, as of Spring 2018, has been automated and done through MyDegree, the new academic advising and auditing platform, for students admitted starting academic year 2017-2018.

B. Admission

B1. Admission Application

B1.1 Admission Form

The admission application can be downloaded from the University website or taken directly from the Admissions Office or filled online. The applicant can make the choice of three majors in his/her file.

The admission application should be completed, returned and accompanied with all the required documents, to the Admissions Office within the deadline specified in the Academic Calendar. This application, along with the submitted official documents, remain the property of USEK and will be confidential.

Students with incomplete files will be admitted to USEK as regular students under condition to deliver to the Admissions office the required documents no later than one semester. if the file remains incomplete, an admission hold will be placed on the student's record, prohibiting him from registering for the next semester.

The voluntary transcription of incorrect information and submission of falsified documents, will automatically lead to the annulment of the admission request. The applicant can Only request copies of the submitted document(s).

B1.2 Documents required for the Freshman Program

- Photocopy of the national identity card or photocopy of valid passport (for international students);
- Two recent passport-size photos;
- The permission to continue studying the foreign curriculum (from the Equivalence Committee of the Lebanese Ministry of Education);

- A high school diploma or school leaving certificate;
- SAT I scores, if any.

B1.3 Documents required for Undergraduate Studies

- Photocopy of the national identity card or photocopy of valid passport (for international students);
- Two recent passport-size photos;
- A photocopy of the grades transcript of the last three high-school classes (school and/or technical) certified by the school (the first two trimesters for Gr12 classes in case the admission file is submitted before the end of the ongoing academic year);
- The certificate of the Lebanese Baccalaureate or an equivalent degree, certified by the Lebanese Ministry of Education and Higher Education, when needed.
- Original recent certificate of the coverage of the National Social Security Fund or its equivalent.

B1.4 Documents required for Graduate Studies

- Photocopy of the national identity card and a recent family civil extract (for Lebanese applicants) or photocopy of valid passport (for international students);
- Two recent passport-size photos;
- The certificate of the Lebanese Baccalaureate or an equivalent degree certified by the Lebanese Ministry of Education and Higher Education, when needed;
- Certified copy of university degree(s) equivalence by the Ministry of Education and Higher Education in Lebanon, when needed;
- Official grades transcript(s) covering all previous academic work
N.B.: Applicants with academic work in progress who expect to complete an Undergraduate degree program before the intended date of enrollment at USEK must submit evidence of degree conferral and a final academic record, as soon as they are available. The Undergraduate degree must be completed prior to the start of the Graduate studies;
- Two recommendation letters given by academic referees who know the student well
N.B.: Each referee should send the letter in a sealed envelope, with his/her name signed across the seal, directly to the Admissions Office;
- A motivation letter;
- A curriculum vitae (C.V.) or e-portfolio;
- Certificate(s) of employment, if applicable;
- Original recent certificate of the coverage of the National Social Security Fund or its equivalent
N.B.: USEK students who wish to pursue their Graduate studies at USEK should only attach two recent passport photos to the Graduate Admission Application Form.

B2. General Admission Requirements

An applicant to USEK should fulfill the following general admission requirements:

B2.1 Undergraduate Studies

1. Be a holder of the Lebanese Baccalaureate or of an equivalent diploma (depending on program requirements):
 - Lebanese high school baccalaureate: Life Sciences - *LS*, General Sciences - *GS*, Literature and Humanities - *LH*, Economics and Sociology - *ES*
 - Lebanese technical baccalaureate. In this case, admission depends on compatibility between the chosen technical field and the university program being considered.
 - Freshman Arts or Freshman Sciences degree
2. Have completed an admission form for the Undergraduate studies program, filled online or at the Admissions Office, along with the required documents.
3. Have sufficient knowledge of the teaching language(s) of the chosen program and demonstrate a required level of English language proficiency (see section B3).

4. Meet the admission requirements of the chosen program (see section B4).
5. Pay the file opening and admission test fees; these non-refundable fees should be paid beforehand at one of the banks specified by the University.

B2.2 Graduate Studies

1. Be a holder of an Undergraduate degree or its equivalent, recognized by the Lebanese Ministry of Education and Higher Education.
2. Get the recommendation of the related unit's Graduate Admission Interview Committee.
3. Meet the additional admission requirements of the chosen program, if any.
4. Have completed the Graduate Admission Form, available at the Admissions Office, which should be submitted along with the required documents.
5. Pay the file opening and admission test fees; these non-refundable fees should be paid beforehand at one of the banks specified by the University.

B3. Language Proficiency Requirements

B3.1 Proof of Language Proficiency for Undergraduate programs

The language proficiency requirements are defined based on the delivery language of the program for which the candidate is applying. The program delivery language could be:

- **English:** Courses fully delivered in English
- **Hybrid:** Courses in hybrid programs are delivered in English, French and Arabic

B3.1.1 English requirements (for all programs)

Students admitted to USEK must demonstrate a level of English proficiency by presenting one of the standardized tests accepted by the University or USEK English Proficiency Test. Below are the recommended minimum scores for all the tests, accepting that these scores may be changed without prior notice:

- Redesigned SAT I Evidence-Based Reading and Writing \geq 550 / 800 or Essay SAT \geq 16/24
- Paper Based TOEFL PBT \geq 550/670
- Internet Based TOEFL IBT \geq 80 / 120
- Computer Based TOEFL CBT \geq 213 / 300
- IELTS \geq 6/9
- USEK-EPT English proficiency test \geq 70 / 100

Standardized tests: Details on standardized tests could be verified at the following link:

<http://www.amideast.org/lebanon> for applicants in Lebanon.

USEK's **College Board code number is 7061**. This code allows our institution to receive SAT scores automatically.

USEK English proficiency test USEK-EPT: This test is carefully designed to measure a candidate's level of proficiency in the English language, and place him/her in the appropriate English course. It includes sections on structure and language use, vocabulary and written response, reading and comprehension, and essay writing.

Placement rules: According to his/her results and based on the following rules, a student may have to enroll in an English Language remedial program (ENG130 and ENG140) equivalent to 9 to 15 credits:

English remedial courses	Redesigned SAT I	TOEFL PBT	TOEFL IBT	TOEFL CBT	IELTS	USEK-EPT
ENG130-Basic English 9 cr Students taking ENG130 are not allowed to start with their major courses	200-430	\leq 450	\leq 56	\leq 152	\leq 4.5	\leq 50
ENG140-Academic English 6 cr	431-549	450-549	57-79	153-212	5-5.5	55-65

B3.1.2 French requirements (for hybrid programs)

Students coming from French background schools are evaluated upon their school grades by the Admission and Transfer Committee and may be exempted from the 6 credits remedial courses in French language if they show evidence of French language proficiency. (*French General average = 10/20 on the first and second secondary class*).

Students coming from an English background are required to follow an intensive French language remedial program equivalent to 6 credits.

DELFL B2 or TCF B2 applicants will be exempt from the French remedial courses.

B3.1.3 Arabic requirements (for specific programs)

Some programs may also require an Arabic proficiency level. A student's Arabic proficiency level will be evaluated upon the school grades by the Admission and Transfer Committee and he/she may be exempt from taking a three-credit remedial course in Arabic if he/she shows evidence of Arabic proficiency. (*Arabic General Average = 10/20 on the first and second secondary class*).

B3.2 Proof of Language Proficiency for Graduate programs

All graduate applicants will be evaluated based on the transcripts and the interview conducted as part of the admission process. If needed, they will have to pass the language proficiency tests.

B3.3 Language remedial courses

A student admitted under the condition of following remedial courses should register for these courses upon his/her first semester at USEK. Any violation of this rule will lead to the termination of his/her admission.

English remedial courses	Redesigned SAT I	TOEFL PBT	TOEFL IBT	TOEFL CBT	IELTS	USEK-EPT
ENG130-Basic English 9 cr Students taking ENG130 are not allowed to start with their major courses	200-430	≤450	≤56	≤152	≤4.5	≤50
ENG140-Academic English 6 cr	431-549	450-549	57-79	153-212	5-5.5	55-65

The minimum grade to validate a remedial course is 60/100. However, this grade will be mentioned on the academic transcript as a "PR".

In the Undergraduate Program, a remedial course cannot be taken more than two times (can only be registered twice maximum) under penalty of being excluded from the University. Nevertheless, the student can present a petition at the Student Affairs Office asking to reconsider his/her case for one last chance before exclusion.

B4. Specific Admission Requirements for the Chosen Program

Applicants to USEK should meet the specific requirements of the chosen program.

B4.1 Undergraduate

Undergraduate studies at USEK consist of 4 academic years of education (Freshman, Sophomore, Junior, Senior) with a minimum of 126 total credits.

Freshman - a student completing 1 to 25% of his undergraduate credits

Sophomore - a student completing 25 to 50% of his undergraduate credits

Junior - a student completing 50 to 75% of his undergraduate credits

Senior - a student completing 75% or more of his undergraduate credits

All **undergraduate** students are required to complete 30 credits of Freshman courses, automatically granted for holders of the Lebanese Bacculaureate or any other recognized diploma by the Ministry of Education and Higher Education, 30 credits of General Education courses and a minimum of 66 credits pertaining to the program of study.

There are 3 types of admission applicants at the undergraduate level:

a- Freshman

Students completing 12 years of schooling can apply to the freshman level at USEK after getting the permission to continue studying the foreign curriculum from the Equivalence Committee of the Lebanese Ministry of Education and Higher Education.

- Freshman Admission Requirements:
 - Filled Application and submitted to the Admissions Office within the specified deadline available on the Academic Calendar;
 - Photocopy of the national identity card or photocopy of valid passport (for international students);
 - Two recent passport-size photos;
 - The permission to continue studying the foreign curriculum (from the Equivalence Committee of the Lebanese Ministry of Education);
 - High School certificate based on 12 years of schooling, starting with grade I, awarded by a public or private school and recognized by the Lebanese Ministry of Education and Higher Education;
 - A Proof of Language Proficiency by submitting SAT I scores.
Applicants are expected to have score for Redesigned SAT I (Evidence-Based Reading and Writing + Math) 1000/1600 when applying to the program. Upon completion of the Freshman year, they are expected to sit for the Redesigned SAT II and score as follows:
Freshman Arts: a minimum of **2150** on both Redesigned SAT I and Redesigned SAT II (SAT I + SAT II)
Freshman Sciences: a minimum of **2300** on both Redesigned SAT I and Redesigned SAT II (SAT I + SAT II).

- Freshman Program:

	Freshman Sciences	Freshman Arts
Humanities	ENGL140 English Communication Skills (3 credits) ELL101 English Literature (3 credits) Total credits: 6	ENGL140 English Communication Skills (3 credits) ELL101 English Literature (3 credits) Total credits: 6
Social Sciences	SOC100 Introduction to Sociology (3 credits) Total credits: 3	SOC100 Introduction to Sociology (3 credits) Total credits: 3
Natural Sciences	BIO101 Introduction to Biology (3 credits) Total credits: 3	BIO101 Introduction to Biology (3 credits) Total credits: 3
Mathematics	MATH101 Mathematics I (3 credits) Total credits: 3	MATH101 Mathematics I (3 credits) Total credits: 3

Electives	PSY101 Introduction to Psychology (3 credits) CHM102 Introduction to Chemistry (3 credits) PHY101 Introduction to Physics (3 credits) MATH102 Mathematics II (3 credits) NUT101 Introduction to Human Nutrition and Dietetics (3 credits)	PSY101 Introduction to Psychology (3 credits) ECO100 Introduction to Economics (3 credits) CHM102 Introduction to Chemistry (3 credits) PHI100 Introduction to Philosophy (3 credits) HUM103 History of Civilizations (3 credits)
	Total credits: 15	Total credits: 15

b- Sophomore

Students applying to the Sophomore year should have completed one of the following:

- 12 years of schooling and a Freshman program at USEK or any other recognized university.
- 12 years of schooling and a Lebanese Baccalaureate diploma, or any equivalent, recognized by the Ministry of Education and Higher Education. Baccalaureate holders are automatically granted 30 academic credits equivalent to the Freshman year credits.

- **Sophomore Admission Requirements:**

- Filled Application and submitted to the Admissions Office within the specified deadline available on the Academic Calendar;
- Photocopy of the national identity card or photocopy of valid passport (for international students);
- Two recent passport-size photos;
- A photocopy of the grades' transcript of the last three high-school classes (school and/or technical) certified by the school (the first two trimesters for Gr12 classes in case the admission file is submitted before the end of the ongoing academic year);
- The certificate of the Lebanese Baccalaureate, Freshman diploma or an equivalent degree, certified by the Lebanese Ministry of Education and Higher Education, when needed.
- Original recent certificate of the coverage of the National Social Security Fund or its equivalent, if applicable.
- A Proof of Language Proficiency refer to section B3 "Language Proficiency Requirements" of the Academic Rules and Student Life.

- **Program Specific Requirements:**

- 1-**Architecture Programs:** Applicants are expected to score on the Redesigned SAT I (Evidence-Based Reading and Writing + Math) $\geq 1200/1600$ or USEK Math Entrance exam $\geq 70/100$.
- 2-**Business Programs:** Applicants are expected to score on the Redesigned SAT I (Evidence-Based Reading and Writing + Math) $\geq 1100/1600$ or USEK Math Entrance exam $\geq 70/100$.
- 3-**Humanities and Art Programs:** Applicants are expected to demonstrate language proficiency for university level and score on the Redesigned SAT I (Evidence-Based Reading and Writing) $\geq 550/800$.
- 4-**Engineering Programs:** Agricultural Engineering applicants are expected to score on the Redesigned Sat I (Evidence-Based Reading and Writing + Math) $\geq 1100/1600$ or USEK Math Entrance Exam $\geq 70/100$.
For all other Engineering majors, applicants are expected to score on the Redesigned SAT I (Evidence-Based Reading and Writing + Math) $\geq 1250/1600$ (where Math ≥ 650) or USEK Engineering Entrance Exam $\geq 75/100$.

5-Medicine Programs: Applicants are expected to pass the USEK Medicine Entrance Exam, required for students applying for BS in Health Fundamental Sciences. Students wishing to join the Medical School may require MCAT scores (refer to the Faculty concerned).

6-Sciences Programs: Applicants are expected to score on the Redesigned SAT I (Evidence-Based Reading and Writing + Math) $\geq 1100/1600$ or USEK Math Entrance exam $\geq 70/100$.

SAT scores could be sent automatically to USEK's **College Board code number 7061**.

Undergraduate programs	Common requirements	Specific admission requirements for the chosen program
Humanities and Arts Programs	General Admission Requirements and Language Proficiency Requirements	Redesigned SAT I (Evidence-Based Reading and Writing) $\geq 550/800$
Architecture		Redesigned SAT I (Evidence-Based Reading and Writing + Math) $\geq 1200/1600$ or USEK Math Entrance exam $\geq 70/100$
Business Programs		Redesigned SAT I (Evidence-Based Reading and Writing + Math) $\geq 1100/1600$ or USEK Math Entrance exam $\geq 70/100$
Engineering (excluding Agricultural)		Redesigned SAT I (Evidence-Based Reading and Writing + Math) $\geq 1250/1600$ (where Math ≥ 650) or USEK Engineering Entrance Exam $\geq 75/100$
Agricultural Engineering		Redesigned SAT I (Evidence-Based Reading and Writing + Math) $\geq 1100/1600$ or USEK Math Entrance exam $\geq 70/100$
Medicine		USEK Medicine Entrance Exam / MCAT
Sciences Programs Nutrition and Food Sciences, Sciences, Nursing Sciences		Redesigned SAT I (Evidence-Based Reading and Writing + Math) $\geq 1100/1600$ or USEK Math Entrance exam $\geq 70/100$

c- Transfer : refer to section B5 Admission Tracks and Specific Requirements / Admission by File Transfer.

B4.2 Graduate

- For USEK students willing to pursue their Master degree at the same department/school:
 - Oral/written tests, interviews, portfolios and recommendation letters are not required, except for the Business School who requires oral and written tests. Applicants only need to fill a Graduate Admission form and pay the admission fees.
 - Only BS in Architectural Studies students are automatically admitted to the Master program without submitting an admission form or paying admission fees. However, students will be required to inform the Registrar's Office in case they would not like to pursue their graduate studies.
- For USEK students willing to pursue their Master degree at a new school or Non-USEK students willing to pursue their Master degree at USEK:
 - Graduate admission form, admission fees, interviews, portfolios and recommendation letters are mandatory for admission to all Graduate programs and apply for all applicants. Tests may apply to particular programs (refer to the concerned faculty/school).

B5. Admission Tracks and Specific Requirements

There are four tracks for admission into the Undergraduate studies program at USEK:

- Regular admission
- Admission on file
- Admission on title
- Admission by file transfer

Regardless of the chosen admission track, the candidate should abide by:

- General admission requirements;
- Language proficiency requirements;
- Specific requirements for the chosen program;
- Specific requirements for the chosen track.

B5.1 Track 1: Regular Admission

All applicants fulfilling the General Admission requirements and Language proficiency requirements are eligible for Regular Admission to sophomore within the predefined deadlines.

B5.2 Track 2: Admission on File

Admission on file is available to Grade 12 students. Grade 12 students should submit their completed files to the Admissions Office according to the dates determined in the Academic Calendar, available on the USEK website or from the Admissions Office. In case of linguistic deficiency in the teaching language of the target program, the file will be rejected.

The relevant Academic unit studies the applicant's file and decides on the admission on the following:

- The grades of the applicant during high school;
- The results of Redesigned SAT 1 (Math and Reading sections only) from the year before, if any;
- The mastery of the concerned languages;
- The letter of recommendation from the high school principal.

Applicants admitted on file are eligible to apply for a scholarship, according to the criteria specified by the regulations of granting Excellence Scholarships.

Remarks:

- The final admission of the applicant depends on passing the Lebanese Baccalaureate (or any other equivalent degree);
- Applicants to the Medicine program cannot submit an application for Admission on file. They are required to pass an entrance exam.
- Valid for the ongoing academic year

B5.3 Track 3: Admission on Title

Those applicants with High Distinction in the official Baccalaureate are eligible for admission on title for the academic year following the baccalaureate. In case of linguistic deficiency in the language of the target program, the file will not be accepted.

The chosen faculty/school considers the applicant's file and decides on admission based on the following:

- The mastery of the concerned languages;
- The high school grades of the applicant;
- The letter of recommendation from the high school principal;
- The official grades of the Lebanese Baccalaureate or its equivalent.

Applicants admitted on title can benefit from a scholarship with an amount up to the full cost of study (excluding registration fees and NSSF). Maintaining the scholarship beyond the first year is dependent on the student's AVG and the regulations of granting Merit Scholarships.

Remarks:

- If a correlation is not found between the score of the applicant in the official exam, their grades in high school and the assessment given by the school, the admission will be refused;

B5.4 Track 4: Admission by File Transfer

Applicants who have previously pursued academic studies in another university accredited by the Lebanese Government or in a technical studies institute, and wish to pursue their studies at USEK, should fill in an admission application and tick the “Transfer” box. Any transfer request should be submitted, through an admission application, **within at least four weeks** prior to the beginning of the registration period.

Transfer requests should be accompanied with all the required documents for admission to USEK, and with detailed descriptions of the potential transferable courses (specifying the number of hours: number of credits), in addition to the latest academic transcript; noting that the admission is applicable, in such case, based on the secondary school grades and the university transcript. Courses cannot be transferred if earned as an internship, thesis or seminar. Furthermore, applicants requesting a file transfer option may be required to take a Language Proficiency Test in English and/or Arabic according to the chosen program.

Following the evaluation of the file and the study of the applicant’s references by the hosting Academic unit and the Admission and Transfer Committee, all transferable courses will be validated by the letter ‘T’. The assessment of the credits likely to be transferred is based on the criteria defined by the academic regulations of the University:

- The course and its prerequisite/s must be validated by transfer
- The course validated by transfer must have the same credit hours as its equivalent at the Holy Spirit University of Kaslik;
- For the Undergraduate level, the minimum grade required in the university of origin and that is transferable is 10/20 on the French scale (70/100 according to the US one). In alphabetical rating scale according to the ECTS *and American credit system*, validated courses with A, B and C will be transferred. For the Graduate level, the minimum grade required in the university of origin and that is transferable is 80/100, a B in alphabetical rating.
- Courses validated for more than six years before the admission date, shall be reviewed by the related department and approved by the Admission and Transfer Committee so that they can be considered as transferred credits;
- The number of transferred credits cannot exceed 49% of the total number of credits required for Undergraduate and Graduate studies and a maximum of 12 credits for Freshman
- All transferred credits are declared and validated during admission to the Holy Spirit University of Kaslik - afterwards, no transferred credits can be added;
- If a student registers for a course at USEK that has already been transferred from another institution, this transferred course will be deleted from the transcript and replaced by the grade received in the course taken at USEK;
- Courses taken at USEK cannot be repeated at another institution and transferred back to USEK.
- Courses cannot be transferred if earned from an internship, thesis or practicum and degree minimum residency requirements is maintained.
- Applicant must not be under probation in the University of Origin.

The grade T will be given to the transferred courses and the student cannot repeat a transferred course by registering for its equivalent in the Holy Spirit University of Kaslik.

The Transfer File has to be submitted, along with all required documents, to the Admissions Office, at least four weeks before the beginning of the registration period.

Engineering courses, to be transferable, must be originating from ABET accredited programs. A transfer to the School of Engineering, to the programs of B.A. in Architectural Studies, to the Bachelor of Engineering Sciences – Food Engineering and to the Diploma in Agricultural Engineering is accepted only if a student is coming from a program from a School of Engineering, of Agricultural Sciences, and of Fine and Applied Arts recognized by the Order of Engineers and Architects. Candidates who wish to get a transfer to the Faculty of Engineering should necessarily sit for an English Proficiency test.

Transfer is not accepted for a student in a probationary situation.

B6. Admission Calendar

Applicants are responsible for consulting the USEK Calendar on the University website to check for the schedule of the admission test, or they can refer to the Admissions Office directly.

B7. Admission Validity

The admission is only valid for the ongoing academic year for Undergraduate and Graduate studies. The applicant who does not register for one or two semesters during the academic year in which he/she is accepted, will lose his/her right of admission and he/she will have to submit a new application form to be studied according to the existing admission conditions.

No admission is authorized for the Summer session, noting that the first registration at USEK should take place during Fall or Spring semesters.

The admission to the Medicine, Engineering (except Food Engineering and Agricultural Engineering) and Architecture programs are only valid for one semester.

B8. Special Admission Types

B8.1 Admission of Free Listener

The *Free Listener* status enables interested candidates to register at USEK in order to take courses, without any previous conditions of having a diploma/degree or undertaking a test. Applicants for the *Free Listener* status have to fill an admission application at the Admissions Office, along with a photocopy of the identity card and two passport photos. The file will be examined by the Admission and Transfer Committee in cooperation with the Head of the Academic Unit related to the chosen courses.

The *Free Listener* will receive, at the end of the semester or of the Summer session, a certificate of attendance or a transcript with the grade U (Ungraded). If the *Free Listener* does not attend the class as a regular student, he/she will get the grade "R" and will not receive any certificate. He/she does not benefit from the scholarship granted to students (scholarships, student Social Security). The *Free Listener* must pay all the fees of registration and studies at the beginning of the semester.

N.B.: Candidates for the status of Free Listener can register up to 18 credits at the Undergraduate level or 10 at the Graduate level per semester within the limit of available places in each course.

B8.2 Non-Degree and Visiting Students ⁽¹⁾

⁽¹⁾ A visiting student can be an international student coming to USEK not in the framework of an agreement as for the International Exchange Students.

The purpose of the application of non-degree and visiting students is to pave the way to their enrollment for a short period of study and not for a whole curriculum.

Applicants have to fill an admission application at the Admissions Office and submit the following documents:

- A completed application form;
- An official copy of school / university transcript with information about the rating scale;
- Two letters of recommendation required for visiting students: one from a school advisor and the other from a professor;
- A photocopy of passport or identity card (if local);
- Non-refundable registration fee of 100,000 LL or 67 USD.

To pay the costs of application and registration, applicants (s) who send their applications by mail should include a written check to the Holy Spirit University of Kaslik. The application fee can also be paid by bank transfer, in reference to the name of the applicant. Applicants who submit their applications personally should pay the expenses to the Accounting Office in the ground floor of Building A.

B8.3 Admission of a Visiting Student

This category applies to a student who is currently enrolled in a degree program outside Lebanon, and who seeks to take courses at USEK as part of a recognized study abroad or of an experience of exchange and who wishes to apply or to transfer credits for courses taken at USEK to the curriculum of his/her university of origin.

Admission is normally offered during two semesters if the student enrolled in Fall semester at USEK or for two semesters if he/she starts from the Spring semester (registration may be extended for another semester depending on the course offerings and the results of the courses taken at USEK; the petition to this effect is fundamental).

Applicants should note the following:

- Visiting students must normally complete their studies in their universities of origin;
- Visiting students can normally take up to 18 credits of the Undergraduate program or 10 from the Graduate program per semester;
- Visiting students must be enrolled in an Undergraduate or a Graduate program at a university recognized outside Lebanon;
- Students' file is examined by the University Admission and Transfer Committee;
- Students must meet the language requirements in English and French.

The exemption is given to applicants whose native language is English or French, or to those who register ONLY in Arabic language courses.

N.B.: *The admission at USEK as a Free Listener or as a visiting student does not entitle the student to a regular study program at USEK.*

B8.4 Admission of a Non-Degree Student

For a student who does not want to graduate:

This category applies to students enrolled in an academic program recognized in Lebanon, having completed at least two semesters (24 credits minimum) and who do not wish to enroll in a study program at USEK. The *non-degree student* may take up to 18 credits per semester. Admission is normally offered for two semesters if the student enrolled in the Fall semester at USEK or for two semesters if he/she starts from the Spring semester (registration may be extended to another six months depending on the range of courses and on the results of the courses taken at USEK. The petition for this is fundamental).

Candidates must accept the following:

- Students can normally take up to 18 credits of the Undergraduate program or 10 from the Graduate program per semester;
- Students must have a high school diploma, a high school certificate recognized by the government or a higher level of education recognized by USEK;
- Students must have completed at least two semesters at another university recognized by USEK;
- Credits taken at USEK will be considered in USEK diplomas if the student wishes to apply as a student. He/she will then be accepted following the admission criteria;
- Students must meet the language requirements in English and French.

N.B.: *An exemption may apply.*

B8.5 International Exchange Students

B8.5.1 Admission of Incoming Exchange Students

This category applies to students enrolled in a degree program abroad in one of the USEK partner institutions (list of partners <http://www.usek.edu.lb/en/international/agreements-and-collaborations-by-country>), who wish to transfer credits taken at USEK to their university of origin.

Admission is normally offered for up to two semesters (Summer session may be added), with the possibility of extension upon the approval of the home university.

Applicants must submit the following documents:

- A completed application form;
- An official copy of university transcript;
- One letter of nomination from the university of origin;
- A photocopy of passport or identity card (if local).

Applicants should also note the following:

- Incoming Exchange Students shall be enrolled in an Undergraduate or a Graduate program at a university that has a signed agreement with USEK;
- Incoming Exchange Students must be nominated by their home university;
- Incoming Exchange Students are exempted from paying the tuition fees at USEK unless otherwise stipulated in the agreement signed with the university of origin;
- Incoming Exchange Students can normally take up to 18 credits of the Undergraduate program or 10 of the Graduate program per semester. Taking additional credits must be approved by the relevant department chair knowing that the student must pay the tuition fees of the total number of additional credits;
- Incoming Exchange Students must meet all linguistic requirements of the requested course;
- Incoming Exchange Students shall complete their studies at their university of origin;

B8.5.2 Outgoing Exchange Students

This category applies to students regularly enrolled at USEK and who seek to take courses abroad as part of a recognized program (exchange program to one of USEK partners, special programs, scholarships) and who wish to validate at USEK the credits earned abroad. The mobility period can be of a maximum of two semesters (Summer session may be added).

Applicants should note the following:

- Outgoing Exchange Students must be enrolled and active in an Undergraduate or a Graduate program at USEK;
- Outgoing Exchange Students must complete a minimum of 30 credits for Undergraduate and 9 to 12 credits for Graduate studies at USEK before going abroad;
- Outgoing Exchange Students must have a good academic standing;
- Outgoing Exchange Students are under the obligation of registering USEK equivalent courses and covering the inherent tuition fees in due dates to ensure course recognition;
- Outgoing Exchange Students must normally complete their studies at USEK after the mobility period;
- Credits registered abroad by Outgoing Exchange Students will be considered to be transfer credits and will appear as Pass or Repeat (P/R) on the transcript.
- Outgoing Exchange Students cannot benefit from a Merit scholarship for the next semester, even if he/she fulfills all the required conditions.

B9. Reorientation

The reorientation process is applied when active students request a change of program as the university studies did not meet their expectations for their future career path.

In this case, the Admissions Office offers the needed guidance to current students to help them change their focus towards a most suitable major or program after dealing with the unwanted academic obstacles. Thus, students can find the necessary information about credits, transfers and the support and motivation to ease their transition which might be needed also in case of interruption of studies or a period of study abroad.

C. Registration

C1. Early Registration

During the sixth week of classes, educational orientation aiming at guiding students regarding their early registration is conducted within Academic units by the Head of the department and Academic Advisors.

Students wishing to make a change in the program must submit their application before the deadline set on the Academic Calendar.

During the eleventh week, early registration takes place online. The period given to the online early registration is similar to that attributed to common registration (one week).

Online early registration is conditioned by the following criteria:

- The courses of the current semester are considered successfully completed (in other words, registration in the courses with the prerequisites is done).
- All courses registration restrictions should be respected as defined in the course catalog.
- The student is entitled to a maximum registration of 18 credits in Undergraduate programs and 10 credits in Graduate programs.
- During the registration period for the following semester, the code "PR" of the early registration carried out by the student must be confirmed online, by "Complete Registration".
- A student who fails to confirm or drop his/her courses during the registration period will be subject to a penalty fee.
- If the prerequisite courses considered successful in the early registration are not successfully completed, the confirmation of courses attached therein cannot be made.
- By the end of the semester, the student in Undergraduate programs placed in a probationary situation will only validate his/her registration from 12 to 13 pre-registered credits. Students in Graduate programs will validate the registration of 6 pre-registered credits.

Non cancellation of early registration will be subject for a penalty fee. If students wish to cancel their respective early registration, they must send an email to the Registrar at registrar@usek.edu.lb to initiate their request.

C2. Registration

Course registration is done at the beginning of every semester or the Summer session, exclusively online according to the Academic Calendar. The student will have to confirm the courses chosen during the early registration period. For those who could not register within the established deadlines, it will be possible for them to undergo Late Registration during the Add/Drop period, but they will be subject to penalty fees.

For his/her first registration, the student confirms his/her choice of program in the Admissions Office or on the University website. After 24 to 48 hours, he/she can proceed with the settlement of the first payment of tuition fees at one of the banks listed in the admission application and on the University website.

The first installment of tuition fees includes: the registration fees, the National Social Security Fund fees fixed by the government, and the first term of tuition fees (the full table on the fees is available on the USEK website).

The amount of the first installment, fixed by the University, is similar for all students of the same program, regardless of the number of credits that the student is willing to register in, and even though he/she benefits from a financial aid (in this case, the financial adjustments will take place after the registration period). If the amount fixed by the University exceeds the tuition fees related to the student's semester (for example in case of a final year student), the student should then proceed to the secretariat of the related Academic unit who in turn will send an email to the Registrar Office who will proceed with the audit. He/she can then settle the first payment the next day.

Once the first payment of tuition fees is set up, the student can register his/her courses during the period defined by the Academic Calendar (the student should wait 48 hours at least after depositing the payment at the bank before being able to register his/her courses). The payment should therefore be paid within 48 hours before the end of the registration period. Otherwise, the student will have to undergo a Late Registration and pays a penalty for the amount announced during the registration period.

The student should consult in advance the timetable of the courses on the University website and register in his/her courses.

Steps to follow for course early registration / registration:

- Consult in advance the course offering on the USEK website (usek.edu.lb) and choose courses according to the chosen program. With the exception of final year students who have been issued exemption from

this rule by the Head of Department, approved by the Dean, the student is required to register in 12 credits at least at the Undergraduate level and 6 credits at least at the Graduate level.

- Meet, in case of a need, with the Academic Advisor to choose his/her courses.
- Proceed to the online early registration / registration on the Banner Self-Service during the fixed registration period in the Academic Calendar.

***N.B.:** During the Drop/Add period, the student should also consult his/her Academic Advisor. A student can Drop/Add any desired course online. A course in the course offering may be canceled for major administrative purposes at the end of the registration period. Students and teachers will be notified of its closure by the concerned authorities. The adjustment of registration may be done during the Drop/Add period.*

C3. Course Section Language

The University offers course sections in three languages: English, French and Arabic. While registering, the student should refer to the course section to make his/her choice:

- E: English section code
- F: French section code
- AR: Arabic section code
- Other languages: IT: Italian section code / CH: Chinese section code / PR: Persian section code / SP: Spanish section code / SY: Syriac section code / PT: Portuguese section code / LA: Latin section code / DE: German section code.

C4. Registration Requirements for Specific Courses

C4.1 Remedial Courses

- 1- Students enrolled in Hybrid or English programs and having to take 2 remedial courses:
 - a- 'ENG130' (9 credits) & 'FRN140' (6 credits) should enroll in both remedials **ONLY** with a total of 15 credits during their first semester.
 - b- 'ENG140' (6 credits) and 'FRN140' (6 credits), can register up to 18 credits (12 remedial credits included) starting their first semester.
- 2- Students enrolled in Hybrid or English programs and having to take 1 remedial course:
 - a- 'ENG130' (9 credits) could enroll in it solely in their first semester or with a combination of courses with a minimum of 14 to a maximum of 15 credits during their first semester distributed as follows:
 - ENG130 (9 credits), SRO215 (3 credits), SOC217 (2 credits) and an optional Sports course (1 credit)

Or

 - ENG130 (9 credits), FRN240 (3 credits), SOC217 (2 credits) and an optional Sports course (1 credit)
 - b- 'FRN140' (6 credits) or 'ENG140' (6 credits) should enroll in the course during their first semester.

Note: A hold will be applied on the students upon the completion of their registration to avoid any modification in the course or set of courses registered.

C4.2 Tutorship course

A Head of Department can ask the Dean/Director of the Academic unit to allow a student to follow one tutorship course, only when all the following conditions are fulfilled:

- 1) The student is registered in his graduation term;
- 2) The student could not validate this course on time, for legitimate reasons and this course is not offered in the semester during which the student might finish his/her program;
- 3) The course cannot be taken externally;
- 4) The Department has checked for the approval of a specialized teacher in the Department.

Notwithstanding the above:

- No failed obligatory course can be subject to tutorship, unless the concerned course cannot be offered anymore due to a modification in the program.

- A student cannot be allowed to follow more than one tutorship course in his/her entire program.

C4.3 Master Thesis

The Master thesis is worth 3 to 9 credits and can be completed in one, two or three semesters.

During the first registration for the Master thesis, the student registers for module 6XX A during a semester and pays the corresponding tuition fees.

After this first registration, the student:

- obtains a numeral grade (grade received upon the thesis defense);
- or
- obtains the grade IP and should register in the following semester for the module 6XX B (while paying only the registration fees).

After the registration for the module 6XX B, the student:

- obtains a numeral grade (grade received upon the thesis defense);
- or
- obtains the grade IP and should register for the module 6XX B, for the last time (while paying only the registration fees).

N.B.: A student can only register for his/her thesis for 3 consecutive times in total (6XX A; 6XX B; 6XX B). When he/she exceeds these 3 registrations, the student will be given the grade R and should, in case he/she wishes to reregister, submit a request for exemption to explain the reasons of his/her new registration request for a new thesis. The Academic unit council studies the request of the student, who, in case of a positive response re-registers for the module 6XX A, and has to pay the registration fees and tuition fees according to the number of thesis credits he/she is registered for.

A student can only register along with his/her thesis 6XXB one course of 3 credits maximum.

C5. Administrative Substitution of a Course

In exceptional circumstances, the Head of Department can ask the Dean/Director of the Academic unit to allow a regular student to follow a course other than the one included in the program, notably when this student is not able, for legitimate reasons, to follow this course as defined by the program, or when the course offering does not allow him/her to attend in the semester during which he/she might finish his/her curriculum. In this case, the course is replaced with another one of the same level within the same major and within the program's field of knowledge.

Notwithstanding the above:

- No failed obligatory course can be subject to administrative substitution, unless the concerned course cannot be offered anymore, due to a modification in the program.
- A student cannot be allowed to follow more than two substitution courses in undergraduate studies and one substitution course in his graduate studies.
- General Education courses cannot be substituted by major courses and *vice versa*.

C6. Cross-Registration

Any student at the end of his academic path may attend one or two courses in another university, after having obtained first the authorization of the Registrar Office, his/her Department and the approval of the Dean/Director of his/her Faculty/School. The student should pass by the Admissions Office to fill in the respective form and to submit the required documents.

Courses attended in another institution should be deemed equivalent to those of the current program; the equivalency decision being issued by the Admission and Transfer Committee.

In order to be able to follow external courses, the Undergraduate student must abide by the following conditions:

- The student must be registered in his/her last semester;
- The student must not have failed his/her course(s) before;
- The courses attended in another university, should not be taught within the student's original Academic unit during the semester in question;

- The Head of the department must send, to the Registrar Office, a written statement certifying that all requirements are met by the student;
- The Registrar Office authorizes, in writing, the cross-registration. This authorization is delivered by the student to the hosting university.
- A non-graduating student may be granted a special authorization to cross register a course in certain circumstances deemed necessary;

The final grade for each course should be directly reported by the host university, according to the grading system adopted by USEK, to the Dean/Director of the Academic unit who will report it to the Registrar Office. This grade (T) will be registered on the academic transcript and is accounted for with the remaining grades, when calculating the student's Grade Average and General Average per Semester; In addition to the registration fees of USEK, the student should pay all the necessary fees of the host university.

C7. Changes to a Registration

C7.1 Add/Drop

Once registration is closed, a student can, if he/she wants, modify the registration during the Add/Drop period (as stated in the Academic Calendar). In order to do so, the student can add or drop online any desired course. A student who performs Add/Drop has to maintain his/her status as a full-time student (a minimum of 12 credits for undergraduate studies and a minimum of 6 for graduate studies). No courses can be dropped during the Summer session.

C7.2 Withdrawal

After the Add/Drop period, every withdrawal from a course must be subject to a previously written request before the authorized due date, as fixed in the Academic Calendar. To this purpose, the student must submit a request at the Registrar Office. The deadline for the official withdrawal from a course is fixed, unless otherwise noted, at the 13th week of the semester (or 4th week of the Summer session). It is worth mentioning that an absence during midterms or finals does not lead, in any case, to the withdrawal from the course.

If a student is allowed to withdraw from a course, the latter will be displayed on his/her academic file with the grade W; the course fees cannot be reimbursed or deducted from the general fees the student has to pay. Furthermore, a withdrawal from a course does not lead to any modification in the student's University fees. In addition, a student, having withdrawn from a course during the semester, cannot apply for a scholarship of merit for the following semester, even if all other required conditions are fulfilled.

The withdrawal from a course will be refused if a student's credits per semester drop below the minimum number of 12 credits per semester for Undergraduate studies and a minimum number of 6 credits for Graduate studies.

C7.3 Term Withdrawal

If a student cannot complete a semester and has to withdraw from all his/her courses after the Add/Drop period for major reasons, such as serious health problems or exceptional family circumstances, the University administration can attribute the grade WW (Term Withdraw) to each course. In order to obtain a Term Withdrawal, the student has to submit the relevant official form from the Registrar Office. If the withdrawal from a course is not officially done, the student will be given the failing grade FW (Fail to Withdraw) by the teachers concerned, for every course at the end of the semester.

C7.3.1 Term Withdrawal and Fees

A student who gets a WW grade, will have to pay all his/her University fees, as they were calculated during his/her registration.

N.B.: A term withdrawal can only be granted to a student once during his/her university curriculum. A student cannot proceed with a term withdraw if he/she already interrupted his/her studies previously.

C7.4 Deregistration

Deregistration is the dropping of all courses during the registration and during Add/Drop period. During the registration and add/drop period, the student can drop all his/her courses. For current students, students who have recourse to deregistration, while they were registered during the previous semester/session at USEK, the deregistration request must be accompanied by a request for the interruption of studies. The latter must also be submitted to the Registrar Office via an appropriate form and the interruption of studies will be noted in the student's academic file.

C7.4.1 Deregistration and Fees

In case of deregistration during the Add/Drop period, the student can ask the Registrar Office for a refund. First term medical students cannot apply for a refund of first payment. Then, the entire amount of study fees, which have been already paid, will be refunded. However, the student has to pay a penalty, which amount is fixed by the University (to view the fees, consult the University website).

D. Tuition, Financial Aid and Scholarships

D1. Registration Fees

The registration fees for each semester are fixed by the University for all sections and Regional University Centers, and are non-refundable (excluding academic services and Summer sessions). The fees are available on the University website.

D2. Tuition Fees

The cost of a credit varies according to the level of studies and the chosen specialization. The complete table of fees is available on the USEK website. The cost of a credit is subject to change; the administration reserves the right to review and modify fees for the coming years. All likely modifications of a credit cost are reported in advance to students through bulletin boards, the University website and MyUsek. It is the responsibility of each student to keep well-informed with University news and announcements by regularly consulting these means of communication.

The fees are applied in all USEK branches. However, students registered in one of the three Regional University Centers automatically benefit from a 20% reduction on their tuition fees; this reduction does not include the fee for opening a file, the registration fee and the NSSF membership fee.

N.B.:

- *A student registered in any of the three Regional University Centers of Zahle, Chekka and Rmeich and, thus, benefiting from a 20% subsidization of his/her study fees, will have to pay the full fees pertaining to the course credits attended on USEK's Kaslik campus; without any subsidy if the same course is given in his/her home campus.*
- *A student registered in the Kaslik campus does not benefit from the 20% subsidization of his/her study fees pertaining to the course credits in one of the three Regional University Centers of Zahle, Chekka and Rmeich.*
- *If the student registered in any of the three Regional University Centers of Zahle, Chekka and Rmeich, benefits from a scholarship or social aid, the amount in question will be applied to the subsidized tuition fees.*

D3. Membership Fees to NSSF

Membership fees to the National Social Security Fund (NSSF), as fixed by the government, are annual. Students already affiliated to the NSSF, or an equivalent fund, are required to submit an exemption form at the NSSF Delegate Office to ensure that the fee paid in advance is credited to their account during the registration. The relevant form can be downloaded from MyUsek, the University Intranet and from the USEK website (usek.edu.lb). It should be completed and submitted before the end of the fourth week of classes; the date is fixed in the Academic Calendar.

D4. Payment Procedure

The student should pay his/her university fees in three installments per semester and two installments for the Summer session.

Failure to comply with payment installments, as stated in the Academic Calendar, will lead to a 5% financial penalty calculated according to the amount due. Students who do not settle their payment on time will not be able to continue with any administrative procedure.

It is the responsibility of each student to make sure that his/her tuition fees were paid within the deadlines established by the administration of the University.

D5. Refund

No refunds are granted unless in case of deregistration (refer to: Refund after Deregistration).

D6. Financial Aid

Faithful to the mission of the Lebanese Maronite Order, USEK is committed to help every Undergraduate student facing personal, relational, family, financial or medical difficulties without any discrimination related to religion, culture or nationality.

The Social Service Office proposes financial aid programs allowing the spreading out or the reduction of the tuition fees until the second year of studies. These donations are valid for one academic year, and are not automatically renewed. Applications must be submitted between April and June of the current year for the student to benefit from next year's reduction.

The office reserves the right to withdraw a granted financial aid in the following cases:

- Disciplinary action against the student;
- Student placed on probationary situation;
- Other reasons deemed plausible.

D7. Scholarships

D7.1 Merit Scholarships

Merit scholarships are calculated at the end of each Fall and Spring semesters. Qualified Undergraduate and Graduate students are notified by email (USEK student email).

All Merit Scholarship beneficiaries will have to pay the first installment of their tuition fees. The Merit Scholarship discount applies to the student's entire tuition fees, excluding registration fees and the annual National Social Security Fund (NSSF) membership fees.

Remark:

- The Merit Scholarship does not cover the Summer session.
- The Merit Scholarship does not cover the Pontifical Faculty of Theology degrees and teaching diploma.

Undergraduate Studies

At the beginning of each semester, the University grants merit scholarships to students who have completed a minimum of 30 credits at USEK (excluding Freshman and remedial courses) with a cumulative GPA $\geq 87/100$ in the Undergraduate Program and who meet the following criteria:

Cumulative GPA	Percentage
87.0 – 87.99	5%
88.0 – 88.99	10%
89.0 – 89.99	15%
90.0 – 90.99	20%
91.0 – 91.99	25%
92.0 – 92.99	30%

93.0 – 93.99	40%
94.0 – 94.99	50%
95.0 – 100	75%

Students who rank first in their respective School/Faculty will be granted a 75% Merit Scholarship.

N.B.: Students who rank first in each division of the Faculty of Arts and Sciences (Humanities, Social Sciences, Sciences, and Music) will be granted a 75% Merit Scholarship.

Graduate Studies

At the beginning of each semester, the University grants merit scholarships to students who have completed a minimum of 12 credits at USEK with a cumulative GPA $\geq 90/100$ and who meet the following criteria:

GPA (Graduate Studies)	Percentage
90.0 – 90.99	5%
91.0 – 91.99	10%
92.0 – 92.99	15%
93.0 – 93.99	25%
94.0 – 100	50%

Students who rank first in their respective School/Faculty will be granted a 50% Merit Scholarship.

N.B.: Students who rank first in each division of the Faculty of Arts and Sciences (Humanities, Social Sciences, Sciences, and Music) will be granted a 50% Merit Scholarship.

Remarks:

- Graduate programs offered in collaboration with other universities (HEC Montreal, Paris II, LL.M. in International and Comparative Law, etc.) are not included in the scholarship list.
- Financially supported graduate programs are not included in the scholarship list.

Merit scholarships are forfeited in any of the following cases:

- Academic probation
- Change of academic program
- Interruption of studies
- Course(s) Withdrawal (W)
- Term Withdrawal (WW)
- Course failure
- Part-time enrollment (less than 12 credits per semester for Undergraduate studies or less than 6 credits per semester for Graduate studies)
- Enrollment in an exchange program (grade P or R)
- Upon decision of the Disciplinary Council.

D7.2 Undergraduate-to-Graduate Merit Award

Based on USEK's commitment to make education affordable for all, our unique educational experience is defined not only by dedicated and expert faculty, but also by students who are self-motivated, talented and driven to succeed.

In recognition of exceptional academic accomplishments, USEK has established a new Merit Award as an investment in our bright young minds and our classroom environment.

This Merit Award is granted automatically to eligible students wishing to pursue a graduate degree under the following conditions:

- The students who rank first and second in each program will be granted a 50% and 25% scholarship respectively.

- b) This scholarship is valid for one semester only (the semester following the student's graduation). At the end of that semester, the rules and regulations of Graduate Studies scholarships will apply to the Merit Award recipient.
- c) If the student who ranks first does not apply for a Graduate program, the student who ranks second cannot take their place.
- d) If the student who ranks second does not apply for a Graduate program, the student who ranks third cannot take their place.
- e) Graduate programs offered in collaboration with other universities (HEC Montréal, Paris II, LL.M. in International and Comparative Law, etc.) and financially supported graduate programs are not included in the Merit Award list.

E. Assessment and Grading System

E1. The Grading System

E1.1 The Grading Table

Courses at USEK are graded on a scale of 100. The final grade given by the instructor is converted to a letter grade corresponding to U.S. 4 points grading scale, where the final cumulative grade is called a GPA. The grade point average (GPA) is calculated by dividing the total amount of quality points earned by the total amount of credit hours attempted. The grade point average may range from 0.0 to a 4.0.

Letter Grade	Quality Pts	Grade /100
A+	4.0	≥93
A	4.0	92-90
A-	3.67	89-87
B+	3.33	86-83
B	3.0	82-80
B-	2.67	79-77
C+	2.33	76-73
C	2.0	72-70
C-	1.67	69-67
D+	1.33	66-63
D	1.0	62-60
F	0	59 or below
IP	In Progress	
I	Incomplete	
W	Withdraw	
AW	Administrative Withdraw	
WW	Term Withdraw	
FW	Fail to Withdraw	
P / R	Pass / Repeat	
PR / RR	Pass Remedial / Repeat Remedial	
T	Transfer	
U	<i>Free Listener</i>	
G	Granted	

E1.2 Calculating the Average (AVG) and the Grade Point Average (GPA)

E1.2.1 Average (AVG)

The average (AVG) is calculated by multiplying the grade of each course by the number of credits of the course, then dividing the sum of the results (QPTs) by the total number of credits (AVG-Hrs). The highest grade in a repeated course is used in the calculation of the averages. Courses with indicators (A&E) are excluded from Earned (Ehrs) and Average (AVG-Hrs) credits.

E1.2.2 Grade Point Average (GPA)

All registered courses will be included in the computation of the student's cumulative Grade Point Average. The Grade Point Average (GPA) is the ratio of the number of points gained to the number of credit hours attempted.

The following is an example of a semester GPA computation:

COURSE	NUMERIC GRADE	LETTER GRADE	NO. OF CREDITS HRS		QUALITY POINTS		TOTAL
Course 1	61	D	3	×	1	=	3
Course 2	92	A	4	×	4	=	16
Course 3	75	C+	3	×	2.33	=	6.99
Course 4	79	B-	3	×	2.67	=	8.01
Course 5	59	F	1	×	0	=	0
			14				34

The semester GPA = Total semester quality points/Total semester credit hours attempted.

The semester GPA for the five courses stated above would be: $34/14 = 2.42$. Courses in which grades IP, I, P or R, and PR or RR have been given are not counted in computing the GPA. Similarly, W, AW, WW, FW, T, U, and G are not counted in computing the GPA.

The student has to ensure a minimum of 2.0/4.0 or a C on the Undergraduate level (3.0/4.0 or a B in Sciences and in Health Fundamental Sciences - Medicine) and 3.00/4.00 or a B on the Graduate level.

E1.3 Alphabetical Grading

Grade "A": indicates work of excellent quality. It is valued at four quality points for each credit hour.

Grade "B": indicates work of good quality. It is valued at three quality points for each credit hour.

Grade "C": indicates a satisfactory achievement. It is valued at two quality points for each credit.

Grade "D": indicates the minimum passing grade, and is indicative of poor performance. It is valued at one quality point for each credit hour.

Grade "F": indicates an unsatisfactory performance in the course. It has zero quality points. No credit will be added to the student's record.

"IP" for In Progress

The grade IP is attributed for a course in which the student is given additional time to complete all of its requirements. If it is deemed valid by the concerned teacher, in some exceptional circumstances, and after the approval of the Head of Department, the IP grade can be attributed to a course if it is administratively feasible. Therefore, the student is given additional time to complete all of its requirements. This delay should not exceed the deadline of the registration period of the following semester.

"I" for Incomplete

The temporary grade I is attributed by the teacher to a course when the student did not attend for the final evaluation, for justified and accepted reasons (not passing the final examination, internship report, presentation of final project, etc.).

On the grades transcript given by the teacher, the notation I is accompanied by the preliminary grade over 100 (i.e. 150, 160, etc.), which will then be considered as the final grade if the student does not fulfill his/her obligations, by the date limit fixed by the University Academic Calendar. It is impossible to change this grade; it is the responsibility of the student to pass his/her remedial examination or deliver his/her work on time.

"W" for Withdraw

The grade W is attributed to a course, when the student drops it within the allotted time fixed by the University Academic Calendar. This can be justified when the student considers that his/her mid-term grades will not allow him/her to pass the course; his/her average grade will not, therefore, be affected.

N.B.:

- A student cannot withdraw from a course if this requires him/her to exceed the deadline in order for graduation.
- Absence during mid-terms or finals does not lead in any case to withdrawal from the concerned course.
- A student who repeats a required course in his/her program for the third time cannot withdraw from it. He/she cannot withdraw from a remedial course if it is the second time he/she is repeating it.
- A student who exceeds the allowed number of absences must withdraw from the course; otherwise, the course grade will be assigned as FW or R or RR depending on the type of the course.
- A student who withdraws from a course during a semester cannot apply for a scholarship for the next semester, even if he/she fulfills all the required conditions.
- A student who withdraws from a course will have to pay all his/her University fees, as they were calculated during his/her registration. This means that a withdrawal does not lead to any modification of University fees.
- Withdrawal from a course may be rejected if the number of credits falls below the minimum of 12 credits upon withdrawal for Undergraduate studies and a minimum of 6 credits for Graduate studies. For the Summer session, the minimum number of credits is 3 credits.

“WW” for Term Withdraw

The grade WW is only attributed by the University administration when the student drops all his/her courses for major reasons keeping him/her from continuing the semester; such as, serious health problems, traveling, etc.

In order to obtain the Term Withdraw, the student has to officially apply for it by completing a specific form and submitting it to the Registrar Office. If the withdrawal is not officially completed, related teachers will give the student a “Fail to Withdraw” grade in every course.

N.B.:

- A student who gets a “WW” grade, will have to pay all his/her University fees as they were calculated during his/her registration; meaning that an administrative withdraw will not lead to any modification of University fees.
- A student cannot withdraw from a course if this requires him/her to exceed the deadline in order for graduation.
- A student who repeats a required course in his/her program for the third time cannot withdraw from it. He/she cannot withdraw from a remedial course if it is the second time he/she is repeating it.
- A student who withdraws from a course during a semester cannot apply for a merit for the next semester, even if he/she fulfills all the required conditions.

“AW” for Administrative Withdraw

This grade is only attributed by the University President or the Council of Discipline in case of violation of the regulations.

N.B.: A student who gets an AW grade, will have to pay all his/her University fees as they were calculated during his/her registration; meaning that an administrative withdraw will not lead to any modification of University fees.

“FW” for Fail to Withdraw

The FW grade is given for a course which the student stopped attending without having officially undergone the “Withdraw” procedure – or because he/she did not get the authorization to withdraw. This FW grade is taken into account when calculating the average grade and is equivalent to 40/100.

N.B.: A student who gets a FW grade will have to pay all his/her University fees. This means that a “Fail to Withdraw” grade does not lead to any modification of University fees.

Students who get the grade FW on all their courses during a semester will be excluded from their program of studies at the end of the semester.

“P” for Pass and “R” for Repeat

The grades P and R are given with particular courses, such as internships, etc. These courses are assessed with a non-numerical grade; as a result, they will not be taken into consideration while calculating the general average.

“PR/RR” for Pass Remedial / Repeat Remedial

This grade is attributed to the remedial courses (languages or mathematics courses).

“T” for Transfer

The grade T is given for validated transferred courses. A student cannot repeat a transferred course by registering for its equivalent in the Holy Spirit University of Kaslik.

“U” for Free Listener

The grade U is given for a course in which the student is registered as a free attendee, after the approval of the Head of Department and the Dean/Director. A *Free Listener* does not undertake the examinations of the course he/she is registered in. No grade can be converted into a “U” and vice versa. No “U” grade can be converted into a numerical grade. Failing to attend will result to an “R” grade.

“G” for Granted

The grade G is given for a number of credits of validated courses in the context of a diploma/degree, which means that the courses are granted and students pursuing a higher diploma/degree would not have to repeat them.

E1.4 Distribution of the Final Grade

The overall grade is usually distributed as per the following scale knowing that on these percentages can vary between courses; however, they are defined and announced to the students during the first given sessions of the course. Nevertheless, the evaluation criteria are mentioned in the course syllabus distributed to the students in the beginning of the semester.

- **Attendance and Participation:** 10% it encourages participant’s active discussions.
- **Continuous assessment:** 50% it includes projects, assignments, research papers, mid-term; these are central indicators for student integration and understanding of the material learned thus providing reinforcement of work learned in class and helps students to get an idea of the work pace for later.
- **End of semester evaluation:** 40% Final examination (cannot exceed 45% of the final grade)

N.B.: It is noteworthy that this evaluation is applicable for courses given as lectures “C”, Tutorial Classes “TD”, Practical Works “TP”, in addition to Courses and Practical Works “CTP”. As for Projects “P”, Theses “TH”, Corporate Internship or Medical Internship “S”, and Seminar “SM”, they sometimes follow a specific regulation limited to the final assessment of the course (presentation of the final project, thesis defense, internship report, etc.).

The required passing grade to validate each course of a certain program is mentioned in the in the University catalog. In general, the passing grade of an undergraduate course is D (60/100) or P and for a graduate course is C (70/100) or P. Some courses may require a higher grade in order to meet degree program requirements. The student can, for valid and justified reasons, be absent for a number of teaching hours equal to three teaching weeks (20% of the course’s number of hours; i.e. 9 hours (6 sessions of an hour and 15 minutes each) for a three credit course or 6 hours for a two credit course (4 sessions)).

Every student who exceeds the authorized limit of absences will not be allowed to present his/her final exam and will be given the grade FW (Fail to Withdraw).

The assessment of each requirement should be calculated over 100 and then balanced according to the percentage of each criterion, following the example below:

Evaluation Criteria	Grade over 100 Given to the Student	Final Grade over 100	
		Percentage	Obtained Grades
Positive Participation	90/100	10 %	9/10
Projects and Research	80/100	10 %	8/10
Continuous Assessment	85/100	10 %	8.5/10
Midterm Exam	85/100	30 %	25.5/30
Final Exam	90/100	40 %	36/40
Total			87/100 (A-)

Students who have failed a course requirement (exam, test, report, etc.) will be given the failing grade “Zero” for the requirement by the teacher. The sum of the obtained grades should reflect the learning outcomes.

E1.5 Disclosure of Grades to Students

Prior to the withdrawal deadline from a course, (date indicated in the Academic Calendar), a student has the right to know all his/her grades (participation, attendance, research and/or projects, midterms, quizzes, etc.) in order to decide whether he/she wants to withdraw from a course or not before the final exam. Therefore, it is necessary that the teacher discloses from 60% of the grades to the students before the 12th week of the semester, so they can decide whether they should continue with the withdrawal process.

The instructor is also required to give a qualitative feedback on the presentations prepared by the students and to advise them on the ways and means to advance and achieve the objectives of the course.

Students can obtain their final grade from the Banner Self-Service after they have completed the “Course Feedback Survey” (an assessment of the teachers of all their courses), before the deadline. If students do not meet this deadline, they will be obliged to complete the assessment in order to remove the “CFS Hold”. In the 13th week of the semester, students will be asked to complete this evaluation by email.

E2. Academic Standing

All students are expected to maintain certain standards of academic achievement while enrolled in the program. Students have to check their academic position at the end of each semester by looking at their Banner account.

E2.1 Academic Recognition

The university has assigned Academic Recognition policy enabling to identify and acknowledge students’ excellent and distinguished progress.

Undergraduate

Undergraduate students who complete at least 12 credit hours in a semester (not including summer), with a GPA in the range of 3.67 to 3.99, are placed on the Honor List and a GPA of 4.00 are placed on the Distinguished List.

The above applies only if students have no incomplete grades and a cumulative GPA above 2.00. Courses taken on a Pass/Repeat basis are not considered among the 12 credit hours.

Upon graduation, degrees are awarded with Honors, Distinction, and High Distinction according to the below:

<i>Undergraduate Academic Recognition</i>		
GPA	Grade / 100	Academic Recognition
3.67-3.99	87 – 89	Honors
4.00	90 – 92	Distinction
4.00	93 and above	High Distinction

Graduate

For Graduate students and upon graduation, degrees are awarded with Honors, Distinction, and High Distinction according to the below:

<i>Graduate Academic Recognition</i>		
GPA	Grade / 100	Academic Recognition
4.00	90 – 92	Honors
4.00	93 – 95	Distinction
4.00	96 and above	High Distinction

E2.2 Academic Probation

Students are placed on academic probation when their work has dropped below a satisfactory level, at any time, irrespective of incomplete grades or withdrawals.

A student is in academic probation if the student's cumulative GPA is:

- Less than 2.0 (70/100) for a student registered in a Bachelor Degree, a Bachelor of Engineering or a Diploma of Agricultural Engineering, excluding Summer Session.
- Less than 3.0 (80/100) for a student registered in a Bachelor of Science in Health Fundamental Sciences (Faculty of Medicine and Medical Sciences) or for a graduate student, excluding Summer Session.

During the Summer Session, the student in a probation situation has the right to register only in the failed courses.

Students taking intensive English courses are not subject to the normal probation rules. However, students may not stay in intensive English courses more than a total of two regular semesters and one summer, after which they must leave the university. They can come back only after passing the EEE or TOEFL.

A student on probation is advised to repeat courses in which he/she received a grade of F or less than D, as soon as possible, and may not carry more than 13 credits in a semester.

E2.3 Disciplinary Probation

A student may be placed on disciplinary probation upon decision of the Council of Discipline.

E2.4 Academic Suspension/Exclusion

A student is excluded from the program he/she is registered in for one of the following reasons:

- **School of Medicine and Medical Sciences:** A student is definitively excluded from the School of Medicine and Medical Sciences when he/she receives the second consecutive probation warning, except for Summer sessions.
- **Other Schools/Faculties:** A student is excluded from the department when he/she receives the third consecutive probation warning, except for Summer sessions in Undergraduate studies and the second consecutive probation in Graduate studies;
- If he/she fails to validate his/her academic program within the established time limit;
- If he/she fails a required course three times in Undergraduate programs and twice in Graduate programs;
- If he/she fails a remedial course two times in undergraduate programs and once in Graduate programs;
- If he/she fails/obtains the grade FW on all the courses during a semester following a non-official suspension of studies;
- If he/she suspends his/her education without officially informing the administration, by submitting the appropriate form to the Registrar Office.

A student who is excluded from the academic program can submit a change of program request to another program offered by USEK. However, the grade of his/her exclusion will still appear on his/her academic file. An administrative measure of temporary suspension can be taken by the University President.

E2.5 Administrative Suspension/Exclusion

An administrative measure of temporary suspension can be taken by the University President.

A student can be excluded from USEK, based on an administrative decision of the University President or the University Council of Discipline. The decision will define the nature of the exclusion and its implication on the academic level. The grade of a student's exclusion will appear on his/her academic file. The student will get the grade AW (Administrative Withdraw).

E5. Rules for Final Examinations

Students are expected to take final exams at the times scheduled on the Academic Calendar. Students will need their Student Card to enter the examination room and will have to sign a register of attendance.

Any cheating, or attempt to cheat, during the examination will inevitably lead to the annulment of the student's exam. The concerned student will not be entitled to a make-up exam (or for a second session for Law students). The proctor has the right to withdraw his/her copy and to ask him/her to leave before informing the Administration immediately. Additional measures can also be taken by the University Council of Discipline.

A student who does not show up for the exam or jury, for any reason, is given, by the teacher, the failing grade of **zero** or R/RR. If this absence is due to special justifiable circumstances, such as:

- Death of a family member or relative;
- Hospitalization, attested by a medical report from the hospital;
- Serious accident, attested by an official report from a sworn expert;

then the student can present a petition with supporting documents at the Student Affairs Office.

Law students, having benefitted from a make-up examination, cannot benefit from the 2nd session.

Such, free of charge, petitions must be presented to the Student Affairs Office within 24 hours after the missed exam. The request will be ignored in the case of a recurrence and a student who has showed up for the exam cannot, in any case, present a petition.

Midterm examinations will be organized during the semester for the concerned schools/faculties. The aforementioned rules for the final examinations also apply to the midterms.

E6. Request to Review a Grade

The student has the right to ask, within the deadlines set on the Academic Calendar, for his/her course final grade to be re-examined by submitting an online request or at the Registrar Office. After this period, no recourse, even a justified one, is possible.

A student can ask for the re-examination of two grades, at the most, per semester or Summer session. If the request is approved, the student will check the modified grade on his/her Banner account. If the request is rejected, the process fees will be automatically charged to the student's account.

The only acceptable requests for a grade review are as follows:

- In case a mistake occurred while adding up the grade;
- In case a mistake occurred while copying the grade.

The concerned teacher will write down his/her decision on the change of grade e-form, if necessary. After that, the e-form successively reaches to the Head of Department and the Associate Dean, in order to give their approval. In case of conflict, the request is submitted to the Faculty/Institute Council which will take the final decision. It is eventually submitted to the Registrar Office for processing.

F. Program and Campus Related Rules and Regulations

F1. Change of Academic Undergraduate Major or Emphasis

A student wishing to request a change of major or emphasis during his/her studies should submit a request at the Registrar Office according to the deadline set on the Academic Calendar. Any change of major or emphasis enters into force in the following semester according to the existing Catalog Year.

For changing major, the admission conditions related to the new major must be respected or else switching programs will be refused. The approval of the hosting Academic unit is required, according to the student's admission test results and his/her academic journey, is required.

A change of program to another section (French or English) is conditioned by: -Having the required language proficiency level of the requested section-Having validated at least 80% of the courses in the requested language-Not having failed a language remedial course of the current section.

A change to Engineering programs excluding Agricultural and Food Engineering is conditioned by the validation of a minimum of 30 credits and a GPA greater or equal to 80 (Required by the school).

A change of program to the faculty of Medicine and Medical Sciences is conditioned by having university level in the French and English languages or by taking the USEK French or English placement test (section B3.3 - Languages Remedial Courses rules and conditions apply).

Students have the right to switch major or emphasis once.

The credits of the initial major, related to common and equivalent courses, are validated by the new chosen major.

After changing the major, the average taken into consideration to determine the student's academic status (probation, obtaining the diploma/degree, etc.) is the overall Grade Average. The entire academic record of the student is displayed on the student's transcript.

The academic status of a student is calculated according to the number of credits validated by the new programs major and will be taken into consideration for the period during which the diploma/degree is being obtained.

F2. Declaration of Double Major

To declare a double major, students in good academic standing should submit a request at the Registrar Office. The request requires the approval of the Head of the department offering the primary major and the approval of the Head of the department offering the second major.

Students must meet minimal course and grade requirements, as determined by the Head of the department offering the second major, or have to go through the required admission procedure (when needed) in order to be accepted into the desired major.

A student can enroll in a double major under the condition of not having to validate any remedial course. He/she must define the priority program and the secondary program.

Within a program, the student can apply for another program that will be considered as secondary, in case he/she validated all the needed remedial courses. Therefore, he/she will have to pass the admission test of the new program.

Double majors have to include more than 50% of dissimilarity in the number of credits with the exception of the double major; Bachelor of Arts in Theology, Philosophy and Liturgy.

A student in a probation situation in his/her priority program cannot apply, simultaneously, to another program.

N.B.: *Medicine, Architecture, Engineering, Agricultural Sciences and Law programs cannot be secondary programs.*

F3. Declaration of Double Degree

To declare a double degree, students in good academic standing should submit a request at the Registrar Office after completing 30 credits in the first declared major. The request requires the approval of

the Head of the department offering the primary major and the approval of the Head of the department offering the second degree.

Students must meet minimal major course and grade requirements, as determined by the Head of the department offering the second degree, or have to go through the required admission procedure (when needed) in order to be accepted into the desired program.

F4. Declaration of Academic Minor

To declare a minor, students in good academic standing should submit a request at the Registrar Office. The request requires the approval of the Head of the department offering the primary major and the approval of the Head of the department offering the minor. However, no student can declare a minor in his/her first year of study and in the same discipline of his/her major.

Students must meet minimal course and grade requirements, as determined by the Head of the department offering the minor, to be accepted into the desired minor.

F5. Change of Campus

The student who wishes to change his/her campus, without changing his/her academic program, should submit a request at the Registrar Office, located in the University Kaslik campus, by the end of the 13th week of the semester at the latest. This procedure must be followed in order to switch from a Regional University Center to the Kaslik campus or vice versa.

Students already registered in one of the three Regional University Centers who benefit from a 20% reduction on their tuition fees, will not benefit from this grant, once registered in the Kaslik campus. However, students already registered in the Kaslik campus will be able to benefit from the 20% grant, when switching to one of the three Regional University Centers.

F6. Interruption of Studies and Re-admission

A student who wishes to temporarily suspend his/her studies must submit a request to the Registrar Office. During the interruption of studies, the concerned student is considered as an "inactive student".

Students who interrupted their studies for less than two years and are willing to pursue again their curriculum at USEK are granted automatic re-admission to their major, after the submission of a Readmission request, as long as the interruption is not due to academic probation or disciplinary exclusion.

Students who interrupted their studies for more than two years and are willing to pursue again their curriculum at USEK, shall submit a re-admission request to the Registrar Office. The previously earned courses will be subject to re-assessment, in alignment with the University Catalog, by the concerned department.

Students who interrupted their studies and earned credits in another Higher Education Institution during the interruption period may submit a request for credits transfer to the Registrar Office, in accordance with the rules and regulations of Admission on File Transfer.

N.B.: *An Interruption of studies can only be granted to a student once during his/her university curriculum.*

G. Graduation Requirements

G1. General Graduation Requirements

The graduation requirements for degrees offered vary between the levels of Undergraduate and Graduate studies, in addition to specific criteria related to the type of degree granted within the same level.

The graduation criteria for the Undergraduate students include reaching the required number of credits, fulfilling the minimum and maximum duration of studies that vary from 3 years (excluding Freshman year) to 7 years, passing all the required courses, fulfilling all the General Education requirements, having a total grade average not less than 70/100 (75/100 for the Engineering programs excluding Agricultural) and not being in probation.

The graduation criteria for Graduate students include reaching the required number of credits, fulfilling the minimum and maximum duration of studies that vary from 2 semesters (1 year) to 8 semesters (4 years), passing all the required courses, drafting and defending his/her thesis, having a total grade average not less than 80/100 and not being in probation.

For Transfer students, the total amount of external credits added to the credits transferred upon the student's admission, shall not exceed 49 % of the total required credits. The courses attended in Lebanon, even though in another university, should not be taught within the student's original Academic unit during the semester in question.

The program requirements for all degrees are described in the University Catalog.

G2. Duration of Studies and Courses Validation

The recommended durations of study (excluding Freshman year), specified in the educational contract of each academic program, are defined for the Undergraduate degrees as follows:

- **Bachelor Degree:** between 3 years and 5 years, consecutive.
- **BA in Theology:** between 5 years and 7 years, consecutive.
- **Bachelor of Engineering:** between 5 years and 7 years, consecutive.
- **Engineering Diploma in Agricultural Engineering:** between 5 years and 7 years, consecutive.
- **Bachelor in Health Fundamental Sciences:** between 3 years and 4 years, consecutive.
- **Master:** between 2 years and 4 years, consecutive.
- **Diploma in Interpretation:** between 2 years and 4 years, consecutive.
- **Doctor of Medicine M.D.:** between 4 years and 6 years, consecutive.

G3. Issuing Degrees

To certify that a student has succeeded in a program, USEK delivers 1 diploma/degree on parchment. The parchment is labeled in both Arabic and English languages.

However, fees, which are available on the University website, are required for each certified document from the related authorities. Therefore, a student has to pay these fees at the Students Accounting Desk for every request for an official document (and/or a true copy):

Official registration certificate (in English, French and/or Arabic).

Official diploma certificate (in English, French and/or Arabic).

Official academic transcript (delivered in English only).

N.B. Students enrolled in accredited programs at USEK shall receive an additional certification from the accrediting organization upon graduation.

G4. Graduation Procedure

At the end of each semester, the University proceeds with the graduation of the final year students who have met the degree requirements.

However, students have the right to postpone their graduation in case they were willing to increase their GPA or finalize a Minor. In order to do so, students should submit a request at the Registrar Office to postpone the graduation procedure as soon as they receive the notification of the ongoing graduation process. The Academic unit to which students are affiliated should approve the suspension request.

G5. Procedure for Issuing Diplomas/Degrees

In their diploma request (parchment, degree certificate, academic transcript) presented online or to the Registrar Office, students should make sure the personal data included in their file (name, surname, date and place of birth, etc.) is correct, and then, in case of error, proceed with the necessary corrections (especially uppercase, lowercase, accents, spaces). Students are required to submit legal documents justifying their modifications. If this is not the case, the parchment will be automatically printed and a financial penalty will be applied to any request for modification.

G5.1 Collection of a Diploma/Degree (Parchment) and Certificates

Students should collect their degrees and certificates from the Registrar Office. They are required to collect in person, submit their national identity card and sign a special register.

A student who cannot collect these documents in person, for any reason, could delegate a representative, by completing the Letter of Authorization to Release Information or by sending an email to the Registrar official email address registrar@usek.edu.lb.

National and international mailing services are ensured, in case of need, through the Registrar Office. USEK reserves the right not to deliver a student's degree and certificates if he/she is in any irregular situation with the Library and/or the Financial Administration.

G5.2 Diploma Replacement Request (Duplicate)

Graduates who have misplaced, lost or damaged their original diploma may request a replacement one, in person only, by completing the Replacement Diploma form available at the Registrar Office.

If the diploma is lost, the graduate requesting the duplicate must certify on the Replacement Diploma Form that this duplicate will be returned when the original is found. In case the original diploma is damaged, evidence must be provided. The new diploma will be issued with the same date as the original diploma.

The newly issued diploma will include the wording "Duplicata" stating that the document is a replacement of the originally issued one.

The diploma replacement fee is payable by cash (in person only), by check made payable by MasterCard, or Visa.

The replacement diploma will include the signature of the incumbent concerned authorities.

If the graduated student wishes that the replacement diploma displays his/her name in a different spelling than the one mentioned on his/her original diploma or the one in his/her records, he/she must submit a Personal Information Correction Form along with the Replacement Diploma Form. The Personal Information Correction Form must be accompanied by the official documentation of his/her new legal name (court order, passport or Lebanese ID).

A new parchment may be issued when any typo mistake except those related to the graduate's personal information is found in the original diploma. The new parchment will be handed over to the concerned person, in exchange for the originally issued one without any additional fees.

G6. Initiation of Procedures and Official Documents Withdrawal

The student or any person can initiate a request at the Registrar Office or send an email to submit a request. Once the document is ready, the student will receive an email and SMS and the document fee must be settled at the Students Accounting Desk. The student may, if he/she wishes, delegate a third party to retrieve the requested documents. He/she will then mandate officially the Registrar Office by a signed letter or by sending an email to registrar@usek.edu.lb

N.B:

- All requested official documents will remain available at the Office of the Registrar till the end of the ongoing term. Subsequently to the said, all uncollected documents will be disposed of and if unsettled, the fees will be charged to the designated student's account balance (current students only).
- All outstanding amount should be settled prior requesting any official document.

H. Student Responsibility and Ethical Conduct

H1. Positive Participation

Positive participation is required for courses, practical activities, directed activities, laboratory sessions, etc.

Absent students are held responsible for the work done and/or announcements made during the skipped session of a course.

Students who exceed the allowed number of absences must withdraw from the course; otherwise, the course grade will be assigned as FW or R or RR depending on the type of the course.

A student who does not show up to all his/her courses for more than three consecutive weeks will be considered by the administration as having resigned; he/she will be given the grade FW (Fail to Withdraw) in all his/her courses and will be consequently excluded from his/her academic program at the end of the semester. However, the student can present a readmission demand to the Academic unit in order to continue his/her education, starting from the following semester (a readmission form must be presented to the

Registrar Office). The Dean of the Academic unit gives his/her opinion; however, the readmission request can be refused by the Admission and Transfer Committee.

If the student justifies the exceptional circumstances of his/her absence to all the courses for three consecutive weeks, he/she can apply for an Administrative Withdraw by presenting the appropriate form to the Registrar Office.

H2. Academic Integrity

Academic integrity is at the core of University learning and is compromised by plagiarism and fraud.

H2.1 Plagiarism

Plagiarism consists of someone pretending that other people's ideas and statements are his/her own. For example, plagiarism cases comprise:

- Copying texts or parcels of texts without indicating they are borrowings and without citing their source;
- Omitting to cite the source of a paraphrased or summarized text.

H2.2 Fraud

Fraud cases include for example the following situations:

- To present, under one's own name, a text partially or entirely prepared by someone else;
- To borrow, buy, sell or lend a text that is to be presented for a course;
- To submit the same text in more than one course;
- To receive or give help or information from, or to, another student during a test or an exam;
- To use unauthorized material during a test or an exam;
- To present, during a test and under one's own name, a text partially or entirely prepared by someone else;
- To submit false information in a work or a report;
- To obtain the questions of a test or exam in an unauthorized way;
- To pretend to be someone else during a test or an exam or let someone else do the test or the exam.

A student who commits plagiarism or fraud will be given the grade FW on the plagiarized work or the exam during which the fraud was committed. The teacher must report this fraud to the Dean/Director, who will have to evaluate its gravity before deciding whether he/she wants to submit the case or not to the University President; the latter will therefore be able to refer the case to the Council of Discipline.

H3. On Campus Code of Ethics

This Code of Conduct on Campus of the Holy Spirit University of Kaslik is the complement of institutional and academic rules defined by the statutes and regulations in force at USEK. It determines the main rules, which are to be observed by all on the campuses of the University, in order to generate and maintain a common life of respect, and to create an amenable atmosphere conducive to studying. It defines certain necessary limits and imposes certain duties and obligations.

USEK students on campus are required to comply with all instructions, established by this Code of Conduct.

H3.1 Political Activities

Political student elections are definitely forbidden at USEK. In order to get permission for the below, within the different campuses of the University, prior written consent of the Vice President for Community Life, in response to an explicit prior written request, is needed:

- Public political debates
- Political meetings
- Billposting of political posters or posters related to a political party
- Distribution of political leaflets or leaflets related to a political party

H3.2 Use of the University Name, Its Acronym and Its Logo

The University name, used in any language, as well as its acronym "USEK" and its logo are the intellectual property of the University and are registered trademarks, protected by law. Any complete or

partial use of the University name, its acronym or its logo requires a prior written authorization from the Vice President for Community Life, under penalty of sanction.

H3.3 Billpostings and Leaflet Distribution

Distributing or billposting leaflets, notices and press releases by the members of the University community, within the various USEK campuses, is subject to the prior consent of the Student Affairs Office (or the administration for the University Regional Centers) and must not disturb the flow of teaching, research and administration activities.

Any distributed or displayed document must include the signature of its author and the seal of the Student Affairs Office (or the administration for the Regional University Centers), which represents its approval of the distribution or billposting. The author of any distributed or posted document, within USEK, remains the only person in charge of its content and/or ideas.

Document distribution or billposting by any foreign person must be subject to a prior authorization from the Vice President for Community Life (or the Director of the Regional University Center). Outside of the designated posting areas, any billposting, whatever its nature, is forbidden and can bring penalties against its author.

H3.4 Security and Hygiene

Members of the University community and any duly authorized persons can access the USEK campus. The Security personnel at the campus access zones are entitled to request, for precautionary measures, that all vehicles as well as individual bags are searched. Students are required to show their student identification cards to the security personnel, in order to access the campus. The collective premises and equipment of the University are placed at the disposal of the students, within the limits of availability and office hours. However, users cannot access them unless under the supervision of an administrative or educational official, who is clearly appointed in accordance with the regulations in force. Users are required to be familiar with the security regulations and rules, which are posted within the premises. Documents and devices, placed at the disposal of the students, must not be taken out of the University premises (specific rules apply to the Library, in this regard).

It is strictly forbidden to smoke on the premises, introduce substances harmful to health and public order, and consume alcohol within the University.

H3.5 Found Objects

The members of the University community, motivated by a spirit of solidarity and responsibility, are required to hand in found objects to the Student Affairs Office (or to the administration for the Regional University Centers). Moreover, in case of a loss, the Student Affairs Office should receive the depositions of the concerned persons. USEK cannot be held responsible for the loss or theft of an object belonging to a person within the campus.

In the case of a suspicious object, it is recommended that it should not be moved; University security agents should be informed as soon as possible.

H3.6 Behavior and Dress

Any damage caused to the premises and equipment of the University, as well as to private property belonging to a third party, thefts or theft attempts and verbal or physical violence within USEK, constitute behavior, which according to its severity, can result in an appearance of the author(s) before the University Council of Discipline.

The use of mobile phones is forbidden during courses, practical work, examinations and laboratory sessions, etc.

A suitable and decent dress is required within the University. Political signs worn ostentatiously or intended to trigger protests, are not allowed, be it of clothing or any other type.

H4. Appeal Procedure in the Application of Academic Regulations and Petitions

The student who considers that he/she was wrongly accused, or his/her request has not been executed within the regular course of the university bylaws, can appeal against the decision taken on his/her behalf.

In order to do so, the student must refer to the Student Affairs Office in order to write a petition.

The student will have to submit his/her petition at latest three days after the release of the official notification of the contested decision. This petition is submitted free of charge.

The application of every appeal outcome is suspended until it is confirmed by the Student Affairs Office (SAO) which will communicate the relevant decision, by email to the student's USEK email, generally, within seven working days after receiving the petition. The SAO' decision for special cases is reviewed by the Deputy President for Students and thus is final and binding.

Appendix 1. Practical Information for Students

1. USEK Student Card

This card identifies students registered at USEK. Therefore, they should always carry it with them, as it is necessary to access the University campus, classrooms, Library, examinations, conferences, sports center, etc. Students should collect their card from the Registrar Office, after the registration period. While waiting for his/her card to access the campus, classrooms, Library, etc., the student should show his/her registration form.

Duplicate: In case of loss of the card, a duplicate can be made by the Registrar Office and the student should participate in the reproduction cost fixed by the University and indicated on the University website.

Validity: After graduation, the USEK Student Card remains valid. Alumni will be able to access the campus by showing their ID cards on all USEK gates.

2. USEK E-mail Account

Every student is issued with a unique USEK e-mail account which is the official means of communication between the University administration, faculty members and students.

Once the registration is completed, an USEK e-mail account will be created automatically as follows:

FName.InitialOfFather'sName.LName@net.usek.edu.lb

N.B: For security reasons, students should change their default password.

Access to the email account is made available through connecting to "Webmail" which link is available on the University Intranet *MyUSEK* or through the USEK website. In case of problems or for further information, students can refer to the IT Service Desk.

3. Access to Banner Self-service

All students enrolled at USEK automatically benefit from access to the University Student Information System, the Banner Self-Service, which allows students to pre-register/register online, consult their academic transcripts, course catalog, course offering) as well as the financial account summaries.

The username used to access Banner Self-Service is the Student ID and the Pin code, the same password used to login to USEK e-mail.

Access to the Banner Self-service is made available through connecting to "Banner" which link is available on the University Intranet *MyUSEK* or through the USEK website. In case of problems or for further information, students can refer to the IT Service Desk.

4. MyDegree

USEK students enrolled starting Fall 2017(201810) can benefit from MyDegree, the Student Advising and Degree Audit platform. MyDegree is a comprehensive solution, powered by Ellucian Degree Works that helps students and their advisors to successfully negotiate the curriculum and graduation requirements.

MyDegree is accessible from any browser by entering: mydegree.usek.edu.lb or through the MyDegree link on the University website and Intranet *MyUSEK*. A student can log in using the same username and password as their USEK email.

5. Moodle E-Learning Platform

All USEK students automatically benefit from access to the Moodle E-Learning Platform adopted by the University to allow them to follow their courses in an interactive manner, rich in resources (posters, books, links, URLs, etc.), and activities (homework, forum, chat, tests, etc.).

The student can access the Moodle E-Learning Platform by clicking on the link in the University Intranet *MyUsek* and website, using his/her USEK account.

A user's guide can be accessed through the *e-learning* link on the University website and Intranet *MyUsek*.

6. Mahara E-Portfolio Platform

USEK adopted the e-Portfolio platform to help students, and also teachers and staff, in the process of creating a dynamic and engaging digital portfolio where evidence will be held of their professional achievements and developments, personal and educational.

7. Parking Information

USEK student parking lots are free of charge and accessible to all currently enrolled students.

Opening hours: Monday till Friday, from 7:00 am till 10:30 pm.

The student parking lots can be accessed using the student's active ID card.

Students are not allowed to park longer than the specified opening hours without the proper authorization. Doing so, the student will lose his access privileges to the parking for a definite period of time.

In order to access the parking (entry and exit), the student should use only his/her student ID card. Trying to enter or exit the parking using another student ID card, the student will lose his access privileges to the parking for a definite period of time.

For safety reasons, cars will be searched.

Students are invited to properly park in the designated parking spots.

Students parked in the parking lots are required to comply with the parking regulations and Code of Conduct displayed at the entrance of the parking.

Not abiding by the parking rules and regulations may lead to a permanent loss of entry to the parking lots.

The University will not be responsible for any theft or damage to vehicles parked in the parking lots.

Students can refer, at any time, to the Director of Campus Safety and Security to inquire more about the parking and its regulations.

USEK reserves the right to change the parking policy at any given time and without prior notification.

8. USEK Counseling Center

The USEK Counseling Center (UCC) is dedicated to all the students of the Holy Spirit University of KASLIK, whether on campus or in Regional University Centers. It provides many services, including crisis intervention and orientation, short-term counseling, workshops, and psychoeducational programs such as raising awareness and prevention.

UCC's mission is to provide confidential, ethical, innovative and high-quality care that addresses the developmental, relational and emotional concerns of students. The main focus is to help our students through personal transitions and adjustments associated with university life.

9. USEK, Attentive to its Students' Comments

Within the framework of the development of teaching and learning process and administrative services, the Holy Spirit University of Kaslik encourages its students to share their suggestions or complaints and to participate in evaluations.

All students can send us their suggestions or complaints regarding the administrative functioning of the University as well as the quality of the provided services at the Student Affairs Office or by writing to administration@usek.edu.lb

10. An Evaluation System Available for Students

Students are required to fill, on the BLUE evaluation system adopted by USEK, the evaluation of each course they have completed during a semester. They cannot access their final grade without filling this evaluation.

This evaluation revolves around the following criteria, using a scale from 1 to 4:

- General evaluation of the course
- Teaching organization by the teacher
- Educational abilities of the teacher
- Evaluation of the learning method adopted by the teacher
- General opinion of the course and the teaching method

N.B.: *This evaluation is strictly anonymous and confidential.*

Students are also required to fill the BLUE evaluation “On-Campus Well-Being” at the end of each semester. This evaluation revolves around the administrative services provided by the University: student life, student services, library, restaurant, communication and telecommunication, etc.

Finally, all final year students having fulfilled the requirements to obtain their diploma are required to fill the “Graduation Survey” evaluation when they launch their diploma/degree request at the Registrar Office.

Doctoral College Regulations

Article 1: Introduction

The purpose of these regulations is to define the structure, the conditions pertaining to the organization, the access and the development of studies required for the preparation of a thesis in order to obtain the degree of Doctor in USEK.

Article 2: Doctoral College

§1. A Doctoral College has been established within USEK, responsible for the coordination between Doctoral Schools and the follow up of doctoral students, preparing them for professional and academic integration. The Doctoral College contributes to the coordination and the coherence of doctoral studies within the different Faculties and Institutes of related disciplines, representing a Doctoral School for Sciences and Technology and another for Human and Social Sciences.

§2. The President of the Doctoral College is appointed by the President from among the tenured faculty members holding the academic rank of Professor. He is assisted by two coordinators of the Doctoral Schools (a specialist in Human and Social Sciences and another in Sciences and Technology), both shall hold the academic rank of Professor, and by an administrative unit called "Secretariat of the Doctoral College¹".

§3. The Doctoral College consists of a Council composed of the President of the Doctoral College, Coordinators of the Doctoral Schools and Heads of the Doctoral Commissions in the different faculties. This Council shall meet twice a year at least upon the convocation of the President of the Doctoral College. A quorum of 2/3 of the members is required to hold the Council's meeting.

§4. The Doctoral College Council is responsible for:

- defining the general applicant selection criteria;
- deliberating over the admission of applicants;
- organizing and promoting doctoral studies as well as ensuring their quality;
- promoting university partnerships;
- ensuring the supervision quality of doctoral students by units and research groups;
- working with research centers to initiate research teams;
- encouraging scientific contacts and exchanges among doctoral students;
- ensuring the respect and implementation of the doctoral studies regulations as well as the Thesis Charter, and propose amendments, if necessary;
- organizing the doctorials, for the presentation of the doctoral students' papers which will be published in the *Proceedings of the Doctorials*.

§5. The decisions of the Doctoral College are taken by the absolute majority of the legal members. In case of parity, the President has the casting vote.

Article 3: Doctoral Schools

§1. Two Doctoral Schools are established in USEK. They include the different Doctoral Commissions of related disciplines and are divided into Sciences and Technologies, and Human and Social Sciences.

§2. The University President appoints the Coordinators of the Doctoral Schools from among the tenured faculty members who hold the rank of Professor, for one renewable year.

§3. Coordinators of the Doctoral Schools are responsible for:

- the implementation and follow-up of the Doctoral College policy in the concerned disciplines;

¹ Cf. Meeting of the USEK Council – MOM no. CU 1711/2010.3

- the promotion of coordination of teaching and activities among the different Doctoral Commissions of related disciplines.

Article 4: Doctoral Commissions

§1. A Doctoral Commission is established in each faculty with doctoral program. The doctoral program within institutes is attached to the concerned faculty. In this case, a faculty member from the institute is automatically a member of the Doctoral Commission.

§2. Each Doctoral Commission is managed by a Head appointed by the President, on the proposal of the Dean, from among the tenured faculty members of the concerned faculty having at least the academic rank of Associate Professor.

§3. The Doctoral Commission is composed of two members at least of the tenured faculty members having at least the academic rank of Associate Professor. These members are appointed by the President on the proposal of the Dean.

§4. The Director of an institute attached to a faculty proposes to the President the name of the Doctoral Commission member having at least the academic rank of Associate Professor.

§5. This Commission shall:

- prepare, in accordance with the admission requirements stipulated in article 5, a written test (and oral, depending on some specializations), to evaluate the ability of the applicant to pursue doctoral studies. This test covers the following fields:
 - language skills;
 - general knowledge;
 - familiarity with the relevant literature;
 - methodological skills.
- examine the applicants' files and give an opinion as to their admission;
- plan seminars; this planning should be approved by the Dean;
- ensure the scientific follow-up of doctoral students and check their regular attendance during the whole period of their doctoral program;
- evaluate regularly the quality of the doctoral student's scientific work and the progress of his/her research;
- inform the Doctoral College annually about the progress of work undertaken by doctoral students;
- propose the members of the thesis jury to the Dean of the faculty;
- provide the acquisitions of the Main Library in the disciplines related to research;
- take part in determining the research axes and in organizing conferences involving doctoral students.

§6. Decisions of the Doctoral Commission are taken at the absolute majority of its legal members. In case of parity, the Head has the casting vote.

Article 5: Admission

§1. Only those who hold a Research Masters' degree or an equivalent diploma, and who show an appreciable academic level² may apply for admission and register for the admission test, whose date is fixed by the University's academic calendar. Any applicant whose GPA in the Masters' degree is equal to or

² The equivalent degree shall be obtained from the Commission of Equivalences in the Ministry of Education and Higher Education.

greater than 85/100, according to the American grading system (equal to or greater than 14/20 according to the French grading system), may also apply for admission.

§2. The applicant shall also:

- show proof of all the academic years previously completed;
- submit two recommendation letters issued by teacher-researchers;
- submit a duly completed application enclosing all the required supporting documents;
- submit a brief proposal of the expected research areas and the prospective topic;
- have at least a GPA of 85/100 in the Masters' program;
- pass the admission exam. The USEK graduates should also pass this test. Only applicants who are authors of two articles published in an indexed journal with a signature ranking of the said articles among the three top positions, are exempted of this test.

§3. Applicants to doctoral studies may not apply for admission on the basis of a transfer file.

Article 6: Registration and Re-registration

§1. Each applicant, accepted in the doctoral studies program, shall register in the same semester following his/her admission, or in the following one, since admission remains valid for two consecutive semesters. If the applicant does not register within the established deadlines, he/she shall reapply for admission and re-pass the relevant test, without having to open a new file.

§2. As soon as admission is validated, all doctoral students should register their doctoral thesis, every semester, according to the relevant acronym and code.

§3. Following initial registration, each applicant shall re-register his/her thesis at the beginning of each semester, to be maintained in his/her studies, even if, during a certain semester, he/she is not attending any course or seminar. In addition to the registration fees and the course credits, the student shall install each semester tuition fees corresponding to 7.5 credits, assigned to the thesis.

§4. A doctoral student has the right to interrupt his/her studies once, and only for one semester; interruption must be approved by the Thesis Director and Head of the academic unit concerned. As soon as he/she returns, he/she shall fill in a readmission form (Rf. *Interruption of Doctoral Studies Request Form; Readmission to Doctoral Studies Request Form*). If he/she is absent for more than one semester, he/she will be excluded from the program. In order to return, the Ph.D. student will require an admission procedure (not a readmission procedure).

§5. Following the opinion of the Thesis Director and the Head of the Doctoral Commission, the Doctoral College may exclude from the program a doctoral student whose progress in the work is deemed unsatisfactory, or has exceeded, without prior approval, the number of years assigned to doctoral studies. (Rf. *Notification of Expulsion from Doctoral Studies Form*)

Article 7: Thesis Director³

§1. Starting the initial registration of the applicant, the Head of the Doctoral Commission, following the approval of the Dean, appoints a Thesis Director, responsible for the scientific follow-up of the student's work. This director, generally proposed by the applicant, is chosen from among the tenured faculty members, unless otherwise specified by the President, and shall hold, at least, the academic rank of Associate Professor. He/she supervises the research conducted by the doctoral student and his/her thesis. The prior approval of the President of the Doctoral College is required for the co-direction of the

³ The appointment of the thesis co-director is subject to the provisions of Article 7 (cf. Meeting of the USEK Council held on May 13th, 2009- MOM no. 695).

thesis if the nature of the work necessitates so. The co-director may be selected, if possible, from among the tenured faculty members or may be a teacher-researcher from outside USEK. He should hold, at least, the academic rank of Associate Professor.

§2. The Thesis Director shall hold at least two meetings every semester with the doctoral student. At the end of each semester, the Thesis Director is required to present to the Head of the Doctoral Commission an evaluation report of the research conducted by the doctoral student under his/her supervision. The report on the state of the student's progress is attached to the evaluation report of his/her supervisor.

§3. A faculty cannot supervise more than four theses at the same time, unless otherwise previously stated by the President.

§4. Any plan to change the Thesis Director shall be justified and communicated by the Head of the Doctoral Commission to both the Dean and the President of the Doctoral College for approval. (Rf. *Change of Thesis Director Request Form in Doctoral Studies*)

Article 8: Thesis Charter

The respective obligations of the Thesis Director and the doctoral student are explained in detail in a thesis charter outlined by the Doctoral College in accordance with the principles exposed set out in these regulations.

Article 9: Submission of a Thesis Proposal

§1. At the end of the first semester of registration, or the latest during the following semester after the initial registration, and unless otherwise allowed by the Head of the Doctoral Commission for a third eventual semester, the doctoral student shall write a thesis proposal of at least 20 pages to be submitted to his/her Thesis Director. It includes:

- definition of the research area;
- detailed problem statement;
- rationale;
- literature review;
- description of the adopted methodology;
- preliminary plan;
- selected and commented bibliography.

The final topic should be sent to the secretariat of the Doctoral College.

§2. Following the approval of the Thesis Director, the Head of the Doctoral Commission calls the doctoral student for an oral interview related to his/her thesis proposal. The Head of the Doctoral Commission may be assisted by an assessor, selected from among the tenured faculty members, if the nature of the subject necessitates so.

§3. Following the approval of the Thesis Director and the Head of the Doctoral Commission, the doctoral student shall, during the semester following his/her initial registration, submit his/her subject and the thesis proposal to the secretariat of the Doctoral College in accordance with the submission procedure required by the Doctoral College. (Rf. *Thesis Proposal Submission Request Form*)

§4. The secretariat of the Doctoral College registers the topics in a special record and publishes on the University website the list of doctoral students and the chosen topics.

Article 10: Structure of the Doctoral Program

§1. The doctoral studies curriculum is composed of 60 credits divided as follows:

Doctoral Program	Number of credits	Grading
Thematic program, of two seminars at least, proposed by the Doctoral Commission (organized according to the academic profile of the doctoral students) Methodological program of a seminar	9 credits	P ⁴ /R (Pass, Repeat)
Common program proposed by the Doctoral College dealing in general with multidisciplinary themes (one and/or two seminars)	3 or 6 credits	P/R
Doctorials and publication of the relevant Proceedings	3 credits	P
Thesis and academic defense	45 credits	/100
TOTAL	60 credits	

§2. The minimum duration to achieve the doctoral studies is six semesters, as from initial registration. A semestrial extension, of maximum four consecutive semesters, even if the student changes his/her research topic (Rf. *Change of Doctoral Thesis Topic Request Form*), may be granted by the President of the Doctoral College, following a report and a justified opinion from the Thesis Director and the Head of the Doctoral Commission. Following this deadline, the topic is deemed cancelled and the doctoral student is excluded from the program. (Rf. *Registration Extension Request in Doctoral Studies Request Form*)

Article 11: Nomination and Composition of the Thesis Jury

§1. Following the approval of the Thesis Director, the Head of the Doctoral Commission proposes two *rapporteurs* to the Dean. The approval of both the President of the Doctoral College and the President is required for this nomination. One of the *rapporteurs* at least is chosen from the faculty members from a university other than USEK. The two *rapporteurs* automatically become members of the jury and shall deliver their report within a deadline of 30 working days.

§2. The jury, proposed to the Dean by the Head of the Doctoral Commission, is composed of a minimum of five members; two of them should not be from USEK. Out of the five members, who constitute the Jury, at least four of them should hold the academic rank of Associate Professor. The President of the Jury, who can at the same time be the thesis director, must hold the title of Professor.

§3. Prior to communicating the thesis to the *rapporteurs*, the jury shall be approved by both the President of the Doctoral College and the University President. (Rf. *Thesis Jury Composition Request Form*)

Article 12: Thesis Submission

§1. The doctoral student is not allowed to submit his/her thesis before completing and validating all his/her credits of doctoral training, and not before publishing two scientific articles in indexed journals as the main author, or presenting two scientific papers within the framework of one or two international and specialized seminars.

§2. The approval of the Thesis Director as well as the written opinions of both *rapporteurs*, are communicated by the Head of the Doctoral Commission to the President of the Doctoral College, along with

⁴ The grade P (Pass) is \geq to 85/100 according to the American grading system (14/20 according to the French grading system).

the *Thesis Submission / Defense Form*, duly completed. The President of the Doctoral College validates then the thesis submission. (Rf. *Thesis Submission / Defense Form*)

§3. The doctoral student shall submit 8 copies of his/her thesis at the secretariat of the concerned academic unit, as well as a digital copy at the secretariat of the Doctoral College, in accordance with the procedure of submission required by the Doctoral College.

§4. A certificate of thesis submission is delivered to the doctoral student by the secretariat of the Doctoral College.

Article 13: Thesis Defense

§1. The doctoral student is informed in writing by the secretariat of the Doctoral College of the date of his/her thesis defense.

§2. The thesis defense shall take place two months at least after submitting the thesis to the secretariat of the Doctoral College.

§3. The thesis defense is public, unless otherwise exceptionally stated by the President.

§4. An announcement for the thesis defense is issued by the secretariat of the Doctoral College and posted in the different academic units, ten days at least prior to the date of the defense.

§5. The thesis defense, as well as the deliberation, cannot take place unless all the jury members are present. The deliberation is held behind closed doors.

§6. Following the deliberation, the jury members shall fill and sign the record of thesis defense. The President of the jury writes the minutes of the thesis defense co-signed by all the jury members who attended the defense.

A duplicate of these minutes is attached to the diploma. The minutes shall indicate the grade obtained by the student, as well as the distinction in accordance with the following scale:

Grade	Distinction
85	Honorable (or " <i>cum laude</i> ")
90	Highly honorable (or " <i>magna cum laude</i> ")
95	Highly honorable with praise (or " <i>summa cum laude</i> ")
100	Highly honorable with praise and recommendation for publication

For the distinctions "Highly honorable with praise" or "Highly honorable with praise and recommendation for publication", the unanimity of the jury members is required.

Article 14: Appeal

Until the nomination of the jury, the doctoral student can submit to the Doctoral Commission any disagreement he/she may have with his/her Thesis Director. The Doctoral Commission will listen to each of the litigant parties. Its decisions can therefore lead to an appeal to the Doctoral College at USEK.

Article 15: Plagiarism

Plagiarism refers to the insertion, in an academic and scientific work, of textual extracts, iconographic documents, ideas or analyses, of other authors, by representing them as one's own original work, either by appropriation of the said texts, documents or ideas of others, or by omission of the correct reference of others' texts, documents or ideas and their sources.

Plagiarism represents a serious misconduct of an ethical nature. USEK, believing in the transmission of knowledge as primarily related to ethics, autonomy, interdisciplinarity and transparency, considers plagiarism as a violation of the academic and scientific work integrity in universities. It is therefore

subject to punishment, in this case to student expulsion, annulment of the Bachelor, Master or Ph.D. degree, and even criminal prosecution, if applicable.

USEK reserves the right to review every research work (reports, projects, dissertations, theses), by submitting them to a plagiarism detection software and/or to any other appropriate means⁵.

It is understood that when a doctoral student is caught in the act of plagiarism after reviewing his/her work, and that his/her thesis is deleted, it is no longer possible for him/her to submit a new application for admission to doctoral studies at USEK⁶.

Ratifications:

16/05/2009	Article 6
07/12/2010	Article 2.2
21/12/2011	Articles 2.4, 5, 6, 7, 9, 10, 11, 12 and 13
08/02/2012 & 05/12/2012	Article 15
21/05/2013	Articles 6, 7, 11, 12
09/10/2013	Article 2

⁵ Cf. Meeting of the USEK Council on 8/2/2012

⁶ Cf. Meeting of the USEK Council on 5/12/2012

Study Programs by Faculty

General Education Requirements

Rooted in its institutional mission and its commitment to faith, welfare of the human being, human and spiritual values, and respect of cultural and religious pluralism, the General Education program at USEK reflect the values of its founder, the Lebanese Maronite Order, and the teaching of the Catholic Church on universities.

General Education program aims to provide students enrolled as undergraduates with value learning, intellectual inquiry and to cultivate particular skills to become thoughtful and engaged and active citizens of the country, the region and the world while bringing them to a critical and appreciative understanding of religious tradition, ethical theories and moral development.

To this end, at least 30 credits of the undergraduate studies curriculum are devoted to General Education that includes basic general knowledge, common and proper to USEK, while taking into consideration that students who are enrolled in professional fields such as sciences and engineering should be exposed to the humanities and social sciences and students enrolled in humanities fields should be aware of natural sciences and quantitative reasoning:

- **English & French Communication (3 to 6 credits)**
- **Religious Sciences (3 credits)**
- **Quantitative Reasoning (3 to 9 credits):** Mathematics / Statistics / Information Technology
- **Civic Engagement (2 credits)**
- **Sports (1 credit)**
- **Arts & Humanities (3 to 6 credits):** Ethics and Justice / Arts / Philosophical Inquiry / Language & Literature
- **Behavioral, Social Sciences & History (6 to 9 credits):** Psychology, Sociology & Politics / History / Entrepreneurship.
- **Sciences & Health (3 to 9 credits):** Biology / Chemistry / Physics / Agriculture / Nutrition / Environment / First aid and Emergency care.

Moreover, through these 30 credits of General Education, the university seeks to make its students good citizens of the future, actively engaged in the development of societies, empowered with a sound culture, possessing know-how as well as humanism, and contributing to the establishment of a better world.

Institutional Learning Outcomes:

Through USEK General Education, students will be able to:

- Engage in fundamental questions of faith and justice.
- Identify, reflect upon, integrate, and apply different arguments to form independent judgments.
- Collect, interpret, evaluate, and use evidence to make arguments and evidence-based decisions.
- Apply knowledge and tools from various disciplines in order to identify and address intellectual, ethical, and practical problems of relevance to the contemporary world.
- Communicate ideas and arguments through clear writing and speech.
- Identify information needs, locate and access information, and critically evaluate sources.
- Collaborate intellectually and creatively with diverse people.
- Engage in the creative process and think critically about, its products, and its cultural traditions to support society.

English & French Communication | 3 to 6 credits

ENG240 ⁱ	English Communication *
FRN240 ⁱⁱ	French Communication **

Religious Sciences | 3 credits

SRO211	Introduction to the Bible
SRO213	Religious Pluralism and Dialogue
SRO214	Christian Presence in the Middle East
SRO215	Social Teachings of the Church
SRO216	Religion and Politics
SRO218	The Church and Mass Media

Quantitative reasoning | (3 to 9 credits)

refer to program curriculum sheet for specific major requirements

Mathematics 3 credits	
MAT216 MAH216	General Mathematics (or any equivalent course)
Statistics 3 credits	
STA220 STS220	Probability and Applied Statistics
Information Technology 3 credits	
CSC204	Information Technology & Networking (or any equivalent course)

Civic engagement | 2 credits

Civic engagement 2 credits	
SOC217	Citizen and Civic Engagement

Sports | 1 credit

SPT	Sports Education
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Arts & Humanities | (3 to 6 credits)

refer to program curriculum sheet for specific major requirements

Ethics and Justice 3 credits	
SRO217	Bioethics
DRT214	Human Rights
HUM345	Pedagogical Movements
Arts 3 credits	
AVC203	Music and Film Thematic
AVC204	Introduction to Contemporary Cinema
AVS202	Initiation to Theatre Practices
ARS216	Introduction to Artistic Expression
DAA241	General History of Art
PHO224	Introduction to Photography
THT280	Introduction to Acting
MUS200	Musical Initiation
MUS202	Musical Listening and Appreciation
MUS222	A General History of Music
Philosophical inquiry 3 credits	
PHI201	Introduction to Philosophy
PHI210	Greek Philosophy
PHI212	Philosophy of Earth
Language & Literature 3 credits	
LFR210	Myth and literature

ⁱ mandatory to all students

ⁱⁱ mandatory to all students enrolled in hybrid programs (French + English)

ELL315	Public Speaking
ESP215	Introduction to the Spanish Culture
CHI215	Introduction to the Chinese Culture
ALL215	Introduction to the German Culture
ITL200	Introduction to the Italian Culture

Behavioral, Social Sciences and History |(6 to 9 credits)

refer to program curriculum sheet for specific major requirements

Psychology / Sociology / Politics 3 credits	
PSY201	Introduction to Psychology
HUM248	Arab World and Civilization
HUM258	Societies and Environment
SOC201	Introduction to Sociology
SOC210	Introduction to Anthropology
SOC211	Youth and Society
POL211	Introduction to Political Science
POL212	Introduction to Geopolitics
POL213	Introduction to International Relations
RIN205	Anthropology of Travel
History of Lebanon 3 credits	
HIS215	Lebanon in the Ancient Period
HIS220	Lebanon in the Medieval Period
HIS225	Lebanon in the Modern Period
HIS230	Lebanon in the Contemporary Period
HIS235	Phoenician Language and Civilization
MUS243 ⁱⁱⁱ	History of Lebanese Music
Entrepreneurship & Innovation^{iv} 3 credits	
MGT225	Foundations of Entrepreneurship

Sciences & Health | (3 to 9 credits)

refer to program curriculum sheet for specific major requirements

Everyday Biology 3 credits	
BIO211 BLG211	Cellular Biology (or any equivalent course)
Everyday Chemistry & Physics 3 credits	
CHM210 CHE210	Fundamentals of Chemistry (or any equivalent course)
CHM212 CHE212	General Chemistry (or any equivalent course)
PHY210 PCS210	General Physics (or any equivalent course)
Nutrition 3 credits	
NTR211	Introduction to Nutrition
Environment / Agriculture 3 credits	
BIO228	General Botany
GAG303	Introduction to Ecology and Environment
First Aid and Emergency Care 3 credits	
SIN244	First Aid and Emergency Care

ⁱⁱⁱ Reserved for students in the Faculty of Music

^{iv} Students who do not have entrepreneurship course in their curricula should complete a minimum of 3 credits in entrepreneurship & Innovation

General Education Courses Descriptions

ENG240 English Communication 3 cr.

This course is designed to upgrade student proficiency in the English language. It offers guidance in critical reading and instructions in writing to develop clear, well-organized prose. It emphasizes the writing process with an introduction to rhetorical strategies, such as compare and contrast, cause and effect, and argument, through the integration of the four language skills (listening, speaking, reading and writing).

FRN240 French Communication 3 cr.

The main objective of this course is to prepare the students to carry out, in French, specific tasks in the varied domains of the social and academic life through the acquisition of communication, linguistic and cultural knowledge and the elaboration of real learning strategies.

The objectives and content of the course are defined with respect to the goals of the Cadre Européen Commun de Référence pour les Langues. Consequently, the pedagogical process of the course will be privileging the action-based approach that involves authentic communication tasks: writing and oral essays, in all (personal, professional or public) fields which will engage the student in an authentic situation of communication.

SRO211 Introduction to the Bible 3 cr.

The goal of this course is to introduce students to biblical theology, based mainly on the subject of divine-human alliance. Through responses to the history of geographic and historic progression, particularly pertinent to us since Lebanon is a part of the Holy Land, the issue of inspiration, revelation and canonicity of sacred texts, the presentation of literary genres and direct contact with biblical texts, will give students a general idea about the divine-human process promised in the Book of Genesis and accomplished by Jesus Christ. The Bible, a book said to be hard to understand and sometimes impossible to even be considered as credible (especially in the Old Testament, which remains inaccessible), is made approachable in this course because it introduces us, not only to the face of God the Teacher who never tires of understanding the “ungrateful” people, but also the Loving face of God who insists on establishing an alliance with the whole of humanity even though they crucified his Son. Students who finish the course will acquire the understanding that each biblical story is a reflection to their own story with the “Good God”.

SRO213 Religious Pluralism and Dialogue 3 cr.

In Today’s world, interfaith dialogue cannot be ignored as a main need of communication among the world’s religions especially since violent acts and genocides in the name of religion are unfortunately becoming a reality.

“Religious Pluralism and Dialogue” course is designed to introduce students - intellectually and actually - to different religions within the same society, where religious people can interact freely and live peacefully side-by-side.

During the semester, the main topic to be discussed is how to turn an encounter into dialogue. This will be achieved by building a complete understanding of dialogue as a style of communication. In addition, a systematic typology of approaches will be introduced aiming to show the results of interfaith dialogue and to clarify the dynamics under religious pluralism.

Through this course, students are invited to cross into worldviews of Jewish, Christian and Muslim neighbors in order to perceive the real similarities and differences with their own perspective.

SRO214 Christian Presence in the Middle East 3 cr.

This course will introduce students to the extensive history of the Churches in the Middle East, their vocation and their current situation. Knowledge about this subject is fundamental for the Proclamation of the Gospel, the quality of the testimony, ecumenical dialogue and conviviality in the Lebanese context. The main goal of this course is to provide the students with the elements and tools for serving the Church and the world.

The Christian presence in the Middle East finds its meaning in the vocation and mission vested in our churches issued from a surprising plurality. The proclamation of the Gospel in this region of the world depends on ecumenism and interreligious dialogue which somehow constitute two major components of the subject of this proclamation. The challenges are significant, given the complexity of the current

situation in which the Christians in the Middle East are struggling. These challenges are discussed both in the Apostolic Exhortation of Pope John Paul II at the end of the special meeting of the Synod of Bishops for Lebanon, entitled *A New Hope for Lebanon* (1997), and in various pastoral letters by the Council of Catholic Patriarchs of the East, in particular those of Easter 1992 entitled *The Christian presence in the East: Testimony and Mission*, Christmas 1994 entitled *Together Before God for the Good of the Individual and Society* (the coexistence between Muslims and Christians in the Arab world), and Easter 1999 entitled *The Ecumenical Movement "May Them All Become One"*. Analytical reading of these documents is likely to ensure better reception of the content in the ecclesial community and give the Christian presence in the Middle East its full meaning.

SRO215 Social Teachings of the Church 3 cr.

This course serves as an introduction and examination to basic concepts and methods necessary in social ministry of the Church today. It reflects Gospel values of love, peace, justice, compassion, freedom, service and community in the context of modern social problems.

The goals of this course are to increase students' understanding of the concepts of catholic social thought and of concurrent developments in social theory more generally and to apply these understandings and skills to specific societal and cultural settings.

SRO216 Religion and Politics 3 cr.

The ambiguous relationship between religion and politics dates far back to times and eras in human history. This ambiguity is caused by the two specific models for this relationship, based on the limitation of the understanding of religion to the religious institution and doctrine which is summed up by the religious institution in its interpretation. When a given authority meets another one, and a certain doctrine encounters another doctrine, such as policy, confusion about the nature of the relationship will happen. On the other hand, there is another reality, specifically undervalued in the East, which is that religion is an internal requirement in human life and societies. This requirement is widely and clearly addressed in the books of thinkers, as they discover that religion is a constituent idea in human existence and a source of inspiration, and see that religion is about revealing the human history and the history of people and communities. In this context, the image of the relationship becomes different. Confusion is then unveiled, and the relationship moves from exclusion to dialogue, especially in the political sphere, according to the saying of one of the biggest jurists and political philosophers of our time, Bockenforde: "The liberal secular state lives on premises that it cannot itself guarantee".

These elements are the focus of our attention in this course.

SRO218 The Church and Mass Media 3 cr.

In a world that is becoming secularized, where Christianity is marginalized and where language is not common, the Church, custodian of the Gospel (Word, Voice and Image of God) has something to say to the communication's world (speech means, sounds and human images).

In parallel, the Church would need the media to deliver to this secularized world her message of salvation.

- With the increased importance and development of the social media it is important to know the Church's doctrine regarding the world of mass communications. What are, in a comparison, and in practical cases, the positions of other religions (Islam, Judaism) vis-à-vis of these media?
- What is the best way for the Church to fulfill its mission of humanization and evangelization through the mass media and communication tools (word, sound, image)?
How can she develop an appropriate communication strategies to deliver its message to Christians and non-Christians?
- For their part, how the so called new media (those of the digital age) have to be at the service of peace, human rights, freedom, human dignity and dialogue between religions and cultures?

This course is an answer corpus, theoretical and practical, for this multifaceted problem.

HIS215 Lebanon in the Ancient Period 3 cr.

Students will be introduced to the ancient history and antique archeology of Lebanon, including the main historical events and the archeological sites that make this period important for Lebanon. Students will present, through written and material testimonies, the diverse civilizations and the cultures of Lebanon, having gained knowledge and experience through working on archeological sites and studying several

themes: arts, crafts, trade, religion, politics, and society. The period examined, distributed over six chronological phases, starts with prehistory and ends at antiquity/the preByzantine era.

HIS220 Lebanon in the Medieval Period 3 cr.

Students are introduced to the history of medieval Lebanon, a very important period, which begins with the Arab-Muslim conquest of Lebanon in 636 and which ends in 1516 with the victory of the Ottomans over the Mamelukes. Students will become familiar with research while using primary sources.

HIS225 Lebanon in the Modern Period 3 cr.

The history of modern Lebanon extends from the date of the Ottoman victory over the Mamelukes during the battle of Marj Dabek in 1516 to the beginning of the First World War in 1914. Students will learn chronologically about the great periods and events in Lebanon's history, as well as the reign of the Maan and Chehab dynasties, and both Caimacamas, Moutasarifiya (from 1861 to 1915), and the evolution of Lebanese society.

HIS230 Lebanon in the Contemporary Period 3 cr.

This course covers the history of contemporary Lebanon from the eve of World War I until the present day. This history includes the formation of the State of Lebanon and the struggle to maintain its integrity and independence. Lebanon was the first political entity established in the Near East since the 16th century. The roots of its political institutions were built during the Mutasarifiya, under the guarantee of major powers. The Lebanese political entity was confirmed through the declaration of the Lebanese Republic in 1926 and its independence. Independent Lebanon, since 1943, has experienced periods of stability and prosperity as well as periods of disturbance and sociopolitical agitation on the local scale, depending on regional and international rivalries.

HIS235 Phoenician Language and Civilization 3 cr.

This course focuses on the first stages in human history where writing began to take forms shapes. The Phoenicians were the first to invent the alphabet and the letter with vowels and consonants although in an embryonic manner. The objectives of this courses are summarized as such:

- Help students rediscover the Phoenician alphabet: importance, value, ramifications and influence upon subsequent civilizations.
- Highlight the influence of the alphabet on cultures of various peoples: Greeks, Egyptians, Chaldeans, Assyrians, Nabateans, Arabic and others in various regions of the Near East.
- Understand the origin of many present alphabets to include Nabatean, Palmyri, Thamoudean, Aramean and others.

Grasp and appreciate the role the Phoenicians through this invention have played in the development of world cultures, international relations, trade and many forms of science and arts.

MUS243 History of the Lebanese Music 3 cr.

This course is designed to:

1 - Sensitize students to Lebanese folk music.

2 - Make them aware of the danger that threatens this music: a heritage endangered. The disappearance of the songs with the disappearance of the circumstances and opportunities serving their *raison d'être*. The disappearance of the 'old', guardians and deliverers of the tradition. A heritage uncollected, not recorded in a scientific way.

3 - Let them know the diversity of forms: mostly unwell known and unknown forms.

4 - Study Poetic-musical internal structure of each form of traditional song.

MAT216 General Mathematics 3 cr.

This course provides the solid basics needed by students to be able to handle their specialty courses. Topics covered include: function of a real variable, elementary functions, Taylor's expansion, simple integral and methods of integration, differential equations, multivariable functions, continuity, partial derivative, the chain rule, differential, introduction to double integrals, methods of integration, matrix calculus, determinants, and linear systems.

STA220 Probability and Applied Statistics 3 cr.

This course prepares students for the practical use of probability and statistics in the biomedical field (agronomy, chemistry, biochemistry, nutrition, medicine, etc.). Topics to be covered are: elements of

descriptive statistics, population, statistical units, frequency distribution, and characteristics of central tendency and dispersion. The course also covers these aspects in detail: probability and combinatorics, conditional probability and Bayes' formula, applications, discrete and continuous random variables, expectation and moments, the weak law of large numbers, empirical frequencies and basic probability laws (Binomial, Multinomial, Poisson, Normal) and asymptotic behavior, the law of large numbers, sampling and estimation, and an introduction to the use of hypothesis tests, and the Chi-2 contingency table.

CSC204 Information Technology & Networking 3 cr.

This course introduces the basics of the integration of information technology and networking in professional life. Subjects treated include: application software; systems software; system unit; Excel spreadsheets; HTML language; physical architecture of a network; internet; internet services; internet protocols (TCP/IP, HTTP, FTP, SMTP et POP); the IPV4 addressing classes; and applications.

SOC217 Citizen and Civic Engagement 2 cr.

The course aims to teach USEK students notions, concepts and practical applications indicative of a civic and citizenship commitment which would contribute to the development of society.

This course is built on theoretical and practical learning areas as follows: a) Acquiring the concept of commitment and its forms (contract, charity work, activism, promise, voluntarism, giving, love of the other, etc.); b) Adopting the fundamental values of citizens such as: freedom of religion and expression, justice, equality, togetherness, family and social solidarity, patriotic and world collective identity, the place of religion in society, etc. ...; c) Integrating the components of social life: democracy, laws, rights, civil society, communal life, social and community diversity, participation in political and public life, elections, individual, institutional and collective security, municipal activities, union activities, etc...) d) Addressing and dealing with social issues such as sustainable development, community health, social discrimination, work ethics, the integration of people with special needs, etc. (A description of performed observation and action is provided with the course, based on concepts covered in class).

SRO217 Bioethics 3 cr.

More and more, human beings have acquired power over nature due to sciences development and techniques. As a result of biology progress, he is trying to master health problems, reproduction and genetics. As for an essential question: Is all possible desirable?

This biological - techno - scientific upheaval which is causing an effective medicine meet another socio-cultural and ideological upheaval that has influenced the representations of life and death, health and sickness, care and preventive care, curative and palliative treatment... These changes are causing a huge social phenomenon that was materialized with bioethics term in 1971.

DRT214 Human Rights 3 cr.

This course aims to introduce students to the concept of Human Rights, since its appearance in history.

It presents, initially, the concept of law in the variety of its dimensions, and focuses on the development of charters related to the rights of the human person notably since the Cyrus Cylinder to the Bill of Rights of the man and Citizen (1789).

Second, this course focuses on the socio-political, philosophical and theological conditions that favored the emergence of the Universal Declaration of Human Rights (1948).

A study from the principles of this Declaration will be developed to effectively sensitize the student to the concept of rights of the human person.

This course examines the acceptance of the Declaration and its application in different countries, particularly those hostile to its goals and aims.

HUM345 Pedagogical Movements 3 cr.

This course is intended for any student wishing to keep abreast of contemporary pedagogical thinking through the work of educationalists that have marked our age (Dewey, Montessori, Decroly, Claparède, Cousinet Freinet). In this regard, the aspect of the pedagogical relationship is tackled within the meaning of the authoritarian pedagogy (Alain), of non-directive pedagogy (Roger), of institutional pedagogy (Oury), of pedagogy by objectives (Mager) and of differentiated instruction (Meirieu). The introduction to these various educational streams is accompanied by readings of reflection on the aims of education, on the values to be transmitted and on the search for a new ethic for the learner as well as the teacher.

AVC203	Music and Film Thematic	3 cr.
This course highlights the value and function of music in the film world. In particular, it establishes the fundamental relationship between music production and moving images.		
AVC204	Introduction to Contemporary Cinema	3 cr.
The course covers the history of world cinema from 1950 to 1985 addressing, among others, the American cinema of Griffith, the Hollywood system and the star system, Russian cinema, German Expressionism, Surrealism and French Impressionism as well as Italian Neo-realism...		
AVS202	Introduction to Theatre Practices	3 cr.
The course develops an introduction to applied theater practices, and motivated learning of technical skills and human qualities. The goal is to introduce students to the performance strategies of actors, and the use of different techniques and exercises to stimulate the imagination and improve concentration.		
ARS216	Introduction to Artistic Expression	3 cr.
The objective of this course is to give the student the opportunity to make a personal work of exploration and plastic experimentation. The student will use the techniques of watercolor, pastel, and oil painting to create new plastic compositions according to the themes proposed by the teacher.		
DAA241	General History of Art	3 cr.
The objective of the course is to give students an understanding of the chronological order of events that constitute the history of art. They will use the methodological tools of the discipline, to learn how to situate, compare and understand the relationships between them through a study of their stylistic characteristics and their socio-historical context.		
PHO224	Introduction to Photography	3 cr.
This course offers an introduction to photography, use and handling of photographic emulsions, to enable students to acquire the principles of photography and adopt the logic of this medium. At the end of this course, students should be able to master the basics of photography, and this includes scientific techniques of image formation and the first visual esthetic laws.		
THT280	Introduction to Acting	3 cr.
Introduction to different fundamental techniques used in the creation of a character. Emphasis on relaxation, concentration, and development of a role through sensorial and emotional memories. Students will improvise and do monologues as exercises in this introductory course.		
MUS200	Musical Initiation	3 cr.
This course will introduce students to the basics of music; it will cover material such as pitches, rhythms clefs, scales and dynamics. The utility of this course as part of the general requirement is to become familiar with the musical language through experiences based on fun activities making it enjoyable as well as useful.		
MUS202	Musical Listening and Appreciation	3 cr.
Not enough people listen to art music critically. This course proposes is to introduce students to the masterpieces of so-called classical music, from the middle ages to the present day. The course includes, in a first step, the presentation of the composer and his career as historical and artistic; Secondly, it addresses the structure and the content of the selected artwork. The 'tools of perception' are the component dominant in the explanatory part of the course.		
MUS222	A General History of Music	3 cr.
For some people, music can be an orchestral symphony, a jazz set, an electronic beat or even something as simple as bird's chirping. This course is a moment to ponder what music means as students meet the history of music. From the Origin when and where music originated, and the 6 periods of music Medieval/Middle Ages, Renaissance, Baroque, Classical, Romantic, 20th-Century, each period has a particular style that greatly contributed to what music is today.		
PHI201	Introduction to Philosophy	3 cr.
The course will introduce students to philosophical thinking and practice. It will cover, on the one hand, the main philosophical currents, highlighting their specificity and their creative input and, on the other hand, the most representative authors in the history of philosophical thought. In an effort not to separate these		

themes and the fundamental questions of mankind, the course attempts to show the relationship that develops between the aforementioned notions, with the aim of addressing their impact on certain world views that constantly interpolate us within contemporary societies.

PHI210 Greek Philosophy 3 cr.

This course is divided into two parts: the first part examines pre-Socratic sources that give students the proper tools to acquire philosophical thinking in their quest for the nature of things, and in their attempt to unveil both natural and human phenomena. It thus includes the main schools of thought such as the School of Miletus (Thales, Anaximander, Anaximenes), the Pythagorean school (Pythagoras), the Ionian school (Heraclitus), the Eleatic school (Parmenides), as well as the Sophists.

The second part deals with Socrates, Plato and Aristotle.

PHI212 Philosophy of Earth 3 cr.

The course offers a reflection on the Earth and the human relationship with the Earth along three axes: a first semiotic and semantic axis that delineate the meaning of the concept "land" in the history of thought; a second interdisciplinary axis that deals with land in philosophy, in theology, in physics, in ecology, in economics and in art; and a third ethical axis that will address the different aspects about the "terrestrial" actuality including media activity where the Earth is with a stronger presence.

The Lebanese land constitutes the subject of the course as intercultural breeding ground.

LFR210 Myth and Literature 3 cr.

This course seeks to initiate the students to the sources of Western literature through the study of Greek and Roman myths. The course consists of two parts. The first part includes the definition of myth in general, of the Oedipus myth in particular, and a presentation of ancient tragedy. The second part focuses on the comparative study of ancient tragedy and a classic tragedy. The course concludes with an introduction to the myth criticism approach.

LLA213 Introduction to Arabic Literature 3 cr.

This course introduces the conception of Arabic literature and its evolution throughout the different literary eras, from Arabic Literature and Pre-Islamic Civilization to Modern and Contemporary Literature. Amongst those are: Sadr al- Islam and the Umayyad Eras, Abbasids Era, Mamluk and Ottoman Era, Renaissance Era, Andalusian Era, and Overseas Arabic Literature. This course also includes the characteristics of Arabic Language and its development, as well as Arabic prose and poetry, and their achievements in their various literary genres.

ELL315 Public Speaking 3 cr.

This course is designed to help students become more effective and responsible speakers and listeners. It will encourage them to communicate more openly in different settings (speeches, debates, group discussion, interviews, etc.). This course teaches students the necessary skills needed to become more articulate in verbal communication. It also highlights the importance of both encoding and decoding in the communication process.

ESP215 Introduction to Spanish Culture 3 cr.

This beginners course will allow applicants to receive the necessary knowledge in accordance with the A1 level of the Common European Framework of Reference for Languages. The course is mainly interactive and focuses on learning based on daily life situations all applicants can relate to, in order to be able to manage simple situations they might be faced with and enlarge their vocabulary for maximum proficiency.

CHI215 Introduction to Chinese Culture 3 cr.

This beginners course will enrich applicants with the basic knowledge and requirements of the Chinese language. They will come to understand its rules, its alphabet and its history. The interactive course will allow applicants to differentiate between the various constituents of a sentence in Chinese, as well as identify simple characters and be able to draw them correctly to eventually expand their vocabulary.

ALL215 Introduction to German Culture 3 cr.

This beginners course will allow applicants to receive the necessary knowledge in accordance with the A1 level of the Common European Framework of Reference for Languages. The course is mainly interactive and focuses on learning based on daily life situations all applicants can relate to, in order to be able to manage simple situations they might be faced with and enlarge their vocabulary for maximum proficiency.

ITL200	Introduction to Italian Culture	3 cr.
<p>This beginners course will allow applicants to receive the necessary knowledge in accordance with the A1 level of the Common European Framework of Reference for Languages. The course is mainly interactive and focuses on learning based on daily life situations all applicants can relate to, in order to be able to manage simple situations they might be faced with and enlarge their vocabulary for maximum proficiency.</p>		
PSY201	Introduction to Psychology	3 cr.
<p>This course will provide students with the basic concepts in psychology and will facilitate their access to knowledge during their academic curriculum. It includes the following objectives: understanding psychology from a historical and a theoretical perspective (Gestalt, phenomenological, experimental, scientific, psychoanalytic and cognitive, etc.); understanding the various fields of psychology (clinical, experimental, developmental, educational, social, etc.) and the different methods used (experimental, clinical, psychometric, projective, etc.); providing an appropriate approach to personality issues - basic needs, affective and emotional (feelings, emotions), intellectual (cognition, memory) and social (social influence).</p>		
HUM248	Arab World and Civilization	3 cr.
<p>This course aims to introduce the student to discover the diffusion centers of the Arab-Muslim culture. The course takes its starting point to Mecca, birthplace of Islam, embraces capitals and cultural centers of the Umayyad and Abbasid empire through Damascus, Baghdad, Cairo, Cordoba, Kairouan and Morocco. The course focuses thus on the intermingling of races, peoples, cultures that gave birth to a Muslim-Arabo civilization based on a Greco-Arabic, Muslim-Arab, Judeo-Islamic and Christian-Islamic syncretism.</p>		
HUM258	Societies and Environment	3 cr.
<p>This course concerns the physical, natural and social environment of the Mediterranean geographical space. The course exposes the environmental risks at different levels: ground, atmospheric and maritime. It also handles (treats) the sustainable development as effects and consequences on the quality of life of the human being in the context of the Mediterranean societies. Thus, the course presents the multiple environmental policies in the national territorial scale in order to advance an ideal type of environment policy of involving national, regional and local authorities.</p>		
SOC201	Introduction to Sociology	3 cr.
<p>This course provides a basic knowledge of general sociology: a) it presents an overview of the context of event emergence of sociology on the basis of the main founders and focuses on the methodological perspectives and applied sociological methods and techniques; b) it focuses on the key principles of social themes, which description and definition have fueled the many debates that are changing this discipline within the vast corpus of scientific knowledge. This course provides the students with general sociology elements, sensitizes their "sociological perspective" and develops critical reflection on various social issues.</p>		
SOC210	Introduction to Anthropology	3 cr.
<p>This course focuses on the complex question of humans and the place of anthropology within the science of humanity. It addresses the key conceptual notions of anthropological reflection (society, myth, ritual, tradition, symbol, etc.). Similarly, the course presents the components of the research framework, both practical and theoretical, of anthropological study. It develops the basic foundation of the entire social system and proposes the discovery of trends of current anthropological topicality and openness to contemporary anthropology. Upon completion of this course students will be able to understand the concepts of anthropology and its fundamental concern that allows it to guard against social, cultural, sexist and racial prejudice.</p>		
SOC211	Youth and Society	3 cr.
<p>This course aims to reflect on the multi- dimensional experience of youth. It positions it in relation to other age groups, by conducting an analytical reading through the concepts and notions of value, norm, culture, ritual, symbol, engagement, life project, the social role of religion, etc. ; to reach the level of placing the youth in spaces and social times such as: family, friends, leisure, associative and political life. The course is particularly interested in young people as the key to any social construction and any change of mentality in favor of a humanist dialogue among societies.</p>		
POL211	Introduction to Political Science	3 cr.

This course defines the notion of policy. It questions the concepts of “Political Science” and the different “Political Sciences” with a focus on the field of policy. The concept of State is an important part in this introduction given the interdependence and complementarity between “political” and “State”.

POL212 Introduction to Geopolitics 3 cr.

This course offers an introduction to geopolitics, its development through history and, its different schools of thought. An analytical approach to the geopolitics of Lebanon and the Middle East is a key aspect of the course.

POL213 Introduction to International Relations 3 cr.

Beyond any theoretical perspective, this course presents the current state of international relations following the fall of communism; emphasizing the new world order, globalization, the role of the United States and its reappraisal.

RIN205 Anthropology of Travel 3 cr.

The course aims at analyzing the experience of travelling under many aspects: from the idea itself of travel, to the comparison between different travelers, to its deep implications in history, economy, philosophy, psychology, sociology, literature, painting, cinema etc.

A “travel into travel”, for being richer when returned to the starting point and capable of managing projects and activities connected to travel.

Each lesson will be based on the reading of texts and main interpretations, in order to enable the students to advance their own critical hypothesis.

ECO222 Macroeconomics 3 cr.

This course gives an insight into macroeconomics, portraying the economy as a whole. It is by developing an understanding of fundamental economic terminology, and concepts and principles that we are able to interpret economic changes and their impact on a country’s situation.

MGT225 Foundations of Entrepreneurship 3 cr.

This course acts as a bridge between theory and the real-life application of academic principles. It complements the academic journey by introducing the students to the concept of entrepreneurship as way to turn their ideas into businesses that can create value in the marketplace. It starts by introducing the students to the entrepreneurial culture and mindset and ends by suggesting tools and methods that they can use if they decide to follow an entrepreneurial path in life.

BIO211 Cell Biology 3 cr.

In this course students will study the structures and functions of prokaryotic and eukaryotic cells. We will focus on eukaryotic cells by examining different areas of cell biology including: the plasma membrane and organelles structures and functions, cellular communication, the cell cycle and its regulation, as well as synthesis and function of macromolecules such as DNA, RNA, and proteins.

CHM212 General Chemistry 3 cr.

The purpose of this course is to present a general outline on chemistry. Through this course chemistry is introduced in its various aspects: the structure of the atom, the various models, and the properties of the elements in the periodic table; various chemical bonds, the Lewis structure, VSEPR rules; thermochemistry, thermodynamics and chemical equilibrium; kinetic chemistry, reactions rate orders, the Arrhenius law; solutions chemistry, acids and bases and various acid-base equilibrium; complexation, liquid solid equilibrium and solubility product; and redox titration and electrochemical cells.

PHY210 General Physics 3 cr.

The objective of this course is the introduction of various laws, principles and physical mechanisms, whose understanding is essential to students pursuing studies in various branches of science. This course consists of several independent parts. The first one deals with dynamics, the different types of motion, Newton’s laws, and conservation of energy. The second part deals with hydrostatics and fluid dynamics. The third part deals with thermodynamics, calorimeters, the first principle and the basic transformations, the ideal gas, and thermodynamic cycles. The fourth part concerns the analysis of simple electrical circuits using Kirchhoff laws and the movement of a particle in an electromagnetic field. In the fifth part we talk about relativity, the theory of photons, and the photoelectric effect. Upon completion of this course the students will have acquired sufficient knowledge of several basic principles in physics and be familiar with these

various topics.

NTR211 Fundamentals of Human Nutrition 3 cr.

This three-credit course introduces the basic concepts related to nutrition. It gives an overview of nutrients, including their food sources, digestion, metabolism, functions, and requirements in humans. This course also examines the use of dietary guidelines and recommendations to assess the nutrient intake of healthy individuals. Upon completion of the course, students will be able to make optimal food choices for better health.

BIO228 General Botany 3 cr.

The course has two parts: plant histology and biology. Histology is the study of meristems, parenchyma and plant tissues, their origins, their characteristics, and role. Plant biology looks at the lower and higher plants, their characteristics and their classifications.

GAG303 Introduction to Ecology and Environment 3 cr.

This course develops an understanding of the principles of ecology, the life supporting and resource generating structures and functions of the ecosystems. It explores the role of atmosphere, hydrosphere and lithosphere in sustaining life. The course also analyses reasons and effects of current and future environmental problems as well as different aspects of sustainable development.

SIN244 First Aid and Emergency Care 3 cr.

Teaching is divided into four parts:

- Basic knowledge in anatomy and the functioning of various body systems
- Prevention of the most common diseases and accidents
- Essential concepts on the most common diseases and the action to be taken
- Learning of first-aid behaviors in order to deal with life-threatening emergencies or accidents

This course provides students with a first aid certificate delivered by the Red Cross.

Academic Majors & Minors

Faculty of Arts and Sciences

Overview

The Faculty of Arts and Sciences at USEK, founded in 2019, is the result of the merge of the Faculty of Letters, Philosophy and Humanities, Sciences and Music and is an academic reengineering process decided in 2017. The Faculty embraces a variety of programs supporting research, teaching and students' learning experience in Humanities, Social Sciences, Arts and Natural Sciences, including Mathematics, Computing and Nutrition.

Mission

In line with USEK and the Lebanese Maronite Order Legacies in liberal arts education, the Faculty of Arts and Sciences aims at graduating morally, intellectually and technologically aware citizens and leaders serving the advancement of knowledge and the wellbeing of humanity. The Faculty of Arts and Sciences does so through both breadth and depth of education and research in liberal arts and sciences.

The Faculty of Arts and Sciences consists of the following departments/programs:

FRESHMAN

- Freshman Arts
- Freshman Sciences

HUMANITIES

Department of Languages and Literatures

- Bachelor of Arts in Languages and Literatures
 - Emphasis:*
 - Arabic Language and Literature
 - English Language and Literature
 - French Language and Literature
- Bachelor of Arts in Modern Languages and Translation
- Minor in Arabic Language and Literature
- Minor in Italian Language and Culture
- Minor in Modern Languages and Translation
- Diploma in Interpretation
- Master of Arts in Arabic Language and Literature
- Master of Arts in English Language and Literature
- Master of Arts in French Language and Literature
- Master of Arts in Translation
- Ph.D. in Arabic Language and Literature
- Ph.D. in English Language and Literature
- Ph.D. in French Language and Literature
- Ph.D. in Language Sciences and Traductology

Department of Philosophy

- Bachelor of Arts in Philosophy
- Minor in Philosophy
- Master of Arts in Philosophy
- Ph.D. in Philosophy

Department of Religious and Oriental Sciences

- Bachelor of Arts in Religious and Pastoral Education
- Master of Arts in Religious Sciences
- Master of Arts in Syro-Antiochean Sciences
 - Institute of Liturgy*
- Bachelor of Arts in Liturgy
- Online Diploma in Liturgy
- Master of Arts in Liturgy

- Ph.D. in Liturgy

Department of Sacred Art, Conservation and Heritage

- Bachelor of Arts in Conservation, Restoration of Cultural Property & Sacred Art
- Bachelor of Arts in Conservation, Restoration of Cultural Property & Sacred Art - Emphasis: Sacred Art
- Minor in Sacred Art: Iconography
- Minor in Sacred Arts: Plastic Arts
- Master of Arts in Conservation, Restoration of Cultural Property & Sacred Art
- Ph.D. in Conservation, Restoration of Cultural Property & Sacred Art

Institute of History and Archeology

- Bachelor of Arts in History
- Minor in History of Lebanon and the Middle East
- Master of Arts in History
- Master of Arts in Information Studies
- Ph.D. in History
- Ph.D. in Archeology and Art History

SOCIAL SCIENCES

Department of Communication

- Bachelor of Arts in Cinema and Television
- Bachelor of Arts in Journalism and Communication
- Minor in Journalism and Communication
- Minor in Photography
- Minor in Sound Recording
- Master of Arts in Cinema and Television
- Master of Arts in E-Journalism and E-Communication
- Master of Arts in Journalism and Communication
- Ph.D. in Visual Arts

Department of Education

- Bachelor of Arts in Education - Basic Education
- Bachelor of Arts in Education - Early Childhood Education
- Minor in Basic Education
- Teaching Diploma - Options:
 - Arabic Language and Literature
 - Chemistry
 - Computer Science
 - Education (Basic Education Cycles I & II)
 - English Language and Literature
 - French Language and Literature
 - History
 - Life Sciences
 - Mathematics
 - Music Education
 - Philosophy
 - Physics
 - Social Sciences
 - Visual and Performing Arts
- Master of Arts in Education

Emphasis:

 - Basic Education
 - Administration of Education
 - Technology of Education

- Support of People with Special Needs
- Supervision and Pedagogical Coordination
- Ph.D. in Education Sciences

Department of Psychology and Social Sciences

- Bachelor of Arts in Psychology
 - Emphasis:*
 - Clinical Psychology
 - Industrial Psychology
- Bachelor of Arts in Social Sciences
- Minor in Psychology
- Minor in Sociology
- Minor in Social Intervention
- Master of Arts in Intervention and Social Work
- Master of Arts in Psychology
 - Emphasis:*
 - Clinical Psychology
 - Industrial Psychology
 - School Psychology
- Master of Arts in Social Sciences
- Diploma in Interventions and Systematic Therapies
- Ph.D. in Psychology
- Ph.D. in Social Sciences

SCIENCES

Department of Biology

- Bachelor of Science in Biology
- Minor in Natural Sciences
- Master of Science in Biology
- Master of Science in Neuroscience and Biotechnology
- Ph.D. in Life and Earth Sciences

Department of Chemistry and Biochemistry

- Bachelor of Science in Biochemistry
- Bachelor of Science in Chemistry
- Minor in Biochemistry
- Minor in Applied Chemistry
- Minor in Chemistry
- Master of Science in Biochemistry
- Master of Science in Chemistry
- Master of Science in Environmental Technologies
- Ph.D. in Chemistry

Department of Computer Science and Information Technology

- Bachelor of Science in Computer Science
- Bachelor of Science in Information Technology
- Minor in Web and Mobile Programming
- Master of Science in Computer Science
- Master of Science in Cybersecurity and Cyberdefence

Department of Mathematics

- Bachelor of Science in Actuarial and Financial Mathematics
- Minor in Actuarial Studies
- Master of Science in Mathematics
- Master of Science in Actuarial and Financial Mathematics

Department of Nutrition and Food Sciences

- Bachelor of Science in Human Nutrition and Dietetics
- Bachelor of Science in Nutrition and Dietetics - Coordinated Program
- Minor in Sports Nutrition
- Master of Science in Nutrition
- Ph.D. in Agriculture and Food Sciences

SCHOOL OF MUSIC AND PERFORMING ARTS

- Bachelor of Arts in Music
 - Emphasis:*
 - Musicology
 - Music Education
- Bachelor of Arts in Music – Music Industry
- Bachelor of Arts in Higher and Specialized Music Education -
 - Emphasis:*
 - Music Composition
 - Musical Instrument
 - Singing (Arabic Singing / Occidental Classical Singing)
 - Solfeggio/Dictation
- Bachelor of Arts in Performing Arts
- Minor in Musicology
- Minor in Theater
- Master of Arts in Music
 - Emphasis:*
 - Musicology
 - Music Education
- Master of Arts in Performing Arts
- Ph.D. in Music and Higher and Specialized Music Education
- Ph.D. in Theater

Administration and Full-time Faculty

Fr. Talal El Hachem, **Dean**

Eng. Pascal Damien, **Associate Dean**

Dr. Walid Hleilhel, **Associate Dean for Research and Doctoral Studies**

Professors:

Fr. Prof. Augustin Mouhanna

Fr. Prof. Georges Hobeika

Prof. Hoda Matar Nehmé

Fr. Prof. Jean Akiki

Fr. Prof. Jean Reaidy

Prof. Joseph Saab

Fr. Prof. Karam Rizk

Prof. Marie Fayad

Prof. Mireille Issa

Prof. Naim Ouaini

Prof. Nicole Saliba-Chalhoub

Prof. Talal Wehbé

Assistant Professors:

Fr. Dr. Antoine Al Tahan

Dr. Bachir Habib

Dr. Eva Hashem

Fr. Dr. Farid El Moujabber

Dr. Karine Nasr Demerjian

Dr. Léa El Yahchouchi Abi Chaker

Dr. Lena Saadé Gebran

Dr. Linda Rizk Saber

Dr. Maya Hobeika Kahwagi

Dr. Pamela Layoun

Dr. Rabih Nabhan

Dr. Rana Elias

Dr. Randa Saliba-Chidiac

Dr. Rita Khater

Dr. Rita Khalil-Khoury

Dr. Roni Abou Khalil

Fr. Toni Eid

Dr. Yonna Sacre-Al Shamy

Fr. Dr. Youssef Matta

Dr. Youssef Abi Raad

Associate Professors:

Fr. Dr. Abdo Badwi

Fr. Dr. Badih El-Hajj

Dr. Charbel Fares

Dr. Christelle Stephan-Hayek

Dr. Edward Yerwant Torokian

Dr. Elie Al Ahmar

Dr. Faten El Hage Yahchouchi

Fr. Dr. Jean Maroun Maghames

Mr. Joseph Chemaly

Fr. Dr. Joseph Moukarzel

Dr. Kifah Fakhouri

Dr. Mirna Abboud Mzaouak

Dr. Mohammad Kacim

Dr. Nadine Zlaket

Dr. Nathalie Estephan

Dr. Randa Abi Aad

Dr. Ranya Salamé

Dr. Rima Mattar-Mazraani

Dr. Rola Zaydan Mehard

Dr. Samar El Hage

Dr. Sophie Julien Sukarieh

Dr. Walid Harb

Dr. Walid Hleilhel

Fr. Dr. Youssef Tannous

Fr. Dr. Ziad Sacre

Lecturers:

Fr. Abdallah Badaoui

Ms. Carole Daoud-Zoueïn

Mrs. Daisy Waked Azar

Mrs. Julnar Deaibess Malek

Dr. Michel El Zoghby

Ms. Nathalie Bouldoukian

FRESHMAN

Freshman Arts / Freshman Sciences

Mission

The mission of the Freshman Program is to provide access to higher education for Lebanese or non-Lebanese students who have the permission to continue studying the foreign curriculum by providing them with courses that comply with the requirements of the Lebanese Ministry of education.

Program Educational Objectives

1. Students will be informed and readied for higher education programs through appropriate pre-requisites.
2. Students will achieve improved competency in writing, note-taking, active reading, and critical thinking skills to be able to master university level work.
3. Students will develop appropriate university conduct and make progress toward clarifying their choice of major.

Program Outcomes

- a. Students will read, understand, and analyze documents related to their course of study.
- b. Students will advance their critical thinking through writing an effective critique on topics related to their course of study.
- c. Students will know how to find documents related to their course of study by resorting to university library and other recourses.
- d. Students will work in teams and individually to conduct laboratory experiments related to their course of study.

Degree Requirements

This program requires 30 credits distributed as following:

Humanities	6
ENGL140 – English Communication Skills	3
ELL101 – English Literature	3
Social Sciences	3
SOC211 – Youth and Society	3
Natural Sciences	3
BIO101 – Introduction to Biology	3
Mathematics	3
MATH101 - Mathematics	3
Electives	15
PSY101 – General Psychology	3
CHM102 – Introduction to Chemistry	3
Electives Arts	
ECO100 – Introduction to Economics	3
PHI100 – General Philosophy	3
HUM103 – History of Civilizations	3
Electives Sciences	
PHY101 – Introduction to Physics	3
MATH102 – Mathematics II	3
NUT101 - Introduction to Human Nutrition and Dietetics	3
Total	30

HUMANITIES

Undergraduate Programs

Bachelor of Arts in Conservation, Restoration of Cultural Property & Sacred Art (Hybridⁱ)

Mission

Considering the richness and the diversity of the Lebanese cultural and artistic heritage in general, and the religious cultural goods in particular, the Bachelor of Arts in Conservation, Restoration of Cultural Property & Sacred has been created in order to meet the specific and urgent needs to preserve and restore this national heritage. The curriculum provides all the theoretical and practical knowledge related to the preservation, protection, and documentation of painted artworks on fabrics and wooden support.

Program Educational Objectives

1. Graduates will be able to analyze the historical, artistic and scientific values of an artwork, and propose a restoration/preservation study.
2. Graduates will possess the ability to complete a restoration or conservation project on any artwork made on fabrics or wooden support.
3. Graduates will be capable to understand the value of the sacred art item, and will contribute to the preservation of the national cultural goods.

Program Outcomes

- a. Preparing a conservation study which includes the description of the item, the method that will be followed, the materials that will be used and the intervention proposals and measures.
- b. Acquiring basic knowledge in restoring and conserving an artifact and developing technical, artistic and scientific abilities and methodology to safely execute the proposals of a preservation study.
- c. Applying directly and effectively the scientific, technological and artistic knowledge and skills on an artwork made on fabrics or wooden support.
- d. Explaining the techniques, media and iconography of any sacred art item using the appropriate vocabulary.

Degree Requirements

This program requires 104 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
ARS216 - Introduction to Artistic Expression	3
DAA241 - General History of Art	3
Common Core	21
AGP223 - Intermediate Computer Graphics	2
ARCH210 - Technical Drawing	2
ARCH310 - History and Culture of Architecture I	2
CRCS205 - Theory & Techniques of Restoration I	3
CRCS210 - Applied Physics for the Cultural Heritage	3

ⁱ Hybrid: Courses offered in French and/or English

CRCS405 - Theory & Techniques of Restoration II	3
CRCS410 - Chemistry for the Cultural Heritage	3
ITL215 - Italian I	3
Specialization	44
ARS201 - Iconography I	3
ARS240 - History of Christian Iconography	3
ARS243 - Geographical History of the Syro-Antiochian World	2
ARS357 - Theology & Icon Interpretation	3
CRCS270 - Conservation & Restoration Lab I	4
CRCS305 - Christian & Medieval Archeology	3
GCH310 - Organic Chemistry	3
CRCS275 - Artwork Lab II + Internship	4
CRCS370 - Artwork Lab III	4
CRCS375 - Artwork Lab IV + Internship	4
CRCS470 - Artwork Lab V	4
CRCS475 - Artwork Lab VI+ Internship	4
CRCS490 - Final Project	3
Electives	9 out of 18
CRCS310 - Petrography for the Cultural Heritage	3
CRCS315 - Biochemistry for the Cultural Heritage	3
CRCS450 - Applied Microbiology for the Cultural Heritage	3
CRCS320 - Science & Technology of Materials	3
PHO224 - Introduction to Photography	3
ITL225 - Italian II	3
Total	104

Bachelor of Arts in Conservation, Restoration of Cultural Property & Sacred Art - Emphasis: Sacred Art (Hybridⁱ)

Mission

Courses of the Sacred Art program are available exclusively at the main campus of Kaslik. The richness of the Syro-Antiochean heritage, its cultural diversity and the need to carry out necessary restorations and make the discipline better known, led to the foundation of the Department of Sacred Art, Conservation and Heritage, which cooperates with various Schools and Institutes of USEK, while also maintaining contact with similar institutes in local and foreign universities.

Program Educational Objectives

1. Graduates will be able to carry out iconography projects (design and execution).
2. Contribute to restoration of icons and paintings.
3. Carry out stained glass projects (design and execution).
4. Carry out mosaics projects (design and execution).
5. Conduct pottery and ceramics projects (design and execution).
6. Perform liturgical design and styling.
7. Undertake engraving projects (design and execution).
8. Carry out research, use documentation and conduct teaching assignments.

Program Outcomes

- a. An ability to apply technical skills in applied arts.
- b. An ability to restore icons according to ancient traditional techniques.

ⁱ Hybrid: Courses offered in French and/or English

- c. An ability to understand, describe and analyze a sacred artwork.
- d. An ability to create new sacred artwork projects.
- e. An ability to identify and compare the different artistic ecclesiastical traditions.
- f. An ability to produce documentation on a subject related to sacred art.

Degree Requirements

This program requires 104 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
ARS216 - Introduction to Artistic Expressions	3
DAA241 - General History of Art	3
Common Core	14
ARS213 - Material, Color, Light	2
DAA211 - Sketching and Drawing I	2
DAA212 - Sketching and Drawing II	2
DAA312 - Sketching and Drawing III	2
DAA342 - History of Art and Architecture I	3
DAA442 - History of Art and Architecture II	3
Specialization	54
ARS201 - Iconography I	3
ARS202 - Iconography II	3
ARS205 - Restoration I	3
ARS206 - Restoration II	3
ARS210 - Mural Painting (Fresco)	2
ARS211 - Ceramic I	2
ARS214 - Mosaic I	2
ARS220 - Color Chemistry	2
ARS233 - Apocrypha and Icons	2
ARS234 - Syriac Language and Calligraphy	2
ARS240 - History of the Christian Iconography	3
ARS241 - Theology of the Icon	2
ARS243 - Historical Geography of the Syro-Antiochian World	2
ARS244 - Iconographic Greek	2
ARS245 - 245 Bible and Iconographic Tradition	2
ARS302 - Iconography III	3
ARS303 - Liturgical Design	2
ARS314 - Stained Glass I	2
ARS316 - Engraving I	2
ARS330 - Research Methodology in Sacred Art	2
ARS340 - Iconographic Hagiography	2
ARS341 - Christian Archeology	3
ARS301 - Bachelor Project + Research Note	3
Electives	6 out of 23

ARS212 - Ceramic II	2
ARS215 - Mosaic II	2
ARS221 - Computer-Aided Drawing	2
ARS222 - Anatomy and Iconographic Drawing Style	3
ARS246 - Christian Aesthetics	2
ARS315 - Stained Glass II	2
ARS317 - Engraving II	2
ARS321 - Photography	2
ARS431 - Architecture and Planning of Religious Edifices	3
ARS445 - Cultural Properties	3
Total	104

Bachelor of Arts in History (Hybridⁱ)

Accreditation

This accreditation commission of evalag, Evalag-Baden-Württemberg <http://www.evalag.de>, accredited this program and awarded the evalag international label for program accreditation.



Mission

The program aims to introduce students to the history of the region they live in, which constitutes their direct heritage. Students will learn about Eastern history, especially the history of Lebanon and history of the Middle East since ancient times. Additional courses will be offered covering religious history, such as Christianity and Islam, which contribute in developing a double-sided civilization in the Middle East.

Program Educational Objectives

1. Graduates will conduct objective analysis on historical events in the Middle East.
2. Graduates will master the different aspects of the history of their region: religion, politics, economic and social matters.
3. Graduates will contextualize, in time and in space, the different events they study.
4. Graduates will be able to conduct a comparative analysis on different scales.

Program Outcomes

- a. Distinguish Lebanon's historical heritage, museums, and art.
- b. Decipher inscriptions and texts in ancient languages.
- c. Analyze great contemporary problems while linking them to historical events.
- d. Conduct historical research, develop a precise subject and manage an adequate dissertation.
- e. Savvy historical facts, problems and events.
- f. Comprehend various theological interpretations, current legal issues and myths about Islam.
- g. Perceive facts about the ancient near-east.
- h. Fathom the modern history of different regions.
- i. Discern contemporary occurrences.
- j. Acquire the Greek and Byzantine history.

Degree requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
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ⁱ Hybrid: Courses offered in French and/or English

General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
HIS215 - Lebanon in the Ancient Period	3
Common Core	31
AAR305 - Museology and Archeology	2
AAR320 - Introduction to Pre-History	2
AAR335 - Former Semitic Languages: Semitic Group (Phoenician, Hebrew, Aramaic, Syriac)	3
AAR340 - Former Language: Greek or Latin (Indo-European Group)	3
AAR355 - Art History in Lebanon	3
AAR360 - Archeology / Tourism in Lebanon: archeological and touristic sites	2
HIS220 - Lebanon in the Medieval Period	3
HIS225 - Lebanon in the Modern Period	3
HIS230 - Lebanon in the Contemporary Period	3
HIS301 - Historical Criticism	3
HIS320 - Geography	2
HIS485 - Islam: Open Questions: Doctrines, Institutions, Rites, Law, Sufism, Brotherhood, Western Trends	2
Specialization	35
AAR415 - Art of Modern Times	3
AAR460 - Contemporary Art	3
HIS385 - Ancient Near-East: Egypt	2
HIS390 - Ancient Near-East: Mesopotamia	2
HIS395 - Ancient Near-East: Syria	2
HIS400 - Greek and Byzantine History	2
HIS405 - Roman History	2
HIS425 - Islam, from Mahomet to 1516	3
HIS430 - Western Middle Ages	2
HIS435 - The Ottoman Empire	3
HIS450 - Modern Europe	3
HIS455 - The Contemporary World	2
HIS460 - Contemporary Middle East	3
HIS480 - History of Christianity: Birth and Doctrines	3
Total	96

Bachelor of Arts in Languages and Literatures

Emphasis

- Arabic Language and Literature
- French Language and Literature
- English Language and Literature

Accreditation

This accreditation commission of evalag, Evalag-Baden-Württemberg <http://www.evalag.de>, accredited this program and awarded the evalag international label for program accreditation.



Mission

The mission and objectives of the program are to develop the undergraduate students' communicative competence in Arabic / English / French and critical thinking skills to develop writing and speaking skills and to interpret literature. It works toward forming students academically and endeavors to achieve intercultural dialogue between these languages. It also provides the students with the educational resources that enhance their appreciation of the significance of the language and literature in the world today and promote cultural exchanges between Lebanon, the region and the world. Thus, it will allow graduates to have successful careers in education, editing, or writing.

Program Educational Objectives

1. Graduates will become educators in Arabic / French / English language as first language in the complementary cycle of the Lebanese school system.
2. Graduate will become educators in the literary texts and writers integrated to the program of the complementary cycle of the Lebanese school system.

Program Outcomes

- a. Classify literary works and explain basic concepts of literature;
- b. Analyze literary works critically;
- c. Distinguish and explain basic linguistic concepts;
- d. Use linguistic knowledge to analyze real-life situations critically;
- e. Apply different literary theories to evaluate literature;
- f. Apply various linguistic approaches to evaluate real-situation texts;
- g. Write effectively for different purposes;
- h. Communicate effectively and use speaking skills for various purposes;
- i. Relate language and literature to wider social and historical contexts;
- j. Demonstrate knowledge and awareness of varied cultural situations relation to literature and language.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	3 to 6
General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
Common Core	21
ANG411 - Modern Cultural Issues in English	3
ARA310 - Techniques of Expression in Arabic	3
ARA311 - Current Problems in the Arab World	3
ELL315 - Public Speaking	3
LFR 205 - Modern Cultural Issues in French	3

LFR216 - Techniques of Expression in French	3
TRD220 - Initiation to Translation	3
Emphasis: Arabic Language and Literature	45
ARA210 - Advanced Arabic	3
LLA212 - Introduction to Linguistics	3
LLA222 - Introduction to Rhetoric and Stylistics	3
LLA224 - Introduction to the Study of Literary Genres	3
LLA312 - Pre-Islamic and Umayyad Epochs	3
LLA315 - Novel and Theater	3
LLA316 - Literature in the Abbasids Era	3
LLA318 - Arabic Morphology and Syntax	3
LLA323 - Literature in the Mamluk and Ottoman Era	2
LLA324 - Literature in the Renaissance Era	3
LLA325 - Literature in the Andalusian Era	2
LLA326 - Overseas Arabic Literature	2
LLA411 - Comparative Literature	3
LLA412 - Arabic Linguistics Problems	2
LLA415 - Lebanese Popular Heritage	2
LLA423 - Modern and Contemporary Arabic Literature	2
Capstone	
LLA435 - Modern and Contemporary Arabic Criticism	3
Emphasis: French Language and Literature	45
LFR201 - Advanced French	3
LFR211 - Textual Analysis	3
LFR212 - Commentary	3
LFR220 - History of French Literature I	3
LFR221 - Literature Culture and Society	3
LFR224 - Elements of Linguistics	3
LFR227 - From Text to Stage Representation	3
LFR310 - Francophone Literatures and Cultures	3
LFR316 - French Morphology and Syntax	3
LFR322 - Novels, Texts and Representation	3
LFR409 - Topics in French Literature	3
LFR411 - Latin Language and Civilization	3
LFR420 - Literary Readings	3
LFR423 - Linguistics of Enunciation	3
Capstone	
LFR430 - Literary Criticism	3
Emphasis: English Language and Literature	45
ELL210 - Introduction to Linguistics	3
ELL222 - Survey of English Literature I	3
ELL223 - Sophomore Rhetoric	3
ELL225 - Poetry	2
ELL310 - Survey of English Literature II	3
ELL311 - Introduction to Drama	3
ELL313 - English Morphology and Syntax	3
ELL321 - History of the English Language	3
ELL322 - Development of English Poetry	3
ELL323 - Development of the English Novel	3
ELL324 - American Literature	2

ELL411 - The Age of Shakespeare	3
ELL413 - Special Topics in the English Language	2
ELL422 - Comparative Literature	3
ELL425 - Special Literary Themes	3
Capstone	
ELL410 - Literary Criticism	3
Total	96

Bachelor of Arts in Liturgy (Hybridⁱ)

Mission

The mission of the program is to impart knowledge to students about the Universal Church and especially the Eastern Church.

Students profit from the scientific training that the program offers through its publications that tackles two parts: the offices and the ceremonies of the Universal Church and scientific studies.

Program Educational Objectives

The liturgy is not a collection of items that must be memorized and executed, but it is a science and a celebration. Hence, its degrees consist of giving a good level of a scientific education by highlighting the pastoral dimension of the liturgy.

Program Outcomes

Graduates of the Bachelor Degree will be entitled to the following positions:

- Involvement in religious life.
- Pastoral service in parishes and religious movements of the church (congregations, religious orders, youth chaplains, hospitals, prisons, etc.).
- Teaching catechesis in schools.

Degree Requirements

This program requires 97 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
SRO211 – Introduction to the Bible	3
MUS200 – Musical Initiation	3
Common Core	23 out of 27
THEO212 - Synoptics and Acts of the Apostles	3
THEO221 - Ecumenism	2
THEO241 - Basics of Sacramental Theology and Liturgy	3
THEO312 - Authorship of the Johannine Works	3
THEO340 - Sacraments of Christian Initiation	2
THEO411 - Pauline Corpus	3
THEO441 - Ministries and Healing Sacraments	3

ⁱ Hybrid: Courses offered in French and/or English

THEO422 - Islam	2
SYR211 - Syriac Language (Level 1)	3
MTR222 - University Working Methodology	3
Specialization	42
LIT202 - The Liturgy, Expression of Faith	2
LIT203 - The Liturgical Assembly, Incarnation of the Church	2
LIT205 - The Divine Office of the First Five Centuries	2
LIT206 - Liturgical Literature	2
LIT207 - Conciliar Constitutions = SL	2
LIT301 - Liturgical Year and Calendar	3
LIT302 - Cycle of Holy Week	3
LIT303 - Sacrament of Marriage	2
LIT305 - Mass in the East and Theology of Anaphora	3
LIT306 - Maronite and Syrian Jacobite Office	2
LIT307 - Introduction to the Latin Liturgy	2
LIT308 - Introduction to the Armenian Liturgy	2
LIT401 - Epiphany Cycle and Christmas	2
LIT403 - Office of the Dead	2
LIT404 - Byzantine Office	2
LIT405 - Impact of the Monastic Life on Liturgy	3
LIT406 - Liturgical Symbolism	2
LIT407 - Liturgical Pastoral	2
LIT408 - Liturgical Spirituality	2
Electives	2 out of 4
LIT309 - Audiovisual in the Service of Liturgy	2
LIT310 - Introduction to the Ritual in the Eastern Liturgies	2
Total	97

Bachelor of Arts in Modern Languages and Translation

Accreditation

This accreditation commission of evalag, Evalag-Baden-Württemberg <http://www.evalag.de>, accredited this program and awarded the evalag international label for program accreditation.



Mission

The mission of the program is to enable students to promote inter-linguistic communication. They will achieve a complete knowledge and practice of Arabic, French and English - simultaneously with the other international languages elective acquisition - as well as the art of translation and interpretation from one of these languages into another. Together with their increased professional standing, graduates will be in a position to equip Lebanon, at the confluence of the East and the West, with a historically healthy multilingualism and a capacity for openness, dialogue, communication and exchange, providing enrichment at all levels: economic, socio-political, educational and cultural etc. The Department is concerned with promoting multilingualism and rewardingly, to train professionals in the practice of written translation and interpretation.

Program Educational Objectives

1. Enable our future professional translators to communicate successfully in Arabic, French and English in multicultural contexts, in order to produce quality translations.
2. Train our future graduates to teach translation and modern languages in primary and secondary classes.
3. Build the professional competencies and skills of our future graduates who leave us equipped with lifelong learning habits.

Program outcomes

- a. Students will acquire an ability to teach English.
- b. An ability to teach the French language.
- c. An ability to teach Arabic.
- d. An ability to work in the development of bilingual glossaries.
- e. An ability to teach general translation.
- f. An ability to contribute to the lingual monitoring in their native language, Arabic.
- g. An ability to contribute to lingual monitoring in a foreign language.
- h. An ability to perform economic specialist translations.
- i. An ability to perform legal specialist translations.
- j. An ability to intervene in international negotiations and mediations.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	3 to 6
General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
Common Core	21
ANG411 - Modern Cult. Issues in English	3
ARA310 - Techniques of Expression in Arabic	3
ARA311 - Current Problems in the Arab World	3
ELL315 - Public Speaking	3
LFR 205 - Modern Cultural Issues in French	3
LFR216 - Techniques of Expression in French	3
TRD220 - Initiation to Translation	3
Specialization	39
ARA210 - Advanced Arabic	3
ELL313 - English Morphology and Syntax	3
LFR201 - Advanced French course	3
LFR316 - Morphology and Syntax	3
LLA318 - Arabic Morphology and Syntax	3
TRD310 - Methodology and Rules of Translation	2
TRD321 - General Translation A-B/B-A	3
TRD322 - General Translation A-C/C-A I	3
TRD415 - Computer-Assisted Translation	2
TRD416 - Linguistics and Translation	3
TRD421 - Legal Translation A-B/B-A	3
TRD423 - General Translation A-C/C-A II	3
TRD424 - Economic Translation A-B/B-A	2
TRD425 - Economic Translation A-C/C-A	3
Capstone	6
TRD428 - Conference Translation A, B, C	3
TRD429 - Sight Translation A, B, C	3
Total	96

Bachelor of Arts in Philosophy (Hybridⁱ)

Accreditation

This accreditation commission of evalag, Evalag-Baden-Württemberg <http://www.evalag.de>, accredited this program and awarded the evalag international label for program accreditation.



Mission

The principal mission of the program is to provide undergraduates and graduates with a broad and intensive training in philosophy and offer them the opportunity to develop critical thinking competencies, in order to analyze the major issues of our time and to have the ability to handle complex logical arguments.

These skills will empower them to enter the labor market and gain access to higher education and research.

Program Educational Objectives

1. Graduates will become qualified teachers and professionals in philosophy in secondary education schools.
2. Graduates will make careers in interdisciplinary environments such as journalism and media.
3. Graduates will demonstrate all the skills necessary to pursue a graduate course and carry out excellent research.
4. Graduates will become leaders in the conversion of thinking.

Program Outcomes

- a. Students will correlate the various fields of human sciences and target the interaction between philosophy and other sciences.
- b. Define the key concepts of philosophy and delineate the historical and theoretical issues that give it meaning and value.
- c. Recognize that philosophical wisdom is transboundary and prioritize the Arab world and the Far Eastern world.
- d. Rigorously approach a research methodology that combines epistemological, ethical and technological principles.
- e. Assess the contribution of classical philosophy and tradition as the foundation of modernity.
- f. Reframe Greek philosophy within Arab-Islamic thought.
- g. Develop a rational approach to compare the different currents or tendencies and philosophical schools.
- h. Create questioning situations that highlight reflection upon ontological and anthropological problems.
- i. Build up an ethical-political knowledge and integrate it into action.
- j. Formulate a metaphysical problem within a strictly philosophical perspective.
- k. Validate the parameters of meaning in their various linguistic, artistic and religious expressions.
- l. Structure and diagram a philosophical work and report critical synthesis.
- m. Put into practice the knowledge acquired, evaluate training, and master the fundamental skills pertaining to teaching philosophy and pedagogy

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3 to 6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	6

ⁱ Hybrid: Courses offered in French and/or English

General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
Common Core	15
MTR222 - University Working Methodology	3
PHI201 - Introduction to Philosophy	3
PHI433 - Far-East Philosophy	3
PSY201 - Introduction to Psychology	3
SOC201 - Introduction to Sociology	3
Common Core - Electives	3 out of 6
PHI449 - Islamology	3
PHI456 - Modern and Contemporary Arab Thought	3
Specialization	45
PHI210 - Greek Philosophy	3
PHI301 - Medieval Philosophy	3
PHI325 - Philosophical Reading	3
PHI327 - Philosophical Anthropology	3
PHI333 - Modern Philosophy	3
PHI419 - Philosophy and Sciences	3
PHI420 - Logic and Philosophy of Knowledge	3
PHI445 - Metaphysics	3
PHI447 - Moral and Political Philosophy	3
PHI448 - Arab Philosophy in the Middle age	3
PHI453 - Hermeneutics	3
PHI455 - German Idealism	3
PHI458 - Contemporary Philosophy I : The Phenomenology	3
PHI459 - Contemporary Philosophy II: Existentialism	3
PHI485 - Philosophy and Societies	3
Capstone	3
PHI375 - Internship	3
Total	96

Bachelor of Arts in Religious and Pastoral Education (Hybridⁱ)

Mission

Specialization in Religious and Pastoral Education introduces students to the realities of living faith, transmission of the Christian tradition and the maturing of religion and its pastoral at all stages of life. It is of interest to both secular and religious persons eager to gain a thorough training in pastoral and religious knowledge.

Program Educational Objectives

1. Graduates will be active in pastoral services in dioceses, parishes and religious movements (youth chaplaincy, hospitals, prisons, etc.).
2. Teaching catechesis in schools and universities.
3. Educators and trainers in educational institutions and centers for the moral and spiritual formation of society.
4. Researchers in the areas of training.

ⁱ Hybrid: Courses offered in French and/or English

5. Enactment of liturgical celebrations in many Christian communities (Mass in East and sacramental theology and liturgy)

Program Outcomes

- a. Students will acquire a first university degree in the field of pastoral intervention.
- b. Demonstrate a clear understanding of the features of contemporary culture that influence the various practices of faith education.
- c. Know how to use the Bible with relevance in the perspective of faith education (introduction to the Bible).
- d. Analyze and handle a religious text from the Church's teaching (evangelization and catechesis).
- e. Exercise practical and pastoral work in the ecclesiastical domain (pastoral and practical theology).
- f. Strengthen their trainer skills.
- g. Refine the observational capabilities of a pastoral practice and identify key issues.
- h. Deepen the spiritual dimension of life.
- i. Exercise a role of responsibility or intervention in relation to the transmission of the Christian tradition and maturation of faith (faith education, pedagogy and catechetical action).
- j. Provide a spiritual accompaniment and vocations.
- k. Energize group dynamics and leadership work (work with a group and make a group work).

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3 to 6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
Common Core	18
MTR222 - University Working Methodology	3
LIT305 - Mass in the East and the Theology of Anaphora	3
THEO241 - Sacraments and Liturgy	3
SRO301 - Education in Faith	3
SRO302 - Management of Cultural and Religious Diversity	3
PSY318 - Personality and Development	3
Specialization	48
THEO251 - Fundamental Moral Theology	3
THEO321 - Theology of Religions	3
THEO471 - History of Modern and Contemporary Church	3
THEO361 - Pastoral Theology Practice	3
PHI326 - Philosophy of Nature	3
ERP401 - Catechesis Teaching and ICTs	3
THEO431 - Christian Anthropology	3
ERP402 - Management and Leadership in Church	3
ERP403 - Evangelization and Catechesis	3
ERP404 - Pedagogy and Catechetical Act	3
ERP405 - Ecclesiology and Religious Communities	3
ERP406 - New Approaches in Theology : Christianity and Modernism	3

PSY467 - Group Management, Functioning and Dynamism	3
ERP420 - Internship/Workshop	3
PSY313 - Psychology of Religion	3
SOC334 - Sociology of Religion	3
Total	96

Online Diploma in Liturgy (Hybridⁱ)

Mission

The mission of the Online Diploma in Liturgy is to spread the liturgical culture and to allow to the faithful to live their faith by practicing the liturgical habits and understanding their theological significations. The liturgy diploma provides students and believers with the liturgical culture necessary to understand and live their faith through the liturgical traditions and rites of the Church.

Program Educational Objectives

1. Ensure the basic liturgical culture to the greatest number of believers through the Internet.
2. Allow believers and students who have completed their certificate in Internet Theological Formation to continue their religious education through the acquisition of a liturgical formation.

Program Outcomes

- a. Understand and live the liturgical traditions.
- b. Live the faith through the liturgy.

Degree Requirements

OCSR32.00 - Liturgy of the Hours	2
OCSR33.00 - The Liturgical Seasons	3
OCSR34.00 - Liturgical Community	2
OCSR35.00 - Law of Praying Law of Believing	2
OCSR36.00 - Sacred Music and Dance of the World	1
OCSR37.00 - Sacred Triduum	3
OCSR38.00 - Matrimonial Rites	2
OCSR39.00 - Eucharistic Liturgy	3
OCSR40.00 - Liturgy and Sacred Music	2
OCSR41.00 - Introduction to the liturgy	2
OCSR42.00 - Baptism and Eucharist	2
OCSR43.00 - Priesthood, Repentance and Anointing of sick	2
OCSR44.00 - Introduction to the Bible	2
OCSR45.00 - Introduction to the pastoral theology	2
Total	30

Academic Minors

Minor in Arabic Language and Literature

Mission

The mission of the minor in Arabic Language and Literature is to assist students in understanding the Arabic heritage and to enable them to acquire knowledge and practice of Arabic as a language of communication and cultural exchange. It also enables them to attain an advanced level in writing in standard Arabic. Furthermore, this minor program helps them to build a career in teaching basic Arabic and editing texts.

ⁱ Hybrid: Courses offered in French and/or English

Program Educational Objectives

1. Students are trained to understand modern and contemporary Arabic literary texts.
2. Students are trained to enhance their speaking and writing skills in Arabic.
3. Students are trained to teach basic Arabic language.

Program Outcomes

- a. Understand the Arabic language and literature in the light of historical and cultural contexts and explain basic linguistic Arabic concepts.
- b. Communicate effectively in Arabic both on the oral and written levels.
- c. Recognize and classify Arab modern and overseas writers.
- d. Compare Arabic literature to foreign literature.

Minor Requirements

LLA222 - Introduction to Rhetoric and Stylistics	3
LLA315 - Novel and Theater	3
LLA318 - Arabic Morphology and Syntax	3
LLA326 - Overseas Arabic Literature	2
LLA411 - Comparative Literature	2
LLA412 - Arabic Linguistics Problems	2
LLA413 - Modern and Contemporary Arabic Criticism	2
LLA423 - Modern and Contemporary Arabic Literature	2
Total	21

Minor in History of Lebanon and the Middle East (Hybridⁱ)

Mission

The program aims to introduce students to the history of the region they live in, which constitutes their direct heritage. Students will learn about eastern history, especially the history of Lebanon and the history of the Middle East since ancient times.

Program Educational Objectives

1. Students will be able to recognize and analyze the historical, economic, geographic, political and social matters related to the historical events of the various periods of the history of Lebanon.
2. Students will be apt to integrate the correct historical terminology into any related discussion, and relate current situations in their specialization and career to historical events.

Program Outcomes

- a. Students will master the basics of museology, conservation, restoration and publishing, simultaneously distinguishing Lebanon's museums, art and historical heritage.
- b. Students will understand great contemporary issues while contextualizing them in past time and space and interconnecting history and other various matters such as human habitat, distribution and activities.
- c. Students will grasp the numerous historical productions of the concerned period, notably architecture, paintings, sculptures, photographs, installations, digital and graphic arts.
- d. Recognize historical facts, problems and events in Lebanon's contemporary period.

Minor Requirements

AAR305 - Museology and Archaeology	2
AAR355 - Art History in Lebanon	3
HIS230 - Lebanon in the Contemporary Period	3

ⁱ Hybrid: Courses offered in French and/or English

HIS320 - Geography	2
HIS435 - The Ottoman Empire	3
HIS460 - Contemporary Middle East	3
Total	16

Minor in Italian Language and Culture

Mission

The mission of the minor in Italian Language and Culture is to enable students to read and understand Italian texts. It enables them to communicate about the simple and routine tasks of everyday life, requiring a direct exchange of information on familiar topics and activities.

Program Educational Objectives

1. Understand modern and contemporary Italian texts.
2. Communicate in Italian fluently on topics that are familiar, of personal interest or pertinent to everyday life (e.g. family, hobbies, work, travel and current events).
3. Deal with most situations likely to arise whilst travelling in an area where Italian is spoken.

Program Outcomes

- a. Acquire a thorough knowledge of all 4 linguistic skills: listening, speaking, reading and writing.
- b. Learn the most common and basic phonetic, grammatical and lexical structures through conversation and simple dialogues.
- c. Develop verbal communication skills that will enable interaction in basic everyday conversations.
- d. Apply writing skills as they produce personal narratives and short compositions.
- e. Gain familiarity with some aspects of contemporary Italian life and culture.

Minor Requirements

ITL200- Introduction to Italian Culture	3
ITL205- Italian for Travelers	3
ITL210- Intermediate Italian	3
ITL220- Italian Composition and Conversation	3
ITL230- Italian Civilization and Arts	3
Total	15

Minor in Modern Languages and Translation

Mission

One of the missions of the program is to enable students who would like to promote inter-linguistic and intercultural communication, to acquire the basics of the art of translation from English, French or Arabic to each one of these languages.

The Department is concerned in training students to practice written multilingual translation.

Program Educational Objectives

1. Students are trained in trilingual translation (Ar.-Fr.-Eng.).
2. Students are trained in translation of a pragmatic text (Ar.-Fr.-Eng.).
3. Students are trained in translation of a specialized text (Ar.-Fr.-Eng.).

Program Outcomes

- a. An ability to communicate successfully in Arabic, French and English.
- b. An ability to practice contrastive linguistics.
- c. An ability to select, in a specialized text, economic terms and to find their equivalent in another language.

d. An ability to select, in a specialized text, legal terms and to find their equivalent in another language.

Minor Requirements

TRD220 - Initiation to Translation	3
TRD310 - Methodology and Rules of Translation	2
TRD321 - General Translation A-B/B-A	3
TRD322 - General Translation A-C/C-A	3
TRD421 - Legal Translation A-B/B-A	3
TRD424 - Economic Translation A-B/B-A	2
TRD425 - Economic Translation A-C/C-A	3
Total	19

Minor in Philosophy (Hybridⁱ)

Mission

The principal mission of this minor is to provide students with necessary knowledge and primary competencies in relation to their major program. It also presents a panoramic overview of the entire history of philosophy and its major thinkers, providing students with the skills of analytical and critical thinking.

Program Educational Objectives

1. Students will learn the basic notions in philosophy that serve as a framework for all the humanities programs.
2. Students will demonstrate all the skills necessary to pursue a graduate course and acquire the skills necessary to excel in any field of research.
3. Students will be formed to be innovators and pioneers in their graduate program as well as in future pursuits.

Program Outcomes

- a. Students will correlate the various fields of human sciences, and target the interaction between philosophy and other sciences.
- b. Define the key concepts of philosophy and delineate the historical and theoretical issues that give it meaning and value.
- c. Recognize that philosophical wisdom is transboundary, and prioritize the Arab world, and reframe Greek philosophy within Arab-Islamic thought.
- d. Build up an ethical-political knowledge and integrate it into action, and validate the parameters of meaning in their various linguistic, artistic and religious expressions.

Minor Requirements

PHI201 - Introduction to Philosophy	3
PHI210 - Greek Philosophy	3
PHI325 - Philosophical Reading	3
PHI327 - Philosophical Anthropology	3
PHI447 - Moral and Political Philosophy	3
PHI448 - Arab Philosophy in the Middle age or PHI449 - Modern and Contemporary Arabic Thought	3
Total	18

ⁱ Hybrid: Courses offered in French and/or English

Minor in Sacred Art: Iconography (Hybridⁱ)

Mission

The sacred art minor in iconography is specifically designed to teach the history and techniques of iconography.

Program Educational Objectives

1. Students will learn the techniques of writing a traditional icon.
2. Students will be able to understand the history, the theology and the meanings of Christian iconography.

Program Outcomes

- a. Writing an icon and promoting fine sacred art according to the traditional standards in the sacred arts.
- b. Creating a correct artistic and iconographical composition.
- c. Being able to master how to look at, identify, analyze, and describe an icon.
- d. Debating and analyzing historical, symbolical, biblical and iconographical elements in an icon.

Minor Requirements

ARS201 - Iconography I	3
ARS202 - Iconography II	3
ARS222 - Anatomy and Iconographic Drawing Style	3
ARS240 - History of the Christian Iconography	3
ARS241 - Theology of the Icon	2
ARS245 - Bible and Iconographic Tradition	2
ARS340 - Iconographic Hagiography	2
Total	18

Minor in Sacred Art: Plastic Arts (Hybridⁱⁱ)

Mission

The sacred art minor in plastic arts is specifically designed to explore several plastic arts techniques, and to understand their technical and esthetic history in order to create new artworks.

Program Educational Objectives

1. Students will learn and demonstrate skills involved in different field in plastic arts.
2. Students will experiment in various approaches to the visual arts.
3. Students will create and produce new artworks.

Program Outcomes

- a. Identify the time periods, geographical and stylistic characteristics of the major art movements covered in this minor.
- b. Understanding and applying the basic skills and process to produce an artwork in the minor arts field.
- c. Experiencing artistic knowledge and skills within a creative support system to create new paintings according to different techniques.
- d. Developing skills to promote and value artworks.

Minor Requirements

ARS210 - Mural Painting (Fresco)	2
ARS211 - Ceramics I	2
ARS214 - Mosaics I	2

ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Hybrid: Courses offered in French and/or English

ARS216 - Introduction to Artistic Expression	3
ARS314 - Stained Glass I	2
ARS316 - Engraving I	2
ARS321 - Photography	2
DAA241 - General History of Art	3
Total	18

Graduate Programs

Master of Arts in Arabic Language and Literature

Mission

The mission of the MA in Arabic Language and Literature is to enable students to reach highly professional aims in literary criticism and language analysis, as well as in producing texts and discourses in the field of academic research. Advances in the latter are conditional on an extended knowledge of global literature, literary criticism, and linguistics.

Program Educational Objectives

1. Graduates are trained to carry out research in the areas of Arabic language and literature.
2. Graduates are trained to compare key literary texts and important writers with texts and writers of world literature.
3. Graduates are trained in writing Master's theses (choosing a subject, formulating a research question and a literature review, designing an outline, writing and implementing a methodology).

Program Outcomes

Students will:

- a. Apply the rules of the methodology in conducting scientific research.
- b. Apply technical and formal rules of the methodology in the presentation of scientific articles.
- c. Locate the place of different cultures, in particular the movement of universal civilizations.
- d. Identify the impact and reciprocal influences between Arab civilization and other universal civilizations.
- e. Relate the contribution of language to modern and contemporary Arab literary studies.
- f. Examine the contribution of Arabic literature to global literature.
- g. Apply various types of textual approaches.
- h. Evaluate Arabic literature and its relationship to foreign literature in a comparative perspective.
- i. Examine the impact of modern drama on contemporary Arab societies.
- j. Propose new topics and formulate research questions for MA theses.

Degree Requirements

Common Core	5
LLA520 - Seminar: Contemporary Culture and Civilization	2
MTR500 - Research Methodology	3
Specialization	25
LLA511 - Seminar: Literature I	3
LLA512 – Seminar: Linguistics I	3
LLA521 - World Literature	3
LLA522 - Textual Approaches	3
LLA523 - Seminar: Modern Theatre	3
LLA610 - Seminar: Arabic literature II	3
LLA612 - Seminar: Arabic Linguistics II	3
LLA621 - Seminar: Comparative Literature	2
LLA623 - Seminar: Civilization and Literature Topics	2
Capstone	6

LLA690A - Master Dissertation	6
Total	36

Master of Arts in Conservation, Restoration of Cultural Property & Sacred Art (Hybridⁱ)

Mission

Courses of the program are available exclusively at the main campus of Kaslik. The richness of the Syro-Antiochean heritage, its cultural diversity and the need to carry out necessary restorations and make the discipline better known, led to the foundation of the Department of Sacred Art, Conservation and Heritage, which cooperates with various Faculties and Institutes of USEK, while also maintaining contact with similar institutes in local and foreign universities.

Program Educational Objectives

1. Graduates will be able to conduct advanced research on iconography and sacred art
2. Graduates will be able to work in the teaching field.

Program Outcomes

- a. Students will develop an ability to contribute to the conservation of national heritage.
- b. Organize a global and reliable documentation of the Church of Antioch.
- c. Promote research on the Church of Antioch.
- d. Encourage advanced studies on local artists and heritage.
- e. An ability to carry out advanced research on the local and oriental iconography.

Degree Requirements

Specialization	24
ARS501 - Syro-Antiochian Topography	3
ARS506 - Contemporary Iconography	3
ARS508 - Thematic Seminar I (Iconographic)	3
ARS509 - Thematic Seminar II (Methodology)	3
ARS540 - Christian Typologies	3
ARS543 - History of Art in Lebanon	3
ARS608 - Thematic Seminar III (Historical)	3
ARS609 - Thematic Seminar IV (Oriental, Non-oriental, Non-Christian Iconography)	3
Capstone	6
ARS680A - Dissertation	6
Electives	6 out of 15
ARS502 - Conferences Cycle	3
ARS510 - Compared Architectures	2
ARS511 - Arts and Crafts- Minor Arts	2
ARS512 - Religious Sites (in Lebanon)	2
ARS513 - Chronology and Construction Techniques	3
ARS514 - Iconography IV	3
Total	36

ⁱ Hybrid: Courses offered in French and/or English

Master of Arts in English Language and Literature

Mission

The mission of the MA in English Language and Literature is to prepare postgraduate students for advanced research in English linguistics and literature and complement their knowledge of contemporary linguistic and literary issues by providing them with the educational resources that further develop their critical thinking and research skills. The program will support research of issues related to the English language, literature and culture in the world today and enable graduates to have successful careers in education, editing, publishing, writing, or English communication-related professions.

Program Educational Objectives

1. Graduates will be active members of their community by teaching the English language and literature in schools and universities or working in fields which require English language skills.
2. Graduates will be ready for national and international careers with the necessary English language skills as educators, editors, writers, analysts or communication professionals.

Program Outcomes

- a. Students will Classify contemporary literature and apply literary theories to various texts.
- b. Explain contemporary linguistic phenomena and apply linguistic theories to real-situation texts.
- c. Develop research skills.
- d. Analyze critically and apply various linguistic and literary concepts as part of research endeavors.
- e. Develop academic writing.
- f. Utilize the latest educational techniques and skills to teach and assess the teaching of English as a foreign language.

Degree Requirements

Common Core	3
MTR500 - Research Methodology	3
Specialization	27
ELL520 - Culture and Modern Civilization Seminar	2
ELL521 - English Literature I	3
ELL522 - English Literature Seminar II	3
ELL524 - English Linguistics Seminar I	3
ELL525 - English Linguistics Seminar II	3
ELL526 - Literary Issues	3
ELL610 - Seminar: Comparative Literature	3
ELL612 - Seminar: Applied Linguistics	3
ELL621 - Seminar: English Literature	2
ELL623 - Seminar: English Language Acquisition	2
Capstone	6
ELL690A - Master Dissertation	6
Total	36

Master of Arts in French Language and Literature

Mission

The program aims to train students to become French language and literature teachers in both complementary and secondary cycles, within colleges for which French is the first language of instruction. It also aims to train them to be able to form and write literary and linguistics criticism through media and communication fields, or through scientific research.

Program Educational Objectives

1. Graduates will be able to teach French language and literature in the complementary and secondary school cycles.
2. Graduates will be able to make literary and linguistics criticism.
3. Graduates will be able to conduct a research.

Program Outcomes

- a. Students will acquire the ability to teach linguistic and stylistic characteristics of French language, as well as literature contents and specifications in the Secondary Cycle of the Lebanese school system.
- b. An ability to produce a literary and linguistics criticism (publishing, cultural press, etc.).
- c. An ability to join a research center and produce research.

Degree Requirements

Common Core	3
MTR500 - Research Methodology	3
Specialization	33
LFR520 - Culture and Modern Civilization Seminar	2
LFR521 - French Literature Seminar I	3
LFR522 - French Literature Seminar II	3
LFR524 - French Linguistic Seminar I	3
LFR525 - French Linguistic Seminar II	3
LFR526 - Seminar: Theater	3
LFR610 - Seminar: Comparative Literature	3
LFR612 - Seminar: General Linguistics	3
LFR621 - Seminar: French or Francophone Literature	2
LFR623 - Seminar: Pragmatics	2
LFR690A - Master Dissertation	6
Total	36

Master of Arts in History (Hybridⁱ)

Mission

In this program students will specialize in historical research, learn to manage primary sources, and to adopt methods and approaches as an historian.

Students will also give particular attention to the complete history of Lebanon. Students taking the Master degree program will be initiated into the field of art history, so they can become art historians, or art critics.

Program Educational Objectives

1. Graduates will manage a research project from the beginning (selection and identification of the sources and of the method of analysis) to the final production of a research paper.
2. Graduates will classify the sources depending on their relevance and type.
3. Graduates will assert artistic and historical criticism.

Program Outcomes

- a. Students will produce a complete analysis of Lebanon's history, in French and in Arabic
- b. Conduct research in a specialized area.
- c. Teach history at school and at university at undergraduate level.

Degree requirements

Common Core	27
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ⁱ Hybrid: Courses offered in French and/or English

HIS600 - Research Methodology	3
HIS620 - Social History: Structure of the Family in Rural and Urban Areas	3
HIS625 - History of International Relations (1918 – 2006)	3
HIS630 - Art Critic	3
HIS640 - Thematic Research	6
HIS650 - Seminary: Ancient Lebanon	3
HIS660 - Seminary: Modern and Contemporary Lebanon	3
HIS655 - Seminary: Medieval Lebanon	3
Specialization: History	9
HIS670A - Thesis Project History	9
Specialization: History of Art	9
AAR610 - Art and New Technologies	3
AAR679A - Thesis Project History of Art	6
Total	36

Master of Arts in Information Studies (Hybridⁱ)

Mission

MIS prepares knowledgeable and ethical professionals in the fields of library, archives and museums for a diverse and global information society by providing a program integrating excellent teaching, inspiring intellectual curiosity and research and fostering interdisciplinary approaches to address challenges and provide exceptional services within diverse communities.

Program Educational Objectives

1. Perform administrative, service, and technical functions of professional practice in libraries, archives, museums and information centers.
2. Use existing and emerging technologies to meet needs in libraries, archival centers, museums and information centers.
3. Integrate relevant research to enhance their work in libraries and information centers.
4. Apply the highest ethical standards in their professional information practice, as articulated by relevant professional organizations.
5. Provide leadership and guidance in their community and to information professions.

Program Outcomes

- a. Identify and analyze information needs and opportunities of individuals and organizations
- b. Demonstrate critical thinking by integrating relevant models, theories, research and practices
- c. Demonstrate management, interpersonal and organizational skills
- d. Demonstrate leadership and advocacy skills
- e. Communicate knowledge from information studies and multidisciplinary specialties
- f. Demonstrate information technology fluency
- g. Demonstrate understanding of the selection, acquisition, licensing, organization, preservation, retrieval, and use of recorded knowledge and information resources
- h. Promote and model the professional values of ethical responsibility, intellectual freedom, and universal access to information
- i. Demonstrate awareness of diverse groups and how to serve them effectively
- j. Participate in ongoing professional development
- k. Teach others to identify, analyze, organize and use information

Degree requirements

ⁱ Hybrid: Courses offered in French and/or English

Remedial Courses	9
RINS502 - Introduction to Information Studies	3
RINS501 - Principles of Conservation and Preservation	3
RINS503 - Evolution of Cultural heritage	3
Common Core	18
INS510 - Law and Ethics in Information Studies	3
INS515 - Management of Libraries and Archives	3
INS520 - Research Methodology	3
INS697A-B - Thesis	6
MUSM610 - Preservation Management	3
Specialization - Option: Archive	18
ARCV605 - Research Tools and the Internet	3
ARCV610 - Records Management	3
ARCV615 - Digital Archives	3
ARCV620 - Information systems	3
MUSM615 - Inventories and Documentation Practices	3
MUSM635 - Communication, Dissemination and Development of Archival Heritage	3
Specialization - Option: Library	18
LIBR605 - Collection Development and Management	3
LIBR610 - Information Sources and Services	3
LIBR615 - Library Automation Systems	3
LIBR620 - Digital Libraries	3
LIBR625 - Rare Books and Special Collections	3
LIBR630 - Informetrics	3
Total	36

Master of Arts in Philosophy (Hybridⁱ)

Mission

The principal mission of the Master's program in philosophy is to prepare students for careers in the second cycle of secondary and higher education, and research in philosophy. The program provides them with philosophical competencies, which act in the transformations and thoughts of science, politics, religion and arts.

Program Educational Objectives

1. Graduates will be able to become secondary school teachers within educational establishments.
2. Graduates will be able to have careers as assistant professors in universities and as budding researchers in the research laboratories of philosophy.
3. Graduates will be able to make careers in the various fields of journalism, in areas of cultural and religious mediation, in institutions and national, international political and ethical organizations, and in the field of diplomatic missions.
4. Graduates will demonstrate all the skills necessary to pursue a Doctoral course and excel in research.

Program Outcomes

- a. Students will adopt an appropriate rigorous working method, which combines all technological, ethical, and epistemological principles, and put into practice the drafting of preparatory work, the purpose of which justifies the realization of a pre-project in philosophy.
- b. Analyze the basic principles of intercultural dialogue in its correlation with the dialogical will and highlight open debates on various controversial issues of interculturalism.

ⁱ Hybrid: Courses offered in French and/or English

- c. Correlate the main mutations of philosophy (will, art, communication) and develop critical thinking.
- d. Address problems of political philosophy and assess the complex relationships between governance and societal change.
- e. Deepen the phenomena - limits of existence (God, transcendental birth, death etc.) in their correlative relationships and deduct, through the phenomenological method, their impact on the human experience.
- f. Formulate the great questions of religion and clear the paradoxical relationship of the distinctive elements that separate and reconcile faith and reason.
- g. Delimit the meaning of the concept of love, identify its ambiguities and show what stems from it as problems of conscience communication within the human experience.
- h. Question the concept of art in its correlation with the values of beauty, and recognize the dual aspect of its autonomy and its heteronomy.

Degree Requirements

Common Core	6
MTR575 - Research Methodology in Humanities	3
PHI596 - Philosophy Project	3
Specialization	24
PHI514 - Will to Power Philosophy	3
PHI515 - Philosophy and Intercultural Dialogue	3
PHI516 - Philosophy of Art	3
PHI517 - Philosophy of Love	3
PHI671 - Philosophy and Communication	3
PHI681 - Philosophy and Religion	3
PHI682 - Political Philosophy Problems	3
PHI683 - Philosophical Approaches to Phenomena - Limit of Existence	3
Capstone	6
PHI690A - Philosophy Dissertation	6
Total	36

Master of Arts in Religious Sciences (Hybridⁱ)

Mission

Specialization in Religious Sciences introduces students to the realities of living faith, transmission of the Christian tradition and the maturing of religion and its pastoral at all stages of life.

It is of interest to both secular and religious persons eager to gain a thorough training in pastoral and religious knowledge.

Program Educational Objectives

1. Graduates will be active in teaching according to new computer techniques used today (teaching Catechesis and ICT; Church and mass media).
2. Conduct scientific research in the practical and pastoral field.
3. Train ecclesiastical and pastoral trainers.

Program Outcomes

- a. Students will clarify basic views to acquire essential internal stability to the exercise of leadership in dialogue.
- b. Improve the way to communicate orally and in writing.
- c. Deepen their own spiritual or pastoral experience.
- d. Learn to carry out rigorously the steps of research in pastoral theology.

ⁱ Hybrid: Courses offered in French and/or English

- e. Become a professionals in religious activities.
- f. Interpret a religious phenomenon in a multidisciplinary aspect (sociology - psychology).
- g. Pursue a thorough research work in the ecclesiastical domain.
- h. State clearly and precisely the teaching of the Church.
- i. Lead the listening centers in schools and rehabilitation centers.

Degree Requirements

Common Core	12
SRO510 - Pastoral Reading of the Gospels	3
SRO515 - Psalms and Biblical Wisdom: Spirituality of Daily Life	3
SRO520 - Symbolic Means of Religions (Prayers, Rites, Meditation)	2
SRO525 - Development, Religion, Culture and Society	2
MTR501 - Research Methodology	2
Specialization	21
ERP600 - Pastoral and Communication Means	3
ERP601 - Lectio Divina	3
ERP602 - Mystagogy: Renewal of Connections Between Liturgy and Catechesis	3
ERP603 - Conduct of Catechetical Projects	3
ERP604 - New Grounds in Theology: Updating the Word of the Lord for Today	3
ERP690A – Master Thesis in Religious and Pastoral Education	6
Electives	3
SRO530 - What is Believing?	3
SRO535 - Schools of Great Christian Spirituality	3
SRO540 - Moral Doctrines of Religion	3
PHL135 - Ethical Issues: Moral Doctrines of Religions	3
Total	36

Master of Arts in Translation

Mission

The mission of the MA in Translation is to allow its students to hone their specialization in technical translations and to comply with the requirements of academic research; so that they can perform the tasks assigned to them in their countries and inter-linguistic and intercultural vocation.

Program Educational Objectives

1. Graduates are trained in general translation and specialize in translation for agencies and publishing houses.
2. Graduates are trained in teaching translation in complementary and secondary education.
3. Graduates will be trained in University research.

Program Outcomes

- a. Students will perform general translations of books.
- b. Perform economic translations of books.
- c. Perform legal translations of books.
- d. Perform scientific and technical translations of books.
- e. Perform oral translations and interpretation.
- f. Perform editorial press and media translations.
- g. Perform subtitle translation for cinema and television.
- h. Be able to teach translation in schools.
- i. Be able to play the role of mediator in multilingual negotiations.
- j. Be able to conduct academic research.

Degree Requirements

Specialization	36
ANG520 - Techniques of Expressions in English	2
MTR501 - Research Methodology	2
TRD511 - General Thematic Translation A-B/B-A	2
TRD514 - Economic Translation A-B/B-A II	2
TRD520 - Economic Translation A-C/C-A II	2
TRD521 - General Thematic Translation A-C/C-A	2
TRD526 - Legal Translation A-B/B-A; A-C/C-A	2
TRD527 - Seminar: Contemporary Culture and Civilization	2
TRD528 - Technical and Scientific Translation A-B/B-A ; A-C/C-A	2
TRD529 - Film Translation: Subtitling and Dubbing	2
TRD620 - Liaison Interpretation A, B, C	2
TRD621 - Editorial and Economic Translation A-B/B-A	2
TRD622 - Editorial and Economic Translation A-C/C-A	2
TRD623 - Legal Translation A-B/B-A II	2
TRD624 - Legal Translation A-C/C-A	2
TRD690A - Master Dissertation	6
Total	36

Diploma in Interpretation

Mission

The Mission of the program is to train conference interpreters by offering them an intensive training in consecutive and simultaneous interpretation and providing them with the required skills and knowledge, in order to integrate them into the world of international organizations and other private and public institutions.

Program Educational Objectives

1. Graduates will be trained for consecutive interpretation in Arabic, French and English.
2. Graduates will be trained for simultaneous interpretation from and into Arabic, French and English.
3. Graduates will be able to teach languages (Arabic, French and English).

Program outcomes

- a. Students will understand a source text.
- b. Identify the language difficulties for each text.
- c. Interpret any text from Arabic, English or French.
- d. Reorganize ideas in the target language.
- e. Interpret the hidden meaning of any text.
- f. Translate, on sight, any text from and into three languages.
- g. Recognize the particularities of each language.
- h. Master the logical transition from one idea to another.
- i. Master note-taking in Arabic, French and English.
- j. Come up with a perfectly comprehensible orally translated text.

Degree Requirements

All the courses in the Diploma of Interpretation require a minimum passing grade of 60/100.

Specialization	69
INT550 - Consecutive Interpretation A-C I	3
INT551 - Sight Translation A-B/B-A I	3
INT553 - Sight Translation A-C/C-A I	3
INT554 - Consecutive Interpretation A-B I	3

INT555 - Consecutive Interpretation B-A I	3
INT556 - Consecutive Interpretation C-A I	3
INT557 - Sight Translation A-B/B-A II	3
INT558 - Sight Translation A-C/C-A II	3
INT559 - Consecutive Interpretation A-B II	3
INT560 - Consecutive Interpretation B-A II	3
INT561 - Consecutive Interpretation C-A II	3
INT563 - Consecutive Interpretation A-C II	3
INT600 - Simultaneous Interpretation A-C I	3
INT610 - Consecutive Interpretation A-B/B-A II	3
INT611 - Consecutive Interpretation C-A III	3
INT612 - Simultaneous Interpretation A-B I	3
INT614 - Simultaneous Interpretation B-A I	3
INT615 - Simultaneous Interpretation C-A I	3
INT616 - Consecutive Interpretation A-B/B-A IV	3
INT617 - Simultaneous Interpretation A-B II	3
INT618 - Simultaneous Interpretation B-A II	3
INT619 - Simultaneous Interpretation C-A II	3
INT620 - Simultaneous Interpretation A-C II	3
Total	69

Doctoral Programs

Ph.D. in Archeology and Art History (Hybridⁱ)

Mission

The Ph.D. Program focuses on research techniques and the methodology of thesis writing. Students will master the methods of developing and substantiating the results of their theory and on-site research. Beside their research work, students deepen their knowledge of Lebanon's history, art history and historiography.

Program Educational Objectives

1. Graduates will conduct thorough research, and master the use of sources and methods of writing a thesis.
2. Graduates will deliver professional oral presentations.

Program Outcomes

- a. Students will classify, organize and exploit research sources.
- b. Defend their research in an optimized timeline.
- c. Pursue their research in a limited time.

Degree requirements

Common Core	3
AAR785 - Art History	3
Specialization	12
AAR710 - Art and Archeology in Ancient Lebanon	3
AAR720 - Art and Archeology in the Ancient Near East	3
AAR730 - Art and Archeology: Near-East in the Late-Empire 1566	3
AAR740 - Teaching Art and Archeology	3
Capstone	45
AAR796 - Thesis Archeology and Art History	45

ⁱ Hybrid: Courses offered in French and/or English

Total	60
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Ph.D. in Arabic Language and Literature

Mission

The mission of the Ph.D. in Arabic Language and Literature is to enable students to acquire deep knowledge in relation to a specific topic. This is achieved through further development of research techniques, and the implementation of relevant approaches and methods of analysis. It is essential for students to become able to position themselves as researchers, and to develop an understanding of their own strengths, as part of the process of their academic formation.

Program Educational Objectives

1. Graduates are trained to teach Arabic language and literature at university levels.
2. Graduates are trained to write creatively scientific articles and books in literary criticism and linguistics.
3. Graduates are trained in academic analysis and literary criticism, and the design, development and defense of innovative personal statements.

Program Outcomes

- a. Formulate research proposals in the various specializations of the discipline.
- b. Examine a thesis in the light of the principles and theories of modern and contemporary esthetics.

Degree Requirements

Specialization	60
LLA700 - Seminar: Scientific Research Methodology	3
LLA710 - Seminar: Comparative Literature	3
LLA711 - Seminar: Linguistics and Terminologies	3
Ph.D. Dissertation	45
Ph.D. Seminars by Doctoral College	6
Total	60

Ph.D. in Conservation, Restoration of Cultural Property & Sacred Art (Hybridⁱ)

Mission

The mission of the program is to offer postgraduate students, through various seminars, the ability to perfect their research skills and critical thinking in the field of Sacred Arts, in order to contribute to the enrichment of the history of the artistic local heritage.

Program Objectives

1. PHD holder will be able to conduct and publish scientific research.
2. PHD holder will be able to classify, organize, and exploit their research sources.
3. PHD holder will be able to teach within the Higher education field.

Degree Requirements

Specialization	60
Ph.D. Seminars by Doctoral College	15
Ph.D. Dissertation	45
Total	60

ⁱ Hybrid: Courses offered in French and/or English

Ph.D. in English Language and Literature

Mission

The mission of the program is to offer postgraduate students specialized training in the field of their choice within the English major by providing them with the educational resources that help them perfect their critical thinking and research skills and contribute to current knowledge in the field of study. Thus, the program will allow graduates to have successful careers in the fields of research, higher education, editing, writing, and English communication.

Program Educational Objectives

1. Train future teachers and researchers of the Higher Education sector.

Program Outcomes

- a. Graduates will be able to teach within the Higher Education sector, conduct and produce scientific research related to English literature and linguistics.

Degree Requirements

Specialization	60
ELL700 - Seminar: Research Methodology	3
ELL710 - Seminar: Modern English Literature	3
ELL711 - Seminar: Special Topics in English Syntax	3
Ph.D. Dissertation	45
Ph.D. Seminars by Doctoral College	6
Total	60

Ph.D. in French Language and Literature

Mission

The program aims to train Ph.D. candidates to become university teachers and researchers in the fields of French and Francophone Literature or Linguistics.

Program Educational Objectives

Train the future Higher Education teachers and researchers.

Program Outcomes

- a. Ph.D. holders will be able to teach within the Higher Education field and to conduct and produce scientific research.

Degree Requirements

Specialization	60
Ph.D. Dissertation	45
Ph.D. Seminars by Doctoral College	15
Total	60

Ph.D. in History (Hybridⁱ)

Mission

The course focuses on research techniques and the methodology of thesis writing. Students will master the methods of developing and substantiating the results of their on-site research.

Beside their research work, students deepen their knowledge of Lebanon's history, art history and historiography.

ⁱ Hybrid: Courses offered in French and/or English

Program Educational Objectives

1. Graduates will conduct thorough research, and master the use of sources and methods of writing a thesis.
2. Graduates will deliver oral presentations.

Program Outcomes

- a. Students will classify, organize and exploit research sources.
- b. Defend their research in an optimized timeline.
- c. Pursue their research in a limited time.

Degree requirements

Common Core	3
AAR785 - Art History	3
Specialization	12
HIS710 - Historiography	3
HIS720 - History of Contemporary Lebanon	3
HIS730 - Civilization of the Near-east	3
HIS784 - Social History	3
Capstone	45
HIS796A - Thesis	0
HIS796B - Thesis	0
HIS796C - Thesis	0
HIS796D - Thesis	0
HIS796E - Thesis	0
HIS796F - Thesis	45
Total	60

Ph.D. in Language Sciences and Traductology**Mission**

The mission of the program is to train doctoral students in higher education and research in the fields of Language Sciences and Traductology.

Program Educational Objectives

Training future university teachers of translation and translation studies.

Program outcomes

- a. Students will be able to work in research centers.
- b. Be able to teach translation in secondary classes.
- c. Be able to teach translation at the University.
- d. Be able to teach language sciences at the University.
- e. Be able to translate and publish literary translations.
- f. Be able to develop and publish research in translation.
- g. Be able to teach contemporary translation theories.
- h. Be able to manage linguistic consulting firms.
- i. Be able to assist in the development of academic curricula.
- j. Be able to work in international organizations.

Degree Requirements

Specialization	60
TRD731 - Seminar: Research Methodology	3

TRD732 - Seminar: Interpretive Theory of Translation	3
TRD733 - Seminar : Pedagogical Translation	3
TRD734 - Literary Translation Seminar	3
Ph.D. Seminars by Doctoral College	3
Ph.D. Dissertation	45
Total	60

Ph.D. in Philosophy (Hybridⁱ)

Mission

The mission of the program seeks to promote philosophy, as a discipline of instruction, communication and culture. The program offers the labor market multidimensional skills in philosophy.

The program offers all the necessary skills to achieve success and proposes an innovative research field falling within the questions of philosophy.

Program Educational Objectives

To train future Higher Education teachers and researchers in philosophy.

Program Outcomes

Ph.D. holders will be able to teach within the Higher Education field and conduct and produce scientific research.

Degree Requirements

Specialization	60
Ph.D. Seminars by Doctoral College	15
Ph.D. Dissertation	45
Total	60

ⁱ Hybrid: Courses offered in French and/or English

SOCIAL SCIENCES

Undergraduate Programs

Bachelor of Arts in Cinema and Television (English)

Mission

The program is founded on the belief that art is a fundamental force in national and international culture, and that one of the primary standards by which societies are judged is the quality, creative freedom, critical insight, and formal and technical innovation of the visual art they produce.

The mission of the program is to provide students with the best possible education in the field of visual arts. The department has a long distinguished history of forming artists of the highest caliber. A full-time faculty of working artists in conjunction with a diverse cross-section of accomplished visiting artists collaborate to foster an environment where the unique talents and perspectives of individual students can merge and flourish.

Program Educational Objectives

1. Graduates from the Bachelor program will work successfully as professional members of the media industry. They should be able to work in a broad range of fields in the media that involve screenwriting, directing, editing, recording and designing sound, production, photojournalism, commercial and artistic photography, television, advertising, web and mobile applications.
2. Graduates will have the ability to produce their own personal work, whether it be fiction film, experimental film, drama, news, TV commercials, documentary film, animated films, still photography, and websites.
3. Graduates will have the ability to function and communicate effectively in the field of media as well as work as ethical and social individuals in society at large.

Program Outcomes

- a. Students will gain an understanding of major cultural and esthetic movements that have developed throughout history and their influence on art in general and visual media in particular (cinema, TV, photography, and web).
- b. Understand the notion of visual media as an art form focusing on the essentials of style and language in order to communicate ideas.
- c. Understand the basics of a number of analytical methods and their application to a variety of visual productions.
- d. Understand the essential components that constitute images (still, moving, and computer generated) by manipulating such elements as optical devices, framing, composition, and lighting.
- e. Demonstrate an ability to use the technical tools of the various disciplines of the visual arts including directing, producing, editing, cinematography, production design, acting, writing, and sound.
- f. Acquire knowledge of visual effects processes including basic compositing, green screen with live action integration, motion capture, digital effects animation (2D, 3D), rendering, layout, and coloring.
- g. Demonstrate an ability to produce and direct different types of visual media (fiction, experimental, drama, news, TV ads, documentary, still photography, websites, and animation).
- h. Function effectively on an individual as well as a group level in order to produce a communicative visual product.

Degree Requirements

This program requires 102 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Behavioral, Social Sciences and History	9
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Quantitative Reasoning	3

General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
PHO224 - Introduction to Photography	3
THT280 - Introduction to Acting	3
Common Core	36
FLM240 - History of American Cinema	3
FLM241 - History of European Cinema	3
FLM316 - Introduction to Scriptwriting	3
FLM317 - Introduction to Film Directing	3
FLM319 - Introduction to Cinematography	3
FLM322 - Film Language	3
PHO225 - Advanced Black and White	3
PHO226 - Introduction of Image Technology	3
PHO235 - Introduction to Photography Story-telling	3
TLV351 - Introduction to Editing	3
TLV352 - Advanced Editing	3
TLV431 - Sound Techniques	3
Specialization - option: Cinema	
Mandatory	24
AUV451 - Sound Design	3
FLM321 - Advanced Cinematography	3
FLM344 - Theory and Aesthetics of Film	3
FLM416 - Advanced Scriptwriting	3
FLM417 - Advanced Directing	3
FLM441 - Sound Theory of Film	3
FLM473 - Silent Film	3
FLM474 - Experimental Film	3
Capstone	3
FLM470 - Final Project	3
Electives	9 out of 33
AVC204 - Introduction to Contemporary Cinema	3
FLM475 - Documentary Film	3
TLV307 - Writing for Television	3
TLV420 - Television Production	3
TLV435 - Video Technology	3
TLV461 - Commercials for Television	3
TLV462 - Television Control Room	3
TLV463 - Music Video	3
TLV464 - Drama for Television	3
FLM210 - Music of Film	3
THT455 - Acting for the Camera	3
Specialization - option: Television	
Mandatory	24
FLM475 - Documentary Film	3
TLV307 - Writing for Television	3
TLV420 - Television Production	3
TLV435 - Video Technology	3
TLV461 - Commercials for Television	3
TLV462 - Television Control Room	3

TLV463 - Music Video	3
TLV464 - Drama for Television	3
Capstone	3
TLV470 - Final Project	3
Elective	9 out of 33
AVC204 - Introduction to Contemporary Cinema	3
AUV451 - Sound Design	3
FLM321 - Advanced Cinematography	3
FLM344 - Theory and Aesthetics of Film	3
FLM416 - Advanced Scriptwriting	3
FLM417 - Advanced Directing	3
FLM441 - Sound Theory of Film	3
FLM473 - Silent Film	3
FLM474 - Experimental Film	3
FLM210 - Music of Film	3
THT455 - Acting for the Camera	3
Total	102

Bachelor of Arts in Education - Basic Education (Hybridⁱ)

Offered in Main Campus Kaslik and in RUC Zahle

Accreditation

This accreditation commission of evalag, Evalag-Baden-Württemberg <http://www.evalag.de>, accredited this program and awarded the evalag international label for program accreditation.



Mission

The main mission of the basic education undergraduate program is to train future teachers with moral, human and ethical, values, and an ability for scientific reasoning skills confirmed in education at the primary level (in cycles I and II) and an ability to manage a class independently and responsibly.

These skills empower future teachers to integrate into the labor market, access higher education and research.

Program Educational Objectives

1. Graduates will become qualified teachers who will engage their skills for the promotion of education at the forefront of technology and professional and ethical knowledge.
2. Graduates will make careers in schools, especially in primary schools and will be education specialists adapted to training in sub cycles I and II.
3. Graduates will demonstrate all the skills necessary to pursue a graduate course and excellent research.
4. Graduates will become leader teachers in imparting knowledge and design, and the evaluation of teaching - teaching those who undergo the process of learning.

Program Outcomes

- a. Rigorously adopt a research methodology that combines the epistemological, ethical and technological principles.
- b. Identify the various fields of education, and the different learning theories and know how to apply them in educational practice.
- c. Distinguish the grammatical and linguistic specificities of the language, used as a language of teaching and oral and written communication, in order to conduct educational analysis on different kinds of texts

ⁱ Hybrid: Courses offered in French and/or English

- d. Ethically and humanely manage a classroom group (or small group classes).
- e. Reproduce an artistic flair that gives all teaching practices soft and flexible behavioral skills.
- f. Formulate and integrate the educational objectives into different didactic situations, in order to achieve the practical activities that support the theoretical approaches in language teaching.
- g. Integrate technological tools in teaching, by developing the use of TICE to link the professionalism and creativity of the teacher to the excellent use of the TIIC.
- h. Evaluate objectively and scientifically student performances and learning outcomes.
- i. Validate the quality of education, and organize, plan and construct a course, which is expressed in lessons.
- j. Ensure the transfer of mathematical knowledge in the school context, using logical reasoning from various approaches.
- k. Make scientific analyzes and investigations and determine the effectiveness of science education and the steps to be taken in order to properly acquire it.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3 to 6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
Common Core	18
EDU201 - History of Education	3
EDU215 - Techniques of Expression	3
EDU318 - Issues in Syntax	3
MTR222 - University Working Methodology	3
PSY214 - Developmental Psychology	3
SOC218 - Statistics Applied to Human Sciences I	3
Specialization	42
EDU 305 - Class Management	3
EDU 310 - Learning Theories	3
EDU 322 - Phonetics / Phonology	3
EDU 325 - Digital Resources for School Education	3
EDU 330 - General Didactics	3
EDU 345 - Applied linguistics to teaching French	3
EDU 423 - Evaluation in Education	3
EDU 425 - ICT and Professional Teacher Development	3
EDU 434 - French Language Specialized Didactics I	3
EDU 440 - Pedagogical Analysis of Texts	3
EDU 416 - Teaching Social Studies, Movement and Theatre OR	3
EDU 419 - Specialized Didactics in Mathematics I OR	
EDU 444 - Specialized Didactics of Life and Earth Sciences I	
EDU 421 - Young Adult's and Children's Literature OR	3
EDU 420 - Specialized Didactics in Mathematics II OR	
EDU 445 - Specialized Didactics of Life and Earth Sciences II	

EDU 454 - French Language Specialized Didactics II	3
EDU 469 - Video / « Serious Games » in Schools	3
Capstone	6
EDU470A - Internship: Classroom Observation and Practice	6
Total	96

Bachelor of Arts in Education - Early Childhood Education (Hybridⁱ)

Mission

The main mission of the Early Childhood Education undergraduate program is to train future teachers in ethical values and scientific reasoning skills suitable for an early Childhood level (from 0 – to – 8 years), and to develop their ability to manage classroom responsibility.

The program prepares the specialized teacher in all disciplines because he/she will be responsible of the class. These skills empower future specialized teachers to integrate into the labor market access higher education and research.

Program Educational Objectives

1. Graduates will become qualified teachers, able to engage their skills for the promotion of education using contemporary technology and professional and ethical knowledge.
2. Graduates will forge careers in schools, especially in Early Childhood Education and will be education specialists adapted to training in the areas of early education (0-8).
3. Graduates will demonstrate all the skills necessary to pursue a graduate course and excellent research opportunities.
4. Graduates will become leader teachers in imparting knowledge and design, and the evaluation of teaching - teaching those who undergo the process of learning.

Program Outcomes

- a. Students will compare the various fields of human sciences, focusing on the interaction between education and the aforementioned sciences.
- b. Rigorously adopt methods and materials in early education.
- c. Communicate orally through language exchanges and encouraging classroom communication by capturing their students' attention.
- d. Identify the different learning theories of Early Years Education and know how to apply them in educational practice.
- e. Check and analyze the levels of English language and distinguish the linguistic specificities of the target language taught and used as a language of teaching and communication.
- f. Ethically and humanely manage a classroom group (or small group classes).
- g. Develop an artistic flair that gives teaching practices soft and flexible behavioral skills.
- h. Consider the educational objectives, and formulate and integrate them into different didactic situations.
- i. Deal with theoretical issues of specialized English language teaching.
- j. Achieve practical activities that support theoretical approaches in teaching.
- k. Examine the particularities of different types and kinds of texts and conduct an educational analysis based on a study of the context in which the products are set.
- l. Integrate technological tools in early education.
- m. Ensure the transfer of mathematical knowledge in the early years education context, using logical reasoning from various approaches.
- n. Ensure the transfer of science language in the early years education context and the effectiveness of science education and the steps in it.
- o. Evaluate student performances and learning outcomes objectively and scientifically.

ⁱ Hybrid: Courses offered in French and/or English

- p. Validate the quality of education, and organize, plan and construct a course, in the form of teaching sessions.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3 to 6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
Common Core	18
EDU204 - Home, School, and Community Relations	3
EDU208 - Introduction to Teaching and Learning	3
EDU304 - Theories of Early Childhood Education	3
EDU309 - Technology in Early Childhood Education	3
PSY219 - Perceptual Motor Development	3
PSY307 - Child Growth and Development	3
Specialization	42
EDU212 - Foundations of Education	3
EDU305 - Classroom Management	3
EDU315 - Early Childhood Curriculum: Science	3
EDU316 - Early Childhood Curriculum: Mathematics	3
EDU323 - English Phonology	3
EDU330 - General Didactics	3
EDU336 - Teaching Language Art for Children	3
EDU339 - Methods and Materials in Early Education	3
EDU414 - Survey of Children's Literature	3
EDU424 - Teaching Social Studies, Movement and Theatre	3
PSY425 - Creative and Cognitive Experiences for Young Children	3
EDU427 - Theories of Education Play	3
EDU435 - Workshop in Early Education	3
EDU447 - Evaluation and Assessment in Early Education	3
Capstone	6
EDU478A-B - Practicum: Early Childhood Education	6
Total	96

Bachelor of Arts in Journalism and Communication

Accreditation

This accreditation commission of evalag, Evalag-Baden-Württemberg <http://www.evalag.de>, accredited this program and awarded the evalag international label for program accreditation.

Mission

This program is designed to prepare students to become professional media practitioners (reporters, editors, copywriters, designers and layout artists, etc.) and communication



professionals. The curriculum will improve their techniques of expression and communication, and develop their capacities to understand, analyze and judge events and social phenomena, providing leading research and generating knowledge.

Program Educational Objectives

1. Acquire strong academic knowledge of the state of the art in journalism and communication.
2. Develop professional skills (writing, reporting, editing, shooting, filming...).
3. Practice journalism and communication in various types of media.

Program outcomes

- a. Students will use different techniques of expression in different contexts to elaborate a correct and coherent text in a target language.
- b. Collect, analyze and communicate information using specific methods in journalism.
- c. Implement audiovisual and multimedia technology, and demonstrate working knowledge to produce effective communication.
- d. Acquire necessary knowledge to understand and analyze social, political and historical events, as well as economic issues.
- e. Identify and employ ethical standards.
- f. Select and use appropriate communication strategies
- g. Integrate required knowledge and skills to be professional practitioners (writers, reporters, editors) using specific norms and techniques.
- h. Develop the ability to edit and write effectively for a variety of media.
- i. Produce a report summarizing experience during traineeship.
- j. Select and integrate theories of journalism in the work field.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3 to 6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
Common Core	22
ARA210 - Advanced Arabic	3
JCM200 - Information and Communication Methodology	2
JCM229 - Journalistic Writings Workshops	3
JCM310 - Communication Theories	3
JCM322 - General Contemporary History (Current World Issues)	3
JCM418 - Sociopolitical Communication	2
JCM419 - Advertising Communication	2
JCM427 - Semiology of the Media Image	2
JCM428 - Analysis of the Media Discourse	2
Specialization	42
JCM201 - History of Media	2
JCM203 - Techniques of Journalistic Expression	3
JCM221 - Political Economy of Media	2

JCM225 - General Journalistic Translation	3
JCM228 - Data Collection and Analysis in Journalism	3
JCM314 - Journalism Genres	3
JCM315 - Television Report Techniques	3
JCM316 - Media Law and Deontology	3
JCM324 - Media and Society	3
JCM326 - Multimedia Journalism	3
JCM327 - Specialized Press	2
JCM328 - Photojournalism	2
JCM415 - Media Techniques: Newspapers	2
JCM416 - Media Techniques: Radio	2
JCM417 - Media Techniques: Television	2
JCM425 - Media Geopolitics	2
JCM426 - News Agencies	2
Capstone	2
JCM429 - Professional Internship	2
Total	96

Bachelor of Arts in Psychology (Hybridⁱ)

Emphasis

- Clinical Psychology
- Industrial Psychology

Accreditation

This accreditation commission of evalag, Evalag-Baden-Württemberg <http://www.evalag.de>, accredited this program and awarded the evalag international label for program accreditation.



Mission

The program seeks to train competent people in various fields of study: cognitive, clinical, pathological, social, labor and development psychology. This education aims at giving human behavior a scientific explanation and understanding the psychic functioning that underlies it. The training helps students command, on the one hand, theoretical, methodological and practical knowledge. On the other hand, it prepares them to practice the profession of psychologist and researcher. These skills empower them to enter the labor market and gain access to higher education and research.

Program Educational Objectives

1. Graduates will make careers in guidance, counseling, support and psychological counseling within a pluralistic team in the different institutions; from early childhood to adulthood.
2. Graduates will make careers in the field of psychological practice in clinical and scholarly domains, in specialized rehabilitation and training centers, in hospitals or in prison centers for youths and adolescents.
3. Graduates will demonstrate the necessary skills to pursue a postgraduate course and excel in research.

Program Outcomes

- a. Students will define key concepts of the different domains of psychology, which constitute the basis of the bachelor's degree and introduce the Master's program.
- b. Distinguish the different theoretical perspectives of social psychology, develop conceptual skills of communication and put into practice group functioning.

ⁱ Hybrid: Courses offered in French and/or English

- c. Rigorously adopt a methodological and statistical analysis of the scientific approach in psychology, which combines the epistemological, ethical, technological and static principles.
- d. Recognize the foundations of the psychology of child, adolescent and adult development, and highlight the relative characteristics of each stage.
- e. Correlate the basic notions of psychoanalysis and target the relationship between theory and analytical practice in clinical settings.
- f. Examine the personality across the different theoretical and psychometric perspectives of psychology.
- g. Delineate psychopathology existent from early childhood to adulthood.
- h. Adopt the models and methods of consulting advice and guidance toward education, training and careers.
- i. Analyze through cognition, biology and neurobiology, the psyche and human behavior, normal and pathological in its environment.
- j. Validate the clinical approach, maintenance procedures and clinical examination and the method of testing at the level of the child, adolescent and adult.
- k. Put into practice the acquired knowledge and evaluate training.
- l. Put into practice the fundamental concepts of ergonomics while placing them as priority work-health and work-time relations and analyzing sociologically the institutional environment.
- m. Develop psychological management of management issues, developments of labor and their consequences.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3 to 6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
Common Core	42
MTR222 - University Working Methodology	3
PSY214 - Developmental Psychology	3
PSY305 - Clinical Psychoanalysis 1	3
PSY311 - Theories and Models of Personality	3
PSY315 - Psychology and Health	3
PSY325 - Introduction to Psychosomatics	3
PSY330 - Social Psychology	3
PSY370 - Counselling and Ethics	3
PSY422 - Cognitive Psychology	3
PSY433 - Fundamental Psychobiology	3
PSY467 - Group Management Functioning and Dynamics	3
SOC218 - Statistics Applied to Human Sciences I	3
SOC318 - Statistics Applied to Human Sciences II	3
SOC325 - Psycho-Sociology of Communication	3
Emphasis: Clinical Psychology	24
PSY337 - Child and Adolescent Psychopathology	3
PSY335 - Developmental clinical psychology	3
PSY437 - Adult Psychopathology	3

PSY445 - Clinical Psychoanalysis 2	3
PSY469 - Communication Techniques and Clinical Examination	3
PSY470 - Adult psychological exam	3
PSY480 - Personality Study with Projective Techniques	3
Capstone	
PSY475 - Internship of Clinical Psychology	3
Emphasis: Industrial Psychology	24
SOC423 - Organizational sociology and labor	3
SOC460 - Survey methodology	3
PSY366 - Personal and professional development in occupational Psychology	3
PSY378 - Practice of the evaluation in industrial psychology	3
PSY415 - Ergonomic analysis	3
PSY439 - Psychopathology of Work	3
PSY455 - Psychological management of human resources	3
Capstone	
PSY490 - Internship of Industrial Psychology	3
Total	96

Bachelor of Arts in Social Sciences (Hybridⁱ)

Accreditation

This accreditation commission of evalag, Evalag-Baden-Württemberg <http://www.evalag.de>, accredited this program and awarded the evalag international label for program accreditation.



Mission

The mission of the Social Science degree program is to train undergraduate students with skills to enable them to be teachers and future social actors who drive their companies toward a socially equitable development - civically, economically and politically. The students learn to deal with social issues and examine all forms of Middle Eastern and Mediterranean policy.

The Bachelor's training prepares the students for research, particularly that concentrating on the exploration of their society; to engage in it as a promoter of progress, peace and development.

These skills empower students to integrate into the labor market, access higher education and excel in research.

Program educational Objectives

1. Graduates will become teachers or trainers in the fields of social sciences in schools and public and private institutional spaces.
2. Graduates will become coordinators of research projects.
3. Graduates will become administrators responsible in the areas of planning and evaluation pertaining to action and social, socio- economic and cultural politics.

Program Outcomes

- a. Students will identify the various social science disciplines through their history and their theoretical and conceptual orientations.
- b. Define the flows and sociological concepts that form the basis of the Bachelor's degree and introduce the Master's program in Social Sciences.
- c. Apply the concepts and theoretical approaches in the areas of specialization in social sciences.

ⁱ Hybrid: Courses offered in French and/or English

- d. Interpret theories of communication perceived as psycho-sociological objects and apply specific communication practices to the group or the general public.
- e. Recognize the construction process of personality through the gradual conquest of self and in interaction with the social environment.
- f. Adopt the methods, approaches and techniques of social sciences research within an epistemological and ethical perspective.
- g. Implement statistical techniques of data collection and interpretation of results.
- h. Conduct a survey and analyze the demographic data.
- i. Implement the coordination of components of a research project.
- j. Sociologically analyze a concrete organization and its institutional environment and distinguish the existing associative dynamics in Lebanon.
- k. Correlate socio-economic theories and financial development and conflict with the components of business and community settings.
- l. Validate training with a view to teaching or a social function.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3 to 6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
Common Core	15
MTR222 - University Working Methodology	3
SOC218 - Statistics Applied to Human Sciences I	3
SOC318 - Statistics Applied to Human Sciences II	3
SOC325 - Psycho-Sociology of Communication	3
SOC360 - Social Sciences Methods	3
Common Core – Electives	3 out of 6
PSY318 - Personality and Self Development	3
PSY330 - Social Psychology	3
Specialization	42
SOC201 - Introduction to Sociology	3
SOC210 - Introduction to Anthropology	3
SOC310 - Sociology, Fundamental Concepts	3
SOC411 - Financial Economics	3
SOC421 - The Sociology of Deviance	3
SOC422 - Political Sociology	3
SOC423 - Organizational Sociology and Labor	3
SOC426 - Theories and Practices of Development	3
SOC430 - Sociology of Religion	3
SOC431 - Sociology of the Family	3
SOC432 - Sociology of Conflicts	3
SOC435 - Social Protection Policy	3
SOC438 - Demographic Analysis	3

SOC460 - Survey Techniques	3
Capstone	6
SOC466 - Internship / Laboratory / Workshop	6
Total	96

Teaching Diploma (Hybridⁱ)

Options / Majors

- Chemistry
- Computer Sciences
- Education (Basic Education Cycles I & II)
- Educational Sciences (Philosophy)
- Educational Sciences (Social Sciences)
- English Language and Literature
- French Language and Literature
- History
- Life Sciences
- Mathematics
- Music
- Physics
- Visual and Performing Arts

Mission

The main task of the educational degree program [DE] is to train graduates to become professional teachers in their specialization. This program is the length of a postgraduate academic year, and delivers quality training to would-be teachers that reinforces their basic training and allows them to enter the labor market with a solid knowledge in their specialization and the skills to teach.

Program Educational Objectives

1. Graduates become specialist teachers in the public and private educational sectors.
2. Graduates will undertake research in the field of contemporary specialized didactics and school programs.
3. Graduates, equipped with a psychological, philosophical, sociological and ethical knowledge, will learn to interpersonal communication skills and group management in a class.
4. Graduates will be teaching project planners by putting into practice the theoretical knowledge acquired using multidisciplinary resources, and by implementing specialized evaluation techniques.

Program Outcomes

- a. Students will analyze problem areas related to the didactics and functioning of the school system (Lebanese in particular).
- b. Develop knowledge relating to areas of teaching in their specialization.
- c. Create didactic situations and possible solutions to problems in context.
- d. Integrate the educational use of technological tools to apply new known techniques used in the world of ICT.
- e. Discern the relationship between philosophy and education and make use of this aspect in the theme of the course.
- f. Develop a notional and conceptual synthesis related to social stratification as a school differentiator.
- g. Deepen the psychic needs of the child as well as the psychological management of groups and the educational relationship in the classroom.
- h. Identify the major epistemological trends and apply them in teaching practice and mental operations in cognitive dominance.
- i. Develop skills and gather essential data for evaluation and apply them in a variety of assessment practices.

ⁱ Hybrid: Courses offered in French and/or English

Degree Requirements - Education (Basic Education Cycles I & II)

Common Core	12
EDU312 - Philosophy of Education	3
EDU400 - The Teacher's Ethical Skills	3
EDU485 - Specialized Evaluation in Education	3
SOC311 - Sociology of Education	3
Specialization	12
EDU429 - Didactics of Life and Earth Science	3
EDU464 - French Language Didactics	3
EDU517 - Mathematics Didactics	3
EDU561 - Internship/Workshop/Laboratory	3
Total	24

Degree Requirements

Common Core	12
EDU312 - Philosophy of Education	3
EDU485 - Specialized Evaluation in Education	3
SOC311 - Sociology of Education	3
PSY334 - Psychology of education Or PSY400 - Group-class Psychology and Educational relationship	3
Common Core – Electives	3 out of 6
EDU400 - The Teacher's ethical skills	3
EDU480 - Pedagogic Analysis and Integration of Educational Mediatized Materials	3
Specialization - Option: Chemistry	9
ECH470 - Specialized Didactics I	3
ECH471 - Specialized Didactics II	3
ECH490 - School Internship	3
Specialization - Option: Computer Sciences	9
EIN470 - Specialized Didactics I	3
EIN471 - Specialized Didactics II	3
EIN490 - School Internship	3
Specialization - Option: Educational Sciences (Philosophy)	9
EDU431 - Specialized didactics I (PH)	3
EDU538 - Specialized didactics II (PH)	3
EDU561 - Internship/Workshop/Laboratory	3
Specialization - Option: Educational Sciences (Social Sciences)	9
EDU428 - Specialized didactics I (SCO)	3
EDU548 - Specialized didactics II (SCO)	3
EDU561 - Internship/Workshop/Laboratory	3
Specialization - Option: English Language and Literature	9
ELL470 - Specialized Didactics I	3
ELL471 - Specialized Didactics II	3
ELL490 - School Internship	3
Specialization - Option: French Language and Literature	9
ELF470 - Specialized Didactics I	3
ELF471 - Specialized Didactics II	3
ELF490 - School Internship	3
Specialization - Option: History	9

EHI470 - Specialized Didactics I	3
EHI471 - Specialized Didactics II	3
EHI490 - School Internship	3
Specialization - Option: Life Sciences	9
ESV470 - Specialized Didactics I	3
ESV471 - Specialized Didactics II	3
ESV490 - School Internship	3
Specialization - Option: Mathematics	9
EMT470 - Specialized Didactics I	3
EMT471 - Specialized Didactics II	3
EMT490 - School Internship	3
Specialization - Option: Music	9
EMU470 - Specialized Didactics I	3
EMU471 - Specialized Didactics II	3
EMU490 - School Internship	3
Specialization - Option: Physics	9
EPY470 - Specialized Didactics I	3
EPY471 - Specialized Didactics II	3
EPY490 - School Internship	3
Specialization - Option: Visual and Performing Arts	9
EVS470 - Specialized Didactics I	3
EVS471 - Specialized Didactics II	3
EVS490 - School Internship	3
Total	24

Academic Minors

Minor in Basic Education (Hybridⁱ)

Mission

The main mission of the minor in Basic Education program is to train students with moral, human and ethical values, and an ability for scientific reasoning skills required in education at the primary level (in cycles I and II) and an ability to manage a class independently and responsibly.

Program Educational Objectives

1. Students will demonstrate all the skills necessary to synthesize and apply educational principles in everyday and professional contexts.
2. Students will become educational animators who will engage their skills in designing training packages for different objectives.
3. Students will acquire a broad range of critical reasoning skills to develop learners' thinking and analytical abilities in different didactic and pedagogical situations.

Program Outcomes

- a. Identify the various fields of education, and the different learning theories.
- b. Ethically and humanely manage a classroom group or a small group.
- c. Integrate technological tools in teaching.
- d. Formulate and integrate the educational objectives into different didactic situations.
- e. Conduct an educational analysis on educational literature.

ⁱ Hybrid: Courses offered in French and/or English

Minor Requirements

EDU201 - History of Education	3
EDU305 - Classroom Management	3
EDU310 - Learning Theories	3
EDU325 - Digital Resources for School Education	3
EDU330 - General Didactics	3
EDU421 - Young Adult's and Children's Literature	3
Total	18

Minor in Journalism and Communication**Mission**

The mission of this minor is to develop the communication skills of students by providing knowledge, technical knowhow and an analytical perspective of the communication process and its elements.

Program Educational Objectives

1. Master communication techniques and tools.
2. Engage with the global connected world.
3. Analyze and evaluate the communication process in public and private domains.

Program Outcomes

- a. Collect, analyze and communicate information.
- b. Implement audiovisual and multimedia technology, and demonstrate working knowledge to produce effective communication.
- c. Acquire knowledge to understand and analyze the communication process and implications in different contexts (social, political).
- d. Communicate in a professional context using digital means.

Minor Requirements

JCM200 - Information and Communication Methodology	2
JCM228 - Data Collection and Analysis in Journalism	3
JCM324 - Media and Society	3
JCM326 - Multimedia Journalism	3
JCM328 - Photojournalism	2
JCM427 - Semiology of the Media Image	2
JCM428 - Media Discourse Analysis	2
Total	17

Minor in Photography (English)**Mission**

The mission of the minor in photography is to develop professional image-makers through student-centered studies in history, technology and practical production of photographic images.

Program Educational Objectives

1. Students will be able to produce a set of creative work suitable for seeking professional opportunities in the field of photography.
2. Students will communicate their ideas professionally and connect with their intended audience using visual and written presentation skills relevant to their field.
3. Students will execute technical, esthetic, and conceptual decisions based on an understanding of photography principles.

Program Outcomes

- Students will learn conceptual and problem solving skills.
- Students will acquire technical lighting skills.
- Students will learn technical camera capture skills.
- Students will learn about digital imaging and printing.

Minor Requirements

PHO240 - History of Photography	3
PHO322 - Advanced Image Technology	3
PHO460 - Portrait Photography	2
PHO464 - Architecture Photography	2
PHO465 - Photojournalism	2
PHO466 - Fashion Photography	2
PHO467 - Early Photography Processes	2
Total	16

Minor in Psychology (Hybridⁱ)**Mission**

The minor in psychology focuses on human behavior and psychological functioning. Our mission is to provide undergraduate minors with courses and related experiences that provide solid foundations for advanced study and careers in many fields. Students often pursue careers in business, law, nutrition, human resources, architecture, and many others, with a minor in psychology. The minor in psychology can thus be used to strengthen qualifications for any job requiring “people skills”.

Program Educational Objectives

- Students will be able to select courses that fit with their major and support their career goals.
- Students will demonstrate familiarity with the major concepts, theoretical perspectives and historical trends in psychology.
- Students will be able to communicate effectively in a variety of formats.

Program Outcomes

- Students will define key concepts of the different domains of psychology, which constitute the basis of the bachelor’s degree.
- Correlate the basic notions of psychoanalysis and target the relationship between theory and analytical practice in clinical settings.
- Distinguish the different theoretical perspectives of social psychology, develop conceptual skills of communication and put into practice group functioning.
- Recognize the foundations of the psychology of child, adolescent and adult development, and highlight the relative characteristics of each stage.
- Put into practice the fundamental concepts of ergonomics, making a priority work-health and worktime relations, and analyzing sociologically the institutional environment.
- Develop psychological management of management issues, developments of labor and their consequences.

Minor Requirements

PSY201 - Introduction to Psychology	3
PSY214 - Developmental Psychology Or PSY366 - Personal and Professional Development in Occupational Psychology	3

ⁱ Hybrid: Courses offered in French and/or English

PSY305 - Clinical Psychoanalysis I Or PSY455 - Psychological Management of Human Resources	3
PSY311 - Theories and Models of Personality	3
PSY330 - Social Psychology	3
PSY467 - Group Management Functioning and Dynamics	3
Total	18

Minor in Social Intervention (Hybridⁱ)

Mission

The mission of the minor in social intervention is to train undergraduate students with skills to enable them to be future social actors who drive their professional fields toward a socially equitable development, civically, economically and politically.

Program Educational Objectives

1. Students will demonstrate all the skills necessary to integrate the social dimension in everyday and professional contexts and environments.
2. Graduates will become social actors who will engage their skills in mobilization and implementation of social, sociocultural and socioeconomic projects.
3. Graduates will be able to identify the fields of action in social work and social intervention and to participate in projects of social and community development.

Program Outcomes

- a. Identify the various social science disciplines through their history and their theoretical and conceptual orientations.
- b. Define sociological concepts that form the basis of a sociological view in any kind of professional exercise.
- c. Adopt the methods, approaches and techniques of social sciences research within an epistemological and ethical perspective.
- d. Interpret communication theories perceived as psychosociological object and apply specific communication practices to the group or the general public.
- e. Identify areas of action for work and social intervention on various socio-cultural, socio-educational, socio-political, socio-economic and socio-religious plans.
- f. Define strategies for action in social intervention in respect of different types of groups.

Minor Requirements

SOC 201 - Introduction to Sociology	3
SOC 325 - Psycho-sociology of Communication	3
SOC335 - Labor and Social Intervention, the Fundamental Concepts	3
SOC345 - Labor and Social Intervention Fields	3
SOC 360 - Social Sciences Methods	3
SOC 465 - Social Intervention and Social Groups	3
Total	18

Minor in Sociology (Hybridⁱⁱ)

Mission

ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Hybrid: Courses offered in French and/or English

The mission of the minor in sociology is to train undergraduate students with skills to enable them to be future social actors who mobilize the integration of the social dimension in their professional environment at the two levels of action and research.

Program Educational Objectives

1. Students will demonstrate all the skills necessary to integrate the social dimension in everyday and professional contexts and environment.
2. Students will be trained to have a sociological reading of different themes, situations and problems in his or her social environment at both institutional and community levels.
3. Students will acquire a broad range of methodological and critical reasoning skills to mobilize individuals, communities and public and private institutions in the implementation of social research/action projects.

Program Outcomes

- a. Identify the various social science disciplines through their history and their theoretical and conceptual orientations.
- b. Define sociological concepts that form the basis of a sociological view in any kind of professional exercise.
- c. Adopt the methods, approaches and techniques of social sciences research within an epistemological and ethical perspective.
- d. Interpret communication theories perceived as psycho-sociological object and apply specific communication practices to the group or the general public.
- e. Apply the concepts and theoretical approaches in different areas of social sciences.
- f. Define strategies for action in social intervention in respect of different types of groups.

Minor Requirements

SOC 201 - Introduction to Sociology	3
SOC 310 - Sociology Fundamental Concepts	3
SOC 325 - Psycho-sociology of Communication	3
SOC 360 - Social Sciences Methods	3
SOC 422 - Political Sociology Or SOC 430 - Sociology of Religion	3
SOC 431 - Sociology of the Family	3
Total	18

Minor in Sound Recording (English)

Mission

The mission of the minor in sound recording is to form competent persons who will be able to work in film production and post-production, also in media such as television, and the web.

Program Educational Objectives

1. Students will be able to work in television sound production.
2. Students will be able to record, create and mix sound.
3. Students will be able to record and design sound for films.

Program Outcomes

- a. Students will be able to make technically competent recordings of production and post-production sound for film and television media.
- b. Students will be able to effectively edit and process sound for those media.
- c. Students will be able to create technically competent and esthetically pleasing mixes for those media.
- d. Students will value the transformative power of challenging and meaningful art.

Minor Requirements

AUV450 - Mixing and Recording	3
AUV451 - Sound Design	3
FLM440 - Post-Production Techniques	3
FLM441 - Sound Theory of Film	3
TLV431 - Sound Techniques	3
TLV440 - Studio Production Techniques	3
Total	18

Graduate Programs

Master of Arts in Cinema and Television (English)

Mission

The program is founded on the belief that art is a fundamental force in national and international culture, and that one of the primary standards by which societies are judged is the quality, creative freedom, critical insight, and formal and technical innovation of the visual art they produce.

The mission of the program is to provide students with the best possible education in the field of visual arts. The department has a long distinguished history of forming artists of the highest caliber. A full-time faculty of working artists in conjunction with a diverse cross-section of accomplished visiting artists collaborate to foster an environment where the unique talents and perspectives of individual students can merge and flourish.

Program Educational Objectives

1. Graduates from the Master program will work successfully as professional members of the film production process. They should be able to work in a broad range of positions involving tasks such as writing a scenario, directing, editing, recording and designing sound, and production.
2. Graduates will have the ability to produce their own personal fiction films.
3. Graduates will have the ability to function and communicate effectively in the field of cinema as well as work as ethical and social individuals in society at large.

Program Outcomes

- a. Students will acquire knowledge of critical and theoretical methodologies and their application to film.
- b. Demonstrate in critical essays and oral presentations an ability to analyze films via a variety of theoretical perspectives while using the critical vocabulary and methodologies of the discipline.
- c. Develop a thorough understanding of the fundamental disciplines inherent in motion picture including acting, producing, directing, writing, cinematography, editing, and sound.
- d. Generate and develop ideas for film that include writing from personal experience, and translating these ideas via visual and aural acuity and technical excellence.
- e. Function effectively on an individual as well as a group level in order to produce a communicative cinematic product.

Degree Requirements

Common Core	12
AVS500 - Methodology	3
FLM630 - Seminar in Film Theory	3
FLM640 - Film and the other Arts	3
FLM650 - Film Authors	3
Specialization	18 out of 63
FLM517 - Lighting Workshop for Film	3
FLM537 - Screenwriting for Film and Television	3
FLM551 - Film Design and Special Effects	3
FLM559 - Direction of Actors for Film and TV	3
FLM560 - Practices in Contemporary Arts	3

FLM617 - Advanced Lighting Workshop for Film	3
FLM618 - Cinematography and Directing	3
FLM619 - Advanced Digital Directing	3
FLM620 - Theory of Sound in Films	3
FLM634 - Advanced Screenwriting	3
FLM675 - Advanced Fiction Workshop	3
THT623 - Acting for Camera	3
TLV506 - Editorial News Production	3
TLV507 - Mass Communication Theory	3
TLV514 - Advanced Reporting & Newswriting	3
TLV516 - Writing for Television	3
TLV560 - Editing and Special Effects	3
TLV605 - Programs Production	3
TLV607 - Documentary	3
TLV652 - Sound Recording	3
TLV670 - Seminar in Selected Topics	3
Capstone	6
AVS680A - Directed Individual Studies I	6
Total	36

Master of Arts in Education (Hybridⁱ)

Emphasis

- Basic Education
- Administration of Education
- Technology of Education
- Support of People with Special Needs
- Supervision and Pedagogical Coordination

Mission

The Master of Arts in Education is a further elaboration and professional development, for a better approach to different training situations, namely the basic education, the technology of education, the administration of education, the supervision and pedagogical intervention and the accompaniment of people with special educational needs. The training offered by this Master is theoretical, methodological and practical, it aims at adopting the professional competencies by developing the ability of students to design, organize, manage and control training activities in different school contexts. It deepens the engineering of training and focuses on knowledge, the questioning of practices of trainers and adaptation approaches to cope with the educational changes and to anticipate developments in education.

Program Educational Objectives

1. Graduates will demonstrate all the skills necessary to pursue a doctoral course and excel in research.
2. Graduates will become specialized teachers and trainers equipped with a broad training, versatile and coherent, which will allow them to work in an environment increasingly diversified and pluralistic.
3. Graduates will become heads of schools, executive directors, quality accreditors prepared to address the changes achieved in the world of education and confront the various modes of governance of school management at the forefront of professional and ethical knowledge.
4. Graduates will become professional in educational technology and designers, being equipped with models and effective tools to implement computerized teaching techniques and multimedia projects.

ⁱ Hybrid: Courses offered in French and/or English

5. Graduates will become teachers and trainers with the essential capacity to integrate into teaching and coaching the professional practices that meet special needs education.
6. Graduates will become specialized coordinators in the use of methods and practices of coordination, supervision and pedagogical intervention in order to train and support teachers and organize courses at schools.

Program Outcomes

- a. Define useful knowledge and basic concepts in methodology of research in human sciences and to devise a working method that empowers the Master's students to combine the epistemological, ethical, technological and statistical concepts used in the context of research, in order to produce a pre-project.
- b. Correlate laws, decrees, and the basic texts from the Lebanese educational system, to develop skills in educational legislation.
- c. Analyze the components of a curriculum and conceptions renewed at that level, according to the changes and transformation operated on the teaching programs, and plan an educational policy.
- d. Identify administrative, economic, educational and humanitarian management styles to reflect in professional practices observed or experienced within the school context.
- e. Compare different international approaches to comparative education and interpret the data offered by innovative educational issues and their impact on the world of education.
- f. Recognize the data of linguistics as applied to teaching and the theories of learning that will be consolidating the development of innovative teaching/learning situations for the contents to learn.
- g. Identify concepts, conceptual, operational and economic models, tools for a better understanding of the field of educational management, and for interpreting the data that will accompany the acceleration of change in education.
- h. Assess the performance of the educational establishment in light of the criteria of quality in order to improve the establishment educative work.
- i. Identify philosophical and sociological theories on contemporary issue of knowledge as well as theories of communication and transmission means of information.
- j. Examine the modes of an integrated training of different forms of e-learning and online educational resources, as well as concrete examples in the field of current research in ICT based on a particular theme.
- k. Describe the relationship that exists among psychomotor activities of people with special needs, in order to conceive teaching and learning situations for the contents to be learned and to integrate these various professional practices in the educative context.
- l. Recognize the different ways and forms of special needs educational problems in their physical impairments, psychological effects and learning disabilities.
- m. Analyze supervisory activities in subjects of educational coordination and identify the accompaniment process at the pedagogical, relational and didactic level, and their implementation in educational contexts, among teachers.
- n. Correlate terms of career guidance and design appropriate communication situations to manage and facilitate the exchange among partners in schools.
- o. Prepare an educational project or a master thesis in education.

Degree Requirements

Common Core	15
MTR575 - Research Methodology in Humanities	3
MTR681 - Quantitative Methods in Humanities	2
EDU502 - Training Ethics	1
EDU503 - Educational Legislations in Lebanon	2
EDU570 - Educational Project I	2
EDU540 - Strategic Planning and Curriculum Design	3
EDU661- Internship	2
Emphasis: Basic Education	21

Specialization	15
EDU513 - Linguistics Applied to Teaching	3
EDU519 - Didactics Issues	3
EDU541 - Comparative Education	3
EDU678 - Innovative Pedagogical Issues	3
EDU680 - From Theory to Practice in Education	3
Electives *	3 out of 9
SPC605 - Institutional Communication	3
PSY677 - Neuroscience, cognition and learning disabilities	3
SPC510 - Educational and Professional guidance	3
Capstone	3 or 6
EDU695A - Master thesis in Education	6
EDU694 - Educational Project II	3
Emphasis: Administration of Education	21
Specialization	15
EDU524 - The knowledge society, sociological and philosophical approaches	2
EDU504 - Introduction to the Administration of Education	2
EDU511 - Financial management of educational institutions	2
EDU610 - Evaluation of establishment and success	2
EDU630 - Management of change in Education	2
EDU615 - Leadership school Improvement	3
EDU660 - Thematic seminar in education management	2
Electives *	3 out of 9
SPC605 - Institutional Communication	3
EDU601 - Educational Supervision and Coordination	3
SPC510 - Educational and Professional guidance	3
Capstone	3 or 6
EDU695A - Master thesis in Education	6
EDU694 - Educational Project II	3
Emphasis: Technology of Education	21
Specialization	12
EDU515 - Theories of information and communication	2
EDU525 - From distance learning to e-learning	2
EDU527 - Thematic seminar in educational technology	2
EDU533 - Tools for ICTE and Distance Education	2
EDU524 - The knowledge society, sociological and philosophical approaches	2
EDU534 - Templates and Web 2 tools and mobile Learning	2
Electives	3 out of 9
SPC505 - Fundamentals of Pedagogical Training	3
EDU678 - Innovative Pedagogical Issues	3
SPC605 - Institutional Communication	3
Capstone	3 or 6
EDU695A - Master thesis in Education	6
EDU694 - Educational Project II	3
Emphasis: Support of People with Special Needs	21
Specialization	15
SEN510 - Psychological Approaches to Handicap	3
SEN605 - Practice: Supporting People with SEN	3
SEN610 - Psychomotor Activities for People with SEN	3
SEN615 - Learning Processes Applied to People with SEN	3

PSY677 - Neurosciences, Cognition & Learning difficulties	3
Electives *	3 out of 9
SPC510 - Educational and Professional guidance	3
EDU678 - Innovative Pedagogical Issues	3
SPC605 - Institutional Communication	3
Capstone	3 or 6
EDU695A - Master thesis in Education	6
EDU694 - Educational Project II	3
Emphasis: Supervision and Pedagogical Coordination	21
Specialization	15
SPC505 - Fundamentals of Pedagogical Training	3
SPC510 - Educational and Professional guidance	3
SPC520 - Pedagogical intervention and accompaniment	3
SPC605 - Institutional Communication	3
EDU601 - Educational Supervision and Coordination	3
Electives *	3 out of 9
EDU678 - Innovative Pedagogical Issues	3
EDU541 - Comparative Education	3
PSY677 - Neurosciences, Cognition & Learning difficulties	3
Capstone	3 or 6
EDU695A - Master thesis in Education	6
EDU694 - Educational Project II	3
Total	36

**Students that choose to take the master thesis are not required to complete one of the 3 elective courses.*

Master of Arts in E-Journalism and E-Communication

Mission

This program is designed for holders of degrees in fields outside journalism and communication, willing to pursue an education in journalism. Graduates will be professional practitioners and communication professionals. With an interdisciplinary curriculum combining up-to-date knowledge and practical applications, the degree enhances professional knowledge, skills and leadership in journalism and communication.

Program Educational Objectives

1. Graduates will create and edit written and multimedia content suitable for the web by selecting appropriate technology tools.
2. Graduates will take into account current evolution and media internationalization, to analyze their contact with cultures and societies.
3. Graduates will develop analytical and scientific approaches towards media and communication issues, in order to assess their performance.
4. Graduates will create appropriate communication strategies based on available data and tools.
5. Graduates will adapt their contents to issues of cultural diversity and economic interest, and will abide by law and professional ethics of digital media.

Program outcomes

- a. Students will structure, write and present a personal, innovative and documented research on a problematic topic in online journalism and communication
- b. Re-examine cultural, economic and political issues, with respect to media and mass communication, especially in the age of new media and globalization.
- c. Define the most efficient techniques and tools in communication.

- d. Adapt communication strategies to the real needs of media, enterprises, collectives etc.
- e. Discuss major factors affecting the process of communication.
- f. Implement new technology to support media needs.
- g. Identify, employ and discuss ethical standards.
- h. Define a perspective of media functioning and provide exposure to technical know-how.
- i. Analyze the role and functions of social media in a globalized, networked society, and learn how to mobilize them strategically.

Degree Requirements

Specialization	32
EJCM512 - E-Journalism Workshop I	1
EJCM513 - Web Writing (Arabic)	3
EJCM520 - Web Fundamentals for Online Communication	3
EJCM525 - Web Writing (English OR French)	3
EJCM530 - Professional Seminar I	1
EJCM535 - Cyberlaw and Cyberethics	2
EJCM540 - E-Journalism Workshop II	1
EJCM613 - Social Media and Community Management	2
EJCM625 - Professional Seminar II	1
EJCM680 - Professional Internship	3
JCM517 - New Technologies, New Media	2
JCM524 - Economics and Media Management	2
JCM610 - Strategies and Tools of Public Communication	2
JCM611 - Globalization and Cultural Diversity	2
JCM612 - Internationalization of Media	2
JCM620 - Multicultural Communication	2
Capstone	4
EJCM690A - Professional Project	4
Total	36

Master of Arts in Intervention and Social Work (Hybridⁱ)

Mission

The mission of the Master's program in Intervention and Social Work is to train social born workers with moral, ethical and human values and skills, which are rich in terms of research and social intervention.

These skills will empower students to integrate the job market, give them access to Doctoral studies and excel in research.

Program Educational Objectives

1. The graduate in Intervention and Social Work will become a director or general secretary of a society or a social structure: public or private institutions.
2. The graduate will become a consultant in terms of social welfare of the institutions and companies.
3. The graduate will become head of social projects; socioeconomic, sociocultural and local development.
4. The graduate will demonstrate all the skills necessary to pursue a Doctoral course and propose an innovative field pertaining to the fields of labor and social intervention.

Program Outcomes

- a. Integrate the components of institutional, legal, social and economic frameworks in the management strategies of public and private institutions.

ⁱ Hybrid: Courses offered in French and/or English

- b. Establish the main uses of governance in associative and organizational environments.
- c. Appropriate the tools needed to manage a social organization in both public and private sectors.
- d. Discuss administrative strategies related to social entrepreneurial action.
- e. Estimate the profitability of relationships with the environment, in terms of social responsibility of institutions and companies.
- f. Appreciate the levels of social commitment of a company.
- g. Evaluate contribution of the social actions of the company, in terms of sustainable development.
- h. Manage the types of groups in different societal and cultural situations.
- i. Develop an action plan of social marketing appropriate to public and private organizations.
- j. Integrate constitutive dimensions of sustainable development in social, socioeconomic or sociocultural projects.
- k. Incorporate the two dimensions of culture and leisure in community interventions.
- l. Collaborate with relevant bodies in the definition or reformulation of local development policies.
- m. Appropriate a working method which empowers the Master's student to combine the epistemological, ethical, professional and technological principles and the statistics used in the context of research.
- n. Prepare a research project which leads to the Master's thesis, or project in Intervention and social work.

Degree Requirements

Common Core	15
MTR575 - Research Methodology in Humanities	3
MTR681 - Quantitative Methods in Humanities	2
EDU502 - Training Ethics	1
SOC639 - Sociology of culture and leisure	3
SOC506 - Institutional Sociology	3
TIS605 - Management and group facilitation	3
Specialization	15
TIS615 - Social marketing	3
TIS630 - Governance and ethics	3
TIS635 - Social responsibility and sustainable development	3
TIS640 - Advanced practices in community social intervention	3
TIS597 - Project/internship in work and social intervention	3
Capstone	6
TIS690A - Dissertation in Intervention and social work	6
TIS691 - Professional Practices in Intervention and social work	3
TIS692 - Project in Intervention and social work	3
Total	36

Master of Arts in Journalism and Communication

Mission

This program is designed for BA holders in Journalism and Communication who wish to pursue a higher academic level, in preparation for PhD studies. Graduates will be communication professionals, media researchers and experts, information and communication critics, etc. This degree will enhance academic knowledge, skills and leadership. Graduates will reflect upon more sophisticated topics and acquire a greater sense of discrimination, analysis and criticism. By the end of the curriculum, they will produce a well-researched thesis summarizing their academic attainment.

Program Educational Objectives

1. Graduates will take into account current evolution and media internationalization, to analyze their contact with cultures and societies.

2. Graduates will acquire information in different areas of knowledge including journalism and communication, and will develop an analytical and scientific approach towards media issues.
3. Graduates will create appropriate communication strategies based on available data and tools.
4. Graduates will know how to use media and new technology tools to serve communication strategies.

Program outcomes

- a. Students will acquire methodologies of scientific research, while studying media and communication.
- b. Structure, write and present a personal, innovative and documented research on a problematic topic in the field of information and communication.
- c. Re-examine cultural, economic and political issues, with respect to media and mass communication, especially in the age of new media and globalization.
- d. Define the most efficient techniques and tools in communication.
- e. Adapt communication strategies to the real needs of media, enterprises, collectives, etc.
- f. Discuss major factors affecting the process of communication.
- g. Implement new technology to support media needs.
- h. Identify, employ and discuss ethical standards.
- i. Define a perspective of media functioning and provide exposure to technical know-how.
- j. Develop competency in professional practice and be able to assess a professional experience from different perspectives.

Degree Requirements

Common Core	3
MTR500 - Research Methodology	3
Specialization	27
JCM515 - Media and Public Opinion	2
JCM516 - Psychology of Communication	2
JCM517 - New Technologies, New Media	2
JCM518 - Media: Freedoms and Deontology	2
JCM523 - Political Behaviors and Mass Communication	2
JCM524 - Economics and Media Management	2
JCM610 - Strategies and Tools of Public Communication	2
JCM611 - Globalization and Cultural Diversity	2
JCM612 - Internationalization of Media	2
JCM613 - Bilateral, Multilateral, Mediation and Globalization	2
JCM620 - Multicultural Communication	2
JCM621 - Thematic Seminars	2
JCM680 - Professional Internship	3
Capstone	6
JCM690A - Master Dissertation	6
Total	36

Master of Arts in Psychology (Hybridⁱ)

Emphasis

- Clinical Psychology
- Industrial Psychology
- School Psychology

Mission

ⁱ Hybrid: Courses offered in French and/or English

The mission of the program of Master of Arts in Psychology is to train competent people specialized in various aspects of psychology. This training is interested in the functioning of the human as a member of a group or a particular culture. It addresses normal processes as well as mental disorders. Specialized training in psychology enables students to jointly master the theoretical, methodological and practical knowledge, on the one hand, and on the other hand, it prepares them to pursue the profession of a psychologist and researcher. These skills empower students to integrate into the labor market, to gain access to the Doctorate and excel in research.

Program Educational Objectives

1. Graduates will make careers in the field of orientation, counseling, assistance and psychological accompaniment within a pluralistic team, in different institutions from early childhood to adulthood.
2. Graduates will be qualified psychologists, professional and ethical in the performance of psychological practice in the clinical domain, in rehabilitation and specialized training centers, in hospitals or in detention centers for youths and adolescents, in organizations, at schools.
3. Graduates will demonstrate all the skills necessary to pursue a Doctoral course and excel in research.

Program Outcomes

- a. Students will adopt an appropriate a methodological and statistical analysis of the scientific approach in psychology, which combines the epistemological, ethical, technological and static principles.
- b. Recognize the key concepts, methods and models of psychology in the clinical, professional and familial practice.
- c. Examine and define mental and addictive disorders through various psychopathological perspectives.
- d. Analyze, starting from cognition and neuropsychology, the psyche and the behavior of the human, normal and pathological, in their stressful and traumatic environment.
- e. Put into practice the acquired learning and evaluate the training.
- f. Solve problems in the workplace in order to improve the quality of life.
- g. Examine workplace productivity and management and employee working styles.
- h. Put into practice the psychological assessments in a school setting.

Degree Requirements

Common Core	15
MTR575 - Research Methodology in Humanities	3
MTR681 - Quantitative Methods in Humanities	2
PSY545 - Practicum Training in Psychology	3
PSY595 - Project of Psychology	2
PSY620 - Research in Psychology	3
PSY630 - Ethics and Deontology	1
PSY635 - Thematic Seminar in Psychology	1
Emphasis: Clinical Psychology	21
Specialization	15
PSY531 - Clinical Cognitive Neuropsychology	3
PSY552 - Taxonomy and Psychopathology	3
PSY600 - Stress, Trauma and Disability	3
PSY625 - Analysis of Professional Practices	3
PSY672 - Addictions	3
Electives *	3 out of 6
PSY578 - The Family Clinic	3
PSY682 - Psychology of Family Ties	3
Capstone	3 or 6
PSY690A - Psychology Dissertation	6
PSY695 - Psychology Project II	3
Emphasis: Industrial Psychology	21

Specialization	15
PSY510 - Occupational health psychology	3
PSY515 - Social psychology applied to work	3
PSY550 - Interventions and professional support in the organization	3
PSY610 - Psychological management of human resources practices	3
PSY615 - Orientation Psychology: principles and practices	3
Electives *	3 out of 6
PSY578 - The Family Clinic	3
PSY682 - Psychology of Family Ties	3
Capstone	3 or 6
PSY690A - Psychology Dissertation	6
PSY695 - Psychology Project II	3
Emphasis: School Psychology	21
Specialization	15
PSY536 - Learning Disabilities: dyslexia, dysorthography, dyscalculia	3
PSY537 - Behavioral disorders at school	3
PSY569 - Psychological assessments in school (children, teenagers)	3
PSY570 - School psychologist interventions	3
PSY668 - Digital activities development	3
Electives *	3 out of 6
PSY578 - The Family Clinic	3
PSY682 - Psychology of Family Ties	3
Capstone	3 or 6
PSY690A - Psychology Dissertation	6
PSY695 - Psychology Project II	3
Total	36

*Students that choose to take the master thesis are not required to complete one of the 3 elective courses.

Master of Arts in Social Sciences (Hybridⁱ)

Mission

The mission of the Master's Program in social sciences is to form sociologists equipped with moral, human and ethical values, and rich in skills, in terms of research and teaching in the social sciences.

These skills empower students to integrate into the labor market, gain access to Doctoral studies and excel in teaching and research, especially in the field of sociology.

Program Educational Objectives

1. Graduates in social sciences will become strategic research managers in research laboratories, administration, and public as well as in private organizations.
2. Graduates in social sciences will become a teachers, trainers and coordinators for social and economic sciences in communal and ministerial school settings.
3. Graduates in social sciences will become heads of service (position: 3rd category) in public institutions.
4. Graduates will demonstrate all the skills necessary to pursue a Doctoral course and propose an innovative field within the scope of social sciences.

Program Outcomes

- a. Students will formulate problems relating to various fields of social sciences.
- b. Appropriate a working method which combines the epistemological, ethical, and technological principles and quantitative and qualitative techniques used within the framework of research.

ⁱ Hybrid: Courses offered in French and/or English

- c. Pilot logistical operations of a social science research project.
- d. Develop thematic axes for social science training workshops.
- e. Prepare teaching sequences of sociology and economics tailored to the curriculum of the Lebanese program.
- f. Build specialized didactic tools adapted to the teaching of social sciences.
- g. Evaluate the content and teaching methods in social sciences.
- h. Propose research topics in social sciences tailored to school settings.
- i. Categorize the different types of institutions through their social, socio-economic and socio-cultural functions.
- j. Evaluate the contribution of economic policies.
- k. Validate the fitness levels that the public institutions exert on individuals.
- l. Prepare a research project which leads to the Master's thesis or the project in social sciences.

Degree Requirements

Common Core	15
MTR575 - Research Methodology in Humanities	3
MTR681 - Quantitative Methods in Humanities	2
EDU502 - Training Ethics	1
SOC639 - Sociology of culture and leisure	3
SOC506 - Institutional Sociology	3
TIS605 - Management and group facilitation	3
Specialization	15
SOC511 - Short-term and Structural Adjustment of Economic policies	3
SOC513 - Ethnology	3
SOC521 - Urban and Rural Sociology	3
SOC596 - Project/Internship in Social Sciences	3
SOC638 - Sociology of Minorities	3
Capstone	6
SOC690A - Dissertation in Social Sciences	6
SOC691 - Professional Practice	3
SOC692 - Project in Social Sciences	3
Total	36

Diploma in Interventions and Systematic Therapies (Hybridⁱ)

Mission

The curriculum of this diploma in IST focuses on theoretical inputs, clinical practice and personal development. The diploma offers a thorough education on approaches relating to the field of family ties.

At the end of the curriculum, clinical and health psychologists, psychiatrists and psychotherapists, can incorporate into their professional practice the contribution of systematic practice. Doctors, nurses, psychologists and specialists in the medical, social and educational sectors can integrate structures to accompany families going through difficulties.

Program Educational Objectives

1. Graduates will develop skills relating to the indication of systematic psychotherapy; and to the modalities of interventions adapted to the contexts of groups, networks, family, couples and individuals.
2. Graduates will develop soft skills in their personal assessment and their professional context.
3. Graduates will be qualified systemic psychotherapists, professional and ethical in the performance of psychological practice and the support of couples and families.

ⁱ Hybrid: Courses offered in French and/or English

Program Outcomes

- Students will adopt a methodological approach in construction of a systemic framework.
- Students will recognize the key concepts, methods and models of psychology in the clinical and familial systemic practice.
- Students will examine and define relational disorders in institutions, networks and communities by formulating intervention hypothesis.
- Students will put into practice the acquired learning and evaluate the training.

Degree Requirements

IST505 – Systematic Epistemology	3
IST510 – Modalities of Intervention and Systematic Management	3
IST515 – Stakes of the Clinic Family and the Couple	3
IST520 – Systematic Interventions in Mental Health and the Institutional Network	3
Total	12

Doctoral Programs**Ph.D. in Education Sciences (Hybridⁱ)****Mission**

The mission of the program seeks to promote education as a discipline of instruction, communication and culture.

The program offers multidimensional skills in education to the labor market.

The programs offers all the necessary skills for success and proposes an innovative research field dealing with the problems of education.

Program Educational Objectives

Training future Higher Education teachers and researchers in Education.

Program Outcomes

Ph.D. holders will be able to teach within the Higher Education field and conduct and produce scientific research.

Degree Requirements

Specialization	60
Ph.D. Seminars by Doctoral College	15
Ph.D. Dissertation	45
Total	60

Ph.D. in Psychology (Hybridⁱ)**Mission**

The mission of the program seeks to promote psychology as a discipline of instruction, communication and also culture. The program offers the labor market multidimensional skills in psychology.

The program offers all the necessary skills for success and proposes an innovative research field falling within the domains of psychology.

Program Educational Objectives

To train future Higher Education researchers and professionals in psychology.

Program Outcomes

ⁱ Hybrid: Courses offered in French and/or English

Ph.D. holders will be able to teach within the Higher Education field and to conduct and produce scientific research.

Degree Requirements

Specialization	60
Ph.D. Seminars by Doctoral College	15
Ph.D. Dissertation	45
Total	60

Ph.D. in Social Sciences (Hybridⁱ)

Mission

The mission of the program seeks to promote sociology as a discipline of instruction, communication and also culture. The program offers the labor market multidimensional skills in sociology.

The programs offers all the necessary skills to success and propose an innovative research field falling within the domains of sociology.

Program Educational Objectives

Train the future Higher Education teachers and researchers in sociology

Program Outcomes

Ph.D. holders will be able to teach within the Higher Education field and to conduct and produce scientific research.

Degree Requirements

Specialization	60
Ph.D. Seminars by Doctoral College	15
Ph.D. Dissertation	45
Total	60

Ph.D. in Visual Arts (Hybridⁱ)

Mission

The Ph.D. program in visual arts challenges the traditionally conceived borders between creative and critical practice. The program enables potential dialogue between creative practice and theoretical knowledge as related forms of intellectual work and provides the conditions for students to realize a wide range of possible projects, including those that exist across the traditional divides of critical studies and production. Focusing on a diverse range of cultural production that includes cinema, television, video art, the Ph.D. program participants interrogate the historical, aesthetic, political, ideological, and technological aspects of these media forms across a range of international contexts, investigating their points of connection and convergence as well as their relationship to broader cultural and historical change. The program thus prepares students for intellectually informed creative practice as well as theoretical and critical production in a range of environments, not limited to traditional academic contexts.

Integrating critical and creative practice: In our research and teaching, we explore the intersections of what have been, or have become, separated modes in our field of media studies: theory and practice. We seek to nurture dialogue between creative practice and scholarly inquiry as related forms of intellectual work.

Working across media: Our approach to media studies and media production incorporates a range of technologies and platforms, stressing their historical and intertextual relationships.

Pursuing new modes of social and political engagement: Media literacy, broadly defined, is an essential component of participation in our increasingly mediated lives. A new generation of media makers and media interpreters has the power to re-shape the world.

ⁱ Hybrid: Courses offered in French and/or English

Fostering global cultural citizenship: Making and studying media today necessitates a global and historical perspective. By thinking and working across boundaries of nation, culture and identity, we are creating new forms of knowledge and new media forms that respect and investigate differences of race, class, gender, sexuality and nation.

Program Educational Objectives

Upon program completion, graduates will:

1. Be prepared for employment in research/faculty.
2. Engage in and promote evidence-based practices through the application of rigorous methodology.
3. Link education research to policy and practice.
4. Provide leadership in the field by developing an independent line of ethical and culturally responsive research.
5. Contribute to development of the next generation of scholars.
6. Be able to influence school policy and reform.

Program Outcomes

Students who earn a Ph.D. in visual arts will gain the skills, knowledge, and understanding that will enable them to:

- a. Demonstrate knowledge of video and/or digital media production.
- b. Demonstrate critical thinking and analytical skills appropriate to doctoral work in to the discipline of film and digital media.
- c. Demonstrate research skills appropriate to doctoral work in the discipline of film and digital media.
- d. Demonstrate scholarly writing skills appropriate to doctoral work in the discipline of film and digital media

Degree Requirements

Specialization	60
Ph.D. Seminars by Doctoral College	15
Ph.D. Dissertation	45
Total	60

SCIENCES

Undergraduate Programs

Bachelor of Science in Actuarial and Financial Mathematics (English)

Accreditation

This program is accredited by the Applied and Natural Science Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Applied and
Natural Science
Accreditation
Commission

Mission

Dedicated to its institutional beliefs both at the human and spiritual levels, the Department of Mathematics seeks to form undergraduate and graduate students that excel in the fields of fundamental mathematics as well as in Actuarial and Financial Mathematics. This is fulfilled through comprehensive educational programs, research and development and collaborations with academic institutions and professionals.

Program Educational Objectives

1. Graduates will be able to bring in front the potency fundamental concepts of calculus, linear algebra, probability, interest theory, and statistics to empower themselves obtaining new skills as needed in their employment or future education.
2. Graduates will be able to perceive the ultimate practices and theories of actuarial sciences and their application that enable them to establish a career as an actuary and provides risk management expertise to insurance companies, consultancies, government, regulatory bodies, investment firms and banking institutions.
3. By acquiring computing skills & essentials of programming languages, graduates will be able to provide pertinent answers to advanced actuarial problems as well as to analyze big data using the most contemporary software technologies in use by the actuarial industry professionals.

Program Outcomes

- a. An ability to apply knowledge of mathematics, science, and applied sciences.
- b. An ability to design and conduct experiments, as well as to analyze and interpret data.
- c. An ability to formulate or design a system, process, procedure or program to meet desired needs.
- d. An ability to function on multidisciplinary teams.
- e. An ability to identify and solve applied science problems.
- f. An understanding of professional and ethical responsibility.
- g. An ability to communicate effectively.
- h. The broad education necessary to understand the impact of solutions in a global and societal context.
- i. A recognition of the need for and an ability to engage in life-long learning.
- j. Knowledge of contemporary issues.
- k. An ability to use the techniques, skills, and modern scientific and technical tools necessary for professional practice.

Degree requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Religious Sciences	3
General Education - Science and Health	9
General Education - Sports	1

CSC204 - Information Technology & Networking	3
Common Core	37
CSC211 - Discrete Methods	3
ECO221 - Microeconomics	3
ECO222 - Macroeconomics	3
FIN421 – Financial Markets	3
INF216 - Introduction to Programming	3
INF217 - Applicative Programming	3
MAC315 - Insurance Contracts	1
MAC400 - Actuarial Mathematics	3
MAC421 - Demography and Actuarial Science	3
MAT213 - Calculus III	3
MAT220 - Differential Equations	3
MAT310 - Linear Algebra	3
MAT313 - Vector Analysis	3
Specialization	28
CSC416 - Graph Theory and Operations Research	3
ECO410 - Banking and Finance	3
MAC216 - Ethics of Insurance	3
MAC430 - Insurance Accounting and Mathematical Reserves	3
MAT312 - Economical and Financial Calculus	3
MAT418 - Numerical Methods	3
STA320 - Applied Probability and Statistics	3
STA321 - Descriptive Statistics	3
STA331 - Statistical Analysis	3
STA335 - Statistical Survey and Analysis	1
Capstone	1
MAC438 – Internship Report	1
Total	96

Bachelor of Science in Biochemistry (Hybridⁱ & Eng.)

Offered in Main Campus Kaslik and in RUC Zahle

Mission

The mission of general biochemistry program is to prepare our students to infiltrate the food, biotechnological, pharmaceutical and chemical industries as specialists of the highest research qualification in the branches of molecular biochemistry, analytical biochemistry and biotechnology by providing analytical approaches and techniques for analyzing and providing solutions to the stakeholders' needs.

Program Educational Objectives

1. Graduates will be able to succeed in a wide variety of post-baccalaureate paths, including graduate and post-graduate schools, as well as research in biochemistry and related disciplines.
2. Graduates will be able to work in many biochemistry-related fields and continue their professional development while engaging in life-long learning necessary for a sustainable career.
3. Graduates will be able to function effectively and ethically, within an organization and society as productive members of interdisciplinary teams, with analytical and critical thinking skills to analyze and solve problems.

Program Outcomes

ⁱ Hybrid: Courses offered in French and/or English

- a. Students will apply knowledge of mathematics and applied and/or natural sciences to areas relevant to the discipline.
- b. Students will design and conduct experiments, or test hypotheses, as well as to analyze and interpret data.
- c. Students will formulate or design a system, process, procedure or program to meet desired needs.
- d. Students will function on multidisciplinary teams.
- e. Students will identify and solve technical or scientific problems.
- f. Students will exhibit an understanding of professional and ethical responsibility.
- g. Students will communicate effectively.
- h. Students will possess the broad education necessary to understand the impact of technical and/or scientific solutions in a global and societal context.
- i. Students will recognize the need for and ability to engage in life-long learning.
- j. Students will appreciate the knowledge of contemporary issues.
- k. Students will use the techniques, skills, and modern scientific and technical tools necessary for professional practice.

Degree requirements – Hybrid

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Religious Sciences	3
General Education - Sports	1
MAT216 - General Mathematics	3
PHY210 - General Physics	3
STA220 - Probability and Applied Statistics	3
Common Core	37
BCH320 - Structural Biochemistry	3
BCH421 - Metabolic Biochemistry	3
BCH470 - Laboratory of Biochemistry	1
BIO201 - General biology I	3
BIO202 - General biology II	3
BIO271 - Laboratory of General Biology I	1
BIO321 - Human Anatomy and Physiology	3
BIO322 - Genetics	3
BIO413 - Molecular Biology	3
BIO472 - Laboratory of Molecular Biology	1
CHM212 - General Chemistry	3
CHM222 - Chemistry of Solutions	3
CHM270 - Laboratory of General Chemistry	1
CHM317 - Organic Chemistry	3
CHM370 - Laboratory of Analytical Chemistry	1
CHM371 - Laboratory of Organic Chemistry	1
CHM471 - Lab of Chromatography and Spectroscopy	1
PHY270 - Laboratory of General physics	1
Electives	12
BCH440 - Fundamentals of biotechnology	3
BIO228 - General Botany	3

BIO336 - General Immunology	3
BIO411 - General Microbiology	3
BIO415 - Systems physiology	3
BIO471 - Laboratory of Microbiology	1
BIO473 - Laboratory of biology & physiology of plant	1
BIO272 - Laboratory of General Biology II	1
CHM321 - Inorganic Chemistry	3
CHM411 - Organic Chemistry II	3
CHM426 - Food chemistry	3
Physics II	3
Laboratory of Physics II	1
INF304 - CS for Chemistry, Biochemistry and Biology	3
Specialization	17
BCH471 - Laboratory of Enzymology	1
BCH350 - Enzyme technology	3
BCH420 - Biochemical analysis techniques	3
BCH430 - Pharmaceutical biochemistry	3
BCH445 - Fundamentals of cell signaling	3
BCH490 - Internship	3
Total	96

Degree requirements – English

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3 to 6
General Education - Behavioral, Social Sciences and History	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	3
General Education - Religious Sciences	3
General Education - Sports	1
MAT216 - General Mathematics	3
PHY210 - General Physics	3
STA220 - Probability and Applied Statistics	3
Common Core	34
BCM320 - Structural Biochemistry	3
BCH421 - Metabolic Biochemistry	3
BCH470 - Laboratory of Biochemistry	1
BIO201 - General biology I	3
BIO202 - General biology II	3
BIO271 - Laboratory of General Biology I	1
BIO321 - Human Anatomy and Physiology	3
BLG322 - Genetics	3
BLG413 - Molecular Biology	3
BLG472 - Laboratory of Molecular Biology	1
CHE270 - Laboratory Of General Chemistry	1
CHE371 - Laboratory of Organic Chemistry	1
CHM222 - Chemistry of Solutions	3
CHM317 - Organic Chemistry	3
CHM370 - Laboratory Of Analytical Chemistry	1

CHM425 - Analysis Techniques	3
PHY270 - Laboratory of General Physics	1
Electives	12
BIO228 - General Botany	3
BIO336 - General Immunology	3
BIO411 - General Microbiology	3
BIO415 - Systems physiology	3
BIO471 - Laboratory of Microbiology	1
BIO473 - Laboratory of biology & physiology of plant	1
BIO272 - Laboratory of general biology II	1
CHM321 - Inorganic Chemistry	3
CHE411 - Organic Chemistry II	3
CHM426 - Food chemistry	3
Physics II	3
Laboratory of General Physics II	1
INF304 - CS for Chemistry, Biochemistry and Biology	3
Specialization	20
BCH350 - Enzyme technology	3
BCH420 - Biochemical analysis techniques	3
BCH430 - Pharmaceutical biochemistry	3
BCH440 - Fundamentals of biotechnology	3
BCH445 - Fundamentals of cell signaling	3
BCH490 - Internship	3
BCM471 - Laboratory of Enzymology	1
CHE471 - Lab of Chromatography and Spectroscopy	1
Total	96

Bachelor of Science in Biology (Hybridⁱ)

Mission

The mission of the BS in Biology is to provide its graduates an excellent foundation for careers or further studies in biotechnology, medicine, genetics, physiology and pharmacology, education.

Program Educational Objectives

1. Graduates will be able to develop analytical and critical-thinking skills and be prepared to succeed in a wide variety of post-baccalaureate paths, including graduate and post-graduate schools, as well as research in biology and related disciplines.
2. Graduates will be able to work in many biology related fields and continue their professional development while engaging in life-long learning necessary for a sustainable career.
3. Graduates will be able to function effectively and ethically within an organization and society as productive members of interdisciplinary teams.

Program Outcomes

Students will have:

- a. An ability to apply knowledge of mathematics, science, and applied sciences.
- b. An ability to design and conduct experiments, as well as to analyze and interpret data.
- c. An ability to formulate or design a system, process, or program to meet desired needs.
- d. An ability to function on multidisciplinary teams.
- e. An ability to identify and solve applied science problems.
- f. An understanding of professional and ethical responsibility.
- g. An ability to communicate effectively.

ⁱ Hybrid: Courses offered in French and/or English

- h. The broad education necessary to understand the impact of solutions in a global and societal context.
- i. A recognition of the need for and an ability to engage in life-long learning.
- j. A knowledge of contemporary issues.
- k. An ability to use the techniques, skills, and modern scientific and technical tools necessary for professional practice.

Degree requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Religious Sciences	3
General Education - Sports	1
MAT216 - General Mathematics	3
CHM212 - General Chemistry	3
STA220 - Probability and Applied Statistics	3
Common Core	19
BCH320 - Structural Biochemistry	3
BIO201 - General Biology I	3
BIO271 - Laboratory of General Biology I	1
BIO202 - General Biology II	3
CHM270 - Laboratory of General Chemistry	1
CHM317 - Organic chemistry I	3
CHM371 - Laboratory of Organic Chemistry	1
PHY211 - Fundamental of Physics for Life Sciences I	3
PHY270 - Laboratory of General physics	1
Specialization	40
BCH445 - Fundamentals of cell signaling	3
BCH421 - Metabolic Biochemistry	3
BIO272 - Laboratory of General Biology II	1
BIO228 - General Botany	3
BIO322 - Genetics	3
BIO336 - General Immunology	3
BIO411 - General Microbiology	3
BIO413 - Molecular Biology	3
BIO415 - Systems Physiology	3
BIO471 - Laboratory of Microbiology	1
BIO472 - Laboratory of Molecular Biology	1
BIO473 - Lab of Biology and Physiology of Plants	1
BIO417 - Fundamentals of Pharmacology and Toxicology	3
BIO321 - Human Anatomy and Physiology	3
BIO430 - Applied Cell Biology	3
BIO490 - Internship	3
Electives	7
BCH470 - Laboratory of Biochemistry	3
CHM321 - Inorganic Chemistry	3
CHM411 - Organic Chemistry II	3

CHM426 - Food Chemistry	3
INF304 - Informatics for Chemistry and Life and Earth Sciences	3
Fundamentals of Physics for Life Sciences II	3
Laboratory of Physics II	1
Total	96

Bachelor of Science in Chemistry (Hybridⁱ)

Mission

The mission of the BS in Chemistry is to provide students interested in pursuing careers in medicine, chemical research, industry, environment and education with a strong foundation of theory, practical lab skills, and research experiences. It helps them become self-learners and promotes an understanding that social consciousness and ethical behavior are essential features of a principled chemistry community.

Program Educational Objectives

1. Graduates will be ready for employment as: chemists, environmental consultant, Technical and sales support of products ranging from laboratory instrumentation to pharmaceuticals, or for graduate study in chemistry, or for acceptance to medical school.
2. Graduates will be able to develop an understanding of chemical principles; skill in analytical methods, including modern instrumentation; the ability to observe, record, critically interpret, and communicate experimental results; a facility in analytical and logical problem solving; and skills in quality control investigation.
3. Graduates will be able to participate effectively in multidisciplinary teams in both leadership and fellowship roles and worked with and welcomed diversity.

Program Outcomes

- a. Students will apply knowledge of mathematics and applied and/or natural sciences to areas relevant to the discipline.
- b. Students will design and conduct experiments, or test hypotheses, as well as to analyze and interpret data.
- c. Students will identify and solve technical or scientific problems.
- d. Students will exhibit an understanding of professional and ethical responsibility.
- e. Students will communicate effectively.
- f. Students will possess the broad education necessary to understand the impact of technical and/or scientific solutions in a global and societal context.
- g. Students will recognize the need for and ability to engage in life-long learning.
- h. Students will appreciate the knowledge of contemporary issues.
- i. Students will use the techniques, skills, and modern scientific and technical tools necessary for professional practice.

Degree requirements

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Religious Sciences	3
General Education - Sciences & Health	3
General Education - Sports	1

ⁱ Hybrid: Courses offered in French and/or English

MAT216 - General Mathematics	3
STA220 - Probability and Applied Statistics	3
Common Core	25
BCH320 - Structural biochemistry	3
BIO201 - General Biology I	3
BIO271 - Laboratory of General Biology I	1
CHM212 - General Chemistry	3
CHM222 - Chemistry of Solutions	3
CHM270 - Laboratory of General Chemistry	1
CHM317 - Organic Chemistry	3
CHM371 - Laboratory of Organic Chemistry	1
INF304 - Informatics for Chemistry and Life and Earth Sciences	3
PHY211 - Fundamental of Physics for Life Sciences I	3
Laboratory of Physics I	1
Specialization	29
CHM321 - Inorganic Chemistry	3
CHM325 - Physical Chemistry I	3
CHM330 - Theoretical Chemistry	3
CHM340 - Spectroscopic Methods	3
CHM370 - Laboratory of Analytical Chemistry	1
CHM411 - Organic Chemistry II	3
CHM412 - Physical Chemistry II	3
CHM422 - Process Chemistry	3
CHM425 - Analysis Techniques	3
CHM471 - Lab of Chromatography and Spectroscopy	1
CHM490 - Internship	3
Electives	12
BCH421 - Metabolic Biochemistry	3
BCH470 - Laboratory of Biochemistry	1
BIO202 - General Biology II	3
BIO272 - Laboratory of General Biology II	1
CHM420 - Macromolecules, Polymers and Materials	3
CHM426 - Food Chemistry	3
GEO412 - Ecology and Environment	3
Physics I	3
Laboratory of physics II	1
Total	96

Bachelor of Science in Computer Science (English)

Offered in Main Campus Kaslik and partially in RUC Zahle

Accreditation

This program is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Mission

The mission of the Department of Computer Science and Information Technology is to graduate undergraduate and graduate students that excel in the fields of

The mission of the Department of Computer Science and Information Technology is to graduate undergraduate and graduate students that excel in the fields of computing, networking, and database design, creation and management. This is fulfilled through comprehensive educational programs and research and development.

Program Educational Objectives

1. Graduates will work successfully as members of professional software teams to address real work problems, as well as demonstrate strong communication skills. They will be prepared for careers in industry, consulting, teaching, and other fields related to computer science.
2. Graduates will provide full solutions for software problems from system design to solution development. They will be committed to lifelong learning.
3. Graduates will have the ability to function and communicate effectively as ethically and socially responsible computer science professionals.

Program Outcomes

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions [CS].

Degree requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	15
General Education - Arts and Humanities	3
General Education - Social Sciences	3
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Sports	1
General Education - Religious Sciences	3
Math and Sciences	28
MAT202 - Algebra I	3
MAT213 - Calculus III	3
MAT220 - Differential Equations	3
MAT310 - Linear Algebra	3
MAT418 - Numerical Methods	3
STA320 - Applied Probability and Statistics	3
CHM212 - General Chemistry	3
PHY210 – General Physics	3
CHM270 - Laboratory of General Chemistry or PHY270 – Laboratory of General Physics or CHM370 – General Chemistry & Physics Laboratory	1
CSC211 - Discrete Methods	3

Specialization	45
CSC212 - Computer Organization and Assembly Language	3
CSC214 - Programming I	3
CSC215 - Programming II	3
CSC270 - Programming Laboratory I	1
CSC271 - GUI programming	1
CSC272 - Programming Laboratory II	1
CSC314 - Object Oriented Programming	3
CSC315 - Data Structures and Algorithms	3
CSC320 - Database systems	3
CSC352 - Theory of Programming Languages	3
CSC360 - Internet Technology	3
CSC368 - Project Management	2
CSC416 - Graph theory& operations research	3
CSC420 - Computer Networks	3
CSC421 - Operating Systems	3
CSC438 - Internship Report	1
CSC460 - Information Systems Security	3
CSC461 - Parallel and Distributed Computing	3
Electives	6 out of 18
CSC312 - Advanced VB Programming	3
CSC343 - Mobile Programming	3
CSC417 - Human Computer Interaction	3
CSC426 - Database Applications Development	3
CSC428 - Database Administration	3
CSC430 - Systems and Networks Administrator	3
Capstone	2
CSC436 - Advanced Programming Project	2
Total	96

Bachelor of Science in Human Nutrition and Dietetics (Hybridⁱ & Eng.)

Offered in Main Campus Kaslik and RUC Zahle

Program Mission

The mission of the program is to improve the health and wellbeing of individuals and diverse communities locally and globally through leadership and excellence in nutrition and dietetics education, research, practice and service. In addition, the program is dedicated to preparing graduates to become global citizens, ethical leaders and decision makers.

Program Educational Objectives

1. Prepare graduates to be competent entry level dietitians.
2. Grow their ability to translate research into practice through effective programs and valuable information dissemination.
3. Strongly engage in current nutrition and health issues affecting the national and global communities.

Program Outcomes

ⁱ Hybrid: Courses offered in French and/or English

- a. Students will learn how to maintain up-to-date knowledge and synthesize approaches related to contemporary and emerging nutrition issues.
- b. Develop personal characteristics such as leadership and an ability to work in multidisciplinary teams.
- c. Act ethically with accountability for life-long learning and commitment to excellence.
- d. Apply the knowledge of food and nutrition in the disease management process.
- e. Apply the knowledge of basic sciences and statistics.
- f. Develop effective counseling techniques needed in clinical dietetic practice and assessing their outcomes.
- g. Interpret and apply nutrition concepts to evaluate and improve the health of communities.
- h. Conduct research using appropriate measures and methods.
- i. Communicate effectively.

Degree Requirements - Hybrid Section

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Sports	1
General Education - Religious Sciences	3
BIO211 - Cell Biology	3
NTR211 - Fundamentals of Human Nutrition	3
STA220 - Probability and Applied Statistics	3
Common Core	9
BCH215 - Introduction to Biochemistry	3
CHM210 - General Chemistry	3
GAA227 - Food Microbiology	2
GAA277 - Food Microbiological Laboratory	1
Specialization	51
GAA340 - Food Composition and Analysis	3
GAA339 - Hygiene and Quality Control of Food	3
GAA378 - Food Composition and Analysis Laboratory	1
NTR222 - Nutrition and Physiology I	3
NTR223 - Nutrition and Physiology II	2
NTR322 - Human Nutrition I	3
NTR325 - Inborn Errors of Metabolism	2
NTR328 - Eating Behaviors and Disorders	2
NTR331 - Community Nutrition	3
NTR334 - Food Service Management	3
NTR335 - Nutrition in the Life Cycle	3
NTR336 - Human Nutrition II	2
NTR435 - Preventive Nutrition and Public Health	2
NUT442 - Clinical Counseling and Nutrition Assessment	2
NTR471 - Clinical Counseling and Nutrition Assessment Lab	1
NTR445 - Current Topics in Food Sciences and Nutrition	0
NTR446 - Pharmacology and Human Health	3
NTR447 - Pathophysiology of Nutrition Related Diseases	4
NTR452 - Medical Nutrition Therapy I	2
NTR475 - Medical Nutrition Therapy I Lab	1

NTR453 - Medical Nutrition Therapy II	2
NTR476 - Medical Nutrition Therapy II Lab	1
NTR454 - Medical Nutrition Therapy III	2
NTR478 - Medical Nutrition Therapy III Lab	1
Electives	4 out of 8
NTR218 - Food Economy	2
NTR326 - Drug-Nutrient Interactions	2
NTR433 - Nutrition for Athletes	2
NUT320 – Food Processing	2
Capstone	2
NTR338A - Food Service Management and Community Internship	2
Total	96

Degree Requirements – English Section

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Sports	1
General Education - Religious Sciences	3
BLG211 - Cell Biology	3
BLG222 - Animal Histology	3
NUT211 - Fundamentals of Human Nutrition	3
STS220 - Applied Probability and statistics	3
Common Core	9
GAA227 - Food Microbiology	2
GAA277 - Food Microbiology Lab	1
BCM215 - Introduction to Biochemistry	3
CHE210 - General Chemistry	3
Specialization	51
GAA340 - Food Composition and Analysis	3
GAA339 - Food Hygiene and Quality Control	3
GAA378 - Food Composition and Analysis Laboratory	1
NUT222 - Nutrition and Physiology I	3
NUT223 - Nutrition and Physiology II	2
NUT322 - Human Nutrition I	3
NUT325 - Inborn Errors of Metabolism	2
NUT328 - Eating Behaviors and Disorders	2
NUT331 - Community Nutrition	3
NUT334 - Food Service Management	3
NUT335 - Nutrition in the Life Cycle	3
NUT336 - Human Nutrition II	2
NUT435 - Preventive Nutrition and Public Health	2
NUT442 - Clinical Counseling and Nutrition Assessment	2
NUT471 - Clinical Counseling and Nutrition Assessment Lab	1
NUT445 - Current Topics in Food Sciences and Nutrition	0
NUT446 - Pharmacology and Human Health	3

NUT447 - Pathophysiology of Nutrition Related Diseases	4
NUT452 - Medical Nutrition Therapy I	2
NUT475 - Medical Nutrition Therapy I Lab	1
NUT453 - Medical Nutrition Therapy II	2
NUT476 - Medical Nutrition Therapy II Lab	1
NUT454 - Medical Nutrition Therapy III	2
NUT478 - Medical Nutrition Therapy III Lab	1
Electives	4 out of 10
NUT218 - Food Economy	2
NUT326 - Drug-Nutrient Interactions	2
NUT327 - Food-Drug Interactions	1
NUT432 - Sports Nutrition	1
NUT433 - Nutrition for Athletes	2
NUT320 – Food Processing	2
Capstone	2
NUT338A - Food Service Management and Community Internship	2
Total	96

Bachelor of Science in Information Technology (English)

Accreditation

This program is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Mission

The mission of the Department of Computer Science and Information Technology is to graduate undergraduate and graduate students that excel in the fields of computing, networking, and database design, creation and management. This is fulfilled through comprehensive educational programs and research and development.

Program Educational Objectives

1. Graduates will obtain positions as information technology professionals in various industries and government agencies involved in the creation, maintenance and use of computers, computer networks and computer information systems.
2. Information technology professionals must be able to work effectively in the planning, implementation, configuration, and maintenance of an organization's computing infrastructure.
3. Graduates will be aware of cultural, social, legal, and ethical issues inherent in the discipline of computing.

Program Outcomes

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing-based systems [IT].

Degree requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	18
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Sports	1
General Education - Religious Sciences	3
Math and Sciences	16
MAT202 - Algebra I	3
MAT213 - Calculus III	3
STA320 - Applied Probability and Statistics	3
CHM212 - General Chemistry or PHY210 - General Physics	3
CHM270 - Laboratory of General Chemistry or PHY270 – Laboratory of General Physics	1
General Education - Science and Health Elective	3
Specialization	54
CSC212 - Computer Organization and Assembly Language	3
CSC214 - Programming I	3
CSC270 - Programming Laboratory I	1
CSC271 - GUI Programming	1
CSC314 - Object Oriented Programming	3
CSC320 - Database Systems	3
CSC360 - Internet Technology	3
CSC368 - Project Management	2
CSC420 - Computer Networks	3
CSC438 - Internship Report	1
CSC300 - Hardware Technology	3
CSC312 - Advanced VB Programming	3
CSC319 - Technology and Networks Infrastructure	3
CSC372 - Advanced Programming Lab	1
CSC417 - Human Computer Interaction	3
CSC426 - Database Applications Development	3
CSC428 - Database Administration	3
CSC430 - Systems and Networks Administrator	3
CSC460 - Information System Security	3
MGT220 - Principles of Management	3
MKT220 - Principles of Marketing	3
Electives	6 out of 12
CSC343 - Mobile Programming	3
CSC352 - Theory of Programming Languages	3
CSC416 - Graph Theory and Operations Research	3
CSC421 - Operating Systems	3

Capstone	2
CSC436 - Advanced Programming Project	2
Total	96

Bachelor of Science in Nutrition and Dietetics - Coordinated Program (Eng.)

Program Mission

The mission of the program is to educate students through didactic, comprehensive and interactive learning environment, critical-thinking, and supervised practices. By means of effective and engaging educational materials, this program is set to prepare graduates becoming successful contributors in the profession of dietetics through counseling, education or research, and to address the ever-changing needs of the communities.

Program Educational Objectives

1. Prepare graduates for practice as a dietitian.
2. Adhere to the Code of Ethics and the Scope of Nutrition and Dietetics Practice.
3. Integrate research principles into evidence-based practice, abide critical thinking, and demonstrate communication and leadership competencies.

Program Outcomes

- a. Demonstrate effective and workmanlike verbal and written communication along with ethical conducts and values for the practice of dietetics.
- b. Integrate peer-reviewed scientific data and translate research data into practice.
- c. Implement the Nutritional Care Process to deliver clinical services and dietetic information to communities and individuals.
- d. Apply management theories using proficient and efficient communication to deliver services to individuals and communities.

Degree Requirements

This program requires 122 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Sports	1
General Education - Religious Sciences	3
BLG211 - Cell Biology	3
CHE210 - General Chemistry	3
ELL315 - Public Speaking	3
NUT211 - Fundamentals of Human Nutrition	3
STS220 - Applied Probability and statistics	3
Electives	4 out of 14
NUT218 - Food Economy	2
NUT325 - Inborn Errors of Metabolism	2
NUT328 - Eating Behaviors and Disorders	2
NUT433 - Nutrition for Athletes	2
NUT435 - Preventive Nutrition and Public Health	2
NUT481 - Food and Social Media	2
NUT482 - Basic Concepts in Nutritional Genomics	2
Common Core	12
BCM215 - Introduction to Biochemistry	3

CHM317 - Organic Chemistry	3
GAA227 - Food Microbiology	2
GAA277 - Food Microbiology Lab	1
NUT425 - Food Processing Principles and Applications	2
NUT430 - Food Processing Principles and Applications- Practice	1
Specialization	56
GAA339 - Hygiene and Quality Control of Food	3
GAA340 - Food Composition and Analysis	3
GAA378 - Food Composition and Analysis Laboratory	1
NUT212 - Advanced knowledge in Nutrition	3
NUT221 - Fundamentals of Anatomy, Human Physiology	4
NUT314 - Principles & Practices in Food Service Management	3
NUT324 - Advanced nutrition and human metabolism	3
NUT332 - Pharmacology and Food-nutrient Interaction	3
NUT340 - Nutrition in the Lifecycle - Practice	1
NUT342 - Nutrition in the lifecycle	3
NUT345 - Ethics and Nutritional Care Process	2
NUT347 - Nutrition in Communities	3
NUT348 - Food Festival Workshop	1
NUT411 - Clinical Nutrition I	3
NUT412 - Clinical Nutrition I Lab	1
NUT442 – Clinical Counsel & Nutrition Assessment	2
NUT471 – Clinical Counsel & Nutrition Assessment Lab	1
NUT431 - Clinical Counseling Skills Workshop	1
NUT440 - Managerial skills in dietetic practice	2
NUT443 - Clinical Nutrition II	3
NUT444 - Clinical Nutrition II Lab	1
NUT448 - Scientific Reasoning in Nutrition and Dietetics	2
NUT507 - Dietetics Seminar	2
NUT510 - Clinical Nutrition III	3
NUT511 - Clinical Nutrition III Lab	1
NUT543 - Writing Skills in Current Topics in Food Sciences and Nutrition	1
Capstone	20
NUT339 - Food Community management practice	2
NUT439 - Food service management Practice	2
NUT460I – Hospital Internship I	7
NUT460II – Hospital Internship II	9
Total	122

Academic Minors

Minor in Actuarial Studies (English)

Mission

The mission of the minor in Actuarial Studies is to provide students with the necessary knowledge to work in the general areas of actuarial science, mainly life and health insurance.

Program Educational Objectives

1. Students will be informed how to solve and model actuarial problems using fundamental concepts of calculus, probability, interest theory and statistics.
2. Students will be able to understand the fundamental practices and theories of actuarial sciences and their application, mainly in the fields of economy and insurance.

Program Outcomes

- Understand the basics of economy and their association with the actuarial sciences.
- Acquire and improve the knowledge of mathematical fundamentals.
- Introduce statistics and probability tools and their applications.
- Gain necessary knowledge to understand the basics of the actuarial theory.

Minor Requirements

MAC400 - Actuarial Mathematics	3
MAC430 - Insurance Accounting and Mathematical Reserves	3
MAT213 - Calculus III	3
MAT312 - Economical and Financial Calculus	3
STA320 - Applied Probability and Statistics	3
STA321 - Descriptive Statistics	3
Total	18

Minor in Applied Chemistry (Hybridⁱ)**Mission**

The minor program in applied chemistry enables students to understand the impact of chemistry in a number of different sectors and industries, involving biotechnology, human health, food and environmental sciences, and more.

Program Educational Objectives

- Students will enhance their skills in the different applied fields of chemistry.
- Students will assume leadership roles in industry and/or in technological fields.
- Students will develop career skills through life-long learning.

Program Outcomes

- An ability to apply knowledge of chemical sciences in solving problems.
- An ability to communicate effectively and ethically
- A knowledge of contemporary issues in the chemistry context
- An ability to design and conduct experiments or processes, to meet desired needs.

Minor Requirements

CHE212 - General Chemistry	3
CHE422 - Industrial Processes	3
CHE425 - Analytical techniques	3
CHE426 - Food chemistry	3
Green chemistry or an equivalent course	3
CHE411 - Organic Chemistry II or CHE320 - Inorganic Chemistry or CHE420 - Macromolecules, Polymers and Materials	3
Total	18

Minor in Biochemistry (Hybridⁱⁱ)**Mission**

The mission of the minor in Biochemistry program is to offer a consistent general program by providing students with a supportive environment to learn the general basic principles in biochemistry and the different laboratory skills and instrumental techniques.

Program Educational Objectives

ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Hybrid: Courses offered in French and/or English

1. Students will be prepared for pursuing further education in health-professional fields, food technology, technical and industrial biochemistry fields, environmental science and scientific communication fields.
2. Students will develop the ability to think critically, analyze, synthesize, and to use information to solve problems.
3. Students will be offered a wider scope of job opportunities.

Program Outcomes

- a. Students will successfully show acquisition of basic concepts in biochemistry.
- b. Students will demonstrate basic experience in laboratory and instrumental modern techniques.
- c. Students will attain suitable preparation for any career related to biochemistry or entrance into professional studies such as health, food technology, and technically advanced fields.
- d. Students will develop the ability to communicate scientific ideas, orally and in writing.

Minor Requirements

BCM320 - Structural Biochemistry	3
BCM421 - Metabolic Biochemistry	3
BCH470 - Laboratory of Biochemistry	1
Electives	11 out of 22
CHE212 - General Chemistry	3
CHM317 - Organic Chemistry	3
CHE270 - Laboratory of General Chemistry	1
CHE371 - Laboratory of Organic Chemistry	1
BIO201 - General biology I	3
BIO271 - Laboratory of General Biology I	1
BIO321 - Human Anatomy and Physiology	3
BLG413 - Molecular Biology	3
BLG322 - Genetics	3
BLG472 - Laboratory of Molecular Biology	1
Total	18

Minor in Chemistry (Hybridⁱ)

Mission

The minor program in chemistry provides courses for non-chemistry majors who need a basic understanding of the principles of chemistry either for their chosen major or their general education. It engages students in developing a greater understanding of the chemical nature of the world.

Program Educational Objectives

1. Students will enhance their skills in the field of chemistry.
2. Students will demonstrate professional and ethical responsibilities towards their profession, society and the environment as well as respect for diversity.
3. Students will be able to work in a society as productive members of interdisciplinary teams and maintain sustained intellectual curiosity characteristic of a lifelong learner.

Program Outcomes

- a. An ability to apply knowledge of science and function on multidisciplinary teams.
- b. An ability to design and conduct experiments, as well as to analyze and interpret data.
- c. The broad education necessary to understand the impact of chemistry in a global, economic, environmental, and societal context.
- d. An understanding of professional and ethical responsibility.

Minor Requirements

ⁱ Hybrid: Courses offered in French and/or English

CHE212 - General Chemistry	3
CHE317 - Organic Chemistry I	3
CHE222 - Analytical Chemistry I	3
CHE325 - Physical Chemistry I	3
CHE370 - Lab of Analytical Chemistry	1
CHE371 - Lab of Organic Chemistry	1
CHE471 - Lab of Chromatography and Spectroscopy	1
CHE411 - Organic Chemistry II or CHE320 - Inorganic Chemistry or CHE420 - Macromolecules, Polymers and Materials or CHE425 - Analysis Techniques	3
Total	18

Minor in Natural Sciences (Hybridⁱ)

Mission

The mission of the natural sciences minor is to prepare students for med school by providing them with the sufficient requirements to present the MCAT exam, as well as to prepare students interested in developing a better understanding of the basic sciences by providing them knowledge in many natural sciences fields (biology, chemistry, physics, and mathematics).

Program Educational Objectives

1. Students will be prepared for entry-level employment in a wide variety of fields, or for graduate study in health professions or other natural sciences-related disciplines.
2. Students will be able to place scientific knowledge into an ethical context, especially how natural sciences can contribute to the resolution of ethical, social, and environmental issues.
3. Students will develop the ability to think critically, analyze, synthesize, and use information to solve problems.

Program Outcomes

- a. Students will understand and apply scientific principles, including forming hypotheses, designing experiments to test hypotheses, and collecting, analyzing, interpreting, and reporting data.
- b. Students will develop the ability to use appropriate laboratory or field procedures, methods, and instrumentation for biological or chemical studies.
- c. Students will develop breadth of knowledge in the natural sciences, including the fields of chemistry, physics, evolution, molecular biology, genetics, and physiology.
- d. Students will develop the ability to communicate scientific ideas, orally and in writing.

Minor Requirements

BCH215 - Introduction to Biochemistry	3
BIO201 - General biology I	3
BIO271 - Laboratory of General Biology I	1
BIO202 - General biology II	3
BIO272 - Laboratory of General Biology II	1
CHE270 - Laboratory Of General Chemistry	1
CHM317 - Organic Chemistry	3
CHE371 - Laboratory of Organic Chemistry	1
CHE411 - Organic Chemistry II	3
PHY270 - Laboratory of General Physics	1
Physics II	3
Laboratory of Physics II	1

ⁱ Hybrid: Courses offered in French and/or English

Total**24**

Minor in Sports Nutrition (Hybridⁱ)

Mission

The mission of this program is to prepare graduates in becoming physical fitness experts. Graduates will be able to contribute to the improvement of health and wellbeing of individuals and groups of people through professional physical activities.

The program offers the opportunity for graduates to work in corporate wellness and/or fitness centers, university or commercial athletic teams.

Program Educational Objectives

1. Prepare graduates to be competent entry-level sport nutrition experts.
2. Understand the importance of nutrition before, during or after any sport activity.
3. Evaluate the nutrition for active individuals and athletes in different fitness settings.

Program Outcomes

- a. Maintain up-to-date knowledge and synthesize approaches related to sports nutrition.
- b. Develop personal characteristics such as leadership and the ability to work in corporate wellness or fitness centers.
- c. Apply the knowledge of food and nutrition before, during or after any sport activity.

Minor Requirements

BIO221 - General Anatomy	2
NUT222 - Nutrition and Physiology I	3
NUT335 - Nutrition in the Life Cycle	3
NUT410 - Physiology of Exercise	2
NUT415 - Exercise Metabolism	3
NUT433 - Nutrition for Athletes	2
Total	15

Minor in Web and Mobile Programming (Hybridⁱⁱ)

Mission

This minor provides students with a foundation in web development and experience of designing and creating compelling native applications for mobile devices.

Program Educational Objectives

1. Students will have a basic understanding of the concepts, processes, skills, and techniques used in the field of web and mobile design and software development.
2. Acquire a knowledge that will compliment many disciplines, adding a breadth and depth of perspective to other programs.
3. Have a broader level of understanding and the resources to think creatively and act as conceptual problem solvers.

Program Outcomes

- a. Students will provide basic solutions for web development.
- b. Students will provide basic solutions for mobile programming.
- c. Students will have the ability to understand programming from different perspectives including object oriented and imperative programming

Minor Requirements

CSC214 - Programming I	3
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ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Hybrid: Courses offered in French and/or English

CSC215 - Programming II	3
CSC270 - Programming Laboratory I	1
CSC272 - Programming Laboratory II	1
CSC314 - Object Oriented Programming	3
CSC343 - Mobile Programming	3
CSC360 - Internet Technology	3
Total	17

Graduate Programs

Master of Science in Actuarial and Financial Mathematics (Hybridⁱ)

Mission

The main mission of this program is to prepare the students to become actuaries and gain exciting job opportunities in insurance companies, health insurances, provident funds institutions, banks, financial institutions as well as in audit offices and actuarial counseling. Students will also acquire a strong ability to perform advanced research in the field of actuarial and financial mathematics. Nowadays, the job of actuary is known as one of the more desirable jobs worldwide, as it offers a wide variety of career choices.

Program Educational Objectives

1. Graduates will have a detailed knowledge of the mathematics and statistics that form the core of actuarial calculations.
2. Proficiency in distinguishing and describing, in depth, many actuarial practice areas, and an understanding of the principles that govern the development of insurance products for those areas, including emerging trends.
3. The computer skills required to analyze data using the most current software tools employed by insurance industry leaders.
4. A developed research spirit and interest in the research novelties in the domain of actuarial and financial sciences.

Program Outcomes

- a. Students will recall advanced probability theories.
- b. Understand the financial mathematics and derivatives.
- c. Perform life contingencies models.
- d. Understand and model different types of insurance losses.
- e. Understand and classify the life and health insurance practices.
- f. Classify and apply data modeling methods.
- g. Recognize, classify and compute different pension plans.
- h. Deepen and apply computer knowledge and skills to the actuarial practices.
- i. Acquire the necessary knowledge in scientific research.

Degree requirements

Common Core	12
ENG510 - Advanced Academic English	2
MAC510 - Individual Health Insurance	3
MAC520 - Theory of Risk	3
SCF600 - Research Methodology	1
STA540 - Random Modeling and Introduction to Stochastic Calculations	3
Specialization	18
MAC530 - Non-life Insurance	3
MAC532 - Survival Models	3
MAC601 - Special Topics in Actuarial and Financial Mathematics	1
MAC602 - Special Topics in Actuarial and Financial Mathematics II	1
MAC603 - Tutorial in Actuarial and Financial Mathematics	1
MAC620 - Time Series and Financial Models	3
MAC634 - Mathematics of Pension Plans	3
MAC641 - Financial Modelling	3
Capstone	6
MAC697A - Master Thesis	6
Total	36

ⁱ Hybrid: Courses offered in French and/or English

Master of Science in Biochemistry (Hybridⁱ)

Emphasis

- Applied Biochemistry and Biochemical Investigations
- Pharmacology and Cosmetology

Mission

The mission of the graduate biochemistry program is to train new scientists to probe the mechanistic basis of fundamental biochemistry processes within the context of an ever-changing knowledge base. This program gives learners a sound and broad background in biochemistry by providing training in the theoretical and practical aspects of biochemistry and its applications to familiarize themselves with biochemical methodology and to sample some of its most exciting applications in biotechnological, pharmaceutical, clinical, cosmetic, food and forensic science industries. In pursuit of this mission, the biochemistry graduate program strives to prepare students for careers ranging from teaching at postsecondary institutions to conducting research in universities (PhD program), health settings, and government or private laboratories.

Program Educational Objectives

1. Graduates will be able to acquire increased professional experience over the course of their graduate program, so that they can be prepared for a successful industrial career through their coursework and the development of a research project.
2. Graduates will be able to apply knowledge of biochemical technology and applied biochemistry to formulate problem statements, design experiments, test hypotheses, and solve problems in biochemical and biological areas.
3. Graduates will be able to recognize research design methodology and are able to use problem solving techniques associated with interdisciplinary research. They will have the ability to engage in a Doctoral Program (PhD program) with scholars in a variety of interdisciplinary topics related to the field.

Program Outcomes

- a. Students will demonstrate broad knowledge of the focus area.
- b. Students will design and conduct experiments, and to analyze and interpret experimental results.
- c. Students will apply knowledge of statistical analysis, applied sciences, biotechnology fundamentals, and to use the techniques, skills and modern applied biochemistry tools.
- d. Students will work as a member of multidisciplinary teams, and have an understanding of team leadership.
- e. Students will communicate scientific results in writing, oral presentation and publication in peer reviewed scientific journals.
- f. Students will recognize how the expertise will be applicable in the execution of interdisciplinary research and how the research training allows joining the doctoral program or employment.
- g. Students will recognize the need for and ability to engage in life-long learning.
- h. Students will appreciate the knowledge of contemporary issues.
- i. Students will identify, formulate, and solve biotechnological problems.
- j. Students will exhibit an understanding of professional and ethical responsibility.

Degree requirements

Common Core	9
CHM511 - Techniques for Quality Control	3
ENG510 - Advanced Academic English	2
FSC600 - Research Methodology	1
STA515 - Statistical Analysis Methods	3
Emphasis: Applied Biochemistry and Biochemical Investigations	21
Specialization	15
BCH526 - Applied Enzymology	3
BCH529 - Applied Biochemistry Laboratory	1
BCH541 - Cell Signaling	3
BCH545 - Applied Biochemical Techniques	2

ⁱ Hybrid: Courses offered in French and/or English

BCH550 - Traceology & DNA Analysis	3
CRM613 - Forensics	3
Electives	6
BCH513 - Ecotoxicology	3
BIO511 - Applied Immunology	3
BIO565 - Genetic Engineering and Applied Biotechnology	3
CRM511 - General Criminology	3
MEDM640 - Forensic and Medical Law	3
Emphasis: Pharmacology & Cosmetology	
Specialization	21
BCH513 - Ecotoxicology	3
BCH541 - Cell Signaling	3
BCH610 - Specialized Cosmetology	3
BCH620 - General Pharmacology and Cosmetology	3
BCH622 - Pharmacotherapy	3
BCH623 - Specialized Pharmacology	3
BCH627 - Clinical Trial-drug Legislation and Guide	3
Capstone	6
BCH697A - Master Thesis	6
Total	36

Master of Science in Biology (Hybridⁱ)

Emphasis

- Molecular and Cellular Genetics
- Physiology and Physiopathology

Mission

The mission of the MS in Biology is to prepare broadly trained, professional scientists by developing the students' independent research skills, strengthening their scientific communication abilities, and enhancing their likelihood of gaining employment in molecular biology, physiology and other biological fields or successful admission into doctoral and professional programs.

Program Educational Objectives

1. Graduates will be able to succeed in a wide variety of post-baccalaureate paths, including graduate and post-graduate schools, as well as research in biology and related disciplines.
2. Graduates will be able to work in many biology-related fields and continue their professional development while engaging in life-long learning necessary for a sustainable career.
3. Graduates will be able to function effectively and ethically within an organization and society as productive members of interdisciplinary teams.

Program Outcomes

- a. Students will integrate advanced concepts in genetics, molecular biology, physiology, physiopathology and related fields
- b. Students will develop analytical and critical-thinking skills, and evaluate, design, conduct and quantitatively assess innovative research in a biological discipline.
- c. Students will assess ethical issues in laboratory and/or field settings
- d. Students will effectively communicate scientific ideas by defending original research in writing and in oral presentation.

Degree requirements

Common Core	12
BCH541 - Cell Signaling	3

ⁱ Hybrid: Courses offered in French and/or English

CHM511 - Techniques for Quality Control	3
ENG510 - Advanced Academic English	2
SCF600 - Research Methodology	1
STA515 - Statistical Analysis Methods	3
Major Requirements	6
BIO501- Special Topics in Biology	1
BIO502 - Introduction to Research Lab 1	1
BIO503 - Introduction to Research Lab 2	1
BIO511- Applied Immunology	3
Specialization - Molecular and Cellular Genetics	12
BIO630 - Cancer Biology	3
BIO631 - Virology and Vectrology	3
BIO632 - Genetic Engineering and Applied Biotechnology	3
BIO633 - The "Omics"	3
Specialization - Physiology and Physiopathology	12
BIO622 – Physiology and Physiopathology of the Contractile Structures	3
BIO623 - Reproductive & development physiology and physiopathology	3
BIO652 - Environmental Physiology	3
NSBT535 - Cellular Neurobiology and Physiology	3
Capstone	6
BIO697A - Master Thesis	6
Total	36

Master of Science in Chemistry (Hybridⁱ)

Emphasis

- Industrial Processes and Methods Validation
- Environmental Risks and Waste Treatment

Mission

The graduate chemistry program values teaching and research as equal and essential components of the education of our students and seeks to integrate research with teaching at every possible opportunity in the curriculum. In pursuit of this mission, the graduate chemistry program aims to prepare students for careers ranging from teaching at postsecondary institutions to conducting research in universities (PhD program), industrial settings, and government laboratories.

Program Educational Objectives

1. Graduates will be able to design systems, components, or processes to meet specified objectives for industrial or laboratory chemical issues within realistic constraints such as economic, environmental, health and safety, manufacturability, and sustainability.
2. Graduates will be able to recognize research design methodology and use problem-solving techniques associated with interdisciplinary research. They will have the ability to engage in a Doctoral Program (PhD program) with scholars in a variety of interdisciplinary chemical fields.
3. Graduates will be able to present chemical information coherently through oral and written discourse and to generate technical documents describing their results for editing and publication in peer reviewed scientific journals.

Program Outcomes

- a. Students will design a system or process within realistic constraints such as economic, environmental, health and safety, manufacturability, and sustainability.
- b. Students will employ critical thinking and efficient problem-solving skills in the industrial production process, in separation units and recycling processes.

ⁱ Hybrid: Courses offered in French and/or English

- c. Students will function in multidisciplinary teams and recognize how their expertise will be applicable in the execution of interdisciplinary industrial problems.
- d. Students will apply the research methodology and statistical analysis to the interpretation and evaluation of critical scientific data.
- e. Students will communicate scientific results in writing and in oral presentation.
- f. Students will generate technical documents describing their results for editing and publication in peer reviewed scientific journals.
- g. Students will identify the future career path and understand how the research training allows them to join the doctoral program or enter employment.
- h. Students will recognize the need for and an ability to engage in lifelong learning

Degree requirements

Common Core	12
BCH513 - Ecotoxicology	3
CHM511 - Techniques for Quality Control	3
ENG510 - Advanced Academic English	2
FSC600 - Research Methodology	1
STA515 - Statistical Analysis Methods	3
Specialization - Emphasis: Industrial Processes and Methods Validation	12
CHM601 - Special Topics in Chemistry - I	1
CHM629 - Experimental designs and formulation	2
CHM630 - Industrial Unit Operation	3
CHM632 - Control and Optimization in the Chemical Industry	3
CHM665 - Applied Nanotechnologies	3
Specialization - Emphasis: Environmental Risks and Waste Treatment	12
CHM601 - Special Topics in Chemistry - I	1
CHM628 - Air Pollution and Control	3
CHM639 - Water waste management and treatment	3
CHM648 - Waste Resource and Solutions	2
CHM649 - Solid Waste Management and Treatment	3
Electives	6
CHM634 - Environmental risk analysis	3
CHM637 - Eco-Design and Sustainable Manufacturing	3
CHM638 - Validation of Analytical Methods and Procedures	3
Capstone	6
CHM697A - Master Thesis	6
Total	36

Master of Science in Computer Science (English)

Mission

The mission of the department of computer science is to graduate undergraduate and graduate students that excel in the field of computing, networking, and database design, creation and management. This is fulfilled through comprehensive educational programs and research and development.

Program Educational Objectives

1. Graduates will be ready for advanced careers in computer science and networking, and related fields, as well as further graduate study.
2. Graduates will provide full solutions for software problems from system design to solution development. They will be committed to lifelong learning.
3. Graduates will have the ability to function and communicate effectively as ethically and socially responsible computer science professionals.

Program Outcomes

- a. An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
- b. An ability to design, implement, and evaluate a computer-based system, component, or program to meet desired needs.
- c. An ability to function effectively on teams to accomplish a common goal.
- d. An understanding of professional, ethical, legal, security and social issues and responsibilities.
- e. An ability to communicate effectively with a range of audiences.
- f. Recognition of the need for and an ability to engage in continuing professional development.
- g. An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modelling and design of computer-based systems in a way that demonstrates comprehension of the trade-offs involved in design choices

Degree requirements

Common Core	12
CSC500 - Software Engineering	3
CSC530 - Advanced Database Systems	3
CSC601 - Special Topics in C. Sc. - I	1
CSC602 - Special Topics in C. Sc. - II	1
CSC603 - Tutorial in Computer Science	1
ENG510 - Advanced Academic English	2
FSC600 - Research Methodology	1
Specialization	12
CSC521 - Artificial Intelligence	3
CSC560 - Information System Security	3
CSC630 - Distributed Database Systems	3
CSC632 - Data Warehousing	3
Specialization - Electives	6 out of 18
CSC522 - Advanced Computer Networks	3
CSC540 - Network Management and Security	3
CSC570 - Multimedia and Computing Systems	3
CSC634 - Data Mining	3
CSC635 - Database System Administration	3
CSC655 - Server Configuration and Administration	3
Capstone	6
CSC697A - Master Thesis	6
Total	36

Master of Science in Cybersecurity and Cyberdefence (English)

This program is offered in Collaboration with Université Bretagne Sud, leading to a double degree: Master in Cybersecurity and Cyberdefence conferred by USEK and a Master in Cybersecurity conferred by UBS.



Presentation

The mission of the MS in Cybersecurity and Cyber defense is to generate qualified cybersecurity professionals by providing them with the knowledge to design, plan and manage cyber systems to protect organizations, governments and infrastructures from the ever-changing security threats and infiltration techniques such as hackers, network outages, viruses and cyber-attacks.

Program Educational Objectives

1. Graduates will be ready for advanced careers in computer science and networking, and related fields, as well as further graduate study.

2. Graduates will provide full solution for software problem from system design to solution development. They will be committed for long-life learning.
3. Graduates will have the ability to function and communicate effectively as ethically and socially responsible computer science professionals.

Program Outcomes

- a. An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
- b. An ability to design, implements, and evaluates a computer-based system, component, or program to meet desired needs.
- c. An ability to function effectively on teams to accomplish a common goal.
- d. An understanding of professional, ethical, legal, security and social issues and responsibilities.
- e. An ability to communicate effectively with a range of audiences.
- f. Recognition of the need for and an ability to engage in continuing professional development.
- g. An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modelling and design of computer-based systems in a way that demonstrates comprehension of the trade-offs involved in design choices.

Degree requirements

Specialization	32
ENG510 - Advanced Academic English	2
CYB550 - Software Engineering	3
CYB555 - Advanced Database Systems	3
CYB545 - Cyber Security Ethics and Law	1
CYB560 - Cryptography and Steganography	3
CYB565 - Distributed Database Systems and Security	3
CYB570 - Network Management and Security	3
CYB575 - Operating & Embedded System's Security	3
CYB571 - Lab - Operating & Embedded System's Security	1
CYB580 - Platforms and Development Protection	3
CYB600 - Component Based Software Engineering	3
CYB572 - Lab - Qualification Testing	1
CYB573 - Lab - Cybernatic Crises Simulation	2
CYB650 - Internship (240 hours)	1
Capstone	4
CYB670 - Master's Project I	1
CYB680 - Master's Project II	3
Total	36

Master of Science in Environmental Technologies (Hybridⁱ)

Mission

This professional master offers to prepare competent executives in the environmental field and particularly in air quality and analysis. It aims to give candidates a solid and wide scientific knowledge allowing them to evaluate the impacts on the environment generated by human activities and to implement the tools, techniques and devices to control them.

Program Educational Objectives

1. Graduates will be trained to be capable of coping with the major environmental, climatic and socio-economic changes to come, using both state-of-the-art training Research and a dense and efficient network of professionals.

ⁱ Hybrid: Courses offered in French and/or English

2. Graduates will be familiar with research design methodology and be able to use problem-solving techniques associated with interdisciplinary research.
3. Graduates will have the ability to present chemical information coherently through oral and written discourse and to generate technical documents describing their results for editing and publication in peer reviewed scientific journals.

Program Outcomes

- a. Students are able to use the legal prerequisites to ensure a good environmental management.
- b. The students are able to solve an environmental problem by applying a multidisciplinary approach.
- c. Students acquire the necessary foundations and essential in analysis, and geographic information processing so they can integrate it in the professional environment field.
- d. Apply the research methodology and statistical analysis to the interpretation and evaluation of critical scientific data.
- e. Communicate scientific results in writing and in oral presentation.
- f. Generate technical documents describing their results for editing and publication in peer reviewed scientific journals.
- g. Be able to limit the environmental impacts of effluents.
- h. Recognize the need for and an ability to engage in lifelong learning.
- i. Have an ability to apply knowledge of mathematics and applied and/or natural sciences to areas relevant to the discipline.

Degree requirements

Common Core	18
ETC520 - Data Processing	3
ETC525 - Chemical Reactivity and Thermodynamic Balances	2
ECT530 - Geomatics: GIS and Remote Sensing I	2
ETC535 - Statistical Tools for Parameter Optimization and Data Analysis	2
ETC545 - Languages and Professionalization Tools / Communication / Seminars	1
ETC550 - Geomatics: GIS And Remote Sensing II	1
ETC555 - Environmental Law	2
ETC560 - Analytical Chemistry of The Environment	3
ETC615 - Sample Processing and Online And In-Situ Measurements	2
Specialization	12
ETC565 - General Presentation of The Atmosphere	2
ETC620 - Physicochemistry of The Atmosphere and Atmospheric Reactivity	3
ETC625 - Elements of Meteorology and Quality of Confined Atmospheres	3
ETC630 - Environmental Project	1
ETC635 - Hydrogeology	1
ETC640 - Treatment of Effluents and Odors	2
Capstone	6
ETC697A - Analytical Strategy and Study of Pollution	6
Total	36

Master of Science in Mathematics (Hybridⁱ)

Mission

The goal of the Master's program in mathematics is to educate each student in the foundations of advanced mathematics. In general, a student in the Master's program will fall into one of three categories: wishing to work in the private sector, wishing to teach mathematics in a school, or wishing to continue into a Ph.D. program in mathematics.

Program Educational Objectives

ⁱ Hybrid: Courses offered in French and/or English

1. Graduates will present a deep knowledge in the different fields of theoretical and applied mathematics.
2. Graduates will develop a mathematical logic that could be applied for problem modeling and solving in different areas of interest.
3. Graduates will acquire a vast scientific methodological approach to tackle mathematical research problems responding to the needs of different scientific fields.

Program Outcomes

- a. Students will simulate problems in the advanced areas of numerical analysis.
- b. Model problems in the areas of functional analysis.
- c. Solve problems in the advanced areas of algebra.
- d. Understand the concepts of stochastic processes.
- e. Apply computer knowledge to solve numerical problems.
- f. Acquire the necessary knowledge in scientific research.

Degree requirements

Common Core	12
ENG510 - Advanced Academic English	2
MAT522 - PDE and Modeling	3
MAT523 - Group Theory	3
SCF600 - Research Methodology	1
STA540 - Random Modeling and Introduction to Stochastic Calculations	3
Specialization	18
MAT500 - Numerical Analysis and Optimization	3
MAT601 - Special Topics in Mathematics I	1
MAT602 - Special Topics in Mathematics II	1
MAT603 - Tutorial in Mathematics	1
MAT610 - Discrete Mathematics	3
MAT620 - Spectral Theory	3
MAT623 - Distribution Theory and PDE	3
MAT627 - Lie Algebra	3
Capstone	6
MAT697A - Master Thesis	6
Total	36

Master of Science in Neuroscience and Biotechnology (Hybridⁱ)

Mission

Students are provided with an international curriculum with identical core courses and specialization tracks based on each person's expertise in fundamental or biomedical sciences. We offer a unique wide range of complementary competences and methods that cover all fields of modern neuroscience, from molecular aspects to in vivo analysis. Students also benefit from our dense network of expert research labs and easy access to high-level specialized core facilities, R&D projects in academic and industrial fields, and Bilingual teaching and close collaboration between universities to offer mobility opportunities.

Program Educational Objectives

1. Graduates will have extended knowledge, skills, and experience in neuroscience and biotechnology and developed abilities of leadership, collaboration, and communication.
2. Graduates will be able to conduct original research in a neuroscience, including the design of experiments with appropriate controls.
3. Graduates will be able to apply professional ethics in the conduct of science.
4. Graduates will be able to use their knowledge and abilities to answer questions and solve problems in the complex and interactive context of local, regional, and global issues and concerns.

ⁱ Hybrid: Courses offered in French and/or English

Program Outcomes

- Students will acquire high-level innovative and interdisciplinary training in Neuroscience.
- Manipulate theoretical concepts together with a broad range of experimental methods used in biotechnology and biomedicine.
- Master competences required to implement and use modern techniques, and to serve complex experimental set-up.
- Conceive and conducting individual projects in Neuroscience and Biotechnology.
- Elaborate and communicating scientific data and concepts.
- Develop connections and networking in neuroscience across the Mediterranean region.

Degree requirements

Common Core	19
NSBT520 - Language and Communication	1
NSBT525 - Biotechnology and Bioinformatics	3
NSBT530 - Functional and Cognitive Anatomy	2
NSBT535 - Cellular Neurobiology and Physiology	3
NSBT540 - Methodologies	2
NSBT545 - Experimental Approaches of Neuropathology	2
NSBT550 - Behavior, Emotion and Cognition	2
NSBT565 - Economy	1
NSBT570 - Regulations, Laws and Bioethics	2
NSBT575 - Drug Development	1
Electives	4 out of 8
NSBT555 - Neuropharmacology	2
NSBT557 - Biophysics	2
NSBT560 - Genomics and Proteomics	2
NSBT562 - Developmental Biology and Ageing	2
NSBT650 - Case Study in Biotechnology	2
Specialization – Option: Medical Neuroscience and Neuroimaging	7
NSBT580 - Morpho-functional Imaging	3
NSBT585 - Physiopathology of the Nervous System	2
NSBT590 - Diagnostic and Therapeutic Tools Development	2
Specialization – Option: Integrative and System Biology	7
NSBT620 - From Sensation to Perception	2
NSBT625 - From Perception to Action	2
NSBT630 - Integrative Physiology	2
NSBT635 - Computational Neurosciences	1
Specialization – Option: Molecular and Cellular Neuroscience	7
NSBT640 - Plasticity and Cell Communication	3
NSBT645 - Neurogenesis, Stem and Transplantation	2
NSBT648 - Neuroendocrinology and Neurobiology of Food Intake	2
Capstone	6
NSBT690A - Long Training Period	6
Total	36

Master of Science in Nutrition (Hybridⁱ)

Mission

The mission of the Department of Nutrition and Food Sciences at USEK is to improve the health and wellbeing of individuals and diverse communities locally and globally through leadership and excellence in nutrition and dietetics education, research, practice and service.

Program Educational Objectives

1. Understand the broad area of nutrition sciences as well as the areas of nutritional biochemistry, nutritional assessment, and research techniques.
2. Grow their ability to analyze and apply current research into practice and use these nutrition principles in the treatment and prevention of diseases.
3. Develop effective oral and written communication skills for the education of other nutrition professionals and others in the general public.

Program Outcomes

- a. Apply research based evidence into dietetics practice.
- b. Provide optimal nutrition counseling for different types of clients and introduce behavioral change in clinical settings
- c. Evaluate and communicate current and future trends in the areas of dietetics for disease prevention, health promotion and management practices.
- d. Develop personal characteristics and perform in interdisciplinary teams

Degree Requirements

Common Core	12
GAA619 - Quality Assurance and Consumer Health	3
NTR514 - Advanced Nutrition: Macronutrients and Micronutrients	3
NTR552 - Advanced Medical Therapeutic Nutrition	3
NTR635 - Economics for food and Nutrition Policy	3
Specialization	15
NTR510 - Research Methodology in Nutrition	3
NTR512 - Advanced Food Service Management	3
NTR516 - Nutritional Epidemiology	3
NTR545 - Advanced Topics in Food Sciences and Nutrition	0
NTR650 - Advanced Lifecycle in Nutrition	3
NTR688 - Seminar in Nutrition	3
NTR696 - Practical Statistics in Agrifood and Nutrition	0
Elective	3 out of 18
GAA523 - Food Innovation and Development	3
NTR611 - Clinical Sports Nutrition	3
NTR617 - Nutrigenomics	3
NTR652 - Diabetes, Dyslipidemia & Obesity	3
NTR657 - Elaboration and Evaluation of Health Programs	3
NTR658 - Public Health in Lebanon	3
Capstone	6
NTR697A - Thesis in Nutrition, Option: Nutrition and Public Health	6
Or NTR698A - Thesis in Nutrition, Option: Food Service Management	6
Or NTR699A - Thesis in Nutrition, Option: Clinical Nutrition	6
Total	36

ⁱ Hybrid: Courses offered in French and/or English

Doctoral Programs

Ph.D. in Agricultural and Food Sciences (hybridⁱ)

Presentation

The Ph.D. in Agricultural and Food Sciences is the first doctoral degree in the discipline in Lebanon. The vocation of both scientific and technological research of the most of the laboratories in the school require to go beyond the specialization towards an integral approach, in both ways between the science and the technology, and the confrontation to the advancement of each of the disciplines.

Ph.D. in Chemistry & Life and Earth Sciences (hybrid)

Presentation

Candidates could specialize in either Chemistry or Life and Earth Sciences.

ⁱ Hybrid: Courses offered in French and/or English

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	6
General Education - Behavioral, Social Sciences and History ⁱ	3
General Education - Civic Engagement	2
General Education - English and French Communication	6
MUS243 - History of Lebanese Music	3
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
Common Core	40
HRG215 - Harmony I A	1
HRG225 - Harmony I B	1
HRG315 - Harmony II A	1
HRG325 - Harmony II B	1
MUSC210 - Choral Singing I	1
MUSC215 - Choral Singing II	1
MUSC220 - Music Critique and Aesthetic Judgement I	1
MUSC225 - Music Critique and Aesthetic Judgement II	1
MUSC246 - Arab Music I	3
MUSC250 - Musical Computing	2
MUSC255 - Applied Musical Computing	1
MUSC310 - Choral Singing III	1
MUSC315 - Choral Singing IV	1
MUSC320 - Music Critique and Aesthetic Judgement III	1
MUSC340 - Musical Forms	2
MUSC350 - History of 18 th Century Music	2
MUSC355 - Analysis of 18 th Century Music	2
MUSC400 - Organology and Instrumentation	3
MUSC420 - Choir Conducting I	1
MUSC425 - Choir Conducting II	1
MUSC450 - History of 19 th Century Music	2
MUSC455 - Analysis of 19 th Century Music	2
MUSPIV1 - Instrument/Vocal	2
SDG201 - Solfeggio/Dictation I	2
SDG202 - Solfeggio/Dictation II	2
SDG303 - Solfeggio/Dictation III	2
Specialization - Emphasis: Musicology	26
MUG205 - Musicological Research	2
MUG330 - Music Languages	2
MUG335 - Musical Acoustics	3
MUG340 - Introduction to Musicology and Ethnomusicology	3
MUG410 - Contemporary Music	3
MUG425 - Arab Music II	3

ⁱ Students enrolled in the hybrid section are required to take the course FRN240 - French Communication instead of 3 credits from the Behavioral and Social Sciences category. [UNIVERSITY CATALOGUE 2019-2020](#) | FACULTY OF ARTS AND SCIENCES

THT465 - Performing Arts Production	3
Electives	7 out of 14
MUG305 - Music and Dance	2
MUG420 - World Music	2
MUG435 - Sociology of Music	3
MSS310 - Sacred Music	3
MSS405 - Gregorian Chant	1
MSS415 - Syriac Chant	1
MSS420 - Byzantine Chant	1
MSS430 - Armenian Chant	1
Specialization - Emphasis: Music Education	26
EMU320 - Specialized Musical Teaching	2
EMU330 - Music Education Methods	3
EMU345 - Music Education Orff Ensemble	1
EMU355 - Musical Awakening: Rhythmic and Psychomotricity	3
EMU405 - Music and Psychology	3
EMU410 - Psycho-Pedagogical Approach to Musical Learning	2
EMU415 - Scholar Musical Teaching I	3
EMU420 - Scholar Musical Teaching II	3
EMU425 - School Observation Internship	3
THT415 - Puppet and Theater for Children	3
Total	96

Bachelor of Arts in Music – Music Industry (Hybridⁱ)

Mission

The School of Music and Performing Arts is committed to providing each student with an understanding of the fundamentals of business within the music industry from a musician's perspective. Music industry students will be aware of legal, financial, artistic, and ethical issues, in addition to management (artists, events, technology, etc.), and music industry domains that face a fast-changing world. Both the University and the school will provide a real-world experience with a diversity of musicians and professionals, along with the introduction to many business owners / companies in the country and worldwide, in addition to a bachelor degree. The school provides opportunities for students to enhance their musical knowledge and skill through participation in a wide variety of academic courses, performance studies, and field experiences.

As a vital part of the University, the school promotes the musical arts of regional, national and international communities within the University.

Program Educational Objectives

Graduates will be able to:

1. Engage in active music production.
2. Apply and analyze the basic copyright protection afforded to musicians, publishers and master recording owners.
3. Explain and apply industry-related contracts, reviews and agreements.
4. Assess the dynamics of the music industry, including the issues that relate to revenue generation, different industry players and futuristic views, trends and development of the domain.
5. Create a link between the scientific and artistic competencies of music and musicians and achieve the milestone in the music industry domain.
6. Build teams, managers and leaders in the domain of the music industry.

Program Outcomes

Students will:

- a. Develop knowledge and skills on a major instrument or voice and the ability to sight-read

ⁱ Hybrid: Courses offered in French and/or English

- b. Develop skills and understanding of music language and composition in a variety of styles, periods, and genres in both western European tradition and non-Western cultures.
- c. Develop skills of criticism and defend musical judgment, with reference to contextual meaning and aesthetic value in own work and the work of others.
- d. Develop a comprehensive knowledge and understanding of Western musical history and its analysis, and of the Arab and Lebanese music traditions.
- e. Develop technical skills and musical awareness for performance and leadership of both small and large choirs.
- f. Develop knowledge and skills in the use of technology as it applies to notating, arranging, recording, and composing music.
- g. Develop a comprehensive knowledge and understanding of musical instruments, their classification systems, and the technical aspects related to their constructions and sound qualities and their use and importance in a composition.
- h. Demonstrate their technical proficiency with production tools and associated techniques by completing specified projects.
- i. Design and develop business, management, marketing and operations of the music industry and related firms.
- j. Assess copyright and intellectual property laws related to music, in general, and to the music industry in particular.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	6
General Education - Behavioral, Social Sciences and History ⁱ	3
General Education - Civic Engagement	2
General Education - English and French Communication	6
MUS243 - History of Lebanese Music	3
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
Common Core	33
SDG303 - Solfeggio/Dictation III	2
HRG215 - Harmony I A	1
HRG225 - Harmony I B	1
HRG315 - Harmony II A	1
HRG325 - Harmony II B	1
MUSPIV1 - Instrument/Vocal	2
MUSC210 - Choral Singing I	1
MUSC215 - Choral Singing II	1
MUSC310 - Choral Singing III	1
MUSC420 - Choir Conducting I	1
MUSC220 - Music Critique and Aesthetic judgement I	1
MUSC225 - Music Critique and Aesthetic judgement II	1
MUSC350 - History of the 18th Century Music	2
MUSC355 - Analysis of the 18th Century Music	2

ⁱ Students enrolled in the hybrid section are required to take the course FRN240 - French Communication instead of 3 credits from the Behavioral and Social Sciences category. [UNIVERSITY CATALOGUE 2019-2020](#) | FACULTY OF ARTS AND SCIENCES

MUSC450 - History of the 19th Century Music	2
MUSC455 - Analysis of the 19th Century Music	2
MUSC246 - Arab Music I	3
MUSC340 - Musical Forms	2
MUSC400 - Organology and instrumentation	3
MUG335 – Acoustics	3
Specialization – Music Industry	33
MUI300 - Basics of Analogue & Digital Audio,	2
MUI200 - Sound design for music industry	3
MUI205 - Introduction to music industry	2
MUI315 - Recording, Mixing, Editing, processing, and Mastering	3
MUI405 - Music Law	2
MUI400 - Music inverse Casting	2
MUI415 - Internship	1
MUI215 - Music and Business	3
MUI305 - Music events, entertainment, organization and venue management	3
Electives	12 out of 21
MUI420 - Live Sound Field work	3
MUI310 - Technology and Music	3
MUI410 - Electronic Music Production	3
THT450 - Performing arts Sound and light systems	3
MUI220 - Artist and tours management	3
THT465 - Performing Arts Production	3
MUI210 - Music Marketing and Management	3
Total	96

Bachelor of Arts in Higher and Specialized Music Education (Hybridⁱ)

Emphasis

- Music Composition
- Musical Instrument
- Singing (Arabic Singing / Occidental Classical Singing)
- Solfeggio/Dictation

Mission

The School of Music and Performing Arts at USEK is committed to preparing, inspire and motivating students for excellence in professional careers in performance, composition and training.

The school provides a unique music culture and fosters the highest standards of teaching and supports the establishment of creative engagement through its own accomplishments, the work of its department members and staff and the achievement of its graduates.

The school strives to meet the educational needs of its diverse students through instruction, performance, scholarship, and public service; and generates creative music activities that have local, national and international significance.

Program Educational Objectives

1. Graduates will meet standards of musical performance (through applied music studies, ensembles and master classes).
2. Graduates will demonstrate competence in content-based areas of music history and analysis, advanced theory and musicianship, and music technology.
3. Graduates will demonstrate competence in skill-based areas of ear training, sight singing, improvisation, composition and conducting.

ⁱ Hybrid: Courses offered in French and/or English

4. Graduates will demonstrate a working knowledge (an appropriate level of technical and interpretative performance skills), repertory in their major and performing skills - completely and expressively and providing leadership as a soloist, and as a member of performing ensembles.
5. Graduates will demonstrate the ability to apply creative approaches to problem-solving and self-directed study, to conceive and realize musical programs and events.

Program Outcomes

- a. Student will develop skills and understanding of music language and composition in a variety of styles, periods, and genres in both Western European tradition and Non-Western cultures.
- b. Develop skills of criticism and defend musical judgment, with reference to contextual meaning and aesthetic value in their own work, and the work of others.
- c. Develop a comprehensive knowledge and understanding of Western musical history and its analysis, and for the Arab and Lebanese music traditions.
- d. Develop technical skills and musical awareness for performance and leadership of both small and large choirs.
- e. Develop knowledge and skills in the use of technology, as it applies to notating, arranging, recording, and composing music.
- f. Develop a comprehensive knowledge and understanding of musical instruments, their classification systems, and the technical aspects related to their constructions and sound qualities and their use and importance in a composition.
- g. Develop knowledge and understanding of a variety of music businesses and industry practices.
- h. Develop a working knowledge of music as it relates to and enhances the theater and religious experience.
- i. Develop an acute ability to hear, analyze, read, write, and harmonize music at a basic level.
- j. Acquire sufficient understanding of advanced music theory, musical forms, processes, and structures, and use this knowledge in compositional and performance contexts.
- k. Develop knowledge and skills on a major instrument or voice, and the ability to read at sight.
- l. Develop skills that prepare them for careers in musical performance and private teaching of performance, and advanced study and independent practice, including significant technical mastery to solve professional problems, and a coherent set of artistic/intellectual goals that are evident in their work.
- m. Acquire artistic and technical skills, collaborative competence, and knowledge of repertory requisite for artistic self-expression in his major performance area.
- n. Develop an acute ability to identify and work conceptually with the elements of music at an advanced level.
- o. Develop a background in music and musicianship that prepares them for a wide range of further educational and vocational activities that include solfeggio and dictation as a basic component.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	6
General Education - Behavioral, Social Sciences and History ⁱ	3
General Education - Civic Engagement	2
General Education - English and French Communication	6
MUS243 - History of Lebanese Music	3
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1

ⁱ Students enrolled in the hybrid section are required to take the course FRN240 - French Communication instead of 3 credits from the Behavioral and Social Sciences category. [UNIVERSITY CATALOGUE 2019-2020](#) | FACULTY OF ARTS AND SCIENCES

Common Core	33
MUG330 - Music Languages	2
MUG335 - Musical Acoustics	3
MUSC210 - Choral Singing I	1
MUSC215 - Choral Singing II	1
MUSC220 - Music Critique and Aesthetic Judgment I	1
MUSC225 - Music Critique and Aesthetic Judgment II	1
MUSC246 - Arab Music I	3
MUSC250 - Musical Computing	2
MUSC255 - Applied Musical Computing	1
MUSC310 - Choral Singing III	1
MUSC315 - Choral Singing IV	1
MUSC320 - Music Critique and Aesthetic Judgment III	1
MUSC340 - Musical Forms	2
MUSC350 - History of 18 th Century Music	2
MUSC355 - Analysis of 18 th Century Music	2
MUSC400 - Organology and Instrumentation	3
MUSC420 - Choir Conducting I	1
MUSC425 - Choir Conducting II	1
MUSC450 - History of 19 th Century Music	2
MUSC455 - Analysis of 19 th Century Music	2
Specialization - Emphasis: Music Composition (Prerequisite Piano IV)	33
CMU201 - Music Composition I	3
CMU202 - Music Composition II	3
CMU303 - Music Composition III	3
CTP210 - Counterpoint I	2
CTP220 - Counterpoint II	2
CTP330 - Counterpoint III	3
CTP440 - Counterpoint IV	4
HRP330 - Harmony III	3
HRP440 - Harmony IV	4
PNO304 - Piano IV	3
SDO304 - Solfeggio/Dictation IV	3
Specialization - Emphasis: Musical Instrument	33 out of 59
Instrument IV	3
Instrument V	3
Instrument VI	3
Instrument VII	4
Instrument VIII	4
HRG215 - Harmony I A	1
HRG225 - Harmony I B	1
HRG315 - Harmony II A	1
HRG325 - Harmony II B	1
MUA201 - Arab Instrumental Ensemble I	1
MUA202 - Arab Instrumental Ensemble II	1
MUA303 - Arab Instrumental Ensemble III	1
MUA304 - Arab Instrumental Ensemble IV	1
MUC201 - Chamber Music I	1
MUC202 - Chamber Music II	1
MUC303 - Chamber Music III	1

MUC304 - Chamber Music IV	1
Secondary Instrument Level I	2
PAC201 - Accompaniment Practice I	1
PAC202 - Accompaniment Practice II	1
PAC303 - Accompaniment Practice III	1
PAC304 - Accompaniment Practice IV	1
PAC405 - Accompaniment Practice V	1
PAC406 - Accompaniment Practice VI	2
PNO201 - Piano I	2
PPB201 - Public Performance I	1
PPB202 - Public Performance II	2
PPB303 - Public Performance III	2
PPB304 - Public Performance IV	2
SDA303 - Arab Solfeggio III	2
SDA304 - Arab Solfeggio IV	2
SDG303 - Solfeggio/Dictation III	2
SDO304 - Solfeggio/Dictation IV	3
SDO405 - Solfeggio/Dictation V	3
THA340 - Arab Music Theory IV	2
Specialization - Emphasis: Singing	33 out of 60
CCA 201 - Arab Choral Singing I	1
CCA 202 - Arab Choral Singing II	1
CCA 303 - Arab Choral Singing III	1
CCA 304 - Arab Choral Singing IV	1
CHA304 - Arab Singing IV	3
CHA405 - Arab Singing V	3
CHA406 - Arab Singing VI	3
CHO304 - Occidental Classical Singing IV	3
CHO405 - Occidental Classical Singing V	3
CHO406 - Occidental Classical Singing VI	3
EMS305 - Didactics and Physiology of the Voice and the Ear	1
EVO201 - Occidental Vocal Ensemble I	1
EVO202 - Occidental Vocal Ensemble II	1
EVO303 - Occidental Vocal Ensemble III	1
EVO304 - Occidental Vocal Ensemble IV	1
EVO405 - Occidental Vocal Ensemble V	1
EVO406 - Occidental Vocal Ensemble VI	1
HRG215 - Harmony I A	1
HRG225 - Harmony I B	1
HRG315 - Harmony II A	1
HRG325 - Harmony II B	1
KAN 201 - Qanoun I	2
KAN 202 - Qanoun II	2
OUD 201 - Oud I	2
OUD 202 - Oud II	2
PNO201 - Piano I	2
PNO303 - Piano III	2
PPB201 - Public Performance I	1
PPB202 - Public Performance II	2
PPB303 - Public Performance III	2

SDA 303 - Arab Solfeggio III	2
SDA 304 - Arab Solfeggio IV	2
SDG303 - Solfeggio/Dictation III	2
SDO230 - Solfeggio/Dictation III	1
SDO304 - Solfeggio/Dictation IV	3
SFA201 - Accompanied Solfeggio I	2
SFA202 - Accompanied Solfeggio II	2
THA 340 - Arab Music Theory IV	2
Specialization - Emphasis: Solfeggio/Dictation	33
CCA201 - Arab Choral Singing I	1
CCA202 - Arab Choral Singing II	1
EVO201 - Occidental Vocal Ensemble I	1
EVO202 - Occidental vocal ensemble II	1
HRG215 - Harmony I A	1
HRG225 - Harmony I B	1
HRG315 - Harmony II A	1
HRG325 - Harmony II B	1
PNO202 - Piano II	2
SDA201 - Arab Solfeggio I	2
SDA202 - Arab Solfeggio II	2
SDO304 - Solfeggio/Dictation IV	3
SDO405 - Solfeggio/Dictation V	3
SDO406 - Solfeggio/Dictation VI	3
SFA201 - Accompanied Solfeggio I	2
SFA202 - Accompanied Solfeggio II	2
SFA203 - Accompanied Solfeggio III	2
STR210 - Transposed Solfeggio I	2
STR220 - Transposed Solfeggio II	2
Total	96

Bachelor of Arts in Performing Arts (English)

Mission

The Bachelor of Performing Arts is designed to give the student a broad-based understanding of the theatrical arts. Through study in this degree program, the student will develop both cognitive and affective skills in acting, dramatic writing, directing, lighting design, scenic design, costume design, construction and criticism as well as other aspects of Theater performance and Theater production.

Program Educational Objectives

1. Graduates will acquire specific knowledge about the history of theater and shows, theories and practices of the scene and become familiar with the news of contemporary performance and new forms of expression in this field.
2. Develop the acuity of judgment both in terms of creation and in the receiving plan.
3. Acquire multiple stage technical performance.
4. Learn to implement all the means to produce a complex spectacle, whether of body or voice, text (create, write or adaptation), or representation (choice of scenic place, creation a set design, implementation of sound, light or insertion of photographic or cinematographic images).

Program Outcomes

- a. Students will be familiar with the types of spectacles and literary and scenic components. They will have to distinguish a spectacular kind of a subgenre, and to recognize the aesthetic trend to which it relates.
- b. Analyze methodically both a literary (read) and scenic dramatic work (presented on stage), identify scenic choice of directors, and to critically study on a show.

- c. Perform in shows of various kinds (theatrical play, play on camera, puppet animation, mime show, clown show and dancing etc.).
- d. Design a show, draw up the specifications for its production, plan rehearsals, recognize the difficulties it may be facing, identify possible solutions to the problems of implementation, team work and finally to mount a single show.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	9
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
THT280 - Introduction to Acting	3
Specialization Courses	59
SDO200 - Preparatory Solfeggio/Dictation	2
MUSC350 - History of 18 th Century Music	2
MUS250 - Introduction to Voice Mastering	2
MUSC 210 - Choral Singing I	1
THT215 - History of Theater	3
THT230 - Introduction to Mime	2
THT240 - Physical Theater	1
THT250 - Body Expression	2
THT260 - Analysis and Critic of Performing Arts I	1
THT310 - Dramaturgy	3
THT320 - Advanced Acting	3
THT350- History of Theater Directing	3
THT355 - Costume and Set Design Workshop	3
THT360 - Creative Writing	3
THT365 - Analysis and Critic of Performing Arts II	1
THT400 - Modern Drama	3
THT405 - Performance and Contemporary Art	3
THT415 - Puppet and Theater for Children	3
THT440 - Directing and Production Workshop	3
THT450 - Lighting and Sound Workshop	3
THT455 - Acting for the Camera	3
THT460 - Analysis and Critic of Performing Arts III	1
THT465 - Performing Arts Production	3
THT470 - Final Project	3
TLV232 - Make-up for Films	2
Elective Courses	7 out of 27
EMU405 - Psychology and Music	3
PSY214 - Developmental Psychology	3
MUSC450 - History of 19 th Century Music	2
SDG201 - Solfeggio/Dictation I	2

SDG202 - Solfeggio/Dictation II	2
MUSC215 - Choral Singing II	1
MUSC246 - Arab Music I	3
MUG305 - Music and Dance	2
MUS455 - Advanced Voice Mastering	2
FLM344 - Theory Aesthetics of Films	3
FLM240 - History of American Cinema	3
PHO235 - Introduction to Photography Story-telling	3
Total	96

Academic Minors

Minor in Musicology (Hybridⁱ)

Mission

The School of Music and Performing Arts is committed to developing confident, creative, and skilled musicians, researchers, historians of music and ethnomusicologists.

The school provides opportunities for students of all majors to enhance their musical knowledge and skill through participation in a wide variety of academic courses, performance studies, and field experiences.

As a vital part of the University, the school promotes the musical arts within the university, regional, national, and international communities.

Program Educational Objectives

Upon completion of the program students will:

1. Be able to appreciate different styles and works.
2. Demonstrate the use of music terminology as it applies to the music styles.
3. Demonstrate knowledge of music from other cultures.
4. Show a mature, confident, analytical and critical approach to current activities in music and the media which is based on an awareness and understanding of broader cultural issues.

Program Outcomes

- f. Develop and demonstrate understanding and appreciation of diverse non-Western music.
- g. Develop research skills and foundational background necessary to explore the social and cultural development of music from around the globe and demonstrate understanding of musical traditions and their influences.
- h. Develop an understanding of the history and tradition of sacred and liturgical music through different periods of music development.
- i. Develop the ability to interpret various genre and styles of occidental and oriental sacred chants and to prepare a repertoire for specific religious performances and ceremonies.
- j. Develop knowledge and skills in understanding the basic physical concepts of musical acoustics (waves, simple vibrations, principle of superposition and complex waveforms) and understanding the perception of sound and music

Minor Requirements

MUG335 - Musical Acoustics	3
MUG340 - Introduction to Musicology and ethnomusicology	3
MUG410 - Contemporary Music	3
MUG425 - Arab Music II	3
Electives	6 out of 12
MUG420 - World Music	2
MUG435 - Sociology of Music	3
MSS310 - Sacred music	3

ⁱ Hybrid: Courses offered in French and/or English

MSS405 - Gregorian Chant	1
MSS415 - Syriac Chant	1
MSS420 - Byzantine Chant	1
MSS430 - Armenian Chant	1
Total	18

Minor in Theater (Hybridⁱ)

Mission

The mission of this minor is to put Theater in the scope of actuality, in concomitance with the social, economic, cultural and political changes, since theater is mainly the reflection of society. In order to do this, this option aims to ensure a solid theoretical teaching in terms of history related to shows, methodology of analysis, aesthetics, etc. providing workshops for plays, dance, mime, and puppets.

Program Educational Objectives

1. To acquire specific knowledge of the history of theater and spectacles, theories and practices of the stage and to get familiarized with the actuality of contemporary spectacle and with the new forms of expression in this field. Demonstrate the use of music terminology as it applies to the music styles.
2. To develop the acuity of judgment both in terms of creation and in terms of reception.
3. To acquire multiple scenic technical performances.

Program Outcomes

- a. The student will be familiar with the natures of the shows and its literary and scenic components. He will have to distinguish a spectacular genre from a subgenre, as well as to recognize the aesthetic current to which it is connected.
- b. The student will be able to analyze methodically both a drama literary artwork (read) as well as a scenic artwork (presented on stage), to identify the scenic choices of the directors, and to conduct a critical study on a show.
- c. The student will be invited to perform in various kinds of shows (theatrical play, puppet animation, mime show, clown and dancing show ... etc).

Minor Requirements

THT200 - Introduction to Voice Mastering	2
THT215 - History of Theater	3
THT230 - Introduction to Mime	2
THT250 - Body expression	2
THT320 - Advanced Acting	3
THT220 - History of Theater Directing	3
THT405 - Performance and Contemporary Art	3
Total	18

ⁱ Hybrid: Courses offered in French and/or English

Graduate Programs

Master of Arts in Music (Hybridⁱ)

Emphasis

- Musicology
- Music Education

Mission

The School of Music and Performing Arts is committed to developing confident, creative, and skilled musicians.

The school provides opportunities for students of all majors to enhance their musical knowledge and skill through participation in a wide variety of academic courses, performance studies, and field experiences.

As a vital part of the University, the school promotes the musical arts of regional, national, and international communities within the University.

Program Educational Objectives

1. Graduates will be engaged in active music making and a good selection of presentations.
2. Graduates will demonstrate their desire and ability to generate innovative ideas and use effective means of communicating them.
3. Graduates will show a mature, confident, analytical and critical approach to current activities in music and the media, which is based on an awareness and understanding of broader cultural issues.

Program Outcomes

- a. Student will develop an advanced level of technical skill on a major instrument or voice and the ability to sight read at.
- b. Develop an acute ability to identify and work conceptually with the elements of music at an advanced level
- c. Develop an advanced knowledge and understanding of Western musical history and its analysis of the twentieth century.
- d. Develop knowledge and skills in the use of technology, as it applies to notating, arranging, recording, and composing music.
- e. Develop technical skills and musical awareness for choir performance.
- f. Develop advanced knowledge of research, scholarly reading comprehension and writing techniques.
- g. Develop an understanding of what is meant by the notion of property, and how the relationship between a legal person and a 'thing', which is the object of a proprietary interest, differs from other legal relationships.
- h. Develop techniques for writing music for instrumental ensembles and electro-acoustic instrumentation.
- i. Develop up-to-date knowledge and understanding of a variety of music businesses and industry practices.
- j. Develop personal perspectives on the philosophical issues concerning music esthetics.
- k. Develop knowledge of music techniques, materials, and use of equipment for music growth assessments, remedial plans, and treatment implementation in various educational situations.

Degree Requirements

Common Core	26
CTP510 - Counterpoint I	2
MUSC505 - Choral Singing VII	1
MUSC525 - Music Computing III	3
MUSC605 - History of 20 th Century Music	3
MUSC610 - Analysis of 20 th Century Music	3
MUSC615 - Research Methodology	2
MUSC690A - Master Thesis	6
MUSPIV2 - Instrument/Vocal	3
SDO540 - Solfeggio/Dictation IV	3

ⁱ Hybrid: Courses offered in French and/or English

Specialization	10
MUSC545 - The great masters of Arab Music	2
MUSC625 - Orchestration	2
MUSC630 - Philosophy and Music	2
MUSC645 - Law and Music	2
MUSC650 - Comprehensive Analysis	2
MUSC535 - Musicological Meetings	2
MUSC640 - Music and Mass Media	2
MUSC540 - Curriculum and Music Teaching Handbooks	2
MUSC635 - Psycho-Musical and Music Therapy Techniques	2
Total	36

Master of Arts in Performing Arts (Hybridⁱ)

Mission

Performing Arts, Master Degree, enable students to produce high quality artworks and performances, compatible with theories of academic criteria. The basic goal is to educate Masters candidates under the guidance of qualified instructors. Graduate students complete a program with a rigorous study of critical theory, textual history, elements of production (directing, acting, choreography, writing, and design) and embodied research that aim to produce enriched thesis / projects generating an expanded perspective and awareness.

Program Educational Objectives

1. Graduates from the Master program will work successfully as professional members of the theatrical production process. They should be able to work in a broad range of positions involving tasks such as writing a scenario, directing, acting, and production.
2. Graduates will have the ability to produce their own personal pieces of theater.
3. Graduates will have the ability to function and communicate effectively in the field of theater as well as work as ethical and social individuals in society at large.

Program Outcomes

- a. Students will acquire knowledge of critical and theoretical methodologies and their application to theater.
- b. Demonstrate in critical essays and oral presentations an ability to analyze films via a variety of theoretical perspectives while using the critical vocabulary and methodologies of the discipline.
- c. Develop a thorough understanding of the fundamental disciplines inherent in theater including acting, producing, directing, lighting, and sound.
- d. Generate and develop ideas for theater that include writing from personal experience, and translating these ideas via acting, directing and technical excellence.
- e. Function effectively on an individual as well as a group level in order to produce a communicative theatrical product.

Degree Requirements

Common Core	3
AVS500 - Methodology	3
Electives	27 out of 36
THT506 - Modern Theatricalism	3
THT510 - Arab Theater	3
THT512 - Greek Theater	3
THT517 - Practicum in Dramaturgy	3
THT521 - Theory and Criticism	3
THT542 - Manuscript Analysis	3

ⁱ Hybrid: Courses offered in French and/or English

THT615 - Aesthetics of Theater	3
THT616 - Authors and Genres in Theater	3
THT619 - Literary Adaptation	3
THT620 - Scenic Design Workshop	3
THT630 - Semiology of Theater	3
THT662 - Directing as Theory and Practice	3
Capstone	6
AVS680A - Directed Individual Studies I	6
Total	36

Doctoral Programs

Ph.D. in Music and Ph.D. in Higher and Specialized Music Education (Hybridⁱ)

The program seeks to help student become self-directed, evidence-based learners through the ability to access and critically evaluate the reliability of all databases and resources related to music subjects. Originality will lie more in the way in which theoretical and conceptual understandings are applied in managerial and organizational contexts than in simple extension of those theories and concepts.

In addition to the applied character of the doctorate thesis, it is also action-based and transformational in that students will be challenged to change their managerial practices.

Degree Requirements

Specialization	60
Ph.D. Seminars	15
Ph.D. Dissertation	45
Total	60

ⁱ Hybrid: Courses offered in French and/or English

Course Descriptions

AAR305	Museology and Archeology	2 cr.
The course introduces students to the methods of museology, including conservation, restoration, and publishing. They are trained to substantiate the heritage of the Near East by using traditional tools and new technologies during excavations. They will conduct field work at the national museum of Beirut, and compare theories of different methods of conservation used and deployed by international museums, such as Le Louvre in Paris, or the Pergamon museum in Berlin.		
AAR320	Introduction to Pre-History	2 cr.
In this course students will study the period before history, known as pre-history, and consider all the events which marked human beings before the invention of writing. This course is a multidisciplinary science, which includes geology, anthropology, climatology, zoology, etc. Students will examine material, mute traces and lifeless remnants of the past, which will provoke questions and enable students to draw information from multiple arenas.		
AAR335	Former Semitic Languages: Semitic Group (Phoenician, Hebrew, Aramaic, Syriac)	3 cr.
Students of history and archeology will study the Semitic languages, grammar books, dictionaries, and the corpus of texts. In this course students will learn how to read inscriptions and texts.		
AAR340	Former Language: Greek or Latin (Indo-European Group)	3 cr.
This course enables students to decipher inscriptions and to read the classic texts as well get acquainted with the use of tools: grammar, dictionaries, corpus of texts, etc.		
AAR355	Art History in Lebanon	3 cr.
This course presents art in Lebanon since its origins until the present day. By conducting comparative studies, students explore its sources, its interactions, the influences it has undergone, its originality and its geographical, historic characteristics and close and distant cultural context.		
AAR360	Archeology / Tourism in Lebanon: archeological and touristic sites	2 cr.
The purpose of this course is to make students aware of the values of Lebanon's archeological heritage. Important historical sites of Lebanon will be studied. The cultural, architectural and artistic characteristics of every period will be underlined. The main discoveries preserved in Beirut National Museum and in the regional museums of Baalbek, Beiteddine and Byblos, as well as the major works preserved in the international museums, will be included. This highly visual course will be illustrated with projected images.		
AAR415	Art of Modern Times	3 cr.
The course covers the period from the 14th century up to the first half of the 18th century. It studies the transformations in art throughout the centuries within the sociocultural context, from early antiquity in the West, until when paintings and sculptures began to illustrate real characters in real places. Students will learn how to analyze a work of art (painting, sculpture, drawings, etc.) and how to compare the techniques used by the artists in different periods of time.		
AAR460	Contemporary Art	3 cr.
Contemporary art begins in the last half of the 20th century, and this course explains the causes of transformations in art, and the trends, forms and tools which resulted in the contemporary arts. Students learn how to give value to a contemporary work of art in a time when there are not fixed standards anymore and where everything seems allowed. We consider the role of a work of art in society and its impact on the observer, as well as explore real and virtual museums.		
AAR610	Art and New Technologies	3 cr.
The future archeologist will have to use the IT tool for: Register, classify and restore the archeological objects; also, to establish an inventory of archeological sites, to catalog the vestiges which they contain, to make statements, to draw maps, and for all that a thesis, or a report requires plans, boards, graphs, strata...		
AAR679A	Thesis Project History of Art	6 cr.
Application of research methods; Being involved in a research program and topic.		
AAR710	Art and Archeology in Ancient Lebanon	3 cr.
This course provides students with an overview of excavations, which have taken place in Lebanon since Ernest Renan until the present day. Students will study the representative artistic elements and learn to recognize the lasting characteristics of art in Lebanon.		
AAR720	Art and Archeology in the Ancient Near East	3 cr.
This course will provide students with an overview of the excavations in the Near East, and study the representative artistic elements. Students will learn to recognize the lasting characteristics of art in the different areas of the region: Mesopotamia, Persia, Anatolia, Syria, Phoenicia and Palestine.		
AAR730	Art and Archeology: Near-East in the Late-Empire 1566	3 cr.
The Roman era is one of the richest ones concerning spectacular monuments. Students will study the different and representative sites and monuments in Baalbek, Palmyre, Gerosh, Petra, Cesaria, and Jerusalem.		

AAR740	Teaching Art and Archeology	3 cr.
From the results of the excavations, the course studies the architectural sites, sculptures, ceramics, paintings, and other minor arts. It will focus on the uses of the materials in different fields and areas.		
AAR785	Art History	3 cr.
This course examines the dimensions of art in education (schools and universities), in public life (museums and archeological sites), and in the market of cultural property (exhibitions, galleries, auctions). Students will examine a collection of art works from the artistic Lebanese heritage published by the Institute of History.		
ANG411	Modern Cultural Issues in English	3 cr.
The course studies current events in the Anglophone world. The introduction defines the concept of current event, and identifies the Anglophone countries and their common character underlying their various ways of life. Part One examines the special current events relative to each Anglophone country, namely, the United Kingdom and The British Isles, The Republic of Ireland, Australia, New Zealand, Canada, South Africa, India, Nigeria, The Caribbean, and The United States of America. Part Two reflects on the wider world current events that may affect the Anglophone world, such as governance, terrorism, globalization, human rights, democratization, and settlement of international disputes, migration and environmental and economic issues. Finally, the current events of yesterday and of today, no less than those of tomorrow. The course will also explore "the next society" that we want to be members of.		
ANG520	Techniques of Expressions in English	2 cr.
This course aims at perfecting the oral and written English expression of the students. They will learn through the different patterns of expression (essays, text analysis and oral presentations) how to better express themselves orally and in writing, in order to achieve better communication skills and an improved analytical spirit. For the final examination, students should be able to develop an essay of 500 words in the period of 2 hours. Through a variety of themes (technology, society, psychology, education), the students will also improve their topic analysis while discussing and explaining pertaining viewpoints.		
ARA210	Advanced Arabic	3 cr.
Prerequisites	ARA120	
This course aims to develop the students' language skills by giving a detailed analysis of Arabic syntax based on a dynamic approach using practical texts and exercises. This course also broadens the students' knowledge of oral and written Arabic through exploration and analysis, by consolidating their Arabic grammar skills and introducing them to the linguistic studies or references needed for writing.		
ARA310	Techniques of Expression in Arabic	3 cr.
This course is designed to improve the Arabic language performance of the students, and to help them learn, through the different patterns of expression (poetry, literary writings, articles, reports, etc.) how to analyze, connect, distinguish and deduce in order to better understand or write texts. This course also aims to raise the awareness of future translators of the formal and stylistic particularities of each type of discourse.		
ARCV605	Research Tools and the Internet	3
An introduction to the electronic environments related to the archives collections. It aims at acquiring the concepts which allow the adaptation of the major research principles, use and display of archival descriptions to the electronic environment (intranet, internet). This introductory course tackles the documentary and technical problems linked to the establishment of a digitization project in an archive center, and helps acquire the concepts that would allow for the publishing of digitized archives documents on the Internet.		
ARCV610	Records Management	3
This course introduces the basic notions, concepts and main problems related to electronic archiving, helps discover the technical and normative environment; and situate the archivist intervention in the digital information circuit. It also aims at presenting the records management reference systems.		
ARCV615	Digital Archives	3
This course introduces the existing possibilities and technologies for the digitization of analog documents, so as to enable the elaboration of concrete projects. It allows the identification of the main problems related to the archiving of digital documents, the available strategies, and the ability to plan their implementation.		
ARCV620	Information systems	3
An overview of the architecture of information systems and databases as well as the fundamental principles of information technology, their development status and their perspectives. This course introduces the methods used in the development of information systems, and allows the student to evaluate and judge the importance of the foundations of information technologies for institutions. It also enables students to have a good command of a relational DBMS (DataBase Management System), especially the SQL standard; and to understand all the aspects relating to the architecture and functioning of a relational DBMS, namely, physical storage, indexing, and optimization of requests, competition and failover.		

ARS201	Iconography I	3 cr.
This course is an introduction to the process of icon-writing, from its preparatory techniques to its realization according to the Byzantine tradition, using the liquid egg tempera ancient technique. The student will explore and apply the preparation of the plank, how to transfer the drawing and apply the color, and will learn jointly the symbolic meaning of the iconic forms, the materials, and the steps of the icon-writing process.		
ARS202	Iconography II	3 cr.
Pre-requisites	ARS201	
Theories and practical applications of different iconographic techniques.		
ARS205	Restoration I	3 cr.
Historical overview of the old pictorial methods and practical application of the old techniques of painting.		
ARS206	Restoration II	3 cr.
Pre-requisites	ARS205	
Historical overview of the old pictorial methods and practical application of the old techniques of painting.		
ARS210	Mural Painting (Fresco)	2 cr.
Initiating the students to fresco, a mural painting technique done on a fresh coating, consisting of whitewash and sand, on which color pigments mixed with water are applied.		
ARS211	Ceramics I	2 cr.
Introduction and history of the various techniques of ceramics. Applying these techniques, from the turning, to coloring and cooking.		
ARS212	Ceramic II	2 cr.
Advanced applications of various pottery techniques: composition, shooting, color, and cooking.		
ARS213	Material, Color, Light	2 cr.
Through material, color and light, as space generators, this course will take part in the susceptible and abstract notions of spatial creation and the ambiances of everyday interior spaces. The experimental discipline will allow to implement and harmonize the constituent elements of any architectural space, object of design, furniture or surface by the chromatic phenomenon: color, clarity, saturation, contrast.		
ARS214	Mosaics I	2 cr.
History of the different techniques of mosaics through the ages. Practical application: geometrical composition of a non-figurative subject, coloring, cutting and putting on the tesserae.		
ARS215	Mosaic II	2 cr.
Pre-requisites	ARS214 or ARS203	
Practical application: figurative composition, coloring, cutting and putting on the tesserae.		
ARS216	Introduction to Artistic Expression	3 cr.
The objective of this course is to give the student the opportunity to undertake a personal work of exploration and experimentation. The student will explore colors, experience artistic expression and freedom within a creative support system, using tempera, acrylic, gilding and other artistic techniques. The student will learn to create paintings informed by painting ideas and processes through the different movements in the art's history, especially those innovated since the beginning of the 20th century.		
ARS220	Color Chemistry	2 cr.
Chemical study of colors and their properties, the media and the equipment used in different pictorial and iconographic techniques.		
ARS221	Computer-Aided Drawing	2 cr.
Create, modify and adjust, using the Photoshop program, images that meet the diversified needs.		
ARS222	Anatomy and Iconographic Drawing style	3 cr.
Study of drawings and various iconographic canons through the various schools. Creation of graphic compositions and transformation of artistic subjects into iconographic work.		
ARS233	Apocrypha and Icons	2 cr.
An interpretation of iconographic themes that are not mentioned in the Holy Bible, in the light of the apocryphal writings and according to Christian tradition.		
ARS234	Syriac Language and Calligraphy	2 cr.
Introduction to decoding the texts written on sacred representations, and use of these texts in new calligraphic compositions. The course is divided into four parts: reading, grammar, text study, reading and writing of Karchouni.		
ARS240	History of the Christian Iconography	3 cr.
This course is an exploration of the history of the Christian iconography, allowing the student to look over the foundations of sacred Christian art, its purpose and its historical chronology, by understanding the genesis of the Christian icon and its different transformations and evolution. It includes a brief introduction to the Christian aesthetics and iconography, and in-depth studies of the chronology of the Christian Iconography, and learning the different		

iconographical schools and movements, especially the Byzantine and Syro-Maronite iconography, in addition to the an overview of the iconography of the Oriental churches.

ARS241	Theology of the Icon	2 cr.
Theological, artistic and symbolical interpretation of the main types and subjects in iconography.		
ARS243	Historical Geography of the Syro-Antiochian World	2 cr.
This course is a study of the various historical cities in the region of Antioch, and their artistic and religious heritage. It will allow the student to understand and evaluate the importance of the historical, architectural, archaeological and artistic heritage of the different key cities in the region of Antioch. This course also involve the student in conducting a research and a detailed objective work in the field, aiming to highlight one or several local or regional sites concerned by this study.		
ARS244	Iconographic Greek	2 cr.
Introduction to the Greek language in order to achieve the decoding of texts found on icons and sacred artworks.		
ARS245	Bible and Iconographic Tradition	2 cr.
Browsing biblical texts and their various representations through sacred art. Studying biblical themes and characters depicted in iconography.		
ARS246	Christian Aesthetics	2 cr.
Introduction to the general esthetics and the definition of the “beauty” and the “sublime” through the various Christian philosophies, from early Christian until today.		
ARS301	Bachelor Project + Research Note	3 cr.
For the graduation project, students are free to choose a topic that will be developed under the supervision of a project manager. At the end of the semester the project, consisting of a research note and an artwork, will be presented and explained in front of a jury.		
ARS302	Iconography III	3 cr.
Pre-requisites	ARS202	
Conceiving new compositions according to the acquired iconographic techniques.		
ARS303	Liturgical Design	2 cr.
Course on the history and the description of the various pieces of the liturgical clothing. Creating new items and liturgical design.		
ARS314	Stained Glass I	2 cr.
Historical introduction to the different techniques of stained glass. Practical applications: composition, layout, grading, cutting, leading, welding, and grouting.		
ARS315	Stained Glass II	2 cr.
Pre-requisites	ARS314	
Realization of a colored stained glass window according to the traditional method: composition, layout, grading, cutting, grisaille, leading, welding, and grouting.		
ARS316	Engraving I	2 cr.
Introduction and history of different techniques of engraving. Applying these techniques: woodcut, lithography, linoleum, etching, screen printing and others.		
ARS317	Engraving II	2 cr.
Course and practical application: woodcut, lithography, linoleum, etching, screen printing and others.		
ARS321	Photography	2 cr.
General theoretical training providing for the practical and esthetic achievement of photos by students, according to the needs of their field.		
ARS330	Research Methodology in Sacred Art	2 cr.
Learning the scientific research methodology applied to sacred art. Logic and scientific reasoning are at the center of teaching and all academic research in this area.		
ARS340	Iconographic Hagiography	2 cr.
Discovering the saints of the church in iconography: studying their biographies, their attributes and their representations in artworks according to the different traditions of the church.		
ARS341	Christian Archeology	3 cr.
Study of Christian archeology through: monuments (the basilica and places of worship); Christian symbols; relics and reliquaries; and objects of worship.		
ARS357	Theology & Icon Interpretation	3 cr.
The aim of this course is to train and sensitize the student’s eyes and minds to Christian iconography, by studying the theological, artistic and symbolical interpretation of the main types and subjects in iconography. At the end of this course, the student will be able to analyze an icon, by having a detailed and objective look at it. He will be capable of identifying the different textual and traditional sources of inspiration of each subject, will describe and interpret the		

themes, the characters, and the symbols depicted in iconography, as well as all the elements like the composition, the body proportions, the perspective, color, and light, etc.

ARS430	Traditional Religious Architecture	6 cr.
Prerequisites	ARI242 Or DAA342 Or ARCH430 Or ARC333	
Overview on the architecture of religious spaces such as churches and monasteries. Introduction to the particularities of places of worship and religious sites in the East and specifically in Lebanon. Introduction to the approaches of the types and models, Tradition/Innovation, Spaces and liturgies, as well as the contributions of construction techniques. Education seeks to trace the historical evolution of areas and outlines the dialectical Traditions/Modernity and Liturgies/Techniques.		
ARS431	Architecture and Planning of Religious Edifices	3 cr.
Prerequisites	ARI242 Or ARC240 Or DAA342	
General introduction and initiation into the inner characteristics of Christian churches (plans, forms, religious objects and materials).		
ARS445	Cultural Properties	3 cr.
Prerequisites	ARI242 Or ARC240 Or DAA342	
General introduction and awareness of the influence of architectural styles in history, and of the various building systems of places of worship (churches and monasteries). Analytical and critical study of Christian religious edifices in Lebanon and the Middle East.		
ARS501	Syro-Antiochian Topography	3 cr.
Study of the different geographical models that go with the historical representation of the Syro-Antiochian world.		
ARS502	Conferences Cycle	3 cr.
Conferences on specialized topics by experts. At the end of the semester, the student will present a summary document.		
ARS506	Contemporary Iconography	3 cr.
This course offers a description of the wide range of different iconographic schools of the 20th century, from Russia to Greece to Italy, via Cyprus and the Middle East, highlighting the evolution of the icon in compliance with strict Orthodox traditions, and the rise of the icon with the modernization and emancipation of the artist.		
ARS508	Thematic Seminar I (Iconographic)	3 cr.
This course offers a study on the icon throughout the centuries, up to our times, consisting of periods of crisis that eventually led to the rise of the icons, the periods of iconoclasm (8th-9th c.), hesychastic controversy (14th c.) and Moscow councils (16th c.). The Christian icon is restored in its proper context in light of the dogmatic and church teachings, while also receiving a descriptive analysis of the different symbols that it represents. Thus the students will succeed in understanding the real meaning of the icon in its historical, esthetic and cultural context, while being able to distinguish a holy icon from a religious emotional picture.		
ARS509	Thematic Seminar II (Methodology)	3 cr.
In this seminar, we examine the methods of historical and theoretical research, the rules governing the writings of the essay, and problems to be solved during the conception of an artwork or an artistic project. Also studied are issues to be addressed in artistic research and some solutions suggested by important works. The students are invited to participate in terms of discussion and theoretical and practical presentations.		
ARS510	Compared Architectures	2 cr.
A study of Christian architecture through a comparison whereby students can realistically approach the current issues. In the field of heritage, the comparative concerns geographical areas on a worldwide scale, as well as all the periods from antiquity to the present day.		
ARS511	Arts and Crafts- Minor Arts	2 cr.
This course provides the theoretical knowledge and plastic analysis tools necessary for understanding an artwork classified as "Minor Arts", which refers to all forms of figurative art that is neither painting nor sculpture, or architecture. Minor Arts may also be designated as "Decorative Arts".		
ARS512	Religious Sites (in Lebanon)	2 cr.
Introducing students to the interpretation of different built urban forms and shapes in places of worship (the religious site, the monuments).		
ARS513	Chronology and Construction Techniques	3 cr.
An in-depth study of some building systems of places of worship (churches and monasteries), under the direction of professional specialists.		
ARS514	Iconography IV	3 cr.
Conception and advanced practical application using different iconographical techniques.		
ARS540	Christian Typologies	3 cr.
The course begins with a general study of many types of churches from an historical, liturgical, architectural and esthetical perspective. Then students will choose a type of church from which they will make an individual study.		

ARS543	History of Art in Lebanon	3 cr.
Historical study and artistic analysis of modern and contemporary art in Lebanon.		
ARS608	Thematic Seminar III (Historical)	3 cr.
This course presents an historic and esthetical study of the Christian, Syriac and Maronite pictorial heritage; in particular approaching the Gospel of Rabbula and the various Syriac illuminated manuscripts preserved mostly in Eastern European libraries.		
ARS609	Thematic Seminar IV (Oriental, Non-oriental, Non-Christian Iconography)	3 cr.
This course presents a historical and symbolical study of the Pagan, Jewish and Islamic iconography.		
ARS680A	Dissertation	6 cr.
For their dissertations, students can choose freely a subject which will be developed under the supervision of their project manager. At the end of the semester, the dissertation will be discussed in a public thesis defense.		
AVS500	Methodology	3 cr.
This course aims to enable students to present visual and performing arts criticism in correct scholarly form, to introduce them to different methods of carrying out research and to acquaint them with the methodology used in classifying bibliographies and reference works relevant to the subject area.		
AVS680A	Directed Individual Studies I	6 cr.
Students will use this course to complete an independent or team project. This project will help round out a student's portfolio and will demonstrate an appropriate level of professional challenge. These projects may be a narrative film, documentary, animation, website, or mobile application, or they may be a thesis relevant to the field of specialization. Students will form a contract with the faculty concerning the content of their project. Completed projects will assist students in the professional or in the academic field.		
BCH320 -		
BCM320	Structural Biochemistry	3 cr.
Pre-requisites	CHM317 or CHE317 Or CHM311 Or CHE311	
This course is based on an understanding of the different biochemical processes taking place in the human body. It enables students to acquire a basic foundation in biochemistry so they are able to competently address all areas related to medical biochemistry. Structural biochemistry defines the structure of the various molecules of living matter such as carbohydrates, lipids, amino acids, proteins, enzymes, nucleotides and vitamins.		
BCH350	Enzyme technology	3 cr.
Pre-requisites	BCH320	
Enzyme technology is one of the key disciplines that a student in Biology, Biochemistry or even Chemistry should master. This course presents the basic concepts of Enzymology. Student also will discover the technological techniques of enzymes in several fields such as scientific research, industry, food, medicine and the environment. Many illustrations have been inserted to clarify or supplement the topics covered. Some exercises and solutions will enable students to improve or to assess their level of knowledge.		
BCH420	Biochemical analysis techniques	3 cr.
Pre-requisites	BIO413 And CHM222 Or BLG413	
This course deals with acquiring the laboratory skills required for success in experimental biochemistry and molecular biology. It is particularly suited for students intending a career as a technician or research scientist in the areas of biochemistry, biotechnology, bioengineering, microbiology, or molecular biology. The course content focuses on the detection, purification and identification of biological macromolecules such as proteins and nucleic acids. The material is divided into two equal parts. The first part includes the theory and practice of biological spectroscopy with emphasis on visible, infrared, circular dichroism, optical rotary dispersion, resonance Raman, nuclear magnetic resonance and electron paramagnetic resonance spectroscopy of proteins and nucleic acids. The second part includes the theory and practice of analytical biochemistry with emphasis on diffusion, gel permeation chromatography, ion-exchange chromatography, affinity chromatography, X-ray crystallography, sedimentation velocity ultracentrifugation, sedimentation equilibrium ultracentrifugation, density gradient ultracentrifugation, agarose gel electrophoresis, SDS gel electrophoresis and isoelectric focusing of proteins and nucleic acids.		
BCH421 -		
BCM421	Metabolic Biochemistry	3 cr.
Pre-requisites	BCH415 Or BCH410 Or BCH300 Or BCH320 Or BCM320	
Understanding all vital processes requires knowledge of the biochemical reactions and their integration in metabolic pathways. This course covers two basic areas of molecular biochemistry which are the production and storage of energy, and the biosynthesis of macromolecules. The course starts with the metabolism of carbohydrates, the main producer of energy in the cell. Several topics are devoted to the study of glycogen metabolism, glycolysis, the Krebs cycle and the pentose phosphate pathway, then lipid metabolism (β oxidation, fatty acid synthesis, cholesterol synthesis), and on protein metabolism (transamination, urea cycle), and then nucleotide metabolism.		

BCH430	Pharmaceutical Biochemistry	3 cr.
Co-requisites	BCH421	
This course will provide an in-depth look at how novel, pharmacologically active molecules are designed to treat human diseases. Topics will include: Drug discovery; Molecular design; Organic synthesis of drug molecules; Structure-Activity Relationships; Drug interactions with receptors; Pharmacokinetics; Case Histories; Patents; Ethics, and additional examples and applications will be drawn from the published literature. Selected case histories throughout the course will serve to illustrate the concepts.		
BCH440	Fundamentals of Biotechnology	3 cr.
Pre-requisites	BIO413 Or BLG413	
This course introduces both the principles and the applications of recombinant DNA technology to animals, plants, and microorganisms. The course describes the use of genetically engineered products to clean the environment and improve human health.		
BCH445	Fundamentals of Cell Signaling	3 cr.
Pre-requisites	BCH320	
The course is divided into two parts. In the first part, we discuss the structure and dynamics of membranes, the students will receive specialized information concerning lipid and protein composition of the cell membrane, membrane fluidity and cellular traffic. Then, the domain of the translocation of proteins across the membrane will be detailed explaining to the student the destination of a non-cytoplasmic protein (ER, Golgi apparatus, mitochondria, nucleus, and peroxisomes). In the second part, the students will receive a concept on the cell signaling and signal transduction. The different types of membrane receptors and channels of cellular signaling will be described. The various effectors; the coupling mechanisms between receptor and effector, as well as the second messengers produced by these effectors will be detailed.		
BCH470	Laboratory of Biochemistry	1 cr.
Pre-requisites	BCH410 Or BCH415 Or BCH320 Or BCM320	
Students learn how to prepare a buffer solution and how to determine its capacity and its pKa. They also learn to distinguish major biochemical molecules (carbohydrates, lipids, proteins) by using specific qualitative tests for this purpose. Glucose in plasma, lipids, triglycerides, proteins in serum, and level of creatinine in urine are evaluated by using spectro-photo-colorimetric techniques.		
BCH471 -	Laboratory of Enzymology	1 cr.
Pre-requisites	BCH411 Or BCM411	
In part to provide a more authentic experience of actual lab work, experiments are done in groups of two. Each experimental session is started with an explanation, given by the instructor, of the aim, the interest and the steps of the experiment. Prior to each lab period, students need to spend some time reading the Laboratory Manual. This reading provides background information of the procedures to be performed and a facility to answer the prelab questions covered in each session. Students are required to maintain a laboratory notebook used for the recording of laboratory data and calculations, and critically important for writing lab reports. Students are encouraged to participate as much as possible in discussions during the lab work.		
BCH490	Internship	3 cr.
Pre-requisites		
An <i>internship</i> is an opportunity offered by an employer to biochemistry students to work at a firm for a fixed, limited period of time. The internship will increase student's skills and knowledge, improve the understanding of a particular job or industry, and help to gain an insight into the way organizations operate and the challenges they face.		
BCH513 -	Ecotoxicology	3 cr.
Pre-requisites		
Ecotoxicology is a relatively new science, whose main objective is to analyze the mechanism responsible for the dysfunction of ecological systems. This course covers the fundamentals of ecotoxicology (toxicokinetic and toxicodynamic regulation) to introduce the students to a risk assessment approach. The different ecotoxicological fundamental principles are illustrated by numerous examples of common contaminants such as heavy metals, PAHs, organochlorine pesticides, etc. and emerging pollutants such as endocrine disruptors and nanoparticles. This course educates and informs students about the health risks associated with exposure to substances in industrial environments, in food and in the general environment. The knowledge gained will make them alert to and ready to declare any disruption to their health industry leaders and hygienists.		
BCH541 -	Cell Signaling	3 cr.
Pre-requisites		
The main goal of this course is to highlight our emerging understanding of the mechanisms of transduction of information from outside cells to an appropriate response. This is a 3 credit course that focuses on inter- and intracellular communication, from the generation of signaling molecules through to the cellular responses. It teaches concepts central to understanding cellular signaling mechanisms and it covers the major signaling pathways and several emerging pathways.		

This course also uses the primary literature to develop a systems-level understanding of the information flow through the various cell signaling pathways and networks. Current areas of research activities in the experimental and theoretical understanding of cell signaling research are emphasized.

BCH610 Specialized Cosmetology 3 cr.

This course is designed to provide the subject and techniques of Cosmetology. The students will be exposed to the technical application of products, technical skills, theory and personal development. This course will communicate to students all the information related to skin care, hair care, and nail care.

BCH620 - BCM620 General Pharmacology and Cosmetology 3 cr.

Pharmacology is defined as the detailed study of drugs; accordingly teaching pharmacology aims predominantly at communicating to students all the information related to the source, development, physical and chemical properties, biochemical and physiological effects, pharmacodynamics (mechanism of action), pharmacokinetics (absorption, distribution, biotransformation and excretion), therapeutic and other uses of drugs.

The Cosmetology section of this course is to educate the students in the basic manipulative skills, safety judgments, proper work habits and desirable attitudes necessary to obtain licensure and for competency in entry-level positions in cosmetology or a related career field.

BCH622 -

BCM622 Pharmacotherapy 3 cr.

Pharmaceutics is the discipline of pharmacy that deals with the process of turning a new chemical entity (NCE) into a medication to be used safely and effectively by patients. There are many chemicals with pharmacological properties, but need special measures to help them achieve therapeutically relevant amounts at their sites of action. Pharmaceutics also help relate the formulation of drugs to their delivery and disposition in the body. This course aims at introducing students to the various pharmaceutical technologies applied in the preparation of pharmaceutical dosage forms and drug delivery systems. Moreover, the lectures presented demonstrate the correlation between pharmaceutical principles, drug design, formulation, manufacture, and compounding in addition to the techniques applied in each of the stated phases of drug development.

BCH623 -

BCM623 Specialized Pharmacology 3 cr.

This course studies drugs affecting major organ systems. In each topic, the physiopathology of the disease, the mechanism of action, the pharmacokinetic properties, the pharmacologic and side effects of the pharmacological treatment are detailed to better understand the clinical use, the benefits and the toxicity of drugs.

BCH627 -

BCM627 Clinical Trial Drug Legislation and Guide 3 cr.

The course is designed to introduce pharmacology and toxicology Master's students to fundamentals of clinical trials and legislation. The first part of this course includes general principles and issues in clinical research design. These are explored through the formulation of the research objective and the research hypothesis and the specification of the study population, the experimental unit, and the response variable(s). The second part of this course will focus on the Lebanese laws and decrees ruling the conditions of registering, importing, marketing and classifying imported or locally manufactured drugs.

BCH697A -

BCM697A Master Thesis 6 cr.

Pre-requisites FSC600 Or SCF600 Or CHM600 Or BCH600

Students must complete a 6 credits research project applied to their major. They are expected to realize a research work in the laboratory, submit a written report and give an oral presentation.

BIO101 Introduction to Biology 3 cr.

This introductory course is intended for freshmen and covers a set of essential biological concepts, providing students with a scientific basis for the issues they will confront throughout their lives, such as:

- The chemical bases of life,
- How cells function, harvest and produce energy,
- DNA, chromosomes and inheritance
- Evolution and diversity
- The human body
- Ecology

BIO201 General Biology I 3 cr.

This course is an integrated approach to the biology of organisms, covering the chemical and cellular organization of life, the transfer of energy through living systems, as well as heredity, diversity and evolution.

BIO202 General Biology II 3 cr.

Pre-requisites BIO201

This course is designed to provide in-depth knowledge of the evolution, diversity, and function of plants; the evolution, structure, function, and physiology of animals; and the ecology of organisms, populations, communities, and the globe.

BIO221 General Anatomy 2 cr.

This course is an introduction to human anatomy. It covers the study and description of the various component systems of the human body.

BIO228 General Botany 3 cr.

The course has two parts: plant histology and biology. Histology is the study of meristems, parenchyma and plant tissues, their origins, their characteristics, and role. Plant biology looks at the lower and higher plants, their characteristics and their classifications.

BIO271 Laboratory of General Biology I 1 cr.

Pre-requisites BIO201

This laboratory provides a hands-on approach of several biological processes and concepts that have been studied in the accompanying course.

BIO272 Laboratory of General Biology II 1 cr.

Co-requisites BIO202

This laboratory provides a hands-on approach of several biological processes and concepts that have been studied in the accompanying course.

BIO321 Human Anatomy & Physiology 3 cr.

Pre-requisites BIO202

This course introduces the basics of human anatomy and physiology, including homeostasis, and the cellular functions of the nervous and endocrine systems. This course will enable the student to establish links between the structure and the function and will present the mechanisms regulating the physiological functions of the human organism.

BIO320 Physiology 2 cr.

Pre-requisites BIO211

This course aims to introduce homeostasis, defined as the dynamic physiological equilibrium of the organism. It examines the cellular functions of the nervous and endocrine systems. This course will enable the students to establish links between the structure and the function and will present the basic mechanisms regulating the physiological functions of the human organism.

BIO322 - BLG322 Genetics 3 cr.

Pre-requisites BIO211 Or BIO210 Or BLG211 or BIO201

The purpose of this course is to provide basic knowledge of genetics: cytogenetic (the study of chromosomes), formal genetics (the study of hereditary transmission mechanisms), molecular genetics (the study of nucleic acids, their replication, transcription and translation), and bacterial genetics.

BIO327 Developmental Biology 3 cr.

Prerequisites BIO222 Or BLG222

This course reviews the different concepts of development. Also studied are meiotic division, gametogenesis and hormonal regulation, spermatogenesis, oogenesis, folliculogenesis, fertilization, the different types of eggs, segmentation, gastrulation, neurulation and organogenesis. In addition, a comparative study of the evolution of the organs is performed.

BIO335 Biophysics 3 cr.

Prerequisites BIO320 Or BIO319

The course aims at analyzing fundamental biological questions through physics. During this course, these disciplines will be integrated in the analysis of fundamental biological questions focused on the interactions of the living cell with its physical environment and on the physical laws governing the physiology of the cell and even the physical basis of the main medical instrumentations. The aim of this course is to understand important physical concepts, while integrating them in the living world. Teaching will link the biology and physics, showing the relevance of physics in the analysis and understanding of biological phenomena.

BIO336 General Immunology 3 cr.

Prerequisites BIO211 or BLG211

This course provides the basics of immunology from a daily practice point of view. It begins with a presentation of the main findings in the field, and biographical excerpts from prominent authors that have contributed to the development of this science. The main immune effectors are described as well as the two major immune processes: non-specific or innate and specific or adaptive immunity. The establishment of immune responses is clearly stated. The course also describes organ transplantation and rejection reactions and outlines major diseases involving the immune system. Finally, some immunological techniques are presented.

BIO411 General Microbiology 3 cr.

Pre-requisites BIO322 And (BCH410 Or BCH415 Or BCH300 Or BCH320)

This course is designed to give students a comprehensive understanding of bacterial physiology, metabolism, growth conditions, identification, pathogenesis and microbial control methods. It equips students with the tools they will need to understand and address the complex microbial issues related to environmental science, food science, industrial processes and public health. The first part is devoted to the description of bacterial structure (cytoplasm, cytoplasmic membrane, cell wall, glycocalyx, flagella, pili, etc.). The second part studies bacterial metabolism and growth (different trophic types, growth conditions, culture media, etc.). In the third part the main antibiotic families and bacterial genetics are discussed (mechanism of action, spectrum of activity, resistance mechanisms, operons, horizontal genetic transfers, etc.). The fourth part discusses the mechanisms of pathogenicity in bacteria (virulence, toxigenesis, interactions between host and bacteria). The fifth and last part concerns viruses. The basics of virology are explained as well as the different virus families and types, the mechanism of pathogenicity of the virus and the way it affects host cells.

BIO413 - BLG413 Molecular Biology 3 cr.

Pre-requisites BIO411 Or BLG411 Or MEDL200 Or BIO322 Or BLG322

The course begins with a review of nucleic acids and looks at the methods for their extraction, separation and analysis. Secondly, the course extensively studies the regulation of gene expression and provides an update on the changes to the nucleic acids transcriptionally, post-transcriptional and translational. Finally, detailed molecular analysis techniques, cloning, PCR, sequencing and development of DNA banks are described.

BIO415 Systems Physiology 3 cr.

Prerequisites BIO319 Or BIO320 Or BIO321

This course is designed to provide students with an understanding of the function and the regulation of the human body and physiological integration of the organ systems. This course content will include the cardiovascular, respiratory, digestive and urinary systems.

BIO417 Fundamentals of Pharmacology & Cosmetology 3 cr.

Prerequisites BIO321 and BCH421

This course intends to equip the students with basic knowledge of how drugs affect cells, organs and entire organisms. The pharmacological part will mainly focus on general pharmacological principles. The toxicology part intends to give the students' knowledge of toxicological principles such as dose response, and how bioactivation and toxicity of xenobiotic substances are studied.

BIO430 Applied Cell Biology 3 cr.

Prerequisites BIO413

This course intends to equip the students with basic knowledge of how drugs affect cells, organs and entire organisms. The pharmacological part will mainly focus on general pharmacological principles. The toxicology part intends to give the students' knowledge of toxicological principles such as dose response, and how bioactivation and toxicity of xenobiotic substances are studied.

BIO471 Laboratory of Microbiology 1 cr.

Pre-requisites (BIO411 Or BLG411) And (BIO270 Or BLG270 OR BIO271 Or BLG271)

The main purpose of this lab is to teach students all the basics to be able to undertake different types of microbiological analysis (water analysis, food and liquid analysis). It will focus on the basics of good manipulation in a microbiology lab and all the precautions to take to avoid contamination. The students will also learn to identify the types and species of bacteria.

BIO472 - BLG472 Laboratory of Molecular Biology 1 cr.

Pre-requisites BIO413

This course provides students with the opportunity to practice most of the concepts covered in the course of Molecular Biology (BLG413): genomic and DNA plasmid extractions, PCR amplification, enzyme digestion, SDS-PAGE, Western blot and bacterial transformation.

BIO473 Lab of Biology and Physiology of Plants 1 cr.

These laboratory sessions contribute to the understanding of how plants function. It provides students with hands-on experience in basic physiological principles related to nutrient deficiencies, membrane permeability and composition, water/nutrient absorption and translocation, transpiration, photosynthesis and physiological functions of growth regulators.

BIO490 Internship 3 cr.

6-week internship in a laboratory or company specializing in areas related to biology.

BIO501 Special Topics in Biology 1 cr.

Pre-requisites SCF600

Topics selected from recent literature on biology are studied in depth. A combination of workshops, announced seminars and announced conferences will be given covering assigned material. For the literature club students will be responsible for submitting several one-page summaries of articles from the current scientific literature. Summaries will be graded on relevance, critical analysis and presentation.

BIO502 Introduction to Research Lab 1 1 cr.

Pre-requisites

This laboratory course introduces students to the equipment and how to work, plan and conduct experiments in several fields of biology (microbiology, molecular biology, cell biology, etc.)

BIO503 Introduction to Research Lab 2 1 cr.

Pre-requisites BIO502

This laboratory course introduces students to the equipment and how to work, plan and conduct experiments in several fields of biology (microbiology, molecular biology, cell biology, etc.)

BIO510 Applied Biotechnology 3 cr.

This course covers the basic principles of biotechnology. The first part is a reminder of the analysis of the genome of prokaryotic and eukaryotic cells, methods of recombinant DNA, and in vitro cultures. In the second part, it studies in detail animal and plant transgenesis and their various applications. Industrial methods of preparation of biomolecules (amino acids, organics, antibiotics, etc.) and the use of microorganisms in the environment sector (green biotechnology) will also be examined. Exercises and item analysis supplement this course to give a better understanding and an insight to current research and scientific progress based on biotechnology.

BIO511 Applied Immunology 3 cr.

The course reviews the normal function of the immune system, recognizing and eradicating pathogens and other foreign molecules, and reports on abnormalities leading to aberrant immune responses and specific immunity. The theoretical aspect is supported by case studies and recent findings discussed through the analysis of scientific articles published recently.

BIO622 Physiology and Physiopathology of the Contractile Structures 3 cr.

This course will enable the students in the Master's degree to deepen their theoretical bases and experimental approach in muscular physiology and physiopathology. In this course, the anatomy, the histology, the functioning and regulation of skeletal, cardiac and smooth muscles will be covered. This course will introduce the students to the scientific reasoning and to the research by describing and analyzing scientific articles.

BIO623 Reproductive and Development Physiology and Physiopathology 3 cr.

The primary goal of this course is to provide an understanding of how the reproductive system of the human body works to create and sustain life. The course starts with an introduction to basic endocrinology, anatomy and physiology of the human reproductive system and examines the processes and regulations of fertilization, pregnancy, birth and human development. Birth control, infertility and sexually transmitted diseases are also discussed.

BIO624 Endocrine Physiology 3 cr.

This course will enable master's students in physiology to understand the physiologic mechanisms of the endocrine regulation of the organ functions. It covers the regulation, liberation and action (effect) of the different hormones. At the end of each topic, the pathologies due to a lack or excess of the hormones studied will be discussed. At the end of the course the students should be able to recognise most of the hormones produced in the human organism and should be able to understand and analyze the different endocrine pathologies and suggest, when possible, treatment methods.

BIO630 Cancer Biology 3 cr.

This course will provide a comprehensive overview of the biology and pathology of cancer. It will focus on the genetic and molecular bases of cancer, including the role of mutations in cancer cells and how they lead to the deregulation of essential biological properties (programmed cell death, cell proliferation, and differentiation). Some medical aspects of cancer will also be discussed, such as diagnosis, classification, treatments, etc.

BIO631 Virology and Vectorology 3 cr.

This course comprises an introduction to virology, and discusses the different methods to study viruses, their classification, their mechanisms of infection and spreading, focusing on emerging diseases (AIDS, influenza, hemorrhagic diseases, Zika virus...), unconventional agents (prions) and vaccination, as well as the use of viral vectors in gene therapy and biotechnology.

BIO632 Genetic engineering and applied biotechnology 3 cr.

This course studies the methods of genetic manipulations and global analysis of the genome and its expression, as well as directed mutagenesis, gene expression in heterologous hosts and gene therapy.

Tangible applications will clarify some of the major achievements of genetic engineering chosen in different fields of application. This will be addressed through critical analysis of recent scientific articles.

BIO633 The "Omics" 3 cr.

Whole genome sequencing of many organisms, including humans, has created new fields of research. After the study of genomes came the study of proteomes, transcriptomes, metabolomes, etc. The aim of this course is to provide an introduction to each of the -omics fields, as well as practical bioinformatical skills in genomics, transcriptomics, proteomics and metabolomics, knowledge of the major web-resources and an understanding of how these methods are used in scientific research.

BIO640 Genetic Engineering 3 cr.

This course examines the methods of genetic engineering and screening of genomic and cDNA banks. Also covered are the methods of global analysis of the genome and its expression, site-directed mutagenesis, gene expression in heterologous hosts and gene therapy. Legal and ethical issues related to genetic engineering will be mentioned without being developed. Exercises will be performed and aim to simulate genetic engineering problems encountered in research and development. Practical applications will illustrate major achievements of genetic engineering chosen in different fields of application. Therefore, students will perform critical analysis of recent scientific articles.

BIO644 Basic Genomics 3 cr.

The aim of this course is to familiarize students with global approaches in genomics, their advantages and limitations. Several methods will be introduced (genome sequencing, comparative genomics, functional genomics, etc.), and practical examples will be given for each situation.

BIO645 Structural and Functional Proteomics 3 cr.

Whole genome sequencing of many organisms, including humans, has created new fields of research. After the study of genomes came the study of proteomes (entire sets of proteins expressed by a genome), mainly known as structural and functional proteomics. This course aims to introduce concepts and methods in proteomics (structure analysis, organization, purification and detection techniques, as well as study of protein interactions), and to draw the scientific approach leading from a genetic structure to the structural and functional properties of a protein.

BIO652 Environmental Physiology 3 cr.

At the completion of this course, students will have knowledge of environmental hazards with known and possible risks and they will have a better understanding of how these hazards are formed, their fate and distribution in the environment, and how to assess their potential effects in humans. This course will not be a comprehensive survey of all areas of study within environmental physiology, but instead will cover a few major topics in detail like endocrine, developmental and reproductive physiology.

BIO697A Master Thesis 6 cr.

Prerequisites SCF600 Or FSC600 Or CHM600 Or BCH600 or BIO503

Student must complete a 6 credits research project applied to the major. They are expected to realize a research work in the laboratory, submit a written report and make an oral presentation.

CCA201-2 Arab Choral Singing I-II-III-IV 1 cr.
CCA303-4

The Arabic choir offers an opportunity to practice singing an Arabic vocal repertoire, and to discover the richness of Arabic music and its forms through singing, interpreting different styles and exploring vocal genres.

CHM212 - CHE212 General Chemistry 3 cr.

The purpose of this course is to present a general outline on chemistry. Through this course chemistry is introduced in its various aspects: the structure of the atom, the various models, and the properties of the elements in the periodic table; various chemical bonds, the Lewis structure, VSEPR rules; thermochemistry, thermodynamics and chemical equilibrium; kinetic chemistry, reactions rate orders, the Arrhenius law; solutions chemistry, acids and bases and various acid-base equilibrium; complexation, liquid solid equilibrium and solubility product; and redox titration and electrochemical cells.

CHM222 Chemistry of Solutions 3 cr.

Pre-requisites CHM212 Or CHE212

This course brings together the necessary knowledge to understand the reactions in solutions that are the fundamentals of many methods used both in the fields of chemistry, biochemistry or biology, as well as in pharmaceutical analysis. After a reminder of key points and generalities, the course develops four main components: acid-base equilibria, complexation equilibria, redox reactions and the formation reactions of poorly soluble compounds.

CHM270 - CHE270 Laboratory of General Chemistry 1 cr.

Pre-requisites CHM212 Or CHE212 Or CHM210 Or CHE210

The general chemistry laboratory aims to develop different skills for the practical application of theoretical knowledge of general chemistry. Techniques to be learned: preparation and dilution of solutions, experimental verification of the Nernst equation, realization of different types of acid-base and redox titration by volumetric, calorimetric, pH-metric or potentiometric monitoring, and the study of solubility and precipitation reactions and characterization of ions present in a given matrix. The goal of the lab course is to ensure that students are capable of understanding the chemical concepts and to carry out experiments safely and carefully in the laboratory, to obtain data accurately and to manipulate the data correctly.

CHM317 Organic Chemistry 3 cr.
Pre-requisites CHM212

Organic chemistry is an introduction to the structure, reactivity, and properties of organic compounds. This course is intended to introduce students to the major concepts in organic chemistry and prepare them for the upper level classes in chemistry and biochemistry they will take in the coming semesters and the organic chemistry requirements for medical schools. Topics to include: introduction and review of electronic structure and bonding in organic molecules; nomenclature of organic compounds; structure and properties of alkanes, cycloalkanes, and alkyl halides; stereoisomerism and chirality of organic compounds; and the structure, properties and reactivity of alkynes and alkenes.

CHM321 Inorganic Chemistry 3 cr.

Pre-requisites CHM212 or CHE212

This course looks at: the different types of bonds in the solid (covalent, ionic, hydrogen, and van der Waals forces); crystallography structure and mesh patterns; the crystalline forms (cubic, hexagonal); crystal planes; Bravais lattice; stackings (degree of compactness, theoretical density); interstitial sites; ionic solids (some examples of the different types); structural defects (point defects, linear defects, interfacial defects); and solid characterization by XRD.

CHM325 Physical Chemistry I 3 cr.

Pre-requisites CHM212 or CHE212

The objectives of this course are to provide knowledge and mastery of the basic tools of thermodynamics necessary for learning chemical sciences to assess observable phenomena characteristic parameters and apply some basic principles to other aspects of chemistry. Topics: first principle and enthalpy; thermochemistry; second principle and entropy; Gibbs; bioenergetic aspects; and chemical equilibria. The different kinds of chemical reactions are also covered in this course, in order to establish the fundamental bases to calculate the reaction rates of a system. Students will be introduced to concepts of chemical kinetics and surface chemistry. They will explore chemical kinetics: reaction rate, order of reaction, simple reactions, complex reactions, and activation energy. The course also covers kinetic theory, and homogeneous and heterogeneous catalysis.

CHM330 Theoretical Chemistry 3 cr.

Pre-requisites CHM212 or CHE212

The course material covers quantum theory for chemists and introduces the basic theoretical concepts of molecular orbital theory and spectroscopy. The successful students will develop a clear understanding of the origin of molecular orbitals in chemistry, how they are used to understand chemical bonding, and know how simple quantum model systems can be applied to understand spectroscopic data.

CHM340 Spectroscopic Methods 3 cr.

This course focuses on various spectroscopic methods. The goal is to introduce students to the theory and practice of various spectroscopic techniques used in chemistry and related sciences. The students will also learn the instrumentation and applications (UV-vis, IR, SAA, fluorescence, NMR and mass spectroscopy).

CHM370 Laboratory of Analytical Chemistry 1 cr.

Pre-requisites (CHM222 Or CHE222) And (CHM270 Or CHE270)

The purpose of this lab is to give students the opportunity to practice the knowledge they have learned in class. They will use the following techniques: titration of a polyacid, preparation and properties of buffer solutions, titration by indirect redox, complexometric assay, conductometric titration, study of solubility, color indicators, and determination of an equilibrium constant by the method of partition coefficients.

CHM371 -

CHE371 Laboratory of Organic Chemistry 1 cr.

Pre-requisites (CHM311 Or CHM317 Or CHE317) And (CHM270 Or CHE270)

The objective of this practical work is to illustrate by experiment the concepts covered in the course of organic chemistry for students in chemistry and biochemistry and for medical students.

CHM411 -

CHE411 Organic Chemistry II 3 cr.

Pre-requisites CHM311 Or CHM317 or CHE317

This course covers: types of reactions (substitution, addition, elimination, radical, rearrangement); energetic diagrams (kinetic); mechanisms and reaction intermediates (SN1, SN2, E1, E2, etc.); reactivity and reactions: alkanes, alkenes (Markovnikov rule, Kharash, polymerisation), dienes (Diels-Alder), alkynes; reactivity of halogenated derives (SN2 and Walden inversion, SN1, effect of different parameters, E2 and rule of Saïtzev, E1); benzenic hydrocarbons: electrophilic substitution SE2 (Friedel Crafts alkylation, acylation, effect of the substituent, etc.); aldehydes and ketones (Canizzaro, Wittig, etc.); and organometallics.

CHM412 Physical Chemistry II 3 cr.

Pre-requisites CHM325

This course describes the aggregation states of matter: gas, liquid, solid. We introduce the thermodynamics of mixtures, physical transformations of pure substances, phase diagrams, thermodynamic criteria for equilibrium between phases, state equation, kinetic theory of gas, statistics distribution of Maxwell and Boltzmann, intermolecular collisions, effusion velocity,

diffusion, viscosity, the vapor and sublimation pressure, surface tension, viscosity and solubility will be studied. Properties and interpretation of the conductivity of solids will be evaluated according to the chemical constitution of a solid. At the end of the course, students will present a research project on a selected topic in the field.

CHM420 Macromolecules, Polymers and Materials 3 cr.

Pre-requisites CHM311 Or CHM317 Or CHE317

The purpose of this course is to introduce the field of polymers and the very large world of plastics to students. The various methods of synthesis and the types of classification of the polymers and copolymers will be detailed. The course then looks at physicochemical properties (structural and geometric, mechanical, thermal, electrical) and various additives used in the manufacture of plastics (plasticizers, fillers, lubricants, stabilizers) will be presented. The kinetic and thermodynamic data of the various steps in the reactions of polymerization and copolymerization will be studied (anionic, cationic and radical). The composition and structure of the copolymers will be evaluated according to the reactivity ratios.

CHM422 Process Chemistry 3 cr.

Pre-requisites CHM311 Or CHM317 or CHE317

This course provides students with an overview of industrial chemistry and enables them to develop a process diagram and prepare to apply the knowledge and skills acquired in their subsequent studies. We also define the different types of chemical reactors, the balance mass and energy, the operating parameters of the processes and their acquisition mode. Finally, an economic and environmental study related to the chemistry of the process will be followed. At the end of the course, students will present a research project on a selected topic in the field.

CHM425 Analysis Techniques 3 cr.

Pre-requisites CHM222 or CHE222

This course is intended to provide a set of basic knowledge on a number of methods encountered in chemical and biochemical analyzes, qualitative and quantitative, in sectors as varied as the chemical industry, food processing, environmental science, pollution and medical science.

CHM426 Food Chemistry 3 cr.

Pre-requisites CHM311 Or CHM317 or CHE317

This course gives students information on various matter changes during conservation and technological treatments. It defines the main biochemical compositions of foodstuffs such as milk, meat, cereals, oils, etc. It also outlines the various toxic compounds naturally present in food as well as the range of additives.

CHM436 Research Project 1 cr.

Topics selected from recent literature on biochemistry and/or chemistry are studied in depth. A combination of workshops, announced seminars and announced conferences will be given covering assigned material. For the literature club students will be responsible for submitting several one-page summaries of articles from the current scientific literature. Summaries will be graded on relevance, critical analysis and presentation..

CHM438 -

CHE438 Internship and Conferences 1 cr.

Students are required to undergo training in an institution where the work domain covers their field of study. After training, the students are required to write a detailed report regarding their work and defend it in an oral presentation.

CHM471 -

CHE471 Lab of Chromatography and Spectroscopy 1 cr.

Pre-requisites CHM370

This laboratory aims to introduce students to the different experimental techniques of quantification and characterization: the separation process and spectroscopic evaluation. All techniques deal with multidisciplinary skills for those with an interest in industrial chemistry, biochemistry and SVT.

CHM511 -

CHE511 Techniques for Quality Control 3 cr.

This course is dedicated to quality and control. It looks at how to implement quality control practices and which criteria are involved in quality control. To understand all dimensions of quality control, the fields of drugs, food and the environment are discussed. The focus on these areas is explained by the improvement requirements for continuous quality.

CHM601 Special Topics in Chemistry - I 1 cr.

Pre-requisites FSC600 Or SCF600 Or CHM600 Or BCH600

Topics selected from recent literature on chemistry are studied in depth. A combination of workshops, announced seminars and announced conferences will be given covering assigned material. For the literature club, students will be responsible for submitting several one-page summaries of articles from the current scientific literature. Summaries will be graded on relevance, critical analysis and presentation. Submissions will be made available via eLearning and may become part of the material covered by quiz/exam questions.

CHM630 Industrial Unit Operation 3 cr.

Industrial unit operation is a subdivision of an industrial process which generally consists of a physical or chemical process. This course aims to provide the theoretical bases of some major unit operations classes: equilibrium between phases; dispersion-emulsion; decantation-sedimentation-centrifugation; LL extraction (simple and countercurrent); nucleation and crystallization; and filtration at constant volume or constant pressure. This course develops the classical methods for the resolution of such operations and describes the main technologies used for these operations. Students will present a research project for a selected unit operation.

CHM632 Control and Optimization in the Chemical Industry 3 cr.

This course has a wide-ranging content which is required for recognition of the course in a large industrial spectrum. It aims to understand the issues of interdisciplinarity in the industrial field. This course emphasizes the technical side (optimal production, stability), the economic aspects (price of returns, balance mass and energy) and social issues (safety and environment). At the end of the course, students will present a research project on a selected topic in the field.

CHM697A Master Thesis 6 cr.

Pre-requisites FSC600 Or SCF600 Or CHM600 Or BCH600

Students must complete a 6 credits research project applied to their major. They are expected to realize a research work in the laboratory, submit a written report and give an oral presentation.

CMU201 Music Composition I 3 cr.

Pre-requisites HRG320 and HRG330

Composition of short melodies and songs with piano accompaniment, based on tonal harmony: use of 7th of dominant chords with melodic foreign notes (passing notes and cambiata).

CMU202 Music Composition II 3 cr.

Pre-requisites CMU201

Composition of melodies and songs in different classic genres (dances, marches, chorales, etc.), using the resources of harmonic and contrapuntal technique.

CMU303 Music Composition III 4 cr.

Composition for instrumental and vocal in the modal harmony (Arabic music included), jazz and different styles of the Occidental repertoire. Composition for String Quartet in a free style (harmony, counterpoint, contemporary or mixture).

CRCS205 Theory & Techniques of Restoration I 4 cr.

Study, analysis and actualization of the works of C. Brandi, Theory of restoration, Rome 1963: definition of "restoration", the subject-matter of the artwork, the potential unit, time, historical value and aesthetic value, preventive restoration, falsification. Comparison with the theory of restoration of G. Urbani. . History of restoration from the origins to the 18th century: remake, repaint, integration, transfer of frescoes to canvas, revolutionary vandalism, requisitions and refunds.

CRCS210 Applied Physics for the Cultural Heritage 3 cr.

PART I: elements of physics

Atomic physics, physical properties of materials, electromagnetic spectrum (infrared, ultraviolet and x-rays), particles as probe in diagnostic, radiation-matter interaction. Raman effect, radioactive decay

PART II: diagnostic techniques

Optical spectroscopy (Raman, Ir and UV), thermography, electron microscopy and microanalysis, X-Ray Fluorescence (XRF), traditional radiography and tomography (TAC), X-ray diffraction, ion beam techniques (outlines), colorimetry, dating methods based on radioactivity.

PART III: Laboratory experiments.

Portable XRF (demonstrative); Electron microscopy and microanalysis (demonstrative); IR spectroscopy (demonstrative); Measure of gas emission spectra using a spectrophotometer; Subtractive and additive color; colorimeter (demonstrative); Digital Radiography;

CRCS220 Documentation and Representation 2 cr.

The course aims to provide the knowledge and skills necessary to consciously apply the language of design, aimed at analyzing, understanding, relief and communication of the morphology of the artifacts paintings on canvas, the wooden artifacts and multi-material artifacts. Part of the course is dedicated to the documentation and cataloging of cultural heritage as a first approach to knowledge

The course aims to provide, on the one hand, a basic understanding of the historical and scientific foundations of the encoded methods of graphic representation that allows you to read, in the works of figurative art, the geometric structure, the other the theoretical and practical tools for analyze and represent through a conventional language artifacts of a different nature .The representation techniques used will range from the traditional ones of freehand drawing and technical drawing to digital supported by specific software, with particular reference to the documentation of the restoration sites.

The course aims to direct the student to the use of techniques and methods for the detection and graphical representation for the purposes of their analytical and synthetic problems of the graphic documentation for the restoration of cultural heritage.

CRCS270 Conservation & Restoration Lab I 4 cr.

This course is a part of the applied lessons and practical work in conservation and restoration.

Lessons Applied: Book Script Terminology - Book Archeology - Copper and Parchment: Origin and Manufacture - Identification of Animal Species and Skin Recognition - Factor Degradation - Card Format and File Creation - Technique Photography and images for the restoration and conservation of cultural property

Practical activities: sewing test - realization of the primary and secondary capital - proof of beveling in copper and parchment - proof of beveling and restoration - execution of a modern ligature.

CRCS275 Artwork Lab II + Internship 4 cr.

Phenomena of alteration and deterioration of wooden objects: Analysis of the causes and phenomenology of degradation. Methods and materials of treatments for preservation and restoration (disinfection, consolidation, sanitation support) - Plotting and documentation of objects - Prevention and Safety in restoration and construction laboratories - Resilient pack and structures - Integration of missing elements and mouldings.

CRCS305 Christian & Medieval Archeology 3 cr.

This course provides information on the essential basis of Christian and medieval archeology, either from a historical point of view of this discipline or from a methodological point of view, presenting the development of research themes, results and methodological problems, including the reading of some archaeological contexts.

CRCS310 Petrography for the Cultural Heritage 3 cr.

Scientific and technical-commercial criteria for the classification of natural stone materials used in Cultural Heritage. Analysis of most common rock-types, focusing on historical stone materials from local country. Petrographic techniques relevant to Cultural Heritage, with examples of current analytical methods; representation of analytical results. Basic elements for the petrographic description of mortars. Types, mechanisms and causes of deterioration of historic and contemporary natural stone materials. Italian and European standards and recommendations concerning the use and conservation of natural stone materials. Petro-archeometric and conservation case studies.

CRCS320 Science & Technology of Materials 3 cr.

This course aims to provide knowledge on elements of structural chemistry and thermodynamics which are useful for understanding the chemical and physical phenomena of polymeric materials. These bases can be used to improve the choice of materials and interventions to be made in the conservation of cultural heritage.

CRCS370 Artwork Lab III 4 cr.

Phenomena of alteration and deterioration of wooden objects: Analysis of the causes and phenomenology of degradation. Methods and materials of treatments for conservation and restoration (disinfection, consolidation, sanitation support) - Plotting and documentation of objects - Prevention and safety in restoration laboratories and in construction sites - Parchettatura and elastic restraint structures - integration of missing elements and mouldings.

CRCS375 Artwork Lab IV + Internship 4 cr.

The phenomenology of degradation and treatment methodologies of the textile support: rheological performance of constituent materials. Analysis of the causes and phenomenology of the degradation of the support, preparatory layers and illustrations - History of techniques and traditional methods of restoration - Illustration of case studies - Velinatura, pre-consolidation technique, consolidation and joining layers - Improvement of the surface by lowering the cracks, treatment of acidification and cleaning of repaired textiles. Structural reorganization of layers: rheological performance of constituent materials. History of traditional techniques and methods for the structural recovery of paints - Illustration of case studies - Innovative technologies applied to textiles - lining and insertion of lining pads - lining with synthetic products - tension systems - illustration of case studies.

CRCS405 Theory & Techniques of Restoration II 3 cr.

The first part of the course will focus on the following topics:

- Definition, methods and areas of museology;
- History, identity and aims of the museum from the studio and the Wunderkammer to the XIXth models and the different kinds of the contemporary museum;
- Legislation, standards and professions.

In aim of pointing out the relation between museums and the restoration culture, the second part will describe some paradigmatic cases of this interaction within the local context during the XIXth and the XXth Centuries.

CRCS410 Chemistry for the Cultural Heritage 3 cr.

Degradation and decay of historical and artistic artifacts.

The degradation causes. Environmental and anthropic factors. Role of atmospheric pollutants. The chemical and physical mechanisms of degradation.

Degradation of the materials

Ageing of organic materials. The mechanism of oxidation and promoting agents. Decay of binders and of pictorial varnishes. Degradation of cellulosic and protein materials, and analogous: wood, paper, textiles. The degradation of stone materials, natural and artificial. Mural paintings. The degradation of metals: corrosion processes in particular cases of artistic interest. Methodology of restoration interventions. Cleaning, consolidation, protection. Solvents and solutions. Reactive solvents. Vapor pressure, boiling point, viscosity. Retention. Organic solvents: structure, polarities, solvent power. Solubility parameter and Teas triangle. Toxicity and risks management. Aqueous methods: surface tension and wettability; surfactants: structures and characteristics. Emulsions: o/w and w/o. Resin soaps. Thickening agents: gels, solvent gels. Poultices. Chelating agents: structures, reactions and applications. Enzymes in conservation: structure, types, mechanism of action. Consolidation. Organic and inorganic products. Surface and bulk consolidation. Evaluation criteria: compatibility of materials, reversibility, efficacy. Traditional inorganic consolidants. Organic consolidants. The structure of polymer compounds: definitions, nomenclature, classifications. Examples of chemical structures and of architectures. Molecule weights and averages. Silicon based products. Polymers for consolidation and for protection. Regulations and standard protocols for interventions on cultural assets.

CRC450 Applied Microbiology for the Cultural Heritage 3 cr.

The following items will be developed and investigated through the analyses of some cases selected on the basis of the main types of artistic artifacts.

- Diversity of biodeteriogens and biodeterioration processes.
- Environmental factors affecting biological contamination.
- Biodegradation and biodeterioration.
- Biodeterioration agent's diversity; technical analysis (microbiological, botanical entomological analysis).

CRC470 Artwork Lab V 4 cr.

Artworks: structural improvements of layers - Rheological performance of constitutive materials. History of traditional techniques and methods for the structural recovery of paintings. Illustration of case studies - Techniques of total and partial lining, insertions, compensation - innovative technologies applied to textiles - lining and insertion of lining pads - lining with synthetic products - tension systems - illustration of case studies. Techniques for cleaning polychrome artworks: cleaning the surfaces and elimination of overlapped substances - Materials and methods: acidic medium and water base, thickeners, buffer solutions, organic solvents, solvents gels, emulsions, pregelatinized resin soaps - Emulsions, thickening agents. Illustration of case studies - Exercises and laboratory tests aiming to identify cleaning products and methods.

CRC475 Artwork Lab VI+ Internship 4 cr.

Artworks: structural improvements of the layers
Rheological performance of constituent materials. History of traditional techniques and methods for the structural recovery of paintings. Illustration of case studies - Techniques of total and partial lining, insertions, compensation - innovative technologies applied to textiles - lining and insertion of lining pads; - lining with synthetic products - tension systems - illustration of case studies.
Techniques for cleaning polychrome artworks: : cleaning the surfaces and elimination of overlapped substances - Materials and methods: acidic medium and water base, thickeners, buffer solutions, organic solvents, solvents gels, emulsions, pregelatinized resin soaps - Emulsions, thickening agents. Illustration of case studies - Exercises and laboratory tests to identify cleaning products and methods.

CSC211 Discrete Methods 3 cr.

Prerequisites MAT202

This course introduces the discrete methods used in computer science and applied mathematics. The topics that will be covered are regular languages, regular expressions, finite automata and non-regular languages. It also discusses the basic elements in number theory and introduces graph theory. It introduces induction proof and recurrence relations.

CSC212 Computer Organization and Assembly Language 3 cr.

The course is designed to introduce computer science and information technology students to the basics of computer architecture and low level programming, i.e. assembly code and hardware manipulation. The course will focus on the

Intel x86 assembly language, number representations, logic circuits, Boolean algebra and logic simplification, addressing modes, input/output devices, system buses, memory systems, memory occupation, computer arithmetic, instruction sets and the design, control, and structure of CPUs.

CSC214	Programming I	3 cr.
This course enable students to acquire a practical method to solve problems using the C++ programming language. It looks at methods for problem analysis, structural and detailed conception of solutions, base concepts of pseudo code and flow-charts, and the coding and verification of programs. Subjects include: introduction to C++ language, basic concepts of the language, types, expressions, control structures (selection, repetition), one and two dimensional arrays, strings, functions, prototypes, and text files. The course is completed by lab workshops.		
CSC215	Programming II	3 cr.
Prerequisites	(INF214 Or CSC214 Or INF219) And CSC270	
This course introduces many techniques used to organize, search, sort and manipulate data after completing new concepts in the C++ language (structures, pointers, multidimensional arrays and binary files). It emphasizes arrays, linked lists, stacks and queues. Recursion and a simple sorting algorithm are also covered. The course is completed by lab workshops.		
CSC270	Programming Laboratory I	1 cr.
Prerequisites	CSC214	
The course enables students to acquire a practical method to solve problems using the C++ programming language. It includes: applications of the C++ language, basic concepts of the language, types, expressions, control structures (selection, repetition), one and two dimensional arrays, strings, functions, prototypes, and text files. This course is done entirely in the lab, and emphasizes the practical approach.		
CSC271	GUI Programming	1 cr.
Prerequisites	(CSC214 And CSC270) Or (INF214 Or INF219)	
Students will learn about the OpenGL library. Different applications will be done in the lab and as homework using OpenGL with the C++ programming language. Students will also learn how to write a clean code as well as about the history of GUI. They will learn how to do animation and transformation. By the end of the semester a small game will be produced by the students.		
CSC272	Programming Laboratory II	1 cr.
Prerequisites	CSC215	
This lab introduces many techniques used to organize, search, sort and manipulate data after completing new concepts of the C++ language in the course (structures, pointers, multidimensional arrays and binary files). It emphasizes arrays, linked lists, stacks and queues. Recursion and a simple sorting algorithm are also covered.		
CSC300	Hardware Technology	3 cr.
Prerequisites	CSC212 Or INF212	
The fast development of technology in the last few years has considerably reduced the lifespan of the material and computer software. This course examines how computers work on the level of the hardware. The purpose is to arrive at an answer to this question by bringing together the elements which play a significant role in the material structure of computers.		
CSC312	Advanced VB Programming	3 cr.
Prerequisites	(CSC214 And CSC270) Or (INF214 Or INF219)	
This course introduces the concept of event-driven programming and the windows environment. The classes begin with simple forms (Windows) and end with ADO.Net Objects which connect Databases to the VB.Net application, graphics programming. The course also covers Text and Binary file access and the Winsock control for networking.		
CSC314	Object Oriented Programming	3 cr.
Prerequisites	(CSC214 And CSC270) Or INF214	
The main objective of this course is to introduce the basic concepts of object oriented programming, while using the pure object oriented language of Java. UML will be presented succinctly in order to understand the approach of the modelling by objects. Some useful static diagrams are also presented, mainly object and class diagrams. A complete project illustrating the different approaches of this course will be presented as a model for future projects.		
CSC315	Data Structures and Algorithms	3 cr.
Prerequisites	INF211 Or CSC211 And (CSC229 Or INF229 Or (CSC215 And CSC272) Or INF215)	
This course covers many advanced programming techniques. We focus on ADTs, especially trees and hash tables. Implementations are based on the object oriented approach. The analysis of the execution time of a program and the memory space that it uses will be considered throughout this course in order to compare theoretically different ADTs and algorithms.		
CSC319	Technology and Networks Infrastructure	3 cr.
Prerequisites	INF204 Or MIS210 Or INF212 Or CSC204 Or CSC212	

This course aims to introduce the basics of computer networks. Students will study infrastructures, features and network topologies, transfer techniques, switching, encoding, transmission and routing, the reference model, the protocols of different layers, including deepening the study on the TCP / IP architecture used in the Internet.

CSC320 Database Systems 3 cr.

Prerequisites (CSC214 And CSC270) Or (INF214 Or INF219)

This course presents the principles of databases and familiarizes the students with the design and use of relational databases. It covers DBMSs, architecture and functions, entity-relationship and relational data models, relational database design, theory of normalization and the SQL language. This course includes laboratory work under ACCESS DBMS.

CSC343 Mobile Programming 3 cr.

Today's applications are increasingly mobile. Computers are no longer confined to desktops and laptops but instead live in our pockets and hands. This course teaches students the general structure of a mobile application on different mobile platforms. Students will also learn how to build mobile applications for Android and Windows Phones, and how to test and deploy them.

CSC352 Theory of Programming Languages 3 cr.

Prerequisites CSC211 Or INF211 And (INF215 Or CSC215 Or INF229 Or CSC229 Or CSC312 Or INF312)

A programming language is a programmer's principal interface with the computer. More than just knowing how to program in a single language, programmers need to understand the different styles of programming promoted by different languages. In their professional life, they will be working with many different languages and styles, and will encounter many different languages over the course of their careers. Understanding the variety of programming languages and the design tradeoffs between the different programming paradigms makes it much easier to master new languages quickly. Understanding the pragmatic aspects of programming languages also requires a basic knowledge of programming language translation and runtime features such as storage allocation. In this course we explore the major issues in both design and implementation of modern programming languages and provide a basic introduction to the underlying theoretical models on which these languages are based. The emphasis is on fundamental concepts. Several languages are highlighted in sufficient detail to enable the students to write programs that illustrate the relationship between a source program and its execution behavior.

CSC360 Internet Technology 3 cr.

Prerequisites INF215 Or (CSC215 And CSC272) Or INF229 Or CSC229 Or CSC312 Or INF312

This course focuses on the broad range of technologies used to build Internet and Web-based applications. We emphasize the development of client-side applications using HTML5, CSS3, JavaScript, XML and DTD.

CSC368 Project Management 2 cr.

Prerequisites CSC314 Or INF314

This course describes the key principles of successfully managing a project from the planning stage to the end, showing the students how to define the different steps and measure and track their progress. During this course, the students will learn concrete and efficient methods to systematically improve the planning and realization of each step of this software development process.

CSC372 Advanced Programming Lab 1 cr.

In this lab students will apply their knowledge in VB. They will apply the concept of event-driven programming and the windows environment. The classes begin with simple forms (Windows) and end with ADO.Net Objects which connect Databases to the VB.Net application, graphics programming.

CSC416 Graph Theory and Operations Research 3 cr.

Prerequisites MAT310 And (CSC211 Or INF211)

The aim of this course is to formulate a wide variety of real-life problems and to solve them using methods based on graph theory and linear methods. Concerning graph theory, we will particularly study the following problems: shortest path, minimum spanning tree, maximal flow network, and finding a critical path in a project network. As for linear methods, linear programming problems will be solved graphically and by using the Simplex algorithm and duality. We will also see how to solve integer programming problems using the branch-and-bound method.

CSC417 Human Computer Interaction 3 cr.

Prerequisites CSC360 Or INF360

This course will teach students about the importance of the human-computer interface in software design and development. The objectives of the course are: to facilitate communication between human factors engineers and computer scientists on user interface development projects; to provide the future user interface designer with concepts and strategies for making design decisions; to show the future user interface designer the tools, techniques, and ideas for interface design; to introduce the students to the literature of human-computer interaction; to stress the importance of good user interface design; and finally to be able to think differently, imaginatively and creatively.

CSC420 Computer Networks 3 cr.

Prerequisites CSC214 And CSC270 Or INF214

This course covers the architecture and protocols of modern computer networks. It presents the networking protocol models OSI and TCP/IP by discussing the different layers, their functions, roles, and services.

CSC421 Operating Systems 3 cr.

Prerequisites INF314 Or CSC314

The course covers the fundamental concepts of operating systems, emphasizing single-machine systems. These concepts include processes, threads, synchronization, scheduling, memory management, file and I/O management, and user program execution. Popular operating systems (e.g., UNIX, LINUX, and Windows) are used to illustrate implementation of these concepts.

CSC426 Database Applications Development 3 cr.

The aim of this course is to enable students to become familiar with the development of complex database applications. In this course the students will learn to manipulate in a complex manner the data contained in an Oracle database using the PL/SQL procedural language. In addition to the basic skills in PL/SQL programming, the course will cover the most important concepts of the PL/SQL programming language such as: cursors, stored procedures and functions, triggers, exception handling, and transactions.

CSC428 Database Administration 3 cr.

Prerequisites CSC320 Or INF320

In this course, students will learn about the following subjects: tasks of the database administrator; identifying the various components of the Oracle architecture; managing Oracle instance; creating a database; using a data dictionary and dynamic performance views; maintaining the control file; maintaining redo log files; managing table spaces and data files; storage structure and relationships; managing undo data; managing tables; managing indexes; maintaining data integrity; managing password security and resources; managing users; managing privileges; managing roles; backup; and about recovery, environment and applications.

CSC430 Systems and Networks Administrator 3 cr.

Prerequisites INF319 Or CSC319 Or CSC212 Or INF212

The goal of this course is to prepare the students for the task of administrator by introducing them to the management of a UNIX environment. After an introduction to the problems bound to the multi-user and multi-task nature of the UNIX system, we introduce the most useful UNIX commands and the administrator's main tasks: user management, the device drivers, services management, network management, control of scripts on a shell, compression, and backup. The students are then trained on the complete installation of a Linux system.

CSC436 Advanced Programming Project 2 cr.

Prerequisites CSC360 Or INF360 Or CSC343

In the beginning of the semester, students need to set up with their instructors a title and a detailed description of their projects. The instructors of all the sections of the courses will meet within the first three weeks of the semester. During this meeting they will accept, reject, or modify the proposed project. If the project was rejected they need to propose to the student another one. After this meeting, the proposal of every project will be signed by the student as well as the instructor. Instructors need to meet with students at least once every two weeks. During this progress meeting, students need to show the instructors what they did during the two week period and what they are planning to do in the coming two weeks. By the end of the semester, students will have a 10 to 15 minutes presentation. During this presentation instructors from other sections may be present.

CSC438 Internship Report 1 cr.

Prerequisites CSC360 Or INF360 Or CSC343

In the beginning of the semester, students need to find an internship. They have to get the approval of the department and the instructor of the course. They must also describe briefly the type of work they are going to do during their internship. The internship will be a minimum of a 150-hour work experience. Instructors need to meet with students at least once every four weeks. During this progress meeting, students need to show the instructors what they did during the four week period and what they are planning to do in the coming four weeks. By the end of the semester, students will have a 10 to 15 minutes presentation. During this presentation instructors from other sections may be present.

CSC460 Information System Security 3 cr.

This course provides an overview of the problems and solution elements related to security of information systems and networks. It covers network management topics such as definition of network management, network management protocol SNMP, MIB, SMI and RMON as well as network security topics such as security attacks and services, cryptography, network security applications and system security. We treat both aspects of security governance, risk management, evaluation, operational management of security and also technologies that achieve security services.

CSC500 Software Engineering 3 cr.

This course is the presentation of the software engineering principles, methodologies and metrics. The topics of software engineering management, process and quality are presented in an integrative approach, stressing software improvements through measurements of software products and processes. Additional topics covered include system and software writing requirements, formal specification analysis, formal description reasoning, models of standard paradigms, and translations of such models into formal notations. The Unified Modeling Language (UML) is explained and used throughout the course. New topics are also covered such as Object Oriented and software reuse. In brief, the goal of this course is twofold: (1) it presents the evolution of software engineering techniques; (2) it provides an overview for further research in the domain.

CSC521 Artificial Intelligence 3 cr.

This course covers the theory and applications of knowledge-based systems. Topics include algorithmic models of problem solving, knowledge representation, reasoning, planning, decision-making, machine learning, perception, action, communication, and interaction. There is also a review of applications such as intelligent tutoring and multi-agent systems.

CSC522 Advanced Computer Networks 3 cr.

Advanced topics in computer communication networks reflecting current advances in research and applications in this area. Topics include: TCP/IP technology, routing protocols and algorithms, multicast, MPLS, Virtual Private Networks (VPN), Quality of Service (QoS), Voice over IP (VoIP), P2P networks, and wireless LAN.

CSC530 Advanced Database Systems 3 cr.

Advanced topics in the area of database management: query processing, translation into relational algebra, operations algorithms, query optimization, heuristics and cost estimation, transaction processing, concepts and theory, transactions properties, schedules serializability, transaction support, concurrency control issues and techniques, crash recovery techniques, handling the buffer pool, the WAL protocol and the ARIES algorithm, WEB databases, intranets and extranets problems, middleware, and data security . This course includes a project and a synthesis paper.

CSC540 Network Management and Security 3 cr.

This course addresses the issues of network management and security. It covers network management topics such as definition of network management, network management protocol SNMP, MIB, SMI and RMON as well as network security topics such as security attacks and services, cryptography, network security applications and system security.

CSC560 Information System Security 3 cr.

This course provides an overview of the issues and potential solutions related to the security of information systems. We look at aspects of the governance of security, risk management, evaluation of operational safety management and also technologies that achieve security services.

CSC570 Multimedia and Computing Systems 3 cr.

The convergence of computing, communications and display technologies has led to interest in the processing of multiple data types. The integration of text, sound, images, and video in modern presentations requires compression, synchronization, database, and communication methods. This course covers the state-of-the-art technology for multimedia computing. The course topics will cover current media types, images, video, audio, graphics and 3D models in terms of algorithms and data structures for their capture, representation, creation, storage, archival, transmission, assembling, presentation and retrieval.

CSC601 Special Topics in C. Sc. - I 1 cr.

Prerequisites FSC600 Or SCF600

Topics selected from recent literature on computer science are studied in depth. Students will participate in a series of conferences presented by experts.

CSC602 Special Topics in C. Sc. - II 1 cr.

Prerequisites CSC601

Topics selected from recent literature on computer science are studied in depth. Students will participate in a series of conferences presented by experts.

CSC603 Tutorial in Computer Science 1 cr.

Prerequisites CSC601

Topics selected from recent literature on computer science are studied in depth. Students will be responsible to present selected topics of the current scientific literature. They will be graded on relevance, critical analysis and presentation.

CSC630 Distributed Database Systems 3 cr.

This course provides an in-depth discussion of the concepts and design principles used in distributed database systems. It covers the architectural foundations of distributed database management systems topics as well as the application and the system level topics. Application level topics include distributed database design models in addition to the fragmentation, replication, and allocation techniques. System level topics include query processing, query optimization algorithms, transaction management, reliability protocols, concurrency control, type of failures and recovery in distributed database systems.

CSC632	Data Warehousing	3 cr.
<p>This course presents in detail the concepts of data warehousing. It introduces the different architectural issues for a data warehouse and data marts. It explains the different design levels used for creating a data warehouse, such as the multidimensional design, the physical data warehouse design and the extraction, transformation and loading phases. Additionally, the course covers the OLAP tools as well as the extension of the SQL language, and the MDX language to support data warehouse creation and manipulation.</p>		
CSC634	Data Mining	3 cr.
<p>Students will study data mining techniques, data mining tools, data visualization, and parallel data mining models. The techniques will include the application of well-known statistical, machine learning and database algorithms including decision trees, similarity measures, regression, Bayes' theorem, nearest neighbor, neural networks and genetic algorithms.</p>		
CSC635	Database System Administration	3 cr.
<p>This course looks at advanced database administration. Subjects covered include: tasks of the database administrator; identification of various components of the Oracle architecture; managing parameter files; managing tablespaces; storage structure and relationships; creation of database; managing tables, indexes, profiles, roles, and users; managing privileges; managing password security and resources; backup; recovery; fine-tuning of the database; auditing and security of the database. Students are able to develop an understanding of the internal structures and organization of a given database using Oracle10G Database Administrator, as well as applying all the features of the planning, tuning, monitoring, security, backup and recovery.</p>		
CSC655	Server Configuration and Administration	3 cr.
<p>This course will provide students with an in-depth knowledge of server administration and configuration. The material will cover system configuration (files system, file sharing), network services (DNS, Mail, Web, DHCP, FTP, SSH, RAS), installation, configuration and administration of these services, how to manage users and hosting accounts, automating user account management, security issues, and troubleshooting. Hands-on experience through labs and projects will reinforce the reading. This course will teach students how to perform advanced administration tasks on Linux/Windows Enterprise Server: installation and manual configuration, performance tuning, backup and recovery services, studying of Microsoft Windows Active Directory (administrative tasks required to centrally manage large numbers of users and computers, multiple domains).</p>		
CSC697A	Master Thesis	6 cr.
Prerequisites	SCF600 Or FSC600 Or INF600	
<p>Students must complete a research thesis in computer science. They are expected to realize a research work in the laboratory, submit a written report and give an oral presentation. Their work needs to be supported by simulation or implementation.</p>		
CTP210	Counterpoint I	2 cr.
<p>2 parts A. 1st and 2nd species (note against note and two against one) B. 3rd and 4th species (4 notes against one and syncopations) C. 5th species (Florid Counterpoint).</p>		
CTP220	Counterpoint II	2 cr.
Pre-requisites	MPR301 Or MPR512 Or MPR363 Or CTP210	
<p>Counterpoint of 3 and 4 parts - A. Cp. to 3 parts, B. Cp. to 4 parts, C. Cp. Invertible.</p>		
CTP330	Counterpoint III	2 cr.
Pre-requisites	MPR 302 Or MPR 522 Or MUP 463 Or CTP 220	
<p>Counterpoint of 3 and 4 parts - A. Cp. to 3 parts, B. Cp. to 4 parts, C. Cp. invertible</p>		
CTP440	Counterpoint IV	4 cr.
Pre-requisites	MPR 303 Or MUP 563 Or CTP 330	
<p>The Fugue. A. The first elements of the fugue: exhibition, counter-exhibition, theme, answer. B. The second elements of the fugue (entertainment, strata, pedal), with analysis of Bach's fugues. C. Composition of two fugues: one on a given theme, the other on a new theme.</p>		
CTP510	Counterpoint I	2 cr.
<p>A. 1st and 2nd species (note against note and two against one). B. 3rd and 4th species (4 notes against one and syncopations). C. 5th species (Florid Counterpoint).</p>		
CYB545	Cyber Security Ethics and Law	1 cr.
<p>This course will examine the ethics and current laws of cyber security technologies, in terms of the often competing priorities of governments, corporations and the citizen. Topics include ethics, relevant laws, regulations, policies, standards, psychology, and hacker culture. The course will include a set of ethical principles set down internationally, in terms of fundamental rights (e.g. privacy and protection of personal data), which applies to the cyber domain, just as it applies to the physical domain.</p>		

CYB550	Software Engineering	3 cr.
<p>This course is the presentation of the software engineering principles, methodologies and metrics. The topics of software engineering process and quality are presented in an integrative approach, stressing software improvements through measurements of software products and processes. The Unified Modeling Language (UML) is used throughout the course. Topics are: Software development process, domain analysis, object oriented programming, software reuse, client-server framework, design patterns, user interfaces, dynamic modeling, software architecture, software testing, software quality, risk analysis and cost estimation.</p>		
CYB555	Advanced Database Systems	3 cr.
<p>The objective of this course is to study the advanced paradigms of database management systems. The content of this course consists of four main parts: The first part introduces advanced concepts of DBMS such as query optimization, concurrency control and recovery. The second part presents the distributed DBMS. It details the architecture of these systems in order to identify their different types such as client/server DBMS, distributed DBMS, federated DBMS and multi-DBMS. It finally focuses on the fragmentation and data allocation in distributed databases. The third part presents the analytical databases, specifically data warehouses. It explains the difference between the online analytical processing (OLAP) and online transactional processing (OLTP), the ETL process (extraction, transformation and loading) of these warehouses and their logical and physical modeling. The fourth part introduces database Security: Database encryption, Network security, Site authentication (3rd party Agency, Public/private key,...), User authentication, Authorization, Access control and application security(SQL Injection, Invalidated input, Password in Script...) .</p>		
CYB560	Cryptography and Steganography	3 cr.
<p>The objectives of this course are to provide cryptographic and information security topics and algorithms, such as symmetric key and public key encryptions, block and stream ciphers, message authentication, program and OS security as well as network and Web security.</p>		
CYB565	Distributed Database Systems and Security	3 cr.
<p>This course provides an in-depth discussion of the concepts and design principles used in distributed database systems and the related security concern. It covers the architectural foundations of distributed database management systems topics as well as the application and the system level topics. Application level topics include distributed database design models in addition to the fragmentation, replication, and allocation techniques as well as security. System level topics include query processing, query optimization algorithms, transaction management, reliability protocols, concurrency control, type of failures and recovery in distributed database systems.</p>		
CYB570	Network Management and Security	3 cr.
<p>The purpose of this course is to introduce the principles of security in fixed and mobile networks. The course starts with an introduction to information security concepts, security services and security mechanisms. In the second part, we discuss the concepts of symmetric and asymmetric cryptography, the hash function and the signature and key sharing procedures and we apply these concepts to secure the data communication using the SSL and the IPSec protocols. In the third part, we discuss security in wireless networks, intrusions and filtering mechanisms through the use of firewalls. Finally, we discuss security management and risk management concepts.</p>		
CYB575 & CYB571	Operating & Embedded System's Security &Lab	4 cr.
<p>The objective of this course is mastering the principles and mechanisms of the security of classic operating systems (windows and Linux) and embedded systems: (Android, router). To do this aim, it will also be necessary to know the memory plan of the operating systems that are most often encountered, the security model and the software architecture model (driver, service, application). Students will be required to configure the security of both conventional and embedded OS.</p>		
CYB572	Lab - Qualification Testing	1 cr.
<p>The vulnerability of a software is often linked to its quality. Thus, quality becomes a prerequisite for safety. This course aims to introduce and master the main concepts of quality assurance (particular attention is paid to the definition of quality assurance processes: standards, manuals and quality plans). Students will see the concepts and techniques of software review and testing. The purpose is to know how to design and implement quality assurance during a software project.</p>		
CYB573	Lab - Cybernetic Crises Simulation	1 cr.
<p>This lab aims to simulate the functioning of a Security Operation Center (SOC). So, students learn how to implement the dynamic threat analysis procedures, participate in the design of an adapted and dynamic security policy, and pilot the implementation of this security policy by means of anticipation, detection and monitoring of attacks. Furthermore, they also learn how to implement the response procedures adapted to the threat in accordance with the legal framework.</p>		
CYB580	Platforms and Development Protection	3 cr.
<p>The objective of this course is to master the rules that make it possible to secure the software development, to master the protection of the software itself and parries in the face of attacks. At the end of this course, students will have to know how</p>		

to implement and configure security solutions. For example, they will know how to implement cryptology solutions and key management.

CYB600 Component Based Software Engineering 3 cr.

Modularity is an important concept for the development and maintenance of software. After the modularity via the object paradigm, the growth of the system's complexity suggests the use another paradigm: the software component. This course aims to master the concepts, techniques and models for the development of systems by components. This is what is called component-based development. Thus, students will discover how to define and use "frameworks" and patterns for component development.

CYB650 Internship 1 cr.

Students need to get the approval of the head of the department about the internship. They need to describe briefly the type of work they are going to do during their internship. Instructors need to meet with students at least once every four weeks. During this progress meeting, students need to show the instructors what they did during the four-week period and what they are planning to do in the coming four weeks. By the end of the semester, students will have 15 minutes presentation.

CYB670 Master's Project I 1 cr.

This course pushes the students to demonstrate preparedness to start their careers as professionals in the cybersecurity field by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic will give the students the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program.

CYB680 Master's Project II 3 cr.

This course pushes the students to demonstrate preparedness to start their careers as professionals in the cybersecurity field by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic will give the students the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program.

ECH470 Specialized Didactics I 3 cr.

The course is designed for students with a degree in chemistry (or biochemistry). It aims to introduce students to the methods that allow the acquisition of appropriate skills for the teaching of chemistry.

The course focuses on the Lebanese Curriculum in the intermediate cycle, considering fast outputs in order to address the fundamental parts of the third cycle of basic and secondary education, to ensure harmony and continuity between different parts of the chemistry program.

ECH471 Specialized Didactics II 3 cr.

The course focuses on Lebanese Curriculum at the secondary level, emphasizing the use of educational resources: the strategies, methods, educational activities (planning, testing, and evaluation) and choice of teaching materials. Upon completion of the course, the student will be able to adapt to the methods and theories of teaching and model, induce, deduce, abstract, apply and impart knowledge in chemistry.

ECO221 Microeconomics 3 cr.

Prerequisites BUS210 Or MAT206 Or MAT213 Or MAT310 Or MAT217

This course gives insight into microeconomics, which is a key component to designing and understanding public policy and an essential tool for managerial decision-making, while giving insight to the operation of the modern economy.

ECO222 Macroeconomics 3 cr.

Prerequisites MAT206 Or BUS210 Or MAT213 Or MAT310

This course gives insight into macroeconomics, portraying the economy as a whole. It is by developing an understanding of fundamental economic terminology, concepts and principles that we are able to interpret economic changes and their impact on a country's situation.

ECO410 Banking and Finance 3 cr.

Prerequisites ECO222

This course aims at expanding knowledge in economics with an emphasis on accounting, financial intermediaries, banking and their public policies.

EDU201 History of Education 3 cr.

Through a multidisciplinary approach that places education at the crossroads of philosophical, psychological and sociological considerations, this course provides a notional and conceptual framework to situate the different authors in relation to their "educational models" and the teaching strategies arising therefrom, emphasizing the importance given to the learner, society and educational practices in a constitutive interaction of the pedagogical profile of each author.

EDU204 Home, School, and Community Relations 3 cr.

The course is an exploration of home-school relations. It focuses on developing an understanding of traditional and non-traditional families, structural and life style variations and parenting in diverse cultures and at-risk families. Implications from this understanding will guide the development of a parent involvement plan which will include effective ways to communicate with parents, discussions with parents, and how to plan parent meetings and home visits. Special attention will be given to cultural and family situations, which affect young children, such as divorce, child abuse and neglect, illness or death of family members and life in a violent society.

EDU208 Introduction To Teaching and Learning 3 cr.

This course introduces students to theories and research concerning teaching and learning, and helps them apply theory in the school classroom. Students have the opportunity to view films and videos related to education, to explore children's literature, and to participate in role-playing, simulations, and peer teaching. Discussion of the following are included: theories of learning; learning styles; motivation; research on effective teaching and effective schools; assessment and evaluation techniques; how to interpret test scores; and how to explain them to parents. Fifteen hours of field experience will be included.

EDU212 Foundations of Education 3 cr.

This course combines a broad survey of the social, historical, and philosophical foundations of education with in-depth study of selected areas pertinent to education; such as, structures and governance of schools, professionalism, teacher effectiveness, and curriculum models. An Issues Approach is emphasized to develop a more realistic view of the teaching profession and to foster a better understanding of the major debates in education.

EDU215 Techniques of Expression 3 cr.

This course aims to implement essential techniques to improve the oral and written expression of students. At the level of oral expression, it proposes strategies for successful transmission of a verbal message by putting the emphasis on the words and the framework of the communication (body language, voice, intonation, etc.). At the level of writing, it analyzes and decodes all the documents through an effective reading. We shall consider processing a wide range of techniques for the development of the means and forms of written communication (letter, resume, transcript, interview, static and moving image).

EDU304 Theories of Early Childhood Education 3 cr.

This course offers a theoretical comparative study of the history, theory, goals, programs, approaches and related research underlying early childhood. Students will examine how theory influences practice in a variety of early childhood education models, including the Bank Street model, Headstart, open education, Montessori schools, behavioral analysis, Piagetian, Vygotskian, and Reggio Emilia approaches.

EDU305 Classroom Management 3 cr.

This course is an opportunity to analyze what happens in the classroom and guide future teachers to the development of the first elements of a class management model. It aims to familiarize the students with all the elements of planning, organization and supervision in the conduct of the class, which can prevent discipline problems in the classroom and to create an atmosphere and environment conducive to learning (how to motivate, encourage curiosity, stimulate; how to function in daily life or adapt its operation through a variety of group dynamics to increase the maximum participation of students, autonomy and commitment to work, school). In another more relational aspect, this course aims to develop the competence to manage the relationships between actors in a class group, while respecting each individual in the group, to regulate conflict and establish a consistent operation attuned to all learning in the classroom. For this, an understanding of the behavior of difficult students and an identification of communication strategies with these students is of importance.

EDU309 Technology in Early Childhood Education 3 cr.

This course offers an overview of current technological trends that can be used to assist in classroom instruction. The course examines technology's relationship to educational theory and how technology is becoming a part of current reforms in educational practice, and how a foundation in technological skills is critical to becoming an effective teacher. Students will explore and apply a wide range of technology currently used in education. Emphasis will be given to the examination of the use of recent technologies, computers and the Internet, and their application in Kindergarten. Ways to incorporate multimedia production for educators in the classroom will be explored. Traditional audio-visual aides will be explored. Students are expected to plan lessons utilizing technologies.

EDU310 Learning Theories 3 cr.

This course is given with the purpose of developing a classification of large trends found in contemporary theories of education, starting from a descriptive and critical study of the theories (academic, social, psycho-cognitive, technological and socio-cognitive) to come up with strategies serving as contextual references to the learning process.

EDU312 Philosophy of Education 3 cr.

This course focuses on the main axes of the philosophy of education, which is a reflection concerning education as real human development as it was designed by the great masters - Greek thinkers. Three axes are the backbone of the course. The first axis is that of Greek education and Greek philosophy- Socrates, Plato, Aristotle. Special attention will be devoted

to Seneca. The second axis focuses on education at the time of the Renaissance; 15th century and the end of the 16th century; Montaigne and Pascal. The third axis focuses on education during the century of enlightenment - Rousseau and Kant.

EDU315 Early Childhood Curriculum: Science 3 cr.

This course provides students with knowledge of introducing sequential science concepts for the appropriate stages of cognitive development of young children and offers experience in developing the content, methods, and materials for directing children in science activities. Emphasis will be placed on how science can be integrated throughout the day school curriculum and become a valued functional tool.

EDU316 Early Childhood Curriculum: Mathematics 3 cr.

The student will develop concept-oriented strategies in math with a primary emphasis is on thinking, reasoning and understanding and developing the ability to investigate how and why things happen in math in young children. The course focuses on developmentally appropriate learning activities using materials to cultivate logical thinking skills in children. The kinds of activities to be included in the preschool curriculum are also studied.

EDU318 Issues in Syntax 3 cr.

This course aims to develop in the students an alternative approach of a very different French syntax than that learned during their school years. It proposes to go beyond traditional grammar, reaching towards a more rational use of the language. Each grammatical concept starts from the observation of linguistic facts present in a brief text. The observation is guided and the questions lead students to implement previously acquired knowledge, upon which will be anchored new knowledge.

EDU322 Phonetics/Phonology 3 cr.

This course will develop diction competencies of future teachers. Students will first be asked to distinguish between phonetics and phonology. They will then learn the International Phonetic Alphabet; knowledge that will give them access to all the features of the phonetics of the French language. All the rules of pronunciation and diction will be subsequently addressed (pronunciation of sounds, letters, accents, links, intonation) to finally reach a correct and expressive reading of a poetic corpus - narrative or theatrical. All theoretical information will be immediately followed by practical exercises that will be based on the very practice of students. These, through listening exercises and diction, will be asked to identify their shortcomings and those of others, to explain and to address them gradually.

EDU323 English Phonology 3 cr.

This course is designed as an introduction to current phonological theory, with application to descriptions of the phonological systems of English and Arabic. Regular course work includes: phonetic and phonological systems; contrastive analysis; phonemes and allophones; types of transcription; vowel and consonant system: spelling and pronunciation, metrical and prosodic theories. Instruction will focus on problem sounds for Arab learners studying English so that they will be able to recognize and produce consonants, vowels, stress and intonation of the English language correctly. Students will have the opportunity to practice identifying and producing speech sounds.

EDU325 Digital Resources for School Education 3 cr.

This course provides a concrete discovery of digital resources for education namely typology of digital resources for education, online research methodology, and the analysis of digital resources for education and problems of their pedagogical uses. Today the modes of course preparation at all levels of education and training are based increasingly on consultation and integration of educational resources found online. Training institutions are facing the emergence of teaching practices of communities, personal sites of all kinds and commercial offers, resources where the proliferation does not facilitate the teacher's task. This course's main purpose is to present the diversity of these resources, access modes to the latter, but also to give future teachers the key to analyze, in order to help them integrate these into their teaching practices.

EDU330 General Didactics 3 cr.

This course covers the basic concepts of general didactics and pedagogical principles to be understood in the ideas of curriculum, curriculum development and planning of learning situations. It also provides the basic data essential for the development of didactic situations, the analysis of the links between the elements of the educational triangle and principles essential to make the teaching contract successful in various school settings. The course allows the student to apply teaching from the competency-based approach and the problem situation, and specify the use of educational objectives; their classification and formulation, as well as their integration into different learning situations.

EDU336 Teaching Language Art For Children 3 cr.

This course presents techniques and methods for encouraging the development of language and perception skills in young children, and stresses improvement of vocabulary, speech, and methods of stimulating discussion. Surveying children's literature, examining elements of quality storytelling and story reading, and stressing the use of audio-visual materials are all important elements of this course. Through observations and reading students will focus on how humans acquire and develop language. Problems related to bilingualism, language development, and choice of appropriate program activities and materials for young children are emphasized.

EDU339	Methods and Materials in Early Education	3 cr.
This course is designed to acquaint students with principles of learning and classroom procedures for optimum experiences for young children. It focuses on developmentally appropriate methods and material for use in kindergarten educational settings. The emphasis is on kindergarten children aged three years and above. Topics include classroom arrangement, scheduling, selection of materials, curriculum planning using themes and integrated units.		
EDU345	Applied Linguistics to Teaching French	3 cr.
The course focuses on didactics/linguistics relationships, on the application of linguistic theories in the teaching and learning of second languages and on linguistic intervention fields in the class of language. The topics covered address fundamental concepts related to general linguistics, lexical semantics, morphology, syntax and the use of the statements in oral and written texts. In addition, this course provides criteria to be considered in the teaching of a second language and the analysis of errors made by students during their learning, to remedy and even prevent them.		
EDU400	The Teacher's Ethical Skills	3 cr.
After acquiring teaching skills, this course will focus on the teacher's ethical skills in order to give meaning to education by working to certain principles. The course, aimed at undergraduate students of education, considers the ethical element of the teacher's mission. It will allow an awareness of the challenges and ethical issues facing teachers in their profession and will engage them in ethical reflection on topics posed in everyday action.		
EDU414	Survey of Children's Literature	3 cr.
This introductory course is designed to provide an overview of trade books appropriate for children from preschool through to age six. In this course students survey the broad range of literature written for children. Emphasis is placed on selecting genres (prose and poetry) appropriate to the developmental stage of children, gaining familiarity with multicultural literature, understanding the distinguishing characteristics of different genres, developing visual literacy with respect to picture books, evaluating the quality of literature for children, and how child's individual development affects interest and use of literature. Investigating internet and traditional library resources support student' learning course content.		
EDU416	Teaching Social Studies, Movement and Theater	3 cr.
This course introduces students to creative and cultural expression through the theater. Particular attention is paid to the volume of theatrical education as a means eventually helping young children develop language, outperform their vocabulary, and adjust language skills and gestures. Students develop, during their learning, a repertoire of activities and approaches emphasizing the flexibility of maintenance, gesture, movement and dynamism, etc.		
EDU419	Specialized Didactics in Mathematics I	3 cr.
This course will enable students to develop professional skills to teach math according to the methods of active teaching, to introduce young students to transform the basic math skills into intellectual instruments, which will enable them to build solid knowledge and develop critical thinking and synthesis.		
EDU420	Specialized Didactics of Mathematics II	3 cr.
Pre-requisites	EDU419	
This course seeks to deepen didactic concepts such as differentiated instruction, interdisciplinarity, project based pedagogy, etc. It aims to develop in students the skills, which will enable them to design, build and manage learning situations; thereby ensuring the intellectual, psychic, moral, and social development of students.		
EDU421	Young Adults' and Children's Literature	3 cr.
The course of child and youth literature offers students an opportunity to comprehend the literature addressed to young people according to two approaches. In the first approach, which is informative and analytical, the emphasis will be on the wide variety of genres proposed for youth, on the analysis of its components and the different procedures of scripture utilized. A second practical approach offers students different modes and ways to exploit these works, with young people in BCD and reading workshops, in order to promote the pleasure of reading and writing.		
EDU423	Evaluation in Education	3 cr.
The content of this course will develop the conceptual notions in evaluation in light of the various theories. It initiates the future teachers into the process of evaluation, exploring taxonomy, docimological rules, forms and functions of evaluation and terms of interpretation. It prepares students for mastering the techniques of evaluation, notably the evaluation grids, addressing the objects of measurement that structure the education system (namely, the operating targets, or how to assess a teacher's skills), and also the textbook or the school.		
EDU424	Teaching Social Studies, Movement and Theatre	3 cr.
This course emphasizes the richness of cultural and creative expression through social studies, creative art and theatre. Special attention will be given to culture and its impact on language development. Theory, curriculum, methods and materials for teaching social studies and theatre are studied in order to provide experiences in directing children in these areas. Students will develop a repertoire of activities and approaches, emphasizing the child's participation.		
EDU425	ICT and Professional Teacher Development	3 cr.

The course introduces the mastery of observation techniques, natural and manipulated, and necessary for the comprehension of the meaning of the practices of users of ICT in the teaching world. At all levels of training, the use of technology for the teacher provokes pedagogical upheavals that question the postures of the actors in the educational system. Professional postures are facing, on the one hand, the new "cultural" uses of "digital nature"; on the other hand, the tools and programs developed by the training systems. If the myth of the suppression of teachers is no longer appropriate, what are the new competencies of teachers? What is the new knowledge? What are the new professions? This course will put these issues in perspective. It will address certification issues as well as the study of collaborative online practices and uses of digital work environments.

EDU427 Theories of Education Play 3 cr.

This course addresses creativity and play in kindergarten and studies the functions of play in the development and education of the young child (from birth through to age six). Included in the course are the following: research on the stages and the levels of play; methods for supporting and fostering play and creativity for parents, educators and caregivers; and strategies for assessing creativity and play. The developmental phases and ways of supporting and fostering play and using play for understanding children will be surveyed and discussed. Fifteen hours of classroom observation/participation will be required.

EDU428 Specialized Didactics I (SCO) 3 cr.

This course is designed for students holding a degree in Social Sciences or in Sociology.

It aims at introducing students, preparing for their teaching degree (Teaching Diploma), to methods that allow them to acquire skills specific to teaching economic and sociological sciences.

The course focuses on the Lebanese curriculum in high school.

The teaching methods are based on the close connection between theoretical instruction and its practical implementation (the socialization process, social and economic changes, structural and conjunctural policies, etc.)

EDU429 Didactics of Life and Earth Science 3 cr.

This course mainly addresses the epistemology that responds to questions relating to the means capable of fostering the transmission and appropriation of scientific knowledge. It includes techniques of science education, in order to know the specification of experiments or science book, which became the primary teaching tool accompanying learners during schooling. The course deals with the process of teaching and learning of science by "situation-problem".

EDU431 Specialized Didactics I (PH) 3 cr.

This course is designed for students holding a Bachelor's in philosophy. It is intends to introduce students preparing for a Teaching Diploma (Diplôme d'Enseignement) to methods that allow them to acquire skills specific to the teaching of philosophy.

The course focuses on the Lebanese curriculum (and European) in high schools.

The teaching methods are based on the close connection between theoretical instruction and its practical implementation (read, operate, and analyze a philosophical reflection, a text or a thought, etc.)

EDU434 French Language Specialized Didactics I 3 cr.

Students preparing a degree in Educational Sciences - Basic Education, will be called upon to address issues related to specialized didactics of the French language and prepare practical sheets for classroom application. The areas covered will be those of understanding and speaking and those of reading literacy, covering all classroom activities with language lessons (listening, comprehension and oral expression) and reading (text and iconographic documents). A methodology offering an inductive approach will be applied in the preparation of lessons and assessment criteria will be proposed in respect of each activity.

EDU435 Workshop in Early Education 3 cr.

Intensive practical study in a selected area of early education.

EDU440 Pedagogical Analysis of Texts 3 cr.

The course aims, as a first step, to appropriate the fundamental data for the processing and analysis of educational texts, with an emphasis on the different levels of study and representative patterns. The pedagogical analysis is based on a linguistic approach and the study of the context in which the statements are produced. Secondly the course covers the fundamental data that highlight the characteristics of different types and kinds of texts and the elements essential for the structuring of ideas around various situations of writing, in order to produce a variety of texts.

EDU444 Specialized Didactics of Life and Earth Sciences I 3 cr.

This course aims to develop, in students, professional skills needed to teach science in a competency-based approach and an investigative approach. In this course, students will also be prepared to adopt in class the methods of active learning for interactive teaching.

EDU445 Specialized Didactics of Life and Earth Sciences II 3 cr.

Pre-requisites EDU444

This course seeks to deepen didactic concepts such as differentiated instruction, interdisciplinarity, project based pedagogy, etc. It aims to develop in students the skills to enable them to design, build and manage learning situations, ensuring the intellectual, psychic, moral, and social development of students.

EDU447 Evaluation and Assessment in Early Education 3 cr.

This course places an emphasis on the educator's role as observer and evaluator of status and change in school behavior and achievement. It acquaints the student with a variety of formal and informal techniques assessment used for observing, recording, and analyzing the development and the perceptual, motor, cognitive, and social-affective performance of children. Assessment of children will be analyzed by looking at a variety of assessment activities that can be done with children. A range of methods and techniques from direct observation to standardized testing will be surveyed.

EDU454 French Language Specialized Didactics II 3 cr.

Pre-requisites EDU434

This course will present a working approach relating to areas of written expression and knowledge of the language. Students preparing a degree in Educational Sciences -Primary school level, will be required to deepen their knowledge of theoretical concepts in the specialized didactics of the French language, particularly in literacy, and to acquire work processes ready to prepare fact sheets relating to preparing lessons in targeted areas. The work done by students in this course will aim to realize the application of theoretical and practical knowledge in the school context, through an internship conducted in schools.

EDU464 French Language Didactics 3 cr.

In this course specific educational issues relating to the teaching of the French language and in French language in cycles I and II primary are addressed. It deepens levels of analysis of the French language within the school context, and the specifics of the areas of teaching of this language plus the knowledge relating to the methods of language teaching. Didactic situations will be analyzed with reference to content and methodological opinions proposed by the Lebanese curriculum.

EDU469 Video / Serious Games in Schools 3 cr.

The course presents video games created at the forefront of technology, but which leave a serious impact on the concept of leisure and Ludo science. The course objective is to demonstrate the educational interest of an activity called "video game creation at school" to make students understand the potentialities and the difficulties associated with the use of video games for learning. Students learn to develop competencies of analysis and design of pedagogical video games to define learning objectives and write synopses of audio visual materials to achieve the desired objectives. The term "Serious Games" is used to refer to games for utility purposes and within a formative goal. The time component to the "Serious Games" video focuses on online games, on the computer, or on a gaming console, that have a combined educational objective in a ludic operation. Beyond the theoretical approach, the course allows students to create games, from scratch, through relatively simple software.

EDU470A Internship: Classroom Observation and Practice 6 cr.

This training course is for third year students who aspire to teach in primary grades P1 and P2. It allows them to have access to classes, to see closely the didactic practices and better understand their personal characteristics, in order to get ready for professional life. The purposes referred to are: becoming familiar with the concrete realities of school education; addressing the teaching career with ease; and becoming integrated within the school system.

EDU480 Pedagogic Analysis and Integration of Educational Mediatized Materials 3 cr.

In this course, students learn to analyze different educational mediatized documents. Specifically, they will seek to incorporate them in teaching situations in the classroom. Starting from newspapers, radio and television series, this course will introduce the main forms of media (news, documentaries, editorial children's shows, commercials, ads ...). It will also aim to instill in students the skills necessary for the analysis and the implementation of mediatized educational tools.

EDU485 Specialized Evaluation in Education 3 cr.

This course covers essential data for the evaluation of learning and classroom assessment management. Key concepts falling within this domain will be presented, analyzed and discussed, in order to develop, within each discipline, the concept of evaluation that is appropriate. A thorough treatment of the tests will be the subject of an analysis at the level of certain ideas related to tests: the validity of tests and their feasibility, analysis of the types of items, and the way to present them in trials. The way to manage classroom assessment will be addressed through the development of instruments and assessment tools, in accordance with the objectives of the curricula. This course includes various techniques for the preparation and correction of tests, the establishment of scales and scoring. The concept of competence is addressed in an evaluative context, related to formative assessment and in relation with the learning objectives, in order to form an assessment at the end of the educational sequences.

EDU502 Training Ethics 1 cr.

The course firstly introduces the students to the basic concepts of philosophical ethics (the righteous, the good, moral conscience, fundamentalism, coherence, relativism), and the main contemporary doctrines. Secondly, the course analyzes the major ethical problems posed by educational practice and the educational institution, such as social justice, education facing moral pluralism, education for citizenship, respect for others, human rights, ethics of education practitioners, training and professional integration. Upon completion of the course the students will be able to analyze the ethical issues related to educational practice and design of educational systems and develop a normative argument on these issues.

EDU503 Educational Legislation in Lebanon 2 cr.

The course covers the fundamental texts of the Lebanese Constitution related to education, school administration, control modes, the school pact, compulsory education, with multiple decrees and texts simultaneously organizing teaching in pre-school, basic education, secondary and university, and management of education. Upon completion of the course the students will have acquired skills in the relevant laws, decrees, diplomas and educational systems and become familiar with the Official Bulletin of Education and the Official Journal, the Education Code and any appropriate form of structure.

EDU504 Introduction to the Administration of Education 2 cr.

The course is a form of general introduction to educational management function; perceived primarily as the establishment and the efficient organization of all the resources necessary to achieve the objectives of a private or public organization, as regards production or service. It prepares students for entry level as a School Manager. The course emphasizes an awareness of concepts, conceptual and operational models, as well as useful tools for a better understanding of this field of practice and reading of the phenomena that underlie it. It aims to promote the educational management, functions and roles implemented by School Managers. Upon completion of the course, the students will be familiar with the language related to education management.

EDU511 Financial Management of Educational Institutions 2 cr.

This course is designed to introduce those who are entitled to engage in leadership positions in educational institutions - in such a case the holders of Master II in Educational Sciences - to financial management of their schools, to improve profitability, and to control the risk; especially as by virtue of their positions, they assume significant financial responsibilities (scheduling etc.). For this purpose the course will train them to: prepare accounts or basic financial documents (budget, income statement and balance sheet) specific to educational institutions; manage the cash of their establishment through the projection of its financial flows (cash flow, expenses and predictable monthly income); know how to choose the most profitable investment projects for their educational institution, through the financial evaluation of the latter; and regularly assess the financial management of their institution, through a series of ratios, in order to correct deficiencies in time

EDU513 Linguistics Applied to Teaching 3 cr.

The content of this course will focus on the implementation of linguistic theories in the teaching and learning of the French language and the fields of linguistic intervention in the language class. It will also examine how the current psycholinguistic theories help to better understand the process of acquisition of the second language and the factors that facilitate or make the acquisition difficult. It will likewise cover the problems of teaching French (the phenomenon of interference between Arabic and French, analysis of typical errors, bilingual education, and sociolinguistic fallout).

EDU515 Theories of Information and Communication 2 cr.

Knowledge is an entirety of intelligible information. Information is the primary background for knowledge. Communication is the information in motion or the approaches of information transmission from a source to the user. Since the theory of Shanon EC, which describes the most basic aspects of communication systems, information theory was made more precise, and has now become indispensable in the conception of any communication system, in the broadest sense of the term. The communicational contribution of the approaches of behaviorism, media, functionalism, polo altism, the Frankfurt School, McLuhanism, will be addressed in a historical and sociological perspective. The delivery of a course on the subject is done precisely to set the limits of the twentieth century theories, and grapple with the digital age and what ensues (nanotechnology, cybernetics, and genetics), because humanity is confronted with new questions.

EDU517 Mathematics Didactics 3 cr.

The course introduces students to didactic approaches which, following various experiments, put at their disposal effective tools to address the mathematical concepts and practices of class within this discipline. Mathematical logic and, thereafter, appropriate language remain a concern accompanying the various phases of this course. The course enables students to be able to reason according to the criteria of formal logic, to analyze, assess and make a judgment based on a synthesis at all levels of the curriculum.

EDU519 Didactics Issues 3 cr.

This course implements, in didactic situations, appropriate techniques to deepen the teaching practice. These techniques fall within exam preparation, correction, fun activities, organization and class preparation. In conjunction, this course presents the techniques essential to lead the workshop in the job and in selected situations, by putting forward related

educational solutions. This course also presents appropriate teaching methods to be adopted in the classroom, according to the didactic situations as they arise and at the level of the learners.

EDU524 The Knowledge Society, Sociological and Philosophical Approaches 2 cr.

The digital revolution has enabled the emergence of new forms of thought, sociality, culture and policy involving new forms of pedagogical and educational projects that highlight the need to carry out a reflection on a series of questions. The course provides information on the theoretical and methodological approaches in the sociology of uses, to analyze the types of reactions and social and cultural appropriation of ICT and media (rejection, resistance, adoption, embezzlement, etc.).

The course also deals with philosophical approaches that question today's society, explores important issues concerned with theoretical debates and empirical case studies on issues specific to sources of knowledge, changes, namely digital communities, neighborhoods and digital identities, globalization of production and consumption of information, the emergence of a knowledge-based society in perpetual change, instability of knowledge and, at the same time, the massive growth of knowledge and consequences at the level of the individual and the community. The course also tries to think about education articulated in debates, issues and positions, that the sociophilosophical approach does not fail to deploy. The course interrogates the various structuring themes of the educational issue, whether it be the desire, experience, language, modernity, nature and freedom, critical thinking, person, knowledge, meaning, values, etc.

EDU527 Thematic Seminar in Educational Technology 2 cr.

As part of this course, a training scheme is offered to students. Students undergoing training may follow a research seminar that appeals to international stakeholders. In a project teaching logic, students will draw upon computerized tools at their disposal, and will design a situation of teaching/learning from the perspective of research and development. For this purpose experimental facilities (laboratory ICTE) will be available on their website. Students will also examine concrete examples in the field of current research in ICTE, with emphasis on methodology (Investigational Device designs, data analysis, etc.). Presentations will be held to deepen a given theme; each representing a particular disciplinary or methodological approach. Students will develop and implement a project of information and research communication. Students will focus on technological activities that can lead to gains in learning and / or lead to change in teaching and learning.

EDU533 Tools for ICTE and Distance Education 2 cr.

This course introduces learners to a techno-pedagogical approach aimed at the material management of the ICTE (computer equipment, software configuration of machines), software tools and their uses in education, types of environments for the educator, and educational software packages, synchronous and asynchronous learning platforms, etc.

EDU534 Templates, Web 2 Tools and Mobile Learning 2 cr.

This course is complementary to the course "Tools for ICTE and Distance Education". It focuses on the learning and the implementation of the main applications of the Internet in education. The course is based initially on a presentation of research on the uses of educational resources available on the World Wide Web, wikis, blogs, RSS feeds, but also issues intrinsically linked to the development of tools for Web 2.0 or Mobile Learning such as legal problems (copyright, traces, etc.), technological constraints, the semantic web and its applications to research. In the second phase, students will have implemented, through simulations, the different elements presented.

EDU538 Specialized Didactics II (PH) 3 cr.

A follow on from the course of "specialized didactics I", this course will teach students to prepare, give and assess philosophy lessons, both in terms of content and teaching modalities. In terms of content, the course deals with principles that should guide the preparation of lessons in philosophy, in particular, the importance of philosophical concepts, arguments, authors and the history of thought. At the methodological level, students will, through practical work, prepare lessons on philosophy taking into consideration the particularities of the teaching / learning process and the specificity of content in philosophy. The practice will focus on adequate assessment methods for critical judgments and study of philosophical texts.

EDU540 Strategic Planning and Curriculum design in Education 3 cr.

The first part of the course focuses on the Strategic Planning in Education:

1-Planning is intended as a work of reflection of organization that addresses the following issues:

- Understanding the value and role of education, defining strategies for educational policy;
- Determining priorities, expectations, and needs of the educational institution;
- Perceiving education as "an on-going share-of-life" and adopting the concept of "consultation" in the workplace to foster closer links between the worlds of education and the workplace.

A proper understanding of the course will develop educational planning and analyze their practices while identifying the fundamental principles and examining the challenges displayed by the planning of complex operations through addressing the social, political and economic issues.

2-The second part of the course focuses on the theories of explicit and implicit programs that will be the subjects of this part. This study will cover the basics of the design, development, management and implementation of programs. An analysis of the theoretical and practical aspects of the programs' evolution requires consideration at several levels: the role of objectives in curriculum planning, the analysis of needs, building contents, stages of implementation of these programs, revision of evaluation models and the theoretical aspects structuring the different disciplines. This study will be accompanied by the discussion of issues that arise during the implementation of renovated programs and successive transformations carried on the educational programs throughout their implementation.

EDU541 Comparative Education 3 cr.

In the first part, the content of this course will focus on the comparison between the different educational systems of the world (French, American, Australian, Chinese, Japanese, etc.). Students will be prepared to understand the basic concepts related to this area and to analyze, through the stages of its evolution, the factors that led to its emergence and expansion. They will, likewise, be initiated to understand the current trends in comparative research through several thematic studies, with the aim of establishing criteria for comparison. In the second part, the course covers the comparison between the different educational styles and systems in Arab countries, in order to identify divergence and convergence. This viewpoint will place Lebanese students in relation to the regional educational contexts and give them the opportunity to compare them with the Lebanese educational context.

EDU548 Specialized Didactics II (SCO) 3 cr.

Starting from a didactic problematic, this course focuses on the central issues that structure the field of social and economic sciences: that of the epistemology of relevant knowledge and fundamental sociological and economic concepts. This course intends to deepen students' theoretical and didactic knowledge in sociology and economics, updating them according to the contemporary trends and procedures of teaching methods.

EDU561 Internship/Workshop/Laboratory 3 cr.

As part of their teaching practice student will attend classes to observe educational practices in a school context, and gather material for their descriptive and analytical report. Students must demonstrate how they can integrate technological tools and apply new techniques used in the world of ICT for educational purposes.

EDU601 Educational Supervision and Coordination 3 cr.

This course will focus on the supervision and pedagogical coordination produced from the educational and administrative needs of educational institutions and from the objectives targeted by the managers of these institutions, the directors, executive board and teaching staff. The discussed sub themes will also focus on the competencies and the different functions of the coordinator as a trainer, evaluator, manager of education and a member of the teaching staff; as well as on its relations with those responsible for the cycle and the director of school. Techniques and working methods articulating theory and practice will be analyzed at these levels, to focus on interpersonal relationships in the school and the management of learning.

EDU610 Evaluation of Establishment and Success 2 cr.

The course familiarizes students of educational management with new concepts in the evaluation of institutions: accreditation, quality assurance, qualification results, self-assessment and external evaluation. It presents the conditions that guarantee that quality, seen as a tool for improvement, has been achieved; hence the necessity of establishing adequate evaluation criteria upon which to rely, in order to certify that the institution has reached the required level of quality and performance. This course focuses on a transparent self-assessment and ethical approach, which calls the institution to challenge the results of its work and its various functions. The course also analyzes the needs that arise from these types, such as training of administrative staff, training of teachers and interpersonal relationships, with the aim of ensuring and maintaining in balance the continuous improvement process of institutions.

EDU630 Management of Change in Education 2 cr.

The course develops education manager skills, which promote and support processes of transformation of professional practice in different educational contexts; also to be able to make appropriate and informed choices of change strategies in education. The course examines the implications of the role of agents in educational change in a context of complex problems, and, furthermore, analyzes the consequences of accelerated change in school management today and tomorrow.

EDU660 Thematic Seminar in Education Management 2 cr.

The seminar is an open space to all specific issues in management in education. It may include: 1-Sociological analysis of organizations: a) implicit theories of organizations, b) the elements of an organization (structures, contingency, goals, systems, systems of actors, shapes and organizational strengths), c) the characteristics of educational organizations: bureaucratic logic, professional, adhocratic, loosely coupled system, etc.; 2- Evaluation and piloting of educational systems: this is the implementation of reforms, implementation of innovation, management methods and evaluation of educational and training institutions; 3- Interpersonal communication and group management: this is an awareness of attitudes and preferred modes of communication in interpersonal and group levels. The seminar includes training in the analysis of the main phenomena linked to interpersonal communication in a group management context and

development of intervention approaches in groups; 4- The management of diversity in schools. At this point, the manager will learn to identify and analyze the various issues related to the diversity of clientele in the school environment. Studies and analyses of models fostering the integration of the immigrated youth (in Western countries) or those who have adverse living conditions, due to wars that are changing the demography of the Middle East. The focus will be on otherness; 5- Qualitative and quantitative information necessary at all stages of educational planning. This seminar will enable students to acquire and apply the knowledge and techniques needed to build and use information systems for planning and management of education. N.B. Other topics could also serve as an object of the thematic seminar.

EDU661 Internship 2 cr.

The course is intended for every student who aspires to the position of education manager. It is an implementation of the knowledge and skills acquired in education management, taking into account the multidimensional reality of primary and secondary schools. The course also aims to foster a process of reflexive analysis on professional practice as well as to update profiles for the staff of the education manager.

EDU678 Innovative Pedagogical Issues 3 cr.

Education and Modernity

The objective of this seminar will focus on the study of the impact of social, technological, economic and media-dominated changes on education in the era of modernity. Several issues concerning the challenges which education is constantly facing will arise, such as the global or social crises threatening the development of education and affecting the positive representations, which are designing new pedagogies. A redefinition of the relationship between school and society will be vital and a review of new educational realities in the computer age is essential.

EDU680 From Theory to Practice in Education 3 cr.

In light of learning theories, methods and techniques already encountered throughout their academic career, students will make a reflexive analysis on their educational intervention and study situations and cases relating to classes of primary cycles 1 and 2. They will, in turn, propose educational practices concerning these situations. This analysis of teaching practices focuses on implications for the school intervention and the relationship between theoretical and practical teaching. Examples are the choice of approaches, methods and means of teaching used according to the subject being taught, student characteristics, classroom management, and appropriate instrumentation.

EHI470 Specialized Didactics I 3 cr.

The course is designed for students who hold a degree in History. It aims at introducing students in TD to methods that allow the acquisition of skills required for the teaching of history. The course focuses on the Lebanese Curriculum in the secondary cycle. The teaching methods are done in close connection between theoretical teaching in teaching practice by having the ability to read a map, explain an engraving, examine and use a historical text, analyze events and transmit historical knowledge through the many examples that reflect a situation or event.

EHI471 Specialized Didactics II 3 cr.

This course reflects the history program planned by the Lebanese Curriculum. After the course, the student will know the appropriate methods and theories for teaching history and be able to analyze, deduce, construct a coherent understanding and pass it on.

EHI490 School Internship 3 cr.

This course allows the student to put into practice his/her acquired knowledge, experience the possibilities of change, verify, consolidate or make changes in teaching methods, and become familiar with different learning methods. At the end of the course, the student will submit a report.

EIN470 Specialized Didactics I 3 cr.

This course studies concepts, trends, and skills needed to design and teach curriculum materials for informatics education; analysis and evaluation of informatics curriculum; methods and techniques of teaching informatics at the school level; includes demonstrations and observation of actual computer lab sessions.

EIN471 Specialized Didactics II 3 cr.

This course reviews various concepts, trends, and skills needed to design and teach curriculum materials for informatics education.

Students will take part in observations and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers.

EIN490 School Internship 3 cr.

Students will take part in observations and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers.

EJCM520 Web Fundamentals for Online Communication 3 cr.

This is an introductory course to HTML language to enable students to create and manage a website, on their own, or in collaboration with web designers and developers. They will first master the CMS services such as Drupal, Joomla and

Wordpress, and will then be initiated to HTML. They will be acquiring appropriate terminology to communicate with the webmaster for a better exploitation of web tools and possibilities.

EJCM512 E-Journalism Workshop I 1 cr.

The objective of these workshops is to acquire proper techniques to prepare, edit, and diffuse multimedia content such as web reports and web documentaries.

EJCM513 Web Writing (Arabic) 3 cr.

This course raises student awareness to the particularities of writing, organizing, and editing web contents. It defines the formats of various journalistic genres adapted to the web, offering many practical exercises to adapt articles for screen reading.

EJCM525 Web Writing (English or French) 3 cr.

This course raises student awareness to the particularities of writing, organizing, and editing web content. It defines the formats of various journalistic genres adapted to the web, offering many practical exercises to adapt articles for screen reading.

EJCM530 Professional Seminar I 1 cr.

The course is a cycle of seminars involving qualified professionals and specialists from other fields, who will explain the real needs of the market, alongside the available media means to meet these needs. This course will be examining investigative journalism, e-marketing, conceptualizing and editing online magazines, photojournalism, data journalism, leadership, information on mobiles, etc.

EJCM535 Cyberlaw and Cyberethics 2 cr.

This course introduces students to texts about cyberlaw. It discusses the different texts with respect to press freedom, as guarantors of individual and group freedoms. It reviews the influences affecting press liberties; elaborating upon the relationship between press independence, politics and finance. The course also examines different means to ensure respect of this freedom, as well as the professional code and ethics of journalism.

EJCM540 E-Journalism Workshop II 1 cr.

The objective of these workshops is to acquire suitable techniques to prepare, edit, and diffuse multimedia content such as web reports and web documentaries.

EJCM613 Social Media and Community Management 2 cr.

This course trains the students to be community managers, who are entrusted to increase and retain an audience, through different ethical, relational and social strategies, and to uphold the e-reputation of trademarks and media.

EJCM625 Professional Seminar II 1 cr.

The course is a cycle of seminars involving qualified professionals and specialists from other fields, who will explain the real needs of the market, alongside the available media means to meet these needs. This course will be examining investigative journalism, e-marketing, conceptualizing and editing online magazines, photojournalism, data journalism, leadership, information on mobiles, etc.

EJCM680 Professional Internship 3 cr.

Students are required to pass through a traineeship of 200 hours in a press office, company, or advertising agency. They should become familiar with the different services and posts, before selecting a certain job. On completion, they will submit a report of 15 pages summarizing their performed tasks and experience. Enrolled students should have covered 26 credits with a GPA. $\geq 80/100$.

EJCM690A Professional Project 4 cr.

A professional project is pursued under the supervision of a professor in the Master's department, or other professional journalist or communication expert. The purpose of this project is to develop and demonstrate professional competence and experience. The final project (web documentary, digital communication campaign, etc.) depends on the specialty of the student and should be validated by a jury. Enrolled students should have covered 26 credits with a GPA. $\geq 80/100$.

ELF470 Specialized Didactics I 3 cr.

The objective of this course is to train students in the study, analysis and utilization of literary texts (excerpts and complete texts) in middle and high schools, following the methodical reading grid, and the analytical review and literary essay grids.

ELF471 Specialized Didactics II 3 cr.

The objective of this course is to train students in discursive grammar, its textual inclusion, as well as its reinvestment in writings, within the middle and high schools, following constructivist methods.

ELF490 School Internship 3 cr.

Students will complete an observation internship in an elementary level class and in secondary level class for six uninterrupted weeks. The internship shall cover a complete teaching unit where they document their observations in a logbook (subject to supervision by the internship supervisor appointed by the related department). At the end of the internship, students will be called to give two simulations before the internship supervisor: one in an elementary level class and another in a secondary level class.

- ELL101 English Literature 3 cr.**
The aim of this course is to introduce the basic features of major literary genres: poetry, prose, and drama. The design of the course involves the explanation and modes of analysis of the different types of each genre. Selections for the course include a novel, a short story, an essay, a play, and a number of various poetic forms. Basic elements of each genre and its sub-genres will be analyzed. This may be achieved by analyzing the basic characteristics of each form (language, figurative language, plot, setting, characterization, point of view, narrative voice, etc.).
- ELL210 Introduction to Linguistics 3 cr.**
The aim of this course is to introduce the major sub-disciplines in linguistics. Topics include the emergence of language, the sounds and sound systems of language, word structure, sentence structure, meaning, language use and variation, language history and language acquisition. The course combines theoretical and descriptive aspects of linguistic analysis as well as the application of basic tools and techniques used in the field.
- ELL222 Survey of English Literature I 3 cr.**
The course is a close examination of the early beginnings of the novel in the 18th century, culminating with the Gothic School. After introducing the different factors (social, economic, and literary) that brought about the rise of this genre, the students will be introduced to the prevalent modes/techniques as well as the main themes that concerned early novelists such as Defoe, Richardson, Fielding, Sterne, and Mary Shelley. Moreover, successful completion of the course will enable students to construct appropriate oral and written statements concerning literary, historical, cultural, and philosophical movements from the classical up to approximately the romantic era.
- ELL223 Sophomore Rhetoric 3 cr.**
The aim of this course is to enable students to read critically, evaluate what they read and formulate verbal or written opinions based on the best available evidence. It also covers methods of formal argumentation suitable for students majoring in linguistics and literature. During the course students will develop research, writing-process, and timed-writing skills. They will also use primary and secondary sources to write an effective college-level documented expository essay.
- ELL225 Poetry 2 cr.**
This course is an introduction to the major poetic movements that shaped English poetry. Starting with Plato's definition of poetry, the course traces the major developments in poetic conventions, modes and genres: Classicism, Neoclassicism, Romanticism, Victorianism, Aestheticism, Modernism (Symbolism, Impressionism, Imagism, Surrealism) and the contemporary experimental movements (Concrete, Beat, Slam). The poetry selections will be used as a vehicle to examine universal themes basic to the human condition, and to investigate these themes as they relate to life experiences. The course also teaches the skills one needs to study poetry with understanding and pleasure. During this course students will interpret, analyze, and critically evaluate representative works of these movements. Using examples from different periods, the students will be able to develop a sense of how poetic modes, genres, and forms change across different periods.
- ELL310 Survey of English Literature II 3 cr.**
Prerequisites ELL222
The course offers an in-depth analysis of the main characteristics (themes, characters, and techniques of the golden age of the novel: the Victorian period). It focuses on major representative works by such authors as Austen, the Bronte sisters, Eliot, and Hardy. Both the form and the content will be scrutinized in order to highlight the multifaceted nature of the Victorian era and to trace its connection to the 18th and 20th century novel. The course makes students aware of the diversity of the Victorian novel and the various social, intellectual, and religious thoughts that permeated the age.
- ELL311 Introduction to Drama 3 cr.**
The course offers both a historical survey and a literary history of the development of drama. It concentrates on critical analysis of the distinguishing features of the different genres and sub-genres in drama: tragedy, comedy, tragicomedy, morality, Elizabethan, Jacobean, comedy of manners, the well-made play, one act play, closet drama, mono-drama, superstar play, absurd play, etc. The course also introduces the practical or technical side of the theater by looking at stage conventions and artistry. The course aims at helping students gain awareness of the technicalities involved in the theater, as well as the correlation between the genres of drama and the diction, the characterization, and the stage setting. Students are expected to give presentations on their favorite form and try to write scenes based on themes, characters or forms of their choice.
- ELL313 English Morphology and Syntax 3 cr.**
The course is an in-depth study of morphology, the abstract rules/constraints governing the internal structure of words, and syntax, principles governing how words are combined to form phrases and sentences. The focus of the course will be building the students' skills in English morphological and syntactic analysis. Major attention will be given to the interaction of morphology with syntax to study the patterns and relationships of words, phrases, and clauses to form sentences and the rules by which the sentences are constructed.

ELL315	Public Speaking	3 cr.
Prerequisites	ENG240	
This course is designed to help students become more effective and responsible speakers and listeners. It will encourage them to communicate more openly in different settings (speeches, debates, group discussion, interviews, etc.). This course teaches students the necessary skills needed to become more articulate in verbal communication. It also highlights the importance of both encoding and decoding in the communication process.		
ELL321	History of the English Language	3 cr.
This course offers a broad study of the development of the English language from its beginnings to the present time. The course addresses the relationship between the history of society and the history of sounds, inflection, and vocabulary of the English language. The course also surveys English grammar from the point of view of modern linguistic scholarship or transformational grammar. The course aims to help students understand how the English language should be used, rather than simply how it is used.		
ELL322	Development of English Poetry	3 cr.
The course traces the development of English poetry in the 19th and 20th century through an in-depth study of its major figures. The focus of the course is to delineate the changes in poetic modes and sensibility, from Romanticism to Modernism, and in the literary theory which permeated the period and affected directly and indirectly the poetry of the 20th century. Along these lines, the course will take a close look at works of poets such as Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, Arnold, the Nineties, Yeats, Eliot, Auden, and Larkin, among others.		
ELL323	Development of the English Novel	3 cr.
Prerequisites	ELL310	
This course's aim is to offer students a close study of the development of the 20th century novel as an outcome and reaction to the 19th century novel. This course focuses on how the writers of the early 20th century abandoned the previous literary conventions and adopted new ones in their understanding of the role of the novelist. Social, psychological, moral, literary, political, and philosophical circumstances called for experimentation in form, in narrative techniques, in characterization, and in style. The course focuses on some of the major novelists such as Hardy, Conrad, Lawrence, Forster, Woolf, and Joyce. Thus the course enables students to analyze the formalistic and thematic concerns of the novelists of the period.		
ELL324	American Literature	2 cr.
This course offers an introduction to various forms of American literature in the 19th and 20th century. It traces the relationship between the intellectual, political and cultural background of American poetry and the novel. The course focuses on major figures such as Emerson, Poe, Whitman, Melville, Hawthorne, Hemingway, Fitzgerald, Pound, and Eliot. The course leads students to gain awareness in the multicultural nature of American literature, as well as with the specificity of the American experience.		
ELL410	Literary Criticism	3 cr.
This course is an introduction to major trends in literary theory from Plato to the end of the 18th century, covering Classicism, Renaissance, Neo-classicism, Romanticism, Realism and Naturalism, Symbolism, and Aestheticism. The aim of this course is to enable students to practice how to use different theories, to read literature, and how to relate literary theory to the cultural, political, social, and moral backgrounds.		
ELL411	The Age of Shakespeare	3 cr.
The course is designed to introduce students to a representative sample of Shakespeare's dramatic output. The six plays for study include two comedies, two tragedies, a history play and a romance, covering virtually the entire period during which Shakespeare was active as a playwright. The aim of the course is to provide an understanding of the historical conditions - above all the theatrical - in which Shakespeare lived and worked.		
ELL413	Special Topics in the English Language	2 cr.
The course provides an introductory exposure to communicative variation within human sociocultural systems (such as slang, dialects, jargon, speaking in tongues, etc.), language acquisition, languages in contact, communicative performance, linguistic issues in meaning and cognition, aspects of the structure of language, and applied linguistics. The usual format for the class meetings is lecture/discussion, with some in-class exercises. This course synthesizes information on language and culture, human communication, thought and creativity, literary expression, social and historical diversity. It bridges the humanities field of linguistics and aspects of history, literature, philosophy, and the performing arts, as well as the science and social science approaches to language.		
ELL422	Comparative Literature	3 cr.
More often than not, the stories we tell are key to understanding, and even creating, personal and communal identity. In this class we will discover, through the discussion of texts from various cultural backgrounds, the diverse ways in which narrative allows us to explore, challenge and reformulate definitions of identity. The course is designed to equip students		

with the tools necessary to critically analyze texts in light of other texts and to enable them to compare the rhetorical discourse and strategies implied in the texts.

ELL425 Special Literary Themes 3 cr.

The focus of the course is on modern drama which has been preoccupied with expressing the spirit of the modern age. A profound sense of disillusionment, fragmentation and absurdity of human experience pervades the plays of this period. The course investigates the reasons for and the dramatizations of the modern condition by studying European and American drama, illustrated by representative works of the major Irish, American and British playwrights. Although the focus of the course will be on Synge, O'Casey, Beckett, Pinter, Stoppard, O'Neill and Albee, both the precursors (Ibsen, Strindberg, Checkov, and Shaw) and the inheritors of modern drama (Hare, Storey, Mamet, Shepard, etc.) will be introduced. The course aims at helping students gain awareness in the cultural experience of modern drama, and the rendering of the theater as a private space for the playwright's alienation from the audience and from language itself. It familiarizes students with movements such as Naturalism, Symbolism, Realist, and Absurdist, and how these movements manipulate stage settings, language, and other dramatic features.

ELL470 Specialized Didactics I 3 cr.

The objective of this course is to train students in the study, analysis and utilization of literary texts (excerpts and complete texts) in middle and high schools, following the methodical reading grid, and the analytical review and literary essay grids.

ELL471 Specialized Didactics II 3 cr.

The objective of this course is to train students in discursive grammar, its textual inclusion, as well as its reinvestment in writings, within the middle and high schools, following constructivist methods.

ELL490 School Internship 3 cr.

Students will complete an observation internship in an elementary level class and in secondary level class for six uninterrupted weeks. The internship shall cover a complete teaching unit where they document their observations in a logbook (subject to supervision by the internship supervisor appointed by the related department). At the end of the internship, students will be called to give two simulations before the internship supervisor: one in an elementary level class and another in a secondary level class.

ELL520 Culture and Modern Civilization Seminar 2 cr.

This course is designed to examine some of the most important events and trends in modern world history. Students will discuss themes related to the Rise of the West and globalization. They will select and discuss topics in human culture in the context of how humans, as historical beings, are shaped by the thoughts and actions of their predecessors and how they influence the lives of those who follow them. The course will examine culture as a distinct heritage of ideas, values, and artistic expressions that undergo continual adaptation due to social changes. Students will also study religions: Buddhism, Hinduism, Judaism, Christianity and Islam.

ELL521 English Literature I 3 cr.

The aim of the seminar is to integrate the study of different 20th century literary theories and academic research writing. Students will examine the ways in which literary theories of the 20th century have been applied to canonic literary texts and have reshaped the reading and reception of those texts. They will look into the forms, the approaches and the structures employed. They will focus on selected writers, genres, issues, trends, or movements addressed in American, British, and/or world literatures from the Renaissance till now. The course includes reading primary and secondary sources related to poems, plays, and novels encompassing issues like race, gender, class, discourse and political power. Students will study writings that celebrate new freedoms and new ways of assessing the self and the world through literature and theory. Authors such as Shakespeare, Milton, Blake, Wordsworth, Tennyson, Hardy, Yeats, Joyce, Eliot, and others will be focused on. Students will explore diverse approaches, issues, and texts, and they will undertake an analysis of a text of their choice, using the references surveyed in addition to others, as part of their own chosen research project.

ELL522 English Literature Seminar II 3 cr.

This course examines the scope of colonialism/postcolonialism as a multi-disciplinary, often cross-disciplinary, re-examining the history and legacy of colonialism and incorporating the perspectives of the colonized with the purpose of relating this to English literature and postcolonial literature written in English. The aim of this course is to introduce students to a wide range of postcolonial criticism with the purpose of familiarizing them with the major contributors to the field and the significant arguments or counter-arguments that each has espoused, by means of a close reading of seminal articles and class discussions on their basis. In addition to knowledge of postcolonial critics and their articles, students will develop an understanding of the postcolonial approach and method, so that they will acquire an ability to undertake a postcolonial reading and analysis of a text of their choice, using the references surveyed in addition to others, as part of their own chosen research project.

ELL524 English Linguistics Seminar I 3 cr.

The course provides an instructional framework of how to evaluate and participate in reforming language curricula. It emphasizes the development of teacher competency in the fields of curriculum designing, teaching and assessing English as a foreign/second language. During the course students will examine the development and implementation of effective research-based curriculum designing and instructional practices. They will explore theories, procedures, and instruments used for reforming language curricula and assessing language skills for proficiency. Students will also be responsible for evaluating and designing a language syllabus and setting formal/informal assessment strategies that fit with the syllabus designed.

ELL525 English Linguistics Seminar II 3 cr.

This seminar helps students explore systemic functional grammar, a theory that aims to account for the use of language as a vehicle for communication between people in social and cultural contexts. During the seminar, students will experience the functions of language in representing situations and activities, in interaction and in creating discourse. They will be aware of how language users convey meaning through their choice of words and grammatical structures in specific situations. Students will analyze authentic texts and experience how to describe the lexical, grammatical and cohesive structures of texts and reflect on how the resources of the English language are employed in different types of discourse; and they will also learn why language users choose one wording over another to better reach their communicative goals.

ELL526 Literary Issues 3 cr.

This course aims to help students explore a variety of selected literary topics. They will read and analyze literary works drawn from English speaking and non-English speaking cultures. Through lectures and discussions, students will gain awareness of varied literary issues, including structure and technique, and a sense of the cultural backgrounds that inform those works. While reading and discussing literary topics, students will: demonstrate an understanding of literary terms, themes, strategies, and issues relevant to the works being studied; express their understanding of the relationship between literature and the historical/cultural contexts in which it was written; synthesize literature of non-English speaking cultures in terms of historical literary values as they reveal esthetic, political, social, and historical relationships between countries and eras; and demonstrate the ability to choose and apply appropriate critical methods for analyzing and writing about literature.

ELL610 Seminar: Comparative Literature 3 cr.

The seminar aims to explore with the students the field of comparative literature, contemporary theory, and modern approaches to literary texts. It is intended to help students develop an understanding of literature and culture, as well as technologies and esthetic forms of mediation and transmission of world views, values and critiques. During the seminar, students will discuss originals and works in translation, experience cross-cultural comparisons, and the multilingual, pluralistic and global world. They will also compare literature to other arts, media and further modes of writing. The broad perspective of the seminar is to help students think critically and analytically about what literature is and does; how literature relates to other fields and kinds of writing; how literary texts produce their complex webs of meaning; and what the ethical relevance of literature is in a globalized world.

ELL612 Seminar: Applied Linguistics 3 cr.

This seminar provides an overview of the field of applied linguistics, its history, branches and scope. It encourages research collaboration in language learning/teaching and language assessment. It also guides students to examine the different linguistic, social, and cultural factors in human communication through their looking at a variety of levels in language and how such variation constructs and is constructed by identity and culture. An exploration of attitudes and ideologies about these varieties will also be tackled. Moreover, the course offers students the opportunity to explore the research literature on a range of topics related to the study of language and society, including sociolinguistic theory and research methodology, the ethnography of speaking, the role of social variables (such as age, socio-economic status and sex/gender) in language variation and change, bilingualism and language contact, and language policy and planning. Students will carry out an empirical analysis of a set of language data as part of their course project.

ELL621 Seminar: English Literature 2 cr.

The aim of this seminar is to enable students to consider how contemporary Anglo-American literature re-imagines social history, genre, politics and identity. The seminar will focus on influential works written since the beginning of the 20th century by writers such as George Orwell, Virginia Woolf, Maxine Hong Kingston, Margaret Atwood, Wole Soyinka, Carol Ann Duffy, John Fowles and Angela Carter, among others. Students will examine literary texts as examples of contemporary culture, focusing on issues such as postmodernism and multi-culturalism. They will also tackle topics such as the representation of space and identity in depictions of the city, the small town and suburbia, fairy tale and gothic horror and new technologies and culture.

ELL623 Seminar: English Language Acquisition 2 cr.

The aim of this seminar is to help students explore the second language acquisition (SLA) theory and examine some of the latest research methodological tools in the field. Students will also study the complex variables underlying second language acquisition and the different perspectives of SLA theories. Among the topics tackled are: the effect

develop polyphonic awareness (singing a song while playing an instrument) and the basic technical skills for pitched percussion.

EMU355 Musical Awakening: Rhythmic and Psychomotricity 3 cr.

Introduction: The rhythm in our everyday life. The course will consist of a theoretical part: rhythm and development: A child's timeline - rhythm and education: incidents that accompany rhythm concerning schooling. Also a practical part: Perception of rhythm through body: Discovering the pulse: The construction of rhythm according to the normal developmental stages: Rhythm and coordination: How to follow rhythm with the body (individually or in groups) Coordinate body movement with rhythm: Reproduction and creation of rhythm: Reproduction of the rhythmic structure: Creating and elaborating on rhythm through the body: Rhythm and instruments of percussion - Introduction of instruments of percussion in infants: Creation of rhythm.

EMU405 Music and Psychology 3 cr.

Music psychology is the empirical study of how humans perceive and experience music, and the resulting impact on individual, group and cultural behavior. This course will encompass an introductory exploration of music psychology across a lifespan. It explains the different stages of the musical development of the baby, child and adolescent at the sensory-motor, social/emotional, psychomotor and intellectual/communicative levels.

EMU410 Psycho-pedagogical Approach of Musical Learning 2 cr.

The objective of this course is to identify methodological psychoeducational training paths for the music teachers regarding in particular the musical class learning management as it might contribute to the development of basic skills defined for music education and, more generally, social and individual student development.

EMU415 Scholar Musical Teaching I 3 cr.

Musical training, in a perspective of evolution continues throughout the cycle 1, 2 and 3, developing the listening sense of students, their creative potential with regard to the sound world - and skills to express themselves and to communicate through music. The topics of this course are: how to teach music to children in cycle 1, 2 and 3; the role and purpose of music education in both primary and elementary classes; and the effects of music education on the personality of the child. It will examine in particular the following points: - Communicating to the child the pleasure that music gives. - Appropriating the musical content of a musical play and exploiting its inherent expressive elements. - Applying elements of technique and rules for ensemble music. - Sharing experience of interpretation and appreciation. - Examining an excerpt of musical work or a musical performance with regards to content items. - Examining an excerpt from a musical work with regards to socio-cultural aspects (2nd and 3rd cycles).

EMU420 Scholar Musical Teaching II 3 cr.

This course in musical education focuses on education in complementary and secondary classes. The music program in these classes revolves around three complementary and interdependent skills: - Creating musical works, interpreting musical works and appreciating music. In the music program, the word work is used in its broadest sense; it refers to both the achievement of the student and the composer.

EMU425 School Observation Internship 3 cr.

The students, in groups or individually, attend classes of music in different schools. They must submit a report on each period that will be later assessed in class with the teacher in charge of internships.

EMU470 Specialized Didactics I 3 cr.

This course deals with specialized teaching for pre-school and primary music education; its aims:

1. Study and integration of the basic principles of active musical pedagogy.
2. Study and experimentation of various processes to awaken and develop the music faculties of the child (rhythmic sense, auditory attention, inner hearing, voice emission and singing, instrumental, body, dramatic and creative expression, improvisation...).
3. Acquisition and knowledge of repertoires from traditional and contemporary music and instrumental ensembles favorable to a musical pedagogy for pre-school and primary students.
4. Presentation, adaptation and creation of teaching material and exercises-games intended for these same groups of children according to the approach by skills.
5. Planning, organization and evaluation of learning.

EMU471 Specialized Didactics II 3 cr.

This course deals with teaching in elementary school; its aims:

1. Study and integration of the basic principles of active musical pedagogy.
2. Study and experimentation of various processes to develop musical faculties of youth (rhythm, listening and appreciation, individual and group singing, instrumental, body expression, reading and writing, public performance and creativity, improvisation...).
3. Acquisition and knowledge of repertoires from traditional and contemporary music and instrumental ensembles favorable to a musical pedagogy for elementary students.

4. Presentation, adaptation and creation of teaching material and activities intended for these same groups of children according to the approach by skills.
5. Planning, organization and evaluation of learning.

EMU490 School Internship 3 cr.

In this course, the student is required to develop professional autonomy and acquire an adequate mastery of skills for teaching, related to the diversity of schools milieu and taking into consideration development stages of children. Trainee teachers prepare lesson plans, chooses teaching approaches, implementing disciplinary, didactic and pedagogic knowledge and evaluates their educational practice through reflexive analysis. This internship is for a period of 21 days during which the candidate teaches music classes in three different schools for a period of one week in each school. Support and coaching meetings between a designated supervisor and the trainee teacher are planned at the University throughout the training. The internship also includes a period of preparation at the University and provides time for reports writing, estimated to be 24 hours.

ENG510 Advanced Academic English 2 cr.

This graduate level course gives students the opportunity to enhance their writing abilities and develop their critical thinking. It attempts to help students achieve greater competency in reading, writing, reflection, and discussion emphasizing the responsibilities of written inquiry and structured reasoning. Students are expected to investigate questions that are at issue for themselves and their audience and for which they do not already have answers. In other words, this course should help students write about what they have learned through their research rather than simply write an argument supporting one side of an issue or another.

EPY470 Specialized Didactics I 3 cr.

The nature of physics and its implication in teaching; critical study of various physics teaching techniques; survey and practice in the utilization of instructional materials.

EPY471 Specialized Didactics II 3 cr.

A review of various physics curriculum projects and programs; curriculum planning, microteaching, and practicum in classroom observation and teaching.

ERP401 Catechesis Teaching and ICTs 3 cr.

God has always made himself known by his action and speech. Ever since, his messengers, continue to carry his message through the means of information and communication at different times and with civilizations.

In this regard, the pastoral actor and researcher in this field are introduced to the use of ICT's language in the exercise of the announcement of the Good News.

ERP402 Management and Leadership in Church 3 cr.

The management of communities and teams is a knowledge and know-how essential to any leader in this area. Added to those are other requirements when it comes to management in the Church: requirements related to the nature and mission of the latter; also in relation with "Patron" of this management, which is the Holy Spirit.

In this course, the pastoral actor and researcher are introduced to the discernment of the management gift, a gift called "leadership", "animation" or "management" and are introduced to the success of this task in the exercise of their Christian mission.

ERP403 Evangelization and Catechesis 3 cr.

If evangelization was the primary proclamation of the Gospel, the task of catechesis would be to deepen the meaning and nuances of the message originally sent by evangelization.

It is the exercise to which this course refers to: the actor and the pastoral researcher learn how to relay evangelization, taking into account the ecclesial, socio-cultural and other.

ERP404 Pedagogy and Catechetical Act 3 cr.

The success of catechetical activity is linked to several factors and elements among which are pedagogy.

This course initiates the pastoral actor and researcher in how to adopt and adapt, in catechetical activity, the most recent and effective theories and techniques known in pedagogy.

ERP405 Ecclesiology and Religious Communities 3 cr.

Given the diversity of Churches, the Middle East and particularly Lebanon, are places where the ecclesiology is learned and witnessed in the everyday relations between Christians of different affiliations.

This course provides the pastor, the catechist and pastoral researcher the opportunity to observe and analyze the complexity of the relationship between ecclesiological "statements" and "experiences" of the Christian faith in everyday life, when believers come from several church traditions.

ERP406 New Approaches in Theology : Christianity and Modernism 3 cr.

This course helps various pastoral actors and researchers make an analytical and critical theological reading of the relationship between the Christian faith and the modern world. This thinking is mainly based on texts of the Second Vatican Council.

ERP420 Internship/Workshop 3 cr.

Internship follow-ups are provided for school catechesis and other types of pastoral actions.

Courses in the form of workshops are offered according to the needs of students and researchers in the catechetical and pastoral field.

ERP600 Pastoral and Communication Means 3 cr.

In a world that is becoming more and more secularized, where Christianity is marginalized and whose language is not common, the Church needs means of communication to provide this secularized world with its pastoral care.

This course will be approached according to the two following axes:

- Communication and testimony based on the idea "Woe to me if I do not preach the gospel". This axis develops into practice the theme of the media as evangelistic and pastoral means. The transmitter sends a message to the receiver.
- Communication and communion: the media will allow the closer bringing together of humans as brothers under the fatherhood of God. The communication of God is never without incarnation: Christ "the first and perfect communicator"; that's why, the transmitter will not only become a message bearer but he himself becomes a message to the receiver.

ERP601 Lectio Divina 3 cr.

In the monastic tradition, the *lectio divina* is a way to approach the reading of the Bible to relish it and draw on from the bread of life. The course will present the traditional teaching on the *lectio divina*, its place in the spiritual life (reading, mediation, prayer, contemplation) and its current application.

The theoretical teaching (How to do? What to do? With what measures should we approach the text? What are the difficulties?) will be structured around student questions and a reading of John 9-11 which will serve as an introduction to the Word of God and a spiritual life journey.

ERP602 Mystagogy: Renewal of Connections Between Liturgy and Catechesis 3 cr.

The word "mystagogy" is now on many lips. This certainly reflects the feeling that everything does not end with a sacramental celebration and that catechesis still has its place after the celebration. However, this intuition needs to be clarified and better defined.

We feel that there is a successful fitting together between a catechetical process that precedes the liturgical celebration, the liturgy itself and a possible catechetical practice after the celebration. We examine what conditions must be put in place so that the liturgical experience becomes "what we have heard, what we have seen, what we have touched concerning the Word of life (1 John 1: 1)."

ERP603 Conduct of Catechetical Projects 3 cr.

The objective of this course is to introduce students to different aspects of catechesis intervention and develop a capacity to enable them to recognize the main aspects of a catechetical experience (links to the Word, to the experience, to the Church, to the world, to the spiritual life and teaching models), learn to make a critical review and to implement them in given situations.

In addition, this course will also enable them to browse the different communication models on which the act of "transmitting" can be based in a church within a pluralistic world and in an "exploded" society and determine how to implement various catechetical projects while noting, in the form of personal synthesis, the basic elements of the current catechesis.

ERP604 New Grounds in Theology: Updating the Word of the Lord for Today 3 cr.

Many pastoral interventions involve the actualization of the Word of God. How is it done? How to preach the Word? Given the double danger of an Orthodox word that is cut off from the reality of people or a popular word, but which dissolves the radicalism of the message, how can we be faithful to the Gospel?

ERP690A Master Thesis in Religious and Pastoral Education 6 cr.

ESV470 Specialized Didactics I 3 cr.

The course covers the following: the nature of science and its implication in teaching; critical study of various science teaching techniques; survey and practice in the utilization of instructional materials.

ESV471 Specialized Didactics II 3 cr.

The course covers the following: a review of various science curriculum projects and programs; curriculum planning, microteaching, and practicum in classroom observation and teaching.

ETC520 Data Processing 3 cr.

This course provides students with various mathematical tools to solve environmental problems: mathematical tools, statistics and optimization of experimental conditions.

ETC525	Chemical Reactivity and Thermodynamic Balances	2 cr.
Theory of chemical kinetics and thermodynamic equilibria application to transfers to interfaces.		
ECT530	Geomatics: GIS and Remote Sensing I	2 cr.
Introductory module in geomatics allowing students to acquire the necessary bases and indispensable for insertion in the professional environment domain.		
ETC535	Statistical Tools for Parameter Optimization and Data Analysis	2 cr.
It involves teaching statistical tools to optimize parameters (experimental plans) to make method or process developments and also tools to analyze, sort, categorize data.		
ETC545	Languages and Professionalization Tools / Communication / Seminars	1 cr.
Understand and reproduce the content of scientific publications in the English language.		
ETC550	Geomatics: GIS And Remote Sensing II	1 cr.
The theoretical lessons of the first course (Geomatics: GIS And Remote Sensing I) will be coupled here with practical applications dealing with concrete examples. Students will use real and current databases. They will benefit from the intervention of researchers and professionals specializing in the use of geomatics tools in various fields (environmental management, risk mapping, etc.). The acquisition of data in the field and its integration into the GIS will help to better understand the geographic information processing chain. The tools used will be the most common in the professional world (ArcGis, Spatial Analyst ...), each student having the necessary computer equipment.		
ETC555	Environmental Law	2 cr.
This general introductory module gives students the legal prerequisites for environmental management.		
ETC560	Analytical Chemistry of The Environment	3 cr.
This module presents a first overview of analytical methods used for the environmental measurement of organic pollutants and inorganic elements. Analytical separation techniques (HPLC, GC), spectroscopic and electrochemical methods are developed. The techniques described will be systematically illustrated by environmental applications and implemented during practical work.		
ETC615	Sample Processing and Online And In-Situ Measurements	2 cr.
This module presents techniques and methods for sampling and sample retention, passive sampling, extraction / pre-concentration and online measurement.		
ETC565	General Presentation of The Atmosphere	2 cr.
General presentation of the structure, composition and dynamics of atmospheric systems: General presentation of the atmosphere and its gaseous constituents, liquid and particulate; Notion of atmospheric equilibrium and stationary state; Atmospheric reactivity: example of reactivity of semi-volatile species (pesticides, dioxins ...); Criteria Air Contaminants: identification of the induced problem, identification of sources, sinks and their relative importance; Atmospheric carbon balance; Chemistry of the sulfur and implication in the acidification of the rains.		
ETC620	Physicochemistry of The Atmosphere and Atmospheric Reactivity	3 cr.
Understanding the major chemical and physicochemical atmospheric problems and their regulatory approach: Greenhouse effect and global warming.		
ETC625	Elements of Meteorology and Quality of Confined Atmospheres	3 cr.
Presentation of the role of meteorology on air quality and the transport of pollutants and study of the quality of indoor atmospheres.		
ETC630	Environmental Project	1 cr.
Professional situation by adopting a multidisciplinary approach. Master's students will carry out an integrative field study. This work could be an applied study sponsored by companies, communities, design offices or university laboratories, or a one-week field workshop during which students will analyze on a single site the different components of the environment (air, soil, water). Oral defense of the project is carried out before a jury composed of professionals and teacher-researchers involved in the project.		
ETC635	Hydrogeology	1 cr.
This course will help students to master the knowledge of the processes of the continental cycle of water, on the surface (soil-atmosphere) and on the subsurface (aquifers). Students will be able to discuss investigation techniques used in hydrogeology (test pumping) and geophysical prospecting.		
ETC640	Treatment of Effluents and Odors	2 cr.
To be able to limit the environmental impacts of effluents: treatment of industrial liquid effluents (Physical, chemical and biological treatment of liquid effluents, Quality of water after treatment), and treatment of gaseous effluents and odors (physical and chemical treatment of gaseous effluents, analysis, origin and treatment of odors).		
ETC697A	Analytical Strategy and Study of Pollution	6 cr.
Module of scenario of the students on an analytical problematic or on a case of pollution in order to enable them to mobilize the knowledge acquired on a concrete case going from the sampling, the optimization of method and the analytical validation. It consists of work in groups of 3 to 4 students, supervised by a teacher, aiming either at the development of		

analytical method (bibliographic research, and method optimization, or feasibility test, or validation tests), either at the study of pollution that has occurred or is simulated in its historical, analytical, regulatory and technical aspects.

EVO201-2 / 303- Occidental Vocal Ensemble I - II - III - IV - V - VI **1 cr.**
4/ 405-6

The student, guided by a teacher, must work with a group of singers and display a progressive quality of interpretation and an important degree of musical maturity.

EVS470 Specialized Didactics I **3 cr.**

This course is designed for students holding a degree in Visual and Performing Arts. It aims to introduce students learning a TD to didactic methods concerned with image.

The course requires students analyze and produce images for educational purposes.

This is a course with double dimension, theoretical and practical.

EVS471 Specialized Didactics II **3 cr.**

This course develops methods and scenic arts practices for educational and therapeutic purposes, such as psychodrama. Its objectives are to facilitate relations, develop capacity for expression, representation, creativity, etc.

EVS490 School Internship **3 cr.**

This course aims to enable the student to put into practice his/her acquired knowledge, experience the possibilities of change, verify, consolidate or make changes to the acquired methods and become familiar with different learning methods. At the end of the course the student is required to write a detailed course report conforming to the internship protocol prepared by the head of DE.

FIN421 Financial Markets **3 cr.**

Prerequisites BUS211 or MAT312

This course enables students to understand the concepts, terminology, instruments, and investment strategies when dealing with money. This includes the introduction of the broad and closely related areas of financial markets and investments, including the various tools used to determine the value of different investment vehicles. The risk inherited with investing as well as the risk return tradeoff will be considered. Accordingly, the principles of modern portfolio management, including diversification, will be addressed. Particularly, common stocks will be analyzed and valued using multiple valuation techniques. Within the context of fixed income valuation, the concept of bond duration and the yield curve will be examined. Financial derivatives, including options and futures, will also be considered as a hedging tool in the overall investment strategy. Practical application will be emphasized throughout the course using Thomson Reuters Eikon.

FLM210 Music of Film **3 cr.**

Study of music, sound and acoustics as they relate to performance environments, techniques associated with recording, mixing, processing, automation, and reproduction of dialogue, effects, and music tracks for theater sound design.

FLM240 History of American Cinema **3 cr.**

This course is designed to give students an understanding of the history of American cinema from its beginning in 1895 to the present time. It will focus on the silent cinema of D.W. Griffith, the Burlesque film of C. Chaplin and B. Keaton, the genre films of the studio era, the war and post-war noir film, the new Hollywood cinema of the 1960s, the films of the Movie Brats of the 1970s, and the post-modern cinema of the 1980s and on. Special attention will be given to the evolution of the art of the motion picture, including elements of camera, lighting, sound, editing, production design, and narrative structure and the technological evolution of the motion picture, including aspects of inventions and innovations such as color, widescreen, quality sound, and electronic imagery.

FLM241 History of European Cinema **3 cr.**

This course is designed to give students an understanding of the history of European cinema from its beginning in 1895 to the present time. It will focus on the early films of the Lumière Brothers, the German expressionist school, the Soviet montage schools, the French surrealist cinema, the Italian neo-realist film, the French new wave film, the 2nd Italian renaissance, the new-German cinema, and the Danish Dogme 95 movement. Special attention will be given to the way in which history has shaped not only film content but also its form.

FLM242 Film Genre **2 cr.**

Students will acquire understanding of film genre, whether it is western, film noir, science fiction or musical, etc. Students will be introduced to critical approaches to analyze such films.

FLM316 Introduction to Scriptwriting **3 cr.**

The students will acquire basic knowledge and techniques of writing a narrative script for film. The students will be able to create and develop characters, and story line for classical film structure.

FLM317 Introduction to Film Directing **3 cr.**

Students will acquire a basic understanding of staging, directing actors, framing, and different notions of space and time. Students will apply these basic techniques on short segments of video.

FLM319 Introduction to Cinematography **3 cr.**

Pre-requisites	PHO121 Or PHO225	
	Students will acquire knowledge in the theory of film form. Students will apply these different forms through framing, lighting and assembling shots to create a system of expression based on the indirect time movement images.	
FLM321	Advanced Cinematography	3 cr.
Pre-requisites	FLM220 Or FLM319	
	Students will acquire advanced knowledge in the theory of film form. Students will apply these forms by manipulating and assembling shots to create a system of visual expression based on the time-images.	
FLM322	Film Language	3 cr.
	Students will understand the basic semiotics, language, and subjectivity theory (Freudian and Lacanian theory). Students will be able to implement the classical film language theory in films.	
FLM330	Theory of Light in the Cinema	2 cr.
	The students will acquire technical and esthetic knowledge of different sources of light. Students will be able to light interior and exterior scenes.	
FLM344	Theory and Aesthetics of Film	3 cr.
	This course focuses on the various theoretical methodologies that have developed in film theory and esthetics and that have proven useful for the analysis of films and cinema, such as realism, genre and auteur, reflexivity, intertextuality, psychoanalysis, and feminism.	
FLM353	Film Authors I	2 cr.
	Intensive examination of the works of filmmakers who have produced distinctive universes: Jean-Luc Godard, David Lynch, Andrei Tarkovsky, Sergei Paradjanov, Alfred Hitchcock, and Robert Bresson etc.	
FLM416	Advanced Scriptwriting	3 cr.
Pre-requisites	FLM201 Or FLM316	
	Students will write and develop a narrative script, either through the adaptation of a story, or from their own life experience.	
FLM417	Advanced Directing	3 cr.
Pre-requisites	FLM202 Or FLM317	
	Students will implement already known techniques in directing, and apply styles and direct actors in short segments.	
FLM441	Sound Theory of Film	3 cr.
	The students will understand the basics of sound theory in films, based on different concepts introduced by Michel Chion, Kaja Silverman and Slavoj Zizek, etc. Students will acquire a basic understanding of a critical approach to sound in films.	
FLM470	Final Project	3 cr.
	Students will write, shoot, direct and finalize a short film. Students will consult their assigned academic supervisor in the different phases of production and post-production.	
FLM473	Silent Film	3 cr.
	Students will write and make their own short silent film. Students will implement already acquire knowledge and apply it cinematically without the use of dialogue.	
FLM474	Experimental Film	3 cr.
Pre-requisites	FLM317 Or FLM202	
	Students will create their own short films through a personal approach based on their experiences and developed through all the different phases of idea, production, filming and editing.	
FLM475	Documentary Film	3 cr.
Pre-requisites	FLM202 Or FLM317	
	This course covers the study of the documentary genre through definitions, works, styles, forms, strategies, attitudes, conventions, practitioners, and the history of documentary film. It will also focus on the production of a documentary film and will allow students to directly apply cinematic language and esthetics to the stories in reality	
FLM517	Lighting Workshop for Film	3 cr.
	Students will acquire technical know-how in supervised exercises on a stage or in an exterior, and in screenings of scenes. Students will participate in discussions aimed at learning to master the lighting to create an appropriate mood or atmosphere of a premeditated scene recorded on a film or through an electronic system.	
FLM537	Screenwriting for Film and Television	3 cr.
	Through advanced problems in the field of screenwriting, students will acquire professional know-how in documentary and feature film writing, using discussions and exercises with an emphasis on research and preproduction.	
FLM551	Film Design and Special Effects	3 cr.
	Advanced study and practice of computer techniques, effects and methods of design for motion picture and television, coloring, green screen techniques, layering, etc.	
FLM559	Direction of Actors for Film and TV	3 cr.

Exercises in analysis of script and character for the purpose of directing actors in film and television productions. Emphasis is on eliciting the best possible performance from an actor.

FLM560 Practices in Contemporary Arts 3 cr.

Pre-requisites FLM559

Advanced study and practice of performing arts. Emphasis is on contemporary arts, through video performances and works of art to enhance the use of art in society.

FLM617 Advanced Lighting Workshop for Film 3 cr.

Discussion and creation of different styles of lighting through exercises on the electronic medium, aimed at developing the skills of the director of photography to master the craft and establish a style.

FLM618 Cinematography and Directing 3 cr.

Supervised filming of short dramatic projects on the sound stage and at exterior locations that explore the complexity of the process, emphasizing the balance and collaboration essential to both directing and photography in its varied technical, production, and creative aspects.

FLM619 Advanced Digital Directing 3 cr.

Supervised filming of short projects on stage and at exterior locations that explore the complexity of the process, emphasizing exposure, lighting, and handling of digital professional cameras.

FLM620 Theory of Sound in Films 3 cr.

Story of film theory, mainly through the theoretical work of Michel Chion (in particular his concept of acousmetre) and through the films of Starub-Huillet, Tati, Duras, Lynch, Syberberg, etc.

FLM630 Seminar in Film Theory 3 cr.

Study of film theory through the works of Vertov, Eisenstein, Bazin, Metz, Deleuze, Virilio, Chion, Bonitzer, feminism (Mulvey, Silverman, et.), psychoanalysis (Zizek, etc.), and postcolonialist thinkers.

FLM634 Advanced Screenwriting 3 cr.

Through advanced problems in writing for original film, students will write a feature film. Students will be coached and supervised by a mentor.

FLM640 Film and the other Arts 3 cr.

Students will discuss in class issues related to films and other arts, plus weekly film screening. Studies in interrelationships between on the one hand film and on the other painting, dance and theater, through examination of such issues as the different modalities of presence in film and theater, the various functions of the frame in film and painting, the correspondence of the freezing that is part of the cinema apertures (frozen frames), and the diegetic freezing of the dancer. May be repeated twice for credit.

FLM650 Film Authors 3 cr.

Students will participate in discussions in class, screenings to be arranged. Studies of several critical discourses that have influenced the analysis of film: Walter Benjamin's "work of art in the age of mechanical reproduction"; Althusser's interpellation; Lacan's mirror's stage; Virilio's dromology and logistics of perception; Debord's society of spectacle; Edward Said's orientalism, etc.

FLM675 Advanced Fiction Workshop 3 cr.

This workshop consists of a discussion, lasting for three hours, and a laboratory, to be arranged. It is designed for graduate students. They will study the basic techniques of film production, including preproduction planning and production of a short group film.

FSC600 - SCF600 Research Methodology 1 cr.

The objective of the course is to introduce students to scientific research. Topics to be covered are: interest and research objectives; methodologies used in scientific research; how to define a problem; data collection; documentary research; analysis of the collected knowledge; structure of a Master thesis; writing a report; writing the bibliography; making a scientific poster; and how to approach giving an oral presentation.

GAA227 Food Microbiology 2 cr.

Pre-requisites BIO211

Co-requisites GAA277

This course is a study of the fundamentals of food microbiology, including its history, classifications, spores and their importance, and the most common and serious pathogenic food microorganisms. Fermentation, spoilage and control methodology are also discussed.

GAA277 Food Microbiological Lab 1 cr.

Pre-requisites BIO211

Co-requisites GAA227

These laboratory sessions, which accompany GAA 227, provide students with a technical experience of the preparation of liquid and solid culture media (differential, enriched, specific and selective). They deal with inoculation, incubation

and enumeration of microorganisms found in liquid and solid food products. Staining procedures and biochemical tests such as ELISA and AGID are performed as well.

GAA339 **Hygiene and Quality Control of Food** **3 cr.**
Pre-requisites GAA227

This course aims to discuss the current issues of food safety and quality in the food chain. The theoretical approach will enable students to acquire a deep understanding of the steps that would lead to the establishment of a quality system in food industries. These steps aim at ensuring that production conforms to a certain set of standards and through this they contribute to the fulfillment of consumers' safety requirements.

GAA340 **Food Composition and Analysis** **3 cr.**
Pre-requisites BCH215 and CHM212 and CHM210

This course describes the food as a complex system defined by an aqueous phase, a three-dimensional matrix of proteinaceous, oily and / or carbohydric nature and dispersed elements. It also deals with the different modern principles and techniques used in the determination of the chemical composition of foods. It will cover the use of titration, extraction, gravimetry, colorimetry, spectrometry, and chromatography in food analysis, as well as methods for data analysis and presentation of results. . Laboratory sessions are directly related to theory.

GAA378 **Food Composition and Analysis Lab** **1 cr.**

The main purpose of this course is the study of the main chemical constituents of foods. This course introduces the different principles and modern techniques used in the determination of the chemical composition of foods. It will cover the use of titration, extraction, gravimetry, colorimetry, spectrometry, and chromatography in food analysis, as well as methods for data analysis and presentation of results. Laboratory sessions are directly related to the theory.

GEO327 **General Geology** **3 cr.**

This course is a general introduction to the earth sciences. The objective of this course is to familiarize the students with a description of the different geology domains. Basic concepts of geological phenomena occurring on planet earth from earthquakes to volcanos, simple winds to tornados are developed. As a tool to understanding the history and movements of planet earth and its future, this course covers time itself from the big bang and the formation of the universe as we know it, till the appearance of the first building blocks of life.

GEO412 **Ecology and Environment** **3 cr.**

This course aims to introduce students to environmental problems. The notion of ecology is introduced as well as its relationship with the environment. The various chemical processes in the atmosphere, waters, soils and the biosphere are discussed. The disruption caused by various human activities, chemical pollution and toxic substances, and the impact on biodiversity are argued.

HIS215 **Lebanon in the Ancient Period** **3 cr.**

Prerequisites LFR120

Students will be introduced to the ancient history and antique archeology of Lebanon, including the main historical events and the archeological sites that make this period important for Lebanon. Students will present, through written and material testimonies, the diverse civilizations and the cultures of Lebanon, having gained knowledge and experience through working on archeological sites and studying several themes: arts, crafts, trade, religion, politics, and society. The period examined, distributed over six chronological phases, starts with pre-history and ends at antiquity/the pre-Byzantine era.

HIS220 **Lebanon in the Medieval Period** **3 cr.**

Prerequisites LFR120

Students are introduced to the history of medieval Lebanon, a very important period, which begins with the Arab-Muslim conquest of Lebanon in 636 and which ends in 1516 with the victory of the Ottomans over the Mamelukes. Students will become familiar with research while using primary sources.

HIS225 **Lebanon in the Modern Period** **3 cr.**

Prerequisites ENG120

The history of modern Lebanon extends from the date of the Ottoman victory over the Mamelukes during the battle of Marj Dabek in 1516 to the beginning of the First World War in 1914. Students will learn chronologically about the great periods and events in Lebanon's history, as well as the reign of the Maan and Chehab dynasties, and both Caïmacamias, Moutasarifiya (from 1861 to 1915), and the evolution of Lebanese society.

HIS230 **Lebanon in the Contemporary Period** **3 cr.**

This course covers the history of contemporary Lebanon from the eve of World War I until the present day. This history includes the formation of the State of Lebanon and the struggle to maintain its integrity and independence. Lebanon was the first political entity established in the Near-East since the 16th century. The roots of its political institutions were built during the Mutasarifiya, under the guarantee of major powers. The Lebanese political entity was confirmed through the declaration of the Lebanese Republic in 1926 and its independence. Independent Lebanon, since 1943, has

experienced periods of stability and prosperity as well as periods of disturbance and socio-political agitation on the local scale, depending on regional and international rivalries.

HIS301 Historical Criticism 3 cr.

This course approaches history as an experimental science within the constellation of human sciences. It teaches the student-historians how to apply rigorous thought processes, which consist of a series of critical examinations on a variety of testimonies (material, oral and written sources), and on information gathered. The historians master the research processes through independent analysis, the use of supplementary material and the application of critical apparatus (authenticity, origin, restitution, originality), to begin developing the chosen subject. This fundamental course teaches student-historians to work independently with critical minds.

HIS320 Geography 2 cr.

Geography is a science, which is interested in the inhabited earth. It analyzes the natural facts in relation to human beings, their distribution, their movements, their activities and their actions. Beyond the influence of the natural mechanisms on life, geography studies the great contemporary problems: social and economic globalization, inequalities of development, ecological risks, and the overcrowding of cities, etc.

HIS385 Ancient Near-East: Egypt 2 cr.

This course introduces students to the history of Egypt in ancient times, focusing on the chronology of the Pharaohs and their power in the Near East. Students will learn how to read and even to translate hieroglyphs. Students should be able to use primary sources and contextualize the topic in drawing a comparative chronology between Egypt and the rest of the eastern world.

HIS390 Ancient Near-East: Mesopotamia 2 cr.

This course focuses on the history of Mesopotamia in ancient times. This is a fundamental course which enables students to understand the context of the establishment of the first state-cities in the world. Students will use classical methods of learning, such as chronology and scale analysis. They should be able to establish the link between the history of Mesopotamia and the history of Egypt and other countries during the same period.

HIS395 Ancient Near-East: Syria 2 cr.

This course intends to focus on the idea that ancient Syria has never been a centralized and strong state. Students will use methods of contextualization to understand that throughout history its cities have been influenced by empires and neighboring kingdoms: the Hittite Empire in the North, Assyria in the East, and Egypt in the South. This course will also consider the geography of Syria and its geopolitical situation. Finally, it will refer to archeological fields in order to enhance the importance of Syria at a certain time of History.

HIS400 Greek and Byzantine History 2 cr.

Greek history lives on thanks to its rich heritage, especially in the Mediterranean area. The course will present the constitutive elements of this long history since the emergence of the Minoan and Mycenaean "palatial" civilizations up to the fall of the Byzantine Empire in 1453. Students will study the cultural aspect of the Greek civilization, which reached its apogee with Hellenism. The course will help the students to analyze the process of diffusion of Christianity all around the Mediterranean coast, realized by the foundation of the Byzantine Empire and the uniqueness of the Basileus. A political approach will be adopted, analyzing the different regimes in the Greek and Byzantine world, from democracy to the powerful Empire, through tyranny. Attention will be given to the evolution of the city of Constantinople.

HIS405 Roman History 2 cr.

The course examines, through the history of the roman entities, the different factors which enhance the role of Rome as a Mediterranean power. The development and enlargement of the roman influence will be explained during both periods: period of the Roman Republic and then the period of roman imperialism. Students will use a comparative approach to examine the roman influence during these two periods and in different areas. Students will furthermore be able to define the process of Romanization and to develop a critical approach concerning the heritage of the Romans.

HIS425 Islam, from Mahomet to 1516 3 cr.

Gathered under the leadership of the prophet Mahomet, in the 7th century, the Arabs dominated the Near-East within a few years and continue the conquest in Africa and in Europe. The Caliph Rachidoun (632-661) yielded power to dynasties, which governed Dar-el-Islam of various capitals. Students will closely follow the stages of the expansion, the moments of the transfer of power, the organization of the administration and the governmental institutions of the Arab community from social, economic, cultural and scientific perspectives.

HIS430 Western Middle Ages 2 cr.

The course describes the western Middle Ages period with a social, political, military and cultural approach. Students will be introduced to the first theories of modern states, which contributed to transform Europe from the 5th to the 14th centuries. Primary sources and works of art will help the students to understand the different representations of the societies, their leaders and the new-born states. A comparative approach is necessary to understand the different evolutions in the European areas.

HIS435	The Ottoman Empire	3 cr.
<p>The interest in writing about the Ottoman period in history was renewed when local archives were made accessible in the second half of the 20th century. The image of a tyrannical and fanatical power, which made Europe tremble, was sweetened and the emphasis was put on the internal organization of the Empire.</p> <p>Defeated in Lepante in 1570, stopped in Vienna in 1683, and overruled in the Treaty of Kaynardji in 1774, the Empire weakened and became “the sick man of Europe” throughout the 19th century and had disappeared by the end of World War I.</p>		
HIS450	Modern Europe	3 cr.
<p>This course deals with the history of Europe from the Renaissance until the end of the Monarchy. Students will examine financial and economic questions, the political regimes, religious reforms, the Industrial Revolution, as well as the psychological and social structures of the period.</p>		
HIS455	The Contemporary World	2 cr.
<p>This course will focus first on the interwar period of the 20th century. It will then deal with the main reasons that disturbed the world order during the second half of the 20th century: bipolarization, positive neutrality, decolonization, the European construction, the end of communism, the role of the USA as a superpower, globalization, international organizations, etc.</p>		
HIS460	Contemporary Middle East	3 cr.
<p>The expression “Middle East” concerns the area including the states of the Fertile Crescent and those of the Arab Peninsula, and Turkey, Pakistan, Iran, Afghanistan, Libya, Egypt, and sometimes India. The course limits the study to states of the eastern Mediterranean Sea and Iraq. Students will examine themes dealing with the political and economic evolution, social mutations, demographic dynamics and some geopolitical questions focusing on contemporary issues, such as conflicts related to water management and the Arab Spring.</p>		
HIS480	History of Christianity: birth and doctrines	3 cr.
<p>This course focuses on the inauguration of the New Alliance by Jesus, and the New testament which records the words and actions of this period. When Apostles proclaimed the good news by the kerygma it validated the evangelic mission of the Church, and from it, the first Christian communities were developed and organized. Their emergence caused different reactions and they were attacked by the upholders of Judaism and adherents of paganism. The course focuses on the dialectic of the integration of the Christians. The account of the genesis of Christianity is examined in this course along with the elaboration of the corpus of the first texts, and by minutely questioning the essence of the message that it brings to its understanding, its transmission, its evolution and its interpretation.</p>		
HIS485	Islam: open questions: doctrines, institutions, rites, law, Sufism, brotherhood, western trends	2 cr.
<p>This course presents the different theological interpretations and current legal issues, as well as examining the current myths about Islam, the brotherhoods and the different contemporary movements questing an ideal. Students will be studying the papers and the works of contemporary Muslim intellectuals throughout this course.</p>		
HIS600	Research Methodology	3 cr.
<p>Students will develop the practice of critical thinking and analytical approaches they have already applied in history and archeology, opening up the horizons of their research, so they can choose the form of their research paper or thesis. Students will include, alongside the research project, the necessary theoretical and practical knowledge to develop their thesis. Component parts of thesis writing will include: structuring the outline, dividing the content into chapters, and writing the introduction and conclusion in a coherent and rigorous way.</p>		
HIS620	Social History: structure of the family in rural and urban areas	3 cr.
<p>This course examines the family status in different areas and it detects the factors of change and durability. It is obvious that the situation of the family changes in Lebanon, but it is also well known that it remains at the base of society and is an element which gives the country its charm and stability.</p>		
HIS625	History of International Relations (1918 – 2006)	3 cr.
<p>This seminar covers the large context of international relations. It introduces these relations from the first colonial period to the implementation of strategies to secure and dominate the territory. The philosophical theories that preside over these relations will be discussed in class. The implementation of the supranational and super-states authorities of social, political, economic and military types, as well as their actions, will be studied. A study of the Arab world and the Mediterranean Sea are included, from the eve of World War I until the present day.</p>		
HIS630	Art Critic	3 cr.
<p>This course aims at teaching students how to develop a critical eye to define a work of art, analyze its characteristics, place the work of the artist in its correct time, and to know how to channel the information. The art critic explains, defends, objects, regulates, distinguishes and creates artistic movements, and these are the skills students can acquire on this course.</p>		
HIS640	Thematic Research	6 cr.

This course studies problematic cases related to the history, art and archeology of Lebanon.

HIS650 Seminary: Ancient Lebanon 3 cr.

Besides the theoretical and practical knowledge, this course includes field work experience in a multidisciplinary context.

HIS655 Seminary: Medieval Lebanon 3 cr.

Students are introduced to the history of medieval Lebanon, a very important period which begins with the Arab-Muslim conquest of Lebanon in 636 and which ends in 1516 with the victory of the Ottomans over the Mamelukes. Students will become familiar in research using primary sources.

HIS660 Seminary: Modern and Contemporary Lebanon 3 cr.

This course deals with extensive questions related to the history of modern and contemporary Lebanon, based on primary sources such as archives and manuscripts.

HIS670A-B Thesis Project History 9 cr.

Graduates will have the ability to conduct thorough research, and master the use of sources and methods of writing a thesis.

HIS710 Historiography 3 cr.

This course shows what really distinguishes history as a scientific discipline by giving equal consideration to both its theoretical foundations and to its practice. Students look at the historic genres which prevail in Europe and in America, and examine the historiographical trends which are apparent in Lebanon and in the bordering countries.

HIS720 History of Contemporary Lebanon 3 cr.

This course approaches, in a critical and analytical way, the themes of Lebanese contemporary history since the establishment of the Emirate of Chehabs until the Doha Agreement. The content of the course is based mainly on primary sources: diplomatic documents, archives of various institutions, manuscripts, periodicals, memoirs, etc.

HIS730 Civilization of the Near-east 3 cr.

This course studies political thought in the Arab world since the Renaissance period. It considers the papers of the first reformists, those of the contemporary Islamists and tries to reveal the causes of the conflict between the Shiites and the Sunnites in the context of the Arab Spring.

HIS784 Social History 3 cr.

This course deals with several key issues in Lebanon, such as sustainable development, demography, labor and problems related to it, massive urbanization, emigration, the decline of political parties and the trades union, etc.

HRG215-225 Harmony I A-B 1 cr.

Figured bass and given song: A. Realization of a given bass with 3-sound chords (root position, 1st and 2nd inversions); harmonization of a song given with 3 chord sounds (all positions). B. Modulations to the adjacent and distant tones, unisonal and modulating harmonic movements, figured bass and given song. C. Chords of the dominant 7th, with and without fundamental, regular and exceptional resolution: given bass and given song.

HRG315-325 Harmony II A-B 1 cr.

Figured Bass.

A. - Chords of the Dominant 9th major and minor, with and without fundamental - Chords of the 7th in various species.

B. - Changes, delays and pedals.

C. - The foreign notes: changes, delays, pedals, notes of passage, anticipation, appoggiatura, etc.

HRP330 Harmony III 3 cr.

Pre-requisites MPR 201 Or MPR 205 Or MUP 259 Or MUP 261 Or HRP 220

Given chant. A. - Chords of the Dominant 9th major and minor, with and without fundamental - Chords of the 7th in various species. B. - Alteration, Delays and Pedals. C. - The foreign notes: alteration, delays, pedals, notes of passage, anticipation, appoggiatura etc.

HRP440 Harmony IV 4 cr.

Pre-requisites MPR 203 or MUP 459 or HRP 330

Harmonization in different styles: A. - Modal Harmony. B. -Jazz Harmony. C. - Harmony in different styles (from Baroque music to contemporary music).

INF216 Introduction to Programming 3 cr.

This course provides students with a practical method for resolving problems using the programming language Visual Basic. It covers: methods for problems analysis; an introduction to the Visual Basic language, basic concepts of the language, types, expressions, control structures (selection, repetition), one dimensional arrays, two dimensional arrays, strings, procedures and functions; and writing and executing programs.

INF217 Applicative Programming 3 cr.

Prerequisites INF216 Or INF214 Or INF219

This course introduces many techniques used to organize, search, sort and manipulate data, after completing new ideas in the Visual Basic language (multidimensional arrays, procedures, functions and files). It emphasizes sorting methods, recursion, linked lists, stacks and queues.

INF304 CS for Chemistry, Biochemistry and Biology 3 cr.

This course aims to familiarize students of chemistry, biochemistry and biology with the use of advanced software to provide models to illustrate their field of study. Topics include: advanced use of Excel and chemistry applications; tools for drawing molecules; processing molecules in 2D and 3D; introduction to cheminformatics, introduction to bioinformatics and molecular modeling; the structure of proteins (Protein Data Bank and pdb file); demonstration and use of PyMol; and sequence alignment using BioEdit.

INS510 Law and Ethics in Information Studies 3

This course looks into the moral and ethical values essential to information professionals, archivists and museum experts in situations involving legal debates and ethical issues. The course covers the following topics and issues: legal information; general principles of ethics; art and cultural property law; protection of movable and immovable assets; intellectual property and copyright; freedom of information and censorship; information theft and plagiarism; integrity and digitization; principles of negotiations and contracts.

INS515 Management of Libraries and Archives 3

This course is the study of effective and efficient management of organizations. It introduces management theory and decision making in the context of information agencies and services. Emphasis is placed on strategic planning and organizing, quality management, organizational behavior, human resource management, leadership and communication, management of change, legal issues in information agencies, and use of information in decision making.

INS520 Research Methodology 3

The course is designed to generate proposals for master's theses in information studies. It focuses on how to organize a research project, including the development of research questions, the review and synthesis prior to research and writing, and the understanding of the elements of a research proposal. Those include research problems and questions; critical appraisal of research literature; data sources and sampling; research ethics and integrity; and quantitative and qualitative statistics and analysis.

INT550 Consecutive Interpretation A-C I 3 cr.

The aim of the course is to teach note taking for texts in Arabic to be translated into English. The basics of note taking are taught at the beginning followed by texts read to the students with lengths ranging from 2 minutes to 5 minutes at the end of the semester.

INT551 Sight Translation A-B/B-A I 3 cr.

The on sight translation course given to first year students has three main objectives: To enrich their vocabulary. To work on the flow of the texts, the intonation, the articulation etc. To work on reformulating ideas, because interpreting essentially means explaining. The texts given to students revolve around current themes as well as more technical ones such as labor, sustainable development, international conventions etc. They are taken from websites; UN and other International Organizations. Texts are chosen gradually in terms of the gaps that the students need to address, in order to have a comprehensive training. At the end of the semester, students have to appear before a jury, in order to evaluate the process of the first half of the year.

INT553 Sight Translation A-C/C-A I 3 cr.

This course is given to reinforce the sense of translation among the students who will have to translate the text while reading it for the first time. This will teach them speed and precision and will prepare them for the simultaneous interpretation.

INT554 Consecutive Interpretation A-B I 3 cr.

This course introduces students to note taking techniques, in order to consecutively interpret texts from Arabic into French. The text lengths vary, starting with 2 minute texts and ending with texts up to 5 minutes, revolving around different themes: political, economic, and more general texts.

INT555 Consecutive Interpretation B-A I 3 cr.

This course introduces students to note taking. The professor will explain the note taking techniques (symbols, signs, etc.) and give theoretical introductions to the course that starts with 1 or 2 minute long texts for around 4 weeks. The length of the texts will increase as we go into the semester and will reach 5-6 minutes in December. Texts are taken initially from L'Orient-Le Jour and then the professor will choose more difficult texts from international French newspapers and magazines such as (Le Monde diplomatique), as well as other UN reports in French.

INT556 Consecutive Interpretation C-A I 3 cr.

Similarly to all the consecutive translation courses, this course will cover texts taken from the Daily Star in the beginning and will evolve to encompass texts from 'foreign affairs', "The Economist" as well as different reports from many UN agencies. It will focus on note taking at the beginning of the course and move toward a more tangible aspect of translation.

INT557	Sight Translation A-B/B-A II	3 cr.
This course teaches students to read a text and translate it at the same time; this exercise will serve as an introduction to simultaneous interpretation and will prepare students for different types of texts. General texts, at the beginning of the semester, lead to more specialized ones with a more complicated terminology.		
INT558	Sight Translation A-C/C-A II	3 cr.
This course aims at enabling students to read a text and translate it on sight. This exercise will introduce them to simultaneous interpretation and prepare them for different kinds of texts ranging from general themes to more detailed and specific texts with specific terminology.		
INT559	Consecutive Interpretation A-B II	3 cr.
At this stage, the students will have mastered note taking, and will concentrate on texts in Arabic to be translated into French. The text lengths vary between 5-6 minutes and they cover politics, economics and other current events.		
INT560	Consecutive Interpretation B-A II	3 cr.
Students will be able to master consecutive interpretation of texts from French into Arabic. The degree of difficulty will be increasing the further they go into the semester and the students will tackle a variety of themes. As with all consecutive interpretation exercises, the students will have to master the connections within the texts and have to preserve the chronological order of the ideas.		
INT561	Consecutive Interpretation C-A II	3 cr.
The second semester will allow the students to master translating consecutively texts from English into Arabic. The degree of difficulty will increase and with it the variety of the texts given to the students. The students will bear in mind the necessity of keeping the coordination between the various parts of the texts, as well as the chronological order.		
INT563	Consecutive Interpretation A-C II	3 cr.
The aim of this course is to teach interpreting students the techniques of consecutive interpretation. Students will be taught to listen to a 4 or 5 minute long speech in Arabic, to take note of what they heard, and then, based on the notes they have, translate the text into English. This course will teach students how to understand the logic of a given speech and be able to convey the same ideas and logic in English as accurately as possible and within a time frame not exceeding the duration of the original speech. Please note that the length and difficulty of the texts will increase as we progress through the semester and as students improve their oral expression skills and note taking techniques. The texts will be taken from a variety of sources, such as UN agencies and reports and Arab newspapers and magazines, and will cover different topics (economics, politics, international news, the environment, human rights, in addition to any other hot topics or current events as they arise). Material references: Annahar newspaper, Al Hayat newspaper, Al Biao wal Tanmia magazine, Le Monde Diplomatique Arabe, etc.		
INT600	Simultaneous Interpretation A-C I	3 cr.
This first attempt at simultaneous interpretation puts the students in direct touch with the Booth. The students will start with memorization exercises and will start dividing their thinking between listening to the text and translating it. After one month, the students will be able to simultaneously translate any type of text from Arabic into English. The degree of difficulty will increase with time. The types of texts are generally taken from the UN organizations (FAO, ILO, UNESCO).		
INT610	Consecutive Interpretation A-B/B-A II	3 cr.
This course is given for the second year interpretation students. The students will have mastered note taking techniques and will be up to the task of consecutively translating all sorts of texts. They will be honing their already acquired skills.		
INT611	Consecutive Interpretation C-A III	3 cr.
In the 3rd semester of interpretation the students will have mastered note taking. They will continue with texts ranging from 6 to 7 minutes in length, while the instructor focuses on the chronological order of the ideas and the links between them.		
INT612	Simultaneous Interpretation A-B I	3 cr.
This course introduces students to simultaneous interpretation. They will start with memorization techniques and try to divide their attention between listening and translating. The more they train, the more they will be able to follow the texts and concentrate on the nuances and the particularities of the different texts. This course will be based on translating texts from Arabic into French.		
INT614	Simultaneous Interpretation B-A I	3 cr.
This course introduces students to simultaneous interpretation. They will start with memorization techniques and will divide their attention between listening and translating. The more they train, the more they will be able to follow the texts and concentrate on the nuances and the particularities of different texts. This course will essentially cover texts from French into Arabic.		
INT615	Simultaneous Interpretation C-A I	3 cr.
This course introduces the students to simultaneous interpretation. They will be introduced to the Booth, texts will be read to them, and they will start translating the texts at the same time that they are being read to. This ability follows 4 weeks of practice, including memory exercises, to master it. Texts are of a general nature at the beginning. Then we		

progress to the UN General Assembly before moving to the different UN organizations. By the end of the semester the students will have covered all the UN terminology.

INT616 Consecutive Interpretation A-B/B-A IV 3 cr.

This course introduces students to simultaneous interpretation. They will work in the Booth and will translate texts read to them at the same time. This skill follows 4 weeks of intensive training that encompasses memorization exercises. In the beginning, the texts will be general, followed by texts and speeches from the UN General Assembly and other different organizations. The students will learn to deal with UN terminology from the beginning of the semester.

INT617 Simultaneous Interpretation A-B II 3 cr.

After having been introduced to simultaneous interpretation for a semester, the students will have acquired more skills for the second semester, in order to deal with all sorts of texts. At this stage, other factors come into play: speed and precision. The texts are general (United Nations) from Arabic into French. The students will also listen to recorded speeches from the UN and other bodies. The difficulty at this stage will be with accents. Now the students can take part in actual conferences that take place within the University, as training. This will help them reinforce their skills and their performances so that they will be ready for work.

INT618 Simultaneous Interpretation B-A II 3 cr.

After having been introduced to simultaneous interpretation for a semester, the students will have acquired more skills for the second semester, in order to deal with all sorts of texts. At this stage, other factors come into play: speed and precision. The texts are general (United Nations) from French into Arabic. The students will also listen to recorded speeches from the UN and other bodies. The difficulty at this stage will be with accents. Now the students can take part in actual conferences that take place within the University as training. This will help them reinforce their skills and their performances so that they will be ready for work.

INT619 Simultaneous Interpretation C-A II 3 cr.

After introducing the students to simultaneous interpretation for a semester, they will become more competent in the second semester to deal with any types of texts. The skills are taught and now other factors come into play, such as speed, accuracy and precision. Texts vary from UN texts to more general texts. Also the students will be listening to recordings in different languages and accents and will be translating videos and PowerPoints. The students in this stage will have the opportunity to participate in any conference that takes place at the University as silent Booth, in order to reinforce their skills and improve their performance, for them to be ready for the labor market.

INT620 Simultaneous Interpretation A-C II 3 cr.

After introducing the students to simultaneous interpretation for a semester, they will become more competent in the second semester to deal with any types of texts. The basic skills are taught and now other factors come into play, such as speed, accuracy and precision. Texts will vary from UN texts to more general texts. The students will also be listening to recordings in different languages and accents and will be translating videos and PowerPoints. The students, at this stage, will have the opportunity to participate in any conference that takes place at the University as silent Booth, in order to reinforce their skills and improve their performances so that they are ready for the labor market.

JCM200 Information and Communication Methodology 2 cr.

This course is intended to train students in oral and written information and communication techniques, besides data management and data synthesis (writing reports, summaries, analysis, reviews, interviews, etc.).

JCM201 History of Media 2 cr.

This course traces the history of each one of the five great media types (written press, radio, cinema, TV and internet) from the first loose-leaf in Europe, before written press, reaching Web 2.0. It overviews the greatest moments of this history on different levels (sociopolitical, cultural, economic, and technical).

JCM202 Techniques of Journalistic Expression in French 3 cr.

Pre-requisites LFR120

This course aims to develop the students' language skills by giving a detailed analysis of Arabic syntax via a dynamic approach using practical texts and exercises. This course also broadens the students' knowledge of Arabic language, both on oral and written levels, through exploration and analysis. Besides, it gives the student the opportunity to become acquainted with Arabic grammar and linguistic studies or references that will be needed while writing.

JCM203 Techniques of Journalistic Expression 3 cr.

This is an introductory course to the basics and general principles of journalistic writing, wherein different writing techniques for diverse journalism genres are tackled.

JCM221 Political Economy of Media 2 cr.

This course aims to study the science of production, distribution and wealth consumption, especially theories and methods of diverse schools of economy and politics, applied to media. RJCM 500 is a remedial equivalent course.

JCM224 General Journalistic Translation A-C/C-A 3 cr.

Pre-requisites ARA120

This course offers students different translation methods A- C/C-A: equivalence, correspondence, literary translation, free translation, etc. It is also an initiation to translation genres: literary, scientific, technical, economic, legal, etc. In the journalistic field, this course trains students to translate journalistic lexis.

JCM225 General Journalistic Translation 3 cr.

Pre-requisites ARA120

French-educated students can opt for this translation course, in case their linguistic background does not enable them to follow JCM 224. This course offers students different translation methods A-C/C-A: equivalence, correspondence, literary translation, free translation, etc. It is also an initiation to translation genres: literary, scientific, technical, economic, legal, etc. In the journalistic field, this course trains students to translate journalistic lexis.

JCM228 Data Collection and Analysis in Journalism 3 cr.

This course presents quantitative (statistics: variables, population, sampling, questionnaires, etc.) and qualitative methods (interviews, observations, biographies, analysis, etc.) in investigative journalism. RJCM 501 is a remedial equivalent course.

JCM229 Journalistic Writing Workshops 3 cr.

Pre-requisites ARA210

The objective of this course is the acquisition of techniques to write different kinds of articles. It is a workshop where linguistic skills are requested to serve various journalism genres. RJCM 502 is a remedial equivalent course.

JCM310 Communication Theories 3 cr.

The course presents famous schools and authors who have established the most important theories in communication on individual and collective levels. It also seeks to provide students with the basic tools for a better understanding of the communication process, in theory and practice. RJCM 503 is a remedial equivalent course.

JCM314 Journalism Genres 3 cr.

Pre-requisites JCM228 and JCM229

This course conveys appropriate methods and know-how to make reports, inquiries, accounts, interviews, from the very first stages of concept to finalization.

JCM315 Television Report Techniques 3 cr.

This course is intended to tackle technical processes while making a TV report (camera handling, image language, sound takes, editing, etc.). RJCM 504 is a remedial equivalent course.

JCM316 Media Law and Deontology 3 cr.

This course tackles Media and Communication Law, reviewing different official Lebanese texts. It also poses and analyzes ethical issues in journalism, alongside other media ethical codes. RJCM 505 is a remedial equivalent course.

JCM322 General Contemporary History (Current World Issues) 3 cr.

This course explores History in the 20th century, from World Wars I and II, reaching the new world order after the Gulf War. It helps students to read social-historical news in the light of important upheavals in the 20th century.

JCM324 Media and Society 3 cr.

This course explores the role of media in society as a communication medium and socializing agent, exploring functions of media and technology advances with their relative impact on daily life and evolution of society.

JCM326 Multimedia Journalism 3 cr.

The course defines the characteristics of bimedia journalism; web journalism; blogging and social media, in order to enable the students to write and edit contents for digital media.

JCM327 Specialized Press 2 cr.

Pre-requisites JCM314

This course offers students information about the advantages and pitfalls of specialized journalism (economy, agriculture, fashion, sports, games, health, computing, travel, etc.), with an aim to develop writing skills and techniques in the field.

JCM328 Photojournalism 2 cr.

The objective of this course is to convey practical information about photojournalism, including initiation into shooting methods and mastery of specific parameters (lighting, framing, picture composition) in order to make photo portraits, and photo reports.

JCM415 Media Techniques: Newspapers 2 cr.

Pre-requisites JCM314

This course prepares future editorial secretaries, with a primary focus on editing techniques; from the very realization of a cover.

JCM416 Media Techniques: Radio 2 cr.

Pre-requisites JCM314

This course offers basic information on radio journalism, from field work to studio, defining the roles of the radio team (presenter, chief editor and reporter), explaining the difference between different radio formats, alongside typical

exercises targeting radio writing, editing, and mastering vocal core competencies, as well as diction. RJCM 506 is a remedial equivalent course.

JCM417 Media Techniques: Television 2 cr.

Pre-requisites JCM314

The objective of this course is to offer a training experience to write and present TV news, while optimizing body language in front of the lens. RJCM 507 is a remedial equivalent course.

JCM418 Sociopolitical Communication 2 cr.

This course introduces concepts in socio-politics related to “plural societies” and “national identities”, in order to understand and analyze challenges of communication interfaces in a globalized world, considering socio-political and socio-cultural factors.

JCM419 Advertising Communication 2 cr.

This course describes the world of publicity (structure, agents, and different aspects), shedding light on its importance to society. It also reviews major advertising supports, specifications and evolution, starting from the most classical (newspapers, billboards, radio, TV), reaching the internet and new media, with an analysis of media messages.

JCM425 Media Geopolitics 2 cr.

This course describes the geographic division of media in the world, tackling unstable division, division between the consumer and productive world, the underdevelopment issue in the media world, and the right for equal access to information.

JCM426 News Agencies 2 cr.

Pre-requisites JCM314

This course traces the history of news agencies, and expands on the most eminent among them, to study the way they operate; especially processes of data collection and treatment to produce transmissible information.

JCM427 Semiology of the Media Image 2 cr.

Pre-requisites JCM310

Visual literacy is the ability to create images that communicate information in aesthetic and meaningful ways. It is also the ability to interpret images. This course provides you with the analysis tools of the media image in its synthetic, iconic and linguistic aspects. With the theoretical reading assignments you will be provided with the vocabulary to communicate the meaning of different types of images. It focuses on advertising images, caricatures and press photos, offering an analytical framework that allows you to understand how to shape meaning in these systems of signs.

Course Goals: The goals of the class are to gain a practical understanding of semiotics, improve critical thinking skills, and learn to use semiotics to think logically and to analyze communication, meaning, and culture.

JCM428 Analysis of the Media Discourse 2 cr.

The objective of this course is to offer required theoretical and practical elements to analyze different types of media discourse. Based on different methods of analysis, it includes practical exercises from newspaper and TV discourses.

JCM429 Professional Internship 2 cr.

Students are required to pass through a traineeship of 45 hours in a press office, company, or advertising agency. They should become familiar with the different services and posts, before selecting a certain job. On completion, they will submit a report of 15 pages summarizing their performed tasks and experience.

JCM515 Media and Public Opinion 2 cr.

This course highlights the methods used by media to influence public opinion and vice versa. It also tackles the concept of “event” within media (criteria to report an event, impact, situation, interpretation, main differences between a journalist and historian in event reporting).

JCM516 Psychology of Communication 2 cr.

This course defines the key concepts that students need to know which are used to enhance understanding of each other, leading to a better influence of others. Persuasive communication demands a real knowledge, in the fields of advertising and media, in order to analyze future discourse and measure its impact when received.

JCM517 New Technologies, New Media 2 cr.

This course reviews diverse techniques related to new technologies in the field of communication. From print media to electronic media, going through audiovisual media, “new media” are emerging with technological progress, and development of the consumer society. This course is an introduction to the operational aspects of new communication and information technology.

JCM518 Media: Freedoms and Deontology 2 cr.

This course discusses different texts with respect to press freedom, as guarantors of individual and group freedoms. It reviews the factors affecting press liberties, elaborating on the relationship between press independence, politics and finance. The course also examines different ways to ensure respect of this freedom, as well as the professional code and ethics in journalism.

JCM523 Political Behaviors and Mass Communication 2 cr.

The objective of this course is to understand and analyze social phenomena in relation to political power and control. In terms of taking or retaining power, by or for different stakeholders, it is more and more essential to resort to different techniques of communication and public conditioning in political practice.

JCM524 Economics and Media Management 2 cr.

This course examines the role and impact of the media in economy, with a main focus on different aspects required to operate a media company.

JCM610 Strategies and Tools of Public Communication 2 cr.

This course examines adequate techniques and methods to be used, in order to implement a communication strategy with optimum results. As there are multiple communication tools, this course offers a theoretical approach, followed by practical applications allowing a better mastery of the techniques.

JCM611 Globalization and Cultural Diversity 2 cr.

This course introduces the ways by which each human society and linguistic group sees its own culture and civilization, and strives to find distinctive features, while accepting - to a certain extent - different cultures to live in its community.

JCM612 Internationalization of Media 2 cr.

This is an introductory course to different concepts and issues related to the internationalization of the media industry, in relation to international relations, political economy, cultural studies and New World Information and Communication Order.

JCM613 Bilateral, Multilateral, Mediation and Globalization 2 cr.

This course develops various types of communication used between countries in diplomacy and politics, from the United Nations to the European Union and the Arab League. Students will be able to understand the role of the State, and bilateral relationships between States. The course provides explanations about various existing international organizations (role, structure, relationship with these organizations).

JCM620 Multicultural Communication 2 cr.

This course explores consubstantial relationships between communication and culture. As an important and essential element of the communication act, cultures live, perpetuate and renew themselves through communication. The course introduces communication semiotics, and invites students to analyze the mechanisms of intercultural communication.

JCM621 Thematic Seminars 2 cr.

The course is a cycle of seminars, involving qualified professionals and specialists from other fields, who will explain the real needs of the market, alongside the available media means to meet these needs.

JCM680 Professional Internship 3 cr.

This course is based on a one month traineeship in a press office, company or advertising agency. During traineeship, students will become familiar with the different services and posts, before selecting a certain job. On completion, they will submit a report summarizing their performed tasks and experience.

JCM690A Master Dissertation 6 cr.

After completion of the MA courses, students are required to prepare and submit an independently researched dissertation, under the close supervision of a department professor or expert of the field. They should conduct their own original research and write a dissertation of approximately 150 pages in length, on a chosen theme or issue relating to journalism and communication.

LIBR605 Collection Development and Management 3

This course examines the principles, processes, issues and best practices for developing and maintaining library and information center collections. It studies the methods for identifying the needs of a user community, designing a collection policy, selecting and acquiring library materials in all formats, making decisions related to a collection's management and preservation, and evaluating the quality and appropriateness of an existing collection.

LIBR610 Information Sources and Services 3

An introduction to concepts and processes relating to reference and information science. An overview of the reference function includes the history and future trends of reference service, question negotiation, information needs analysis, effective research strategies, evaluation of information sources in various formats, and ethics of information services.

LIBR615 Library Automation Systems 3

This course deals with the principles for the design, selection, implementation, and management of automated systems for all types of libraries, including systems for technical services, processing, reference and user's services. It provides the students with a sound understanding of how libraries apply technology to deliver information. It also describes several open source integrated library systems (ILS) and other proprietary ILS.

LIBR620 Digital Libraries 3

A theoretical study of planning, designing, constructing and evaluating digital libraries, as well as an opportunity to practice. This course covers the requirements, components and technologies of digital library systems, follows the evolution of digital libraries and explores the trends influencing their structure and development.

LIBR625 Rare Books and Special Collections 3

A practical introduction to the field of rare books and special collections, as well as codicology and manuscript cataloging. This course provides students with a definition of rare books and special collections, presents the different types of materials housed in special collections, and discusses what being a rare book and special collections librarian entails. It also covers the study of Syriac and Arabic manuscripts from different places and periods, written in different hands, in order to gain a basic knowledge in how to read and to some degree date and geographically locate these manuscripts.

LIBR630	Informetrics	3
An introduction to the study of the quantitative aspects of information, including the production, dissemination, and use of all forms of information, and encompassing the following fields: bibliometrics, which studies quantitative aspects of recorded information; altmetrics, which is concerned with non-traditional metrics that have been proposed as an alternative to the more traditional citation impact metrics; scientometrics, which studies quantitative aspects of science; and webometrics, which studies quantitative aspects of the World Wide Web.		
LFR201	Advanced French Language Course	3 cr.
Prerequisites	LFR120	
This course enables students to master all grammatical functions and to manipulate the different types of clauses: independent, main and subordinate. The overall method adopted is inductive and the approach is that of text grammar.		
LFR205	Modern Cultural Issues in French	3 cr.
The main objective of the course is to educate future translators in the major political, economic and social contemporary developments, comprehended in their philosophical, historical and human dimensions. It also aims to create in students the habit of reading the world press (French in particular) to familiarize them with the analysis styles used and to think critically.		
LFR210	Myth and Literature	3 cr.
This course seeks to initiate the students to the sources of Western literature through the study of Greek and Roman myths. The course consists of two parts. The first part includes the definition of myth in general, of the Oedipus myth in particular, and a presentation of ancient tragedy. The second part focuses on the comparative study of ancient tragedy and a classic tragedy. The course concludes with an introduction to the myth criticism approach.		
LFR211	Textual Analysis	3 cr.
The course defines specific concepts and methods related to the literariness of a text: fiction, mimesis, figures, versification, etc., and introduces students to the analysis of writing techniques involved in various genres and types of texts. This course represents an introduction to critical approaches which will be elaborated on later in targeted courses.		
LFR212	Commentary	3 cr.
This course is designed to help students acquire writing techniques to develop both French literary exercises: <i>Commentaire composé</i> and <i>dissertation</i> as per the Official French Curricula.		
This course teaches students the necessary skills needed for analyzing literary texts and writing whole dissertations and gives students the opportunity to enhance their writing abilities. The theory will be given based on analysis of texts from several periods and genres.		
LFR216	Techniques of Expression in French	3 cr.
This course initiates students to analyze different kinds of oral or written texts through communication, enunciation, semantics, narration and argumentation theories. It also develops formal and stylistic specificities peculiar to each type of speech and leads students to analyze and produce different types of texts. It helps students to consider, later on, in their translations the communication strategies and other types of speech due to their identification and analysis in this course.		
LFR220	History of French Literature I (from the 18th to the 20th century)	3 cr.
Literary history (18th, 19th and 20th century) invites students to re-explore the French literature of modern times through its main authors and movements. It uses mainly the diachronic approach which enables students to relocate a work within a broad literary movement, to identify the specificities of expression modes related to an era or to a literary genre, and to understand the conveyed literary sensibilities.		
LFR221	Literature, Culture and Society	3 cr.
This course aims to shed light on the relationship between society and literary production by relying on the historical and political context of a specific era. The chosen time is the 1950s, a period shaken by the two World Wars whose influence is particularly seen in writings that fall within the dramatic genre.		
LFR224	Elements of Linguistics	3 cr.
Based on texts written by the founders of the discipline, this course will introduce students to the history of linguistics and the main linguistic concepts and theories developed to date, in order to familiarize them with the various fields of the application of linguistics. This introduction will be followed by a study of the French phonetic and phonological		

systems: synchronic study of sounds, articulatory and combinatorial phonetic transcription, and the phonological approach to French (articulation points and modes of phonemes, minimal pairs, distinctive features, etc.). It will be followed by the study of phonetic evolution.

LFR310 Francophone Literatures and Cultures 3 cr.

This course aims to examine the expansion of Francophonie based on two problem issues: the first one deals with the relationship between history, politics and literature; while the second deals with the link between the francophone writer and the French language. The issues will be examined using a grouping of texts taken from the most representative books of Francophonie.

LFR316 French Morphology and Syntax 3 cr.

Prerequisites LFR201

This course is about lexicology which is divided in two branches: lexical semantics and lexical morphology. We will first define lexicology, word and lexicon. Then, we will explain Saussure's theories about the sign, the different kinds of definitions and semantic relations. In Morphology, we will treat words' formation (derivation, composition, etc.).

LFR322 Novels, texts and representation 3 cr.

This course briefly retraces the Napoleonian's epic in order to show its influence on the 19th century literature. This myth, which has influenced the collectivity's imaginary, will be studied through three integral works. We will also analyze some excerpts from another writings. At the end, we will educe some constants about this myth's perception as well as some major differences.

LFR409 Topics in French Literature 3 cr.

This course will successively shed light on the structural and narrative characteristics, as well as the thematic constants of the fairy tales and fantasy through a corpus of short stories and stories that reveal the evolution of both genres between the 17th and the 20th century.

LFR411 Latin Language and Civilization 3 cr.

Accessing a second level of learning Latin clearly requires a preliminary initiation. This course will first endeavor to summarize and deepen certain language skills, then complete this first level with an indispensable civilizational supplement. To this end, the implementation of a teaching method alternating between language and civilization will offer students the opportunity to rediscover the heritage that founded the French language and thinking.

LFR420 Literary Readings 3 cr.

Prerequisites LFR314

This course is designed to study the work of Jean Cocteau, a marginal author whose pluralistic work played a leading role in 20th century literature. Novels, poetry, theater, cinema, music and painting are all areas that were explored by this unique author.

LFR423 Linguistics of Enunciation 3 cr.

Pre-requisites LFR224

This course aims to introduce students to the theory of articulation. After locating articulation in the field of linguistics, the course will familiarize them with the components of indexical deixis, with the characteristics, particularly the verbal ones, of the articulation plans and with the different forms of the enunciative heterogeneity. The presentation of each notion will be followed by a relevant observation, analysis and interpretation in the selected literary texts.

LFR430 Literary Criticism 3 cr.

Initiation to the structuralist-narratological approach of a text using the method of Gérard Genette.

LFR520 Culture and Modern Civilization Seminar 2 cr.

This course deals with the analysis of what makes the unity of a culture and differentiates it from others. It is based on the theories of Margaret Mead and de Bruno Latour who are concerned with how individuals receive their culture and integrate it within their personal development. Based on the study of exemplar stations of French culture that range from the Golden Age, though the Roaring Twenties, the period between the two World Wars, May 68, the Women's Liberation Movement and the French theory (Derrida, Barthes, Guattari, Bourdieu), we will challenge the biases rooted in attitudes, and we will study using literary texts the difference between men and women in French society according to the psychosocial context, besides studying gestures and corporeality related to each gender. We will also focus on the movement of ideas at the end of the 20th century in interaction with the cultural totality.

LFR521 French Literature Seminar I 3 cr.

This course proposes a philosophical approach to literary texts of 20th century authors, placing the literary work at the intersection of the concerns and aspirations of a group and/or an individual. Hence, students deal with another phase of the pluralistic reading of a literary work showing the intersection of this writing within a multidimensional space-time framework, placing the work at the crossroad of a convergence of thoughts rooted in a particular era, while transcending it; however, these works remain literary in the first place regardless of the genre used.

LFR522 French Literature Seminar II 3 cr.

This course is designed to teach the Freudian and Jungian schools to the students of the Masters in French Language and Literature, as well as their application to literary texts as critical approaches of the sub-textual discourse, or in other words the unconscious of the text.

LFR524 French Linguistic Seminar I 3 cr.

The course consists of two parts. The first is devoted to a review of linguistic and stylistic concepts. The second deals with the application of concepts to poems taken from two collections: *Les Fleurs du mal* by Baudelaire, and *Liban: Vingt poèmes pour un amour* and *Archives sentimentales d'une guerre au Liban* by Nadia Tueni, in order to write a stylistic review of a poem.

LFR525 French Linguistic Seminar II 3 cr.

This seminar aims to remind students of the stylistic guidelines and help them to apply these concepts to a specific corpus. The selected corpus is a collection of monologues taken from works that belong to the period from the 17th to the 21st century.

LFR526 Seminar: Theater 3 cr.

The course focuses on the evolution of the genre. A diachronic vision attempts to trace the sources of Greek tragedy, to show the future of dealing with the tragic themes, the appearance of comedy and the creation of the tragicomic genre. The corpus is rich: the syllabus includes Aeschylus, Euripides and Sophocles, Plautus, Adam de la Halle, Monléon Robert Garnier, Tirso de Molina, Shakespeare and Calderón. The seminar, refraining from an artificial thematic repartition, will dwell on many areas of interference before examining the preparations for classical drama.

LFR610 Seminar: Comparative Literature 3 cr.

The course consists of three parts. The first part reviews the Oedipus myth, the ancient and the classical tragedy. The second part focuses on a comparative study of a Greek tragedy, *The Phoenician Women* by Euripides and two classical tragedies, *The Thebais* by Racine and *Oedipus* by Corneille. The third part is devoted to an introduction to myth criticism.

LFR612 Seminar: General Linguistics 3 cr.

The objective of this seminar is to review issues related to language and gender; exploring female and male dialects by presenting them in their most representative aspects at many levels relating to phonology, syntax, morphology and multiple contingencies that govern every utterance. The language in question is not only verbal but also gestural. In this brief overview, we rely on the course of general linguistics by Ferdinand de Saussure. We then propose outlining a new question in terms of linguistics of sexual difference by referring to contemporary linguists: Lakoff, Verena Aebischer and Anne-Marie Houdebine.

LFR621 Seminar: French or Francophone Literature 2 cr.

The course is dedicated to a hermeneutic reading designed to teach students the decryption of sacred symbols, as well as the application of philosophical and religious concepts to literary texts, presenting the rationale of evil (the pact with the devil, metamorphosis and inversion) and good (the quest of the Self, the quest of God and angelism).

LFR623 Seminar: Pragmatics 2 cr.

This seminar aims to introduce pragmatics as a linguistic discipline. The various pragmatic theories which help examine the functioning of words in situations will be introduced, in addition to the extra-linguistic processes for the production and interpretation of meaning. These theories will be applied to extracts of theater, a dramatic genre presenting many similarities with authentic conversations, the real object of interest of pragmatics.

LFR690A Master Dissertation 6 cr.

LIT202 The Liturgy, Expression of Faith 2 cr.

This is a course that analyzes and comments on the famous saying: *Lex Orandi, Lex credendi*, "the law of prayer is the law of faith", and offers a preliminary explanation of the meaning of "liturgy" that will be followed by three illustrations of the saying.

LIT203 The Liturgical Assembly, Incarnation of the Church 2 cr.

This course focuses on the liturgical assembly, and how liturgy celebrates the faith of an assembly as it was the case for the first Christian communities. To the extent that the assembly is "liturgical" and alive, its liturgy will be meaningful and will be the "incarnation of the Church". The celebration of the paschal mystery opens to communion and sharing, and makes the sanctifying Spirit active in the lives of Christians. There is, therefore, a logical sequence between the paschal mystery, Christian worship, liturgical assembly and Christian life leading to the incarnation of the Church.

LIT205 The Divine Office of the First Five Centuries 2 cr.

This course will consider the liturgical aspects of Divine Office of the first five centuries and students will try to develop the wide-ranging evolution of the office. The course highlights the contribution from the Jewish heritage and the Christian meaning of the Hours.

LIT206 Liturgical Literature 2 cr.

This course will teach students how to closely identify the liturgical sources, to follow them through their historical development, their rituals and literary developments and to highlight their worship-based importance within the Christian community.

LIT207 Conciliar Constitutions = SL 2 cr.

This course examines the Vatican Constitution II on the Liturgy, which does not present itself as a dogmatic text but rather as a document of a pastoral nature. Its primary purpose is not to draw a theology of the liturgy, but to direct the restoration and the progress of liturgy with authority.

LIT301 Liturgical Year and Calendar 3 cr.

This study examines the different concepts of time and of multiple dimensions. It seeks to write the history of the origins of the calendar, in general, and particularly of the Hebrew one, which was the basis of the Christian calendar. This study presents the liturgical year in each Eastern rite, its structure, characteristics and spirituality.

LIT302 Cycle of Holy Week 3 cr.

The objective of this course is to pursue the scientific research of students through the biblical and patristic sources and through the offices and the celebrations of Holy Week, to create awareness of the importance of this Holy Week, the summit of the liturgical year (SL 102, 111).

LIT303 Sacrament of Marriage 2 cr.

God has established marriage by "creating man and woman" that owes nothing to the state or to the Church. It is a natural institution called "customary marriage": a union based on marriage and family more than on formalities. Even for the chosen people, marriage is an earthly reality. The Church, in turn, believes that "marriage has God as its author. It was from the beginning as a figure of the Incarnation of the Word of God". The Vatican does not diverge from this biblical vision. This course examines the development of the celebration of marriage throughout history.

LIT305 Mass in the East and Theology of Anaphora 3 cr.

The course is presented through a liturgical, historical and theological perspective. The first part considers the historical and liturgical development of the parts of the Mass, through the various Eastern liturgies, and distinguishes between the Antiochian and the Alexandrian structure. The main parts of the Mass will be detailed. A major importance will be given to the anaphora.

LIT306 Maronite and Syrian Jacobite Office 2 cr.

This course highlights an important part of the Maronite and Syriac Jacobite liturgy, neglected or forgotten to some extent. It describes, in light of recent and critical research, the structure and theology of the different Hours of the office, and guides students towards an objective understanding of the liturgical reform of the Maronite office.

LIT307 Introduction to the Latin Liturgy 2 cr.

The objective of this course is to give students a comprehensive training on Eastern liturgy which will complement his/her detailed training received on the Eastern liturgy course. The goal is to introduce students to research, to expose them to Western liturgy, and from there, to understand and fully participate in each liturgical celebration in any rite, whether Eastern or Western.

LIT308 Introduction to the Armenian Liturgy 2 cr.

The different Christian communities of Lebanon have different liturgies. This diversity is in itself an invaluable asset for this small country with a substantial Christian population. The source of this diversity of liturgies in the Church is attributed to the inspiration of the Holy Spirit that, on the day of Pentecost, gave the apostles the ability to tell diverse liturgies in several of languages to the Church. All these existing liturgies in Lebanon (Antiochian, Byzantine, Catholic, Orthodox, etc.) have their origins outside Lebanon. The case is the same for the Armenian liturgy created in the distant Armenia.

LIT309 Audiovisual in the Service of Liturgy 2 cr.

Assaulted by media, attacked by images, deafened by sounds, we are still free to choose, are we still free to act and communicate? How to communicate? How to be understood? Does communication have any principles? What are its principles? According to which models of communication did Jesus communicate?

Does the multimedia civilization allow us to celebrate Jesus Christ and to offer our faith? How to celebrate Jesus Christ in the multimedia era?

LIT310 The Ritual in the Eastern Liturgies 2 cr.

In all the subjects taught at the Institute of Liturgy, there are many courses which try to encompass several liturgical disciplines: the Mass, the Divine Office, the liturgical year, and so on. A course on the book of the Ritual was lacking. This book is of paramount importance because it is the priest's book, and the faithful participate in most of its ceremonies. This is why the liturgical, theological and spiritual study of the Ritual is essential since this book contains various important rites or ceremonies: First, it contains the rites (or ordos) of the sacraments: Baptism, coronation, penance, 'Anointing of the sick. We find the rites of the Holy Week, of the Great Sunday of the Resurrection, of the genuflection at Pentecost; we find, in the same way, various blessings: on the children, on the mother who gave birth, on the

newborns, etc. This course shows the importance of this liturgical book in the various oriental liturgies. Our aim is to familiarize the students with this one, in the various liturgical families: Maronite, Syrian, Chaldean, Byzantine, etc.

LIT401 Epiphany Cycle and Christmas 2 cr.

The objective of this course is to discover the two liturgical cycles of Christmas and Epiphany. It should answer the fundamental question: What is the connection between the Epiphany, manifestation of the Lord, and Christmas?

The goal is to guide students in theological liturgical scientific research around these two liturgical rites, Christmas and Epiphany.

LIT403 Office of the Dead 2 cr.

The mystery of death remains an impenetrable subject in many traditions and cultures. But with Christianity, it has become more obvious; it is a sign of hope provided that the texts of the funeral service reflect the truth of the Resurrection of Christ.

LIT404 Byzantine Office 2 cr.

This course will consider the Byzantine office from several angles: legal, theological and liturgical. Emphasis will be given to the liturgical aspect that consists of advancing the wide-ranging evolution of the Byzantine office and its development.

LIT405 Impact of the Monastic Life on Liturgy 3 cr.

If the liturgy is the work of God celebrated in the ecclesial communities, it is still engaged in a well-defined historical and geographical environment. Students will examine the content of liturgical prayer celebrated by the monks of the early centuries as an expression of the multiple wisdom of God. This liturgical-monastic aspect affirms the conjunction of the divine mystery and its symbol to reach the peaks of union with God.

LIT406 Liturgical Symbolism 2 cr.

The essence of religion is to be found in the intersection of the symbolic and the sacred, and the essence of the symbol is to look within the liturgy; because man and symbol meet and interact in a prayer and in a liturgical action.

LIT407 Liturgical Pastoral 2 cr.

Liturgy is both science and celebration. The practical side is an integral part of this science. In other words, the liturgy can be a science of the liturgy only through this transition from theory to live experience and from science to the celebration.

LIT408 Liturgical Spirituality 2 cr.

The course is a true introduction and a practical guide to understanding spirituality in general and its relationship with the liturgy. We intend, through this course, to bond spirituality with science; because beyond all, the life lived concretely and individually is the one we tend to lead to science to reach a desired spirituality.

LLA212 Introduction to Linguistics 3 cr.

This course will provide an introduction to the discipline of linguistics. It focuses on the fundamental concepts, the basic goals and the methods of modern theoretical linguistics. It introduces students to linguistics through the writings of well-known linguists, such as, but not limited to, Ferdinand De Saussure, Bloomfield, André Martinet, Roman Jakobson, and Noam Chomsky. By the end of the course the students will be familiar with some of the terminology and techniques of linguistic analysis.

LLA222 Introduction to Rhetoric and Stylistics 3 cr.

The course is designed to help the students practice writing, reading, evaluating, formulating, and presenting opinions in writing based on the best available evidence, using the methods of formal argument and the methods of rhetorical style.

LLA224 Introduction to the Study of Literary Genres 3 cr.

The focus of the course is on modern drama, and poetry arts such as instructive topic, wisdom, and lyrics. The course aims at helping students gain awareness in the cultural experience of modern drama and topic poetry. It familiarizes students with literary movements such as naturalism, symbolism, realism, and other dramatic features.

LLA312 Pre-Islamic and Umayyad Epochs 3 cr.

The course covers, in introduction, the civilization and the literature of the Pre-Islamic epoch. It helps students to recognize various topics such as glory poetry, chivalry, wisdom, speech, and enthusiasm. Then the course covers the civilization and the literature of the Early Islamic and Umayyad Era. This course aims to distinguish between the development of poetry and prose in this period, and to describe the different methods and characteristics of Early Islamic and Umayyad literature such as Islamic poetry, Umayyad speech, and epistles.

LLA315 Novel and Theater 3 cr.

This course aims to offer students a detailed study of the development of the 20th century novel as an outcome and reaction to the 19th century novel. The course gives special attention to some of the major Arabic novelists, such as Najib Mahfouze, Toufic Youssef Awad, and Amine Maalouf. This course offers both a historical survey and a literary history of the development of drama. It concentrates on critical analysis of the distinguishing features of the different genres and sub-genres in drama, tragedy, comedy, and tragicomedy. This course gives special attention to the major Lebanese theater, such as the Rahbany brothers, Shoushou, Nabih Abu El Husn, and George Khabbaz (modern theatre).

LLA316 Literature in the Abbasids Era 3 cr.

The course is designed to help students study the civilization and the literature of the Abbasids Epoch. This course aims to distinguish between the development of poetry and prose in this period, and to describe the different methods and characteristics of Abbasids literature (poetry, speech, narration, maqama, music, and singing).

LLA318 Arabic Morphology and Syntax 3 cr.

Prerequisites ARA120 Or LLA210

This course aims to help students acquire the basic rules of Arabic morphology and syntax (from the perspective of functional grammar). It will enable them to produce a grammatically correct text. The method adopted uses a text or a series of typical examples, from which the students derive the rule, acquire it and apply it appropriately.

LLA323 Literature in the Mamluk and Ottoman Era 2 cr.

In this course, the students learn about the developments of the Islamic world during the period of Mamluk and Ottoman colonial domination and its aftermath, with special attention to the works of leading authors. In Mamluk literature: Al Boussayri, Saffieh Al Dinn, Ibn Nabata, Ibn Manzour (Issan Al Arab), Salah Al dinn Al safady (Alwafi bel Waffiatt), and Al Kalkashindi (Sobeh Al Ashaa). From the Ottoman literature: Ibn Al Nakib, Ibn Maatuk, Nicola Al Turk, Boutros Karame, and Bader Al dinn Alghozzi.

LLA324 Literature in the Renaissance Era 3 cr.

This course introduces students to Renaissance literature by studying the history of this period and the famous authors and poets who changed the structure of literary texts. This course aims to consider many poetry texts, and to study the influence of printing, and of journalism, the pedagogic foundation which left their effects on Arabic modern literature. The students will be looking at important poets and writers, such as Ahmad Amine, Gergi Zayden, Joubran Khalil Goubran, Micheal Nouayme, and others, and they will study the characteristics of literary production in the light of new methods of modern criticism.

LLA325 Literature in the Andalusian Era 2 cr.

In this course, the students study the prose and the poetry of Andalusian literature. They will study literary genres in order to interpret, analyze, and critically evaluate selections. Poetry topics: nostalgia, nature, terza rima (mouwashah). Poets: Ibn Zaydun, Ibn Khafaja, Ibn Zumrok, Wallada bent Al Mustakfi. Prose topics: Maqama, biography, speech, the short novel, Diwan writing. Writers: Ibn Abd Rabboh, Ibn Tufayl, Ibn Shahid. The students will also learn about the Andalusian civilization, aspects such as religions, languages, the role of women, culture, and society.

LLA326 Overseas Arabic Literature 2 cr.

This course is an introduction to the major literary movements of overseas writers, starting with Gebran Khalil Gebran, M. Nouayme, R. Ayoub, N. Arida, among others. The course traces the major development of Arabic literature overseas, and helps students to investigate the themes and the characteristics of this literature.

LLA411 Comparative Literature 3 cr.

This course investigates the nature and scope of comparative literary studies, focusing on the nature and assumptions of literary study undertaken from several comparative perspectives. It is designed to equip students with the tools necessary to critically analyze texts in light of other texts.

LLA412 Arabic Linguistics Problems 2 cr.

Prerequisites LLA212

This course is a continuation of LLA212. It stresses the importance of linguistic evidence in understanding grammatical correctness. Focusing on the acquisition of basic vocabulary and grammatical structures, it helps students explore, in depth, the principles of word formation, derivation, and inflection, and simultaneously provides an overview of the major syntactic constructions of Arabic.

LLA435 Modern and Contemporary Arabic Criticism 3 cr.

The course prepares students to study, evaluate, and interpret the Arabic literature texts. It will help students to recognize the different methods to criticize the literary text by using the logic interpretation and constant evaluation. The course aims at enabling students to practice how to use different theories, how to read literature, and how to relate literary theory to the cultural background.

LLA415 Lebanese Popular Heritage 2 cr.

This course presents the Lebanese popular language and its importance, its Aramaic origins, and the interest of its study for Westerners. It defines the rules and meters of Lebanese folk poetry, the Zajal (its different genres, its pioneers, along with its modern and contemporary troops), the Muwassah, al-Ataba, al-Mijana.

LLA423 Modern and Contemporary Arabic Literature 2 cr.

This course presents the modern Arabic literature of prose and poetry. It defines modernity and its general characteristics: the literary genres (novel, play, biography, literary research). It presents the contemporary Arabic literature and its universal dimensions: the Arabic novel, its principles and general rules, the movements that it illustrates, and its methods. At the poetry level, the course defines the concepts of modern, new and contemporary.

It reviews the history of modern poetry: its beginnings, its pioneers, its stands, its directions, as well as its various forms of prose, poems, and poems subject to the rules of prosody.

LLA511 Seminar: Literature I 3 cr.

The aim of the course is to define the features of major literary genres: poetry, prose, and drama. The design of the course involves the explanation and modes of analysis of the different types of each genre. It focuses on contemporary authors and on current fields of interaction between arts, sciences and literature.

LLA512 Seminar Linguistics I 3 cr.

The aim of this course is to make the students aware of the importance of studying linguistics theory in order to be acquainted with the grammatical efforts of former Arab grammarians (al khalil bin Ahmad, Sibawaih Ibn Jinny) who analyzed, in their books, the Arabic language through a scientific methodology which does not differ from the linguistic methodology adopted by the generative and transformational grammar. Topics include, but are not limited to, the grammaticality of sentences, the definition of human language, the linguistic competence, and the nominal phrase.

LLA520 Seminar: Contemporary Culture and Civilization 2 cr.

This seminar aims, through a diachronic approach, and starting from the relationship between thought, language and civilization, to shed light on the great trends, movements and schools which have marked, with the passing centuries, Arabic society and culture, and this from within literary texts and founding documents.

LLA521 World Literature 3 cr.

This course introduces students to the diverse genres of international literature and to masterworks produced by Arabic authors. It will help students to read, analyze, and research diverse and significant literary texts. Genres studied include fiction (novels and short stories), drama, comedy, lyrical literature, imagined story, speech, poetry and prose.

LLA522 Textual Approaches 3 cr.

This course aims to help students to approach the literary texts, understanding them by using the modern criticism, studying the form of texts, structure, linguistic style, and evaluating them as performance text meant for production. Students will research and study literary elements of narrative forms, and storytelling traditions of different cultures.

LLA523 Seminar: Modern Theater 3 cr.

The seminar focuses on the esthetics of drama and distinguishes between modern and contemporary drama writing and classical drama poetics. It analyzes Lebanese and Arab theater from pragmatic and intercultural perspectives.

LLA610 Seminar: Arabic Literature II 3 cr.

The aim of the seminar is to define the features of major literary genres: poetry, prose, and drama. The design of the course involves the explanation and modes of analysis of the different types of each genre.

LLA612 Seminar: Arabic Linguistics II 3 cr.

This seminar introduces students to the fields of applied linguistics. It explores how children from infancy to the early school years learn their first language and presents an overview of psychological research and theory on language acquisition. It also covers applications of various branches of linguistics to the methods and approaches of teaching Arabic language.

LLA621 Seminar: Comparative Literature 2 cr.

This seminar will acquaint the students with basic methods and concepts of criticism through close reading of key texts (lyric poetry, drama, short fiction) by major authors. It will offer the students the chance to investigate what constitutes the field of comparative literature. They will trace the history of the discipline and explore traditional as well as recent areas of research, such as interdisciplinarity and global and multicultural comparativism. Students will investigate how to more fluently cross the boundaries of disciplines and national literatures. The course involves a thorough reading and understanding of the background, history, and literature associated with world literatures.

LLA623 Seminar: Civilization and Literature Topics 2 cr.

The course is designed to focus on major issues in literature, such as gender, racial, ethnic, religious, political, colonial and postcolonial culture and multiculturalism. This course aims to raise the students' awareness of the inter-relationship between literature and society in all of its facets.

LLA690A Master Dissertation 6 cr.

The dissertation, which consists of 100 to 150 pages, crowns the completion of the Master's degree by elaborating upon an Arabic literature subject. Students will learn to manage the difficulties of writing a scientific work supported by appropriate research and one that is presented in a rigorous and clear manner. Through the dissertation, the students must successfully prove that they master the components of the methodology required to achieve a scientific work, and that they are able to analyze, argue, illustrate, and defend a thesis, as well as validate a problem, relying on strong and authentic documents and bibliographic references.

LLA700 Seminar: Scientific Research Methodology 3 cr.

This seminar aims to give graduate students the means to acquire the methodological skills essential to the development of their thesis, according to internationally accepted standards. It aims to help them respond quickly to questions they

pose relative to the choice of topic, the organization of their work, using information available to them, in the writing of the thesis, and running the defense.

LLA710 Seminar: Comparative Literature 3 cr.

This seminar aims to develop and deepen knowledge of the Ph.D. students in comparative literature. It broadens their cultural horizons by comparing their own literature and those of other nations. It enables them to compare their own thoughts to those of others, and that of their society with those of other foreign societies, such as customs, traditions, tastes and arts that are peculiar to each of them. It raises global issues in the field of the literary world, presents the characteristics of the different schools of comparative literature, and studies the links connecting literary subjects to those of other humanities disciplines, as well as the corresponding manifestations of these same subjects in other literatures.

LLA711 Seminar: Linguistics and Terminologies 3 cr.

This seminar will focus on certain problems in linguistics and terminology issues which enable a fresh look at a number of key concepts used in linguistics, such as those of sign, categorization, concept, competence, denotation, and connotation. Particular emphasis will be placed on the interest that there may be to analyze, in a terminological framework, metaphors and figures of speech. This doctoral seminar proposes supervised student activities on research projects identified on an individual or small group basis.

Pre-requisites ARA210 or LLA210

This course aims to help students acquire the basic rules of Arabic morphology and syntax (from the perspective of functional grammar). It will allow them to produce a grammatically correct text. The method adopted uses a text or a series of typical examples, from which the students derive the rule, acquire it and apply it appropriately.

MAC216 Ethics of Insurance 3 cr.

This insurance law course begins with an historical overview and insight into the technical and actuarial foundations, as well as some important boundaries, particularly with regard to social insurance. The state of the business of insurance supervision is looked at, and the new law on this is commented upon. In private law, the course deals with the insurance contract and its essential terms. It ends with an overview of the reinsurance and insurance international business. The course is based on theoretical cases, as well as news articles, practice and jurisprudence and the links with the law of civil liability.

MAC315 Insurance Contracts 1 cr.

This course is designed to familiarize students with the different types of life and non-life insurance contracts as well as with accounting and their application in various types of insurance companies. In addition, by the end of this course, the students will have acquired the practice of life insurance. All these concepts will be addressed through workshops so students will be able to understand theoretical and practical information.

MAC400 Actuarial Mathematics 3 cr.

Prerequisites MAT312 And STA320

At the end of this course, students become familiar with the mortality tables, actuarial notations, the force of mortality, calculating the expected value, calculating the pure premium of some types of insurance contracts as well as with the calculation of reserves.

MAC421 Demography and Actuarial Science 3 cr.

Prerequisites MAT312

The aim of this course will be to acquire an overview of the theoretical bases of more sophisticated modeling and forecasting of the development of mortality which is necessary for the calculations of the life insurance premium.

MAC430 Insurance Accounting and Mathematical Reserves 3 cr.

Prerequisites MAC400

This course will allow students to understand the key characteristics of insurance accounting, recognize the types of accounting frameworks and some selected accounting concepts and to identify the fundamentals of insurer financial statements. In addition, students will have an overview on Reinsurance accounting basics and they will be able to calculate loss reserving by applying different methods such as Case reserve plus, Expected loss ratio method, Chain Ladder and Bornhuetter-Ferguson methods. The course content is in line with the syllabus and content of "Introductory Insurance Accounting" course designed by the Casualty Actuarial Society (CAS) specifically for actuaries.

MAC438 Internship Report 1 cr.

Prerequisites MAC400

The students are required to undertake an internship in an Insurance company or a bank. He/she will work with his/her advisors to identify the internship of mutual interest and prepares a significant written document or other work of scholarship that outlines the learning and professional development experiences of the internship. Formal presentation of the results of the internship is required.

MAC510 Individual Health Insurance 3 cr.

The aim of this course is to provide students with the knowledge of what life and health insurance products are available, how are they designed, what advantages and disadvantages they have, how they can be improved and how comparison can be made. Products covered include traditional insurance as well as investment-linked, long-term care, group insurance and retirement plans.

MAC520 Theory of Risk 3 cr.

This course aims to provide students with actuarial methods and techniques of insurance to manage the risks of large portfolios of property and casualty insurance. It addresses: the basic principles of risk management, methods of calculating premiums, risk measures and the determination of the margin of solvency as well as economic capital, the correlation between insured risks and consequences, long-term balance of the operations of a company and the management of multiple risks.

MAC530 Non-life Insurance 3 cr.

This course is divided into three parts: loss models, risk and ruin, and credibility theory. In part one, we discuss actuarial models for claim losses. The two components of claim losses, namely claim frequency and claim severity, are modeled separately and are then combined to derive the aggregate-loss distribution. The techniques of convolution and recursive methods are used to compute the aggregate-loss distributions. Part two is about two important and related topics in modeling insurance business: measuring risk and computing the likelihood of ruin. In this part we introduce various measures of risk, we discuss specific measures such as Value-at-Risk, conditional tail expectation, and the distortion-function approach. We also analyze the probability of ruin of an insurance business in both discrete-time and continuous-time frameworks. Probabilities of ultimate ruin and ruin before a finite time are discussed. We finally show the interaction of the initial surplus, premium loading, and loss distribution on the probability of ruin. In the last part of this course, we study credibility theory as a tool providing the basic analytical framework for pricing insurance products. We introduce the classical approach, the Bühlmann approach, the Bayesian method, as well as the empirical implementation of these techniques. Bühlmann's approach provides a simple solution to the Bayesian method and achieves optimality within the subset of linear predictors.

MAC532 Survival Models 3 cr.

This course focuses on the statistical analysis of time-to-event or survival data. We introduce the hazard and survival functions, censoring mechanisms, parametric and non-parametric estimation, and comparison of survival curves. We cover continuous and discrete-time regression models with emphasis on Cox's proportional hazards model and partial likelihood estimation. We discuss competing risk models, unobserved heterogeneity, and multivariate survival models including event history analysis. The course emphasizes basic concepts and techniques as well as applications in epidemiology using the statistical packages SPSS and R.

MAC601 Special Topics in Actuarial and Financial Mathematics 1 cr.

Prerequisites FSC600 or SCF600

Topics selected from recent literature on actuarial and financial mathematics are studied in depth. Students will participate in a series of conferences presented by experts.

MAC602 Special Topics in Actuarial and Financial Mathematics II 1 cr.

Prerequisites MAC601

Advanced topics selected from recent literature on actuarial and financial mathematics are studied in depth. Students will participate in a series of conferences presented by experts.

MAC603 Tutorial in Actuarial and Financial Mathematics 1 cr.

Prerequisites MAC601

Topics selected from recent literature on actuarial and financial mathematics are studied in depth. Students will be responsible for presenting selected topics from the current scientific literature. They will be graded on relevance, critical analysis and presentation.

MAC620 Time Series and Financial Models 3 cr.

This course aims to instruct students in how to examine a time series, to extract its trend and its seasonal components and to master the principal modeling and forecasting methods. It develops the concepts of modeling by the method of regression and by decomposition of a series. Other topics covered are: review of outliers, forecasts; case of correlated disturbances; deseasonalization by the moving average method; maintained or cancelled by a moving average series; average retaining local, medium polynomials under various constraints, minimizing the variance of the disturbance; capacity for smoothing a moving average; treatments of the ends; forecast using smoothing methods; exponential smoothing, methods of Brown, of Holt & Winters; second-order stationary processes; stationarity, autocovariance and autocorrelation; partial autocorrelation, Durbin algorithm; infinite moving average process, spectral density; autoregressive process AR (p), medium-sized mobile MA (q), mobile medium-Autoregressive process ARMA (p, q); canonical representation; ARIMA and SARIMA process; and an introduction to non-linear models (ARFIMA, ARCH).

MAC634 Mathematics of Pension Plans 3 cr.

The objective of this course is to give those who are beginning a career as a retirement plan professional a general background in qualified plans as a first step toward meeting the challenges of the profession. The course is divided into two parts.

Part 1 introduces qualified retirement plans, and identifies the special characteristics of defined benefit plans and defined contribution plans. The course addresses installing such plans, distinguishing between the types of plan documents, considering the effect a type of business has on the structure, administration of a plan and an awareness of the parties involved in the operation of the plan.

Part 2 covers plan administration, including census collection, benefit allocations and coverage and nondiscrimination testing. This course emphasizes daily valuation recordkeeping but includes discussions of balance-forward plans and conversions. Appropriate investments for daily valuation plans and fiduciary considerations including investment fees and revenue sharing are discussed. The processes involved in daily valuation recordkeeping are covered in detail, including daily functions, mutual fund trading and ethics concerning trading errors. Finally, the course discusses plan mergers and plan terminations including the termination of defined benefit plans.

MAC641 Financial Modelling 3 cr.

In this course we study discrete stochastic processes and their applications in finance (pricing of certain types of options, coverage of a portfolio, etc.). It begins with the foliation of various types of process, then we consider the concept of the conditional expectation, filtration, adapted and predictable process, Doob's decomposition of a process, then we develop the theory of discrete-time martingales, and stopping times are studied. The remainder of this course is designed for applications in finance, considering the financial options, the prices of options, strategies for managing a portfolio, self-financing strategies, arbitrage strategies, hedging strategies of options, the neutralization of risk, viable and complete markets, then certain types of financial models; the binomial for several periods model and the Cox-Ross-Rubinstein model are studied. The last model to be shown is the discretization of the Black-Scholes model, which is a time continuous model.

MAC697A Master Thesis 6 cr.

Prerequisites MAC600 Or SCF600 Or FSC600
Master Thesis Report

MAT202 Algebra I 3 cr.

Prerequisites MAT110

The course aims at providing the necessary tools and the mathematical maturity for engineers, for the design and analysis of abstract mathematical models. Subjects covered: logic and proofs, propositional calculus; sets and mappings; relations and ordered sets; an introduction to algebraic structures, groups, rings and fields; counting, finite and transfinite cardinals; matrix algebra, complex numbers and polynomials.

MAT213 Calculus III 3 cr.

The course covers integration methods to compute integrals, improper integrals and double integration. We will study the sequences, the numerical series, power series and their applications. Moreover, the course will include a brief look at differential equations.

MAT216 General Mathematics 3 cr.

This course provides the basics needed by students to progress in their specialty courses. Topics covered include: function of a real variable, elementary functions, Taylor's expansion, simple integral and methods of integration, differential equations, multivariable functions, continuity, partial derivative, the chain rule, differential, introduction to double integrals, methods of integration, Matrix calculus, determinants, and linear systems.

MAT220 Differential Equations 3 cr.

Prerequisites MAT213

This course teaches basic theory and techniques of Ordinary Differential Equations (ODEs). Topics include : Solution of non-linear first-order ODE's; Linear ODE's, especially second order with constant and variable coefficients; Delta functions, convolution, and Laplace transform methods; Power series and resolution of differential equations using power series; Real and complex Fourier series; Introduction to partial differential equations.

MAT310 Linear Algebra 3 cr.

Prerequisites MAT213

The main objective of this course is to continue the study of algebra, covering mainly linear systems and matrices, matrix algebra, inverses, Gauss elimination, elementary matrices, computing inverses, determinants, vector spaces, definition and examples of spaces and subspaces, linear independence, basis and dimension, change of basis, linear applications, reduction of an endomorphism, eigenvalues, eigenvectors, characteristic polynomial, eigenvalues, solving linear systems of differential equations, diagonalization and applications, bilinear and quadratic forms, Gauss method, scalar and cross product, euclidean and Hermitian spaces, Gram-Schmidt Orthogonalization process, geometric transformations.

MAT312 Economical and Financial Calculus 3 cr.

This course enables the students to become familiar with the main tools and mathematical models used in economics, finance and actuarial science. The first part focuses on the theory of interest: discount and capitalization, different measures of relevance, equivalency rate, instantaneous rate, annuity, actuarial notation and use of tables, numerical methods. The second part deals with optimizing with and without constraints of functions of several variables, linear regression and application of matrix algebra. The last part focuses on differential and integral calculus with application to problems in economics and finance.

MAT313 Vector Analysis 3 cr.

The main objective of this course is to continue the study of calculus, covering mainly parametric and polar curves, three dimensional analytic geometry, differentiation and integration of functions of several variables, and vector calculus. Line integrals, and Green's theorem.

MAT418 Numerical Methods 3 cr.

Prerequisites MAT310 and MAT220 and INF216

This course will introduce the students to numerical computation allowing them to acquire the necessary tools to gain a better understanding of the modeling problems that they will meet later. The subjects covered are the following: introduction to numerical algorithms; non-linear equations, the bisection method, the fixed point method, Newton method, secant method, and systems of nonlinear equations; interpolation techniques of Lagrange, Newton, least squares, and splines; derivation and numerical integration, numerical solution of differential equations; and various applications with MATLAB (matrix algebra, linear systems, direct methods, iterative methods, eigenvalues).

MAT500 Numerical Analysis and Optimization 3 cr.

The objective of this course is to introduce students to the world of mathematical modeling and numerical simulation. The modeling and simulation have taken considerable importance in recent decades in all areas of science and industrial applications. Numerical analysis is the discipline that designs and analyzes methods or algorithms. Numerical simulation enables mathematicians to tackle problems far more complex and concrete than before, from immediate motivations that are industrial or scientific, which can provide answers to both qualitative but also quantitative questions; this is mathematical modeling. On the other hand, the scientist who was able to numerically simulate the problem does not stop there: he then wants to be able to change some parameters to improve or optimize the operation, performance, or the response of a system by maximizing (or minimizing) the associated functions. It is precisely the goal of optimization that provides theoretical or numerical tools to do this. Numerical analysis and optimization are therefore two essential and complementary mathematical modeling tools.

MAT522 PDE and Modeling 3 cr.

This course aims to teach students the mathematical maturity and the rigor of the methods of classification and resolution of partial differential equations, essential to mathematicians, engineers and computer scientists. It enables students to acquire the basic theoretical tools for manipulation of equations in partial derivatives frequently encountered in mathematical models applied to problems from mechanics, acoustics, hydrology, etc. Topics covered: total differential, integrating factors, linear equations of first order, partial differential equations in partial derivatives of order n to two variables, non-linear first-order partial differential equations, equation of heat and wave equation.

MAT523 Group Theory 3 cr.

This course is an introduction to the theory of groups which gives access to the many uses of theory of groups in mathematics. The central concepts are the structure and the actions of groups. Classifications of groups of small orders and of simple groups serve as motivation throughout the course. The themes addressed are: group actions, Sylow theorems, Semidirect Product, type finite Abelian groups, linear groups, projective groups and representations of finite groups. We derive two families of finite simple groups.

MAT601 Special Topics in Mathematics I 1 cr.

Prerequisites FSC600 or SCF600

Topics selected from recent literature on mathematics are studied in depth. Students will participate in a series of conferences presented by experts.

MAT602 Special Topics in Mathematics II 1 cr.

Prerequisites MAT601

Advanced Topics selected from recent literature on mathematics are studied in depth. Students will participate in a series of conferences presented by experts.

MAT603 Tutorial in Mathematics 1 cr.

Prerequisites MAT601

Topics selected from recent literature on mathematics are studied in depth. Students will be responsible for presenting selected topics from the current scientific literature. They will be graded on relevance, critical analysis and presentation.

MAT610 Discrete Mathematics 3 cr.

The first part of this course is designed to introduce students to the use mathematical language and reading and writing mathematical proofs as well as to the concepts and basic discrete math results which will be then used in the curriculum of

mathematics and computer science. In the second part, we introduce some more advanced concepts in discrete mathematics with emphasis on mathematics used in algorithms (order, lattice, Boolean algebra, graph theory). It covers the following topics: mathematical methodology (logic, truth table); sets and relations; Boolean algebra; elements of arithmetic (Bézout's theorem, Fermat's little theorem, Euclid's algorithm); recursion and induction (linear and non-linear recurrence); graph theory (basic definitions, graph oriented and non-oriented, paths, matrices of incidence, Euler's theorem, planarity, coloring, labeled graphs, trees); mesh (introduction to partial order structures, terminal upper and lower); Boolean algebra (Boole lattice and rings of Boole, Boolean functions, normal forms); and rational and finite-state machine.

MAT620 Spectral Theory 3 cr.

The spectral theory, an essential branch of functional analysis, applies to both pure and applied mathematics (differential equations or PDEs, theory of Von Neumann algebras) as in physics and chemistry. The purpose of spectral theory is, for some Endomorphisms of a hilbertien space, to obtain reduced shapes similar to the canonical forms of Jordan for the Endomorphisms of a finite-dimensional vector space and diagonal forms for the Endomorphisms of a hermitian space vector finite-dimensional hermitian. The theory of Hilbert-Schmidt applications was encountered for the first time in the integral equations, to build a first generalization of the results obtained in the finite-dimensional. In fact, the natural setting of this generalization is that of compact applications, studied by F. Riesz. Nevertheless, the case of the more general Endomorphisms escapes this framework; it is a subject for the spectral theory of Hilbert, which uses the techniques of integration. This course is intended primarily for students in the Master of mathematics, and it presents the mathematical tools of spectral theory: Basic Elements of functional analysis (normed spaces and spaces of Banach, spaces of Hilbert, continuous linear maps, duality, weak topologies), passage of the finite to the infinite dimension for continuous linear operators, dimension theory of compact operators, various forms of the spectral theorem, and self-adjoint operator theory.

MAT623 Distribution Theory and PDE 3 cr.

In mathematical analysis, a distribution (also called generalized function) is an object which generalizes the notion of function and measurement. The theory of distributions extends the notion of derivative to all locally integrable functions and beyond, and is used to formulate solutions to certain partial differential equations. They are important in physics and engineering where many discontinuous problems naturally lead to differential equations whose solutions are distributions rather than ordinary functions. The theory of distributions was formalized by the French mathematician Laurent Schwartz leading him to win the Fields Medal in 1950. Its introduction uses linear algebra and topology concepts centered around the idea of duality. We look for the origin of this theory in the symbolic calculation of Heaviside (1894) and in the introduction by physicists to the "Dirac function" (1926). The objective was to generalize the notion of function, in order to give a correct mathematical meaning to objects handled by physicists. It was necessary to keep the ability to do operations such as derivations, convolutions, and transformations of Fourier or Laplace. The distribution of Dirac is an interesting example of distribution because it is not a function, but can be represented informally by a degenerate function which would be void on its domain of definition, except 0 and the integral would be 1. In reality, quite strictly, it is the limit of a sequence of integral functions 1 distributions and converging uniformly to 0 on all compact does not contain 0. Such a mathematical object is useful in physical or signal processing, but no regular function has these properties.

MAT627 Lie Algebra 3 cr.

Lie groups are groups equipped with a structure of manifold compatible with their group structure. Combining topology, algebra and geometry, they play a fundamental role in many branches of mathematics, but also in theoretical physics. This course is an introduction to the theory of Lie groups and Lie algebras, through the broad matrix Lie groups.

MAT697A Master Thesis 6 cr.

Prerequisites MAT600 Or SCF600 Or FSC600
Master Thesis Report

MATH101 Mathematics I 3 cr.

This is a first remedial course in Mathematics and Statistics designed for freshman students. The course uses MyFoundationsLab instructional software to diagnose areas of conceptual knowledge that students need to work on to gain mastery of topics from Basic Math through Intermediate Algebra and Statistics. The goal is for each student to spend time learning and studying only those topics which he/she needs to gain mastery, not the ones that he/she is already proficient in. This may allow students the opportunity to progress through more than one level of math in one semester, depending on the time and effort that they commit to the course.

MGT220 Principles of Management 3 cr.

An introductory course explaining the definition of management as a set of activities, including: planning and decision-making, organizing, leading, and controlling, directed at an organization's resources, including the human, financial, physical, and informational, with the aim of achieving organizational goals in an efficient and effective manner.

MKT220 Principles of Marketing 3 cr.

This course is designed to help the students learn about and apply the basic concepts and practices of modern marketing as they are used in a variety of settings. It is intended for business students who wish to become the decision-makers of

tomorrow at the middle or upper levels of management since it gives students a comprehensive and innovative managerial and practical introduction to marketing.

MSS310 Sacred Music 3 cr.

This course is an introduction to music in its relation to religion. It includes general concepts on religion, philosophy, the sacred and their rapport with music. Subjects to study: the function of sacred music, the relationship of religion with music, tradition and renewal in sacred music; sacred music categories, forms and genres of sacred music, classification of sacred songs in the Maronite Church, and the characteristics of sacred music etc.

MSS405 Gregorian Chant 1 cr.

Gregorian chant is the central tradition of Western plainchant, a form of monophonic, unaccompanied sacred song of the western Roman Catholic Church. Gregorian chant developed mainly in western and central Europe during the 9th and 10th centuries, with later additions and redactions. Although popular legend credits Pope St. Gregory the Great with inventing Gregorian chant, scholars believe that it arose from a later Carolingian synthesis of Roman chant and Gallican chant.

Gregorian chants were organized initially into four, then eight, and finally 12 modes. Gregorian melodies are traditionally written using neumes, an early form of musical notation from which the modern four-line and five-line staff developed. Multi-voice elaborations of Gregorian chant, known as organum, were an early stage in the development of Western polyphony.

Gregorian chant was traditionally sung by choirs of men and boys in churches, or by men and women of religious orders in their chapels. It is the music of the Roman Rite, performed in the Mass and the monastic Office. Although Gregorian chant supplanted or marginalized the other indigenous plainchant traditions of the Christian West to become the official music of the Christian liturgy, Ambrosian chant still continues in use in Milan, and there are musicologists exploring both that and the Mozarabic chant of Christian Spain. Although Gregorian chant is no longer obligatory, the Roman Catholic Church still officially considers it the music most suitable for worship. During the 20th century, Gregorian chant underwent a musicological and popular resurgence.

MSS415 Syriac Chant 1 cr.

The Christian churches of the East are the guardians of a tradition dating back to the early days of Christianity. The Syriac Church is part of a community of independent Christian churches that were born in the East as a result of the separation from the Church of the West. The Syriac church music is vocal, and its liturgical language is Syriac. Ancient language, it is a late dialect of Aramaic (the language spoken by Christ). Syriac is still spoken today, both within the Church and outside. The Syriac scholars who exerted a lasting influence on the Christian world, include St-Ephrem (306-373), Jacob of Serugh (451-521), St. Severus, Patriarch of Antioch (died 538), Jacob of Edessa (died 708) and Bar Hebraeus (died in 1286). Saint Ephraim has composed a very large number of hymns and liturgies.

As is the case in all the churches of the East, the Sunday mass dominates the spiritual and religious life of the faithful. It is celebrated by the priest who stands at the altar while the deacons, placed in two groups or more exactly in two choirs on each side of the altar, sing alternately (antiphonal) all by assisting the priest in the celebration of the mass. Syriac chant places its melodic styles (qinto) within an overall unit (oktōēchos, or set of eight modes). The texts of the sacred songs were compiled in more than twenty liturgical books that include a comprehensive collection of hymns. The texts of the prayers are contained in fifteen liturgical books, including the shkhimo or book of offices for the days of the week, the book of the Holy Mass, the fanqith, or book of prayers for the year (Sundays, holy days...) and the book betkaz (treasure of melodies), complete collection of Church songs.

MSS420 Byzantine Chant 1 cr.

The Aim of this course is to go through the foundations of Byzantine chant and its three 'genera': the diatonic, the chromatic, and the enharmonic; its eight 'modes' or 'tones'; its roots: Greek (as proven by historians who suggest that as Christianity "took over the language of the Greeks... so also it took over the religious music of the Greeks and adapted it to its own needs") Non-Greek (as proven by historians who tend to assert, "the basis of the Christian music during the early centuries was not simply Greek, but Graeco-Roman" and Hebrew); and its key characteristics: as being Entirely vocal, no use of instruments, Monophonic, using only melodies in one part, Antiphonic, executed by two alternately chanting choirs, ison, the holding-note, and leading the chant. As well as the difference between Orthodox Byzantine chants and Catholic Byzantine Chants.

MSS430 Armenian Chant 1 cr.

This course Covers the Armenian chant, composed in one of eight modes, written in khaz, a form of indigenous musical notation. As well as many the ancient origin of these chants, extending to pre-Christian times, while others are relatively modern, including several composed by Saint Mesrop Mashtots, who re-introduced the Armenian alphabet. Some of the best performers of these chants or sharakans, are at the Holy Cathedral of Etchmiadzin, and include the late soprano Lusine Zakaryan. And the Armenian religious music that remained liturgical until Komitas Vardapet introduced polyphony in the end of the 19th century. Apart from his contribution to religious music, Komitas may be considered the founder of modern

classical Armenian music. From 1899 to 1910, he travelled through the Armenian highlands and collected more than 3,000 folk tunes many of which he harmonized and transformed into Lieder.

MTR222	University Working Methodology	3 cr.
<p>This course will provide first year students in humanities with essential methods for the preparation of their work during the years of study at the University. These methods are common to all material and address different levels, ranging from exercises promoting correct educational attitudes in the introduction to the methods of work, the investigation of a text, and finally, to the mastery of speech essential to establish exchange with others, orally and in writing, and to assert with confidence and autonomy. In addition, the objectives of this course will address data essential for the design, drafting and the realization of research work.</p>		
MTR500	Research Methodology	3 cr.
<p>This course improves student skills in writing research proposals and conducting basic research. It enables students to become critical readers of professional literature and develop a critical spirit of inquiry by providing a structured way of thinking about information studies problems and their resolutions. Thus, students will practice writing a typical research proposal which includes: thesis statement/hypothesis, context, variables, literature review, research methods, outlining, results, and so forth. They will also apply basic aspects of quantitative and qualitative analyses within the frame of research proposals. The purpose of this course is to provide students with research training: knowledge and skills. It includes theoretical and methodological teachings, in addition to practical applications. It introduces students to research techniques and analysis methods, and provides them with the methodological framework required to write a research paper or a thesis. The course also includes a purely technical and formal objective: empowering students to apply the rules of research presentation in accordance with what is required by the University, or even on a universal scale, through the implementation of practical work adapted for this purpose (using methodology books, reviewing dissertations or theses, project outlines to be submitted, reports on the proceedings of defense sessions, etc.).</p>		
MTR501	Research Methodology	3 cr.
<p>This course aims to provide students with research training: a knowledge and a “Know-how”. It includes theoretical and methodological teaching, as well as practical applications. It introduces students to research techniques and analysis methods, and provides them with the needed methodological framework to perform a research note, a paper, or a thesis. The course also includes a purely technical and formal objective: allowing students to apply the presentation’s rules of a research, in conformity with the required by the University, or on a universal scale, by carrying out practical work adapted for this purpose (Reports of methodological books, critical of papers or thesis, draft projects to be submitted, report on thesis defense sessions...).</p>		
MTR575	Research Methodology in Humanities	3 cr.
<p>The course aims to introduce a working method, in order to conduct scientific research. It is mainly about conducting research required at the level of Master’s thesis and implementing the different stages of scientific research, ranging from the position of the problem until the drafting and final presentation of the research. Furthermore, regarding a research topic, the course looks at how to select a problematic and devise relevant hypotheses, choose an appropriate technique and then apply it. Students will learn how to communicate the results of research in the form of a clear, rigorous and scientific text. The purpose of this course is to master the design, drafting and submission of the dissertation.</p>		
MTR681	Quantitative Methods in Humanities	2 cr.
<p>This course introduces students to the multiple uses of statistics and contexts from which data is drawn. It allows them to acquire mastery of statistical concepts used in their research and be able to conduct proper investigations. This course provides the Master’s students with the basic knowledge that enables them to act with autonomy in surveys and data processing. It enables them to systematize the stages of an investigation through data collection, data organization, analysis and interpretation of data. Students also learn to use statistical tools for compiling the data and analysis of results.</p>		
MUA201-2 / MUA303-4	Arab Instrumental Ensemble I - II - III - IV	1 cr.
<p>The student, guided by a teacher, must work with a group of instrumentalists in which he/she is to demonstrate a progressive quality of playing and a high-level degree of musical maturity.</p>		
MUA406	Arab Instrumental Ensemble VI	2 cr.
<p>The student, guided by a teacher, must work with a group of instrumentalists in which he/she is to demonstrate a progressive quality of playing and a high-level degree of musical maturity.</p>		
MUC201-2 / MUC303-4	Chamber Music I – II – III – IV	1 cr.
<p>The aim of this music performance course is to provide the opportunity for the students as performers to come together with other like-minded musicians in an ensemble setting to rehearse and perform from the chamber orchestra repertoire. In this course we will focus on overall concepts of self and ensemble expression, engagement, participation, and performance. We will also address musical concepts of ensemble and individual balance, blend, intonation, phrasing,</p>		

dynamics, articulation, tone, rhythmic precision, color, and ensemble clarity. We are going to listen to ourselves, to each other and to the composer's voice.

MUC406 Chamber Music VI 2 cr.

The aim of this music performance course is to provide the opportunity for the students as performers to come together with other like-minded musicians in an ensemble setting to rehearse and perform from the chamber orchestra repertoire. In this course we will focus on overall concepts of self and ensemble expression, engagement, participation, and performance. We will also address musical concepts of ensemble and individual balance, blend, intonation, phrasing, dynamics, articulation, tone, rhythmic precision, color, and ensemble clarity. We are going to listen to ourselves, to each other and to the composer's voice.

MUG205 Musicological Research 1 cr.

This course is an introduction to musicological research. It includes four parts: objects and methods, sources, musicological research and presentation standards. It is essentially practical and aims to help future musicologists and researchers become apprentices in their undergraduate studies.

MUG305 Music and Dance 2 cr.

Attendance and participation are of primary importance for this class. Students will be introduced to a wide variety of techniques and styles in order to learn correct body alignment in basic positions, build a kinesthetic awareness of their own physical abilities, and develop a sense of musicality and rhythm.

Students will learn the following dances: waltz, tango, cha-cha, salsa, cumbia, merengue, foxtrot, country line dance, rumba, swing, samba, etc.

MUG330 Music Languages 2 cr.

The goal of this course is to give to the students a general idea about the evolution of musical language from its beginning to the twentieth century: the scale of harmonics; the cycle of fifths, consonance and attraction, tolerance, habituation, equalization, the formation of the scales, relative pitch and absolute pitch, the organization of the sounds in space and in time, the melodic order and the harmonic order, the chromatic scale; the irregular and altered scales; from ditonic scale to heptatonic scale; accuracy and the acoustic systems; the equal temperament.

MUG335 Musical Acoustics 3 cr.

This course concentrates on: vibratory motion of typical musical sound sources, propagation of sound, wavelength, period and frequency, pressure and acoustic intensity, the acoustic impedance speed, etc; perceived pitch, loudness and timbre of a sound; the objectively measurable properties of a sound wave; explaining how sound is generated - transformed by the musical instruments and the human voice; defining the reverberation time of a hall, using a formula relating reverberation time to the volume of the hall and the absorption of its surfaces, and discussing the acoustical properties desirable in concert halls and opera houses; microphones, amplifiers, speakers and sound capture acoustic treatment and correction.

MUG340 Introduction to Musicology and Ethnomusicology 3 cr.

This course provides an introduction to concepts and approaches to music research as encountered in the co-disciplines of historical musicology and ethnomusicology. It aims to develop students' critical thinking in areas of historiography, fieldwork, musical meaning, and aesthetics.

It introduces students to some of the methodologies and research techniques employed musicology and ethnomusicology.

MUG410 Contemporary Music 3 cr.

This course is open to current and transdisciplinary musical concerns. The concept for transdisciplinarity does not define a degree of specialization, but rather refers to a type of approach that allows the addressing of contemporary issues based on various disciplines and different fields of knowledge, placing the reflection beyond the mere juxtaposition of the subjects studied. The first set gives rise to learning activities that allow the student identify major issues of contemporary concern, to demonstrate the contribution of various disciplines in the understanding of a problem, through theories, concepts and methods of analysis. The second set invites the students to confront the real world and deal with a contemporary problem in a research piece where, after they have identified and analyzed the problem, they will have to justify the relevance of their proposed solutions.

MUG420 World Music 2 cr.

This course deals with music from a variety of world traditions, including Brazilian, Irish, South Indian, Chinese, Japanese, American Jazz, Mexican, Spanish, and European music. It includes both a learning repertoire and discovering how music is taught in different cultural settings.

MUG425 Arab Music II 3 cr.

This course offers an analytical study of the older forms of music and Arabic Song: longa, Samai, Dulab, Tahmila, Bachraf, Taqsím, Mawwals, Qasída, Taqtouqa, Mouwashah, Dawr etc.

MUG435 Sociology of Music 3 cr.

This course explores the influence of music on the individual and on society and the influence of society on the musician and composer - and thereby on the music industry. It concentrates on the socialization processes and the factors affecting musical behavior. It also deals with the formation of self-musical image in accordance with the musical image of society,

expectations, competition and cooperation, leadership and self-confidence, creativity and the aesthetic values of creativity etc.

MUI200	Sound design for Music Industry	3 cr.
Introduction to the concept of sound, transmission modes, transmitters and receivers (natural human ears, etc., artificial & electronic)		
MUI205	Introduction to Music Industry	2 cr.
General Introduction about Music Industry, whole program outcome, and possible future jobs after graduation.		
MUI210	Music Marketing and Management	3 cr.
Introduction to Marketing & Management notions, applied on Musical Domain. Integrate students to develop a marketing plan, a business plan, increase efficiency and manage all music related jobs. (The course should highlight the Music Journalism & methods of writing to market one's work).		
MUI215	Music and Business	3 cr.
The Music business domain explained: how to create a competitive advantage with competitors in the music domain, how to make money from music, how to decrease cost and increase benefits. Ability to understand companies' hierarchies, schedules, headcounts, and apply on case studies in the business domain.		
MUI220	Artist and Tours Management	3 cr.
General Introduction about artists' work, how to organize tours for an artist, bands, etc., how to manage contacts with different countries and with different artists managers.		
MUI300	Basics of Analogue & Digital Audio	2 cr.
Pre-requisites	MUI200	
Basics of Analog and digital audio sounds, the transfer from system to system, The theoretical introduction of the mostly known systems, A2D transformation, quality measures for audio. Introduction to Video streaming and recording techniques		
MUI305	Music Events, Entertainment, Organization & Venue Management	3 cr.
Pre-requisites	MUI215	
All about musical events, entertainment, organization and management: be able to list and follow up all items in any event, and introduce students to become stage managers, coordinators, and implementers.		
MUI310	Technology and Music	3 cr.
A general overview of Music and New technology worldwide, how musicians, musicologists and artists should cope with the changes and apply the utilization of the technology		
MUI315	Recording, Mixing, Editing, processing, and Mastering	3 cr.
Pre-requisites	MUI200	
Advanced studio work in Recording, Mixing, Editing, Processing, Mastering, and handling different studios and different tools.		
MUI400	Music Inverse Casting	2 cr.
Pre-requisites	MUI215	
Introduce Students to the methodology of reviewing musical events, live or registered on the radio or the television. Visits to TVs, Radio Stations, Newspapers, Production Houses, and report about the visited location and find out where each Music Industry Student fits in (A report after each visit is a necessity)		
MUI405	Music Law	3 cr.
Introduction to Music Law (Lebanese Laws, International Laws & Standards), Copyrights, Royalties, Contracts, Legal work, protect your own work, and protect all music related work from fraud, plagiarism, etc.		
MUI410	Electronic Music Production	3 cr.
Pre-requisites	MUI315	
Music Production through the use of new software and hardware and an output end of course project is a necessity. Introducing students to become production managers and consultants		
MUI415	Internship	1 cr.
Internship in a Music Industry related firm for the optimal experience		
MUI420	Live Sound Field work	3 cr.
Pre-requisites	MUI200	
Locations visit for Festivals, Sound planning and big events to support in installing the sound systems. It is considered a hands-on course while documenting all what was experienced through visits.		
MUS200	Musical Initiation	3 cr.
This course will introduce students to the basics of music; it will cover material such as pitches, rhythms clefs, scales and dynamics. The utility of this course as part of the general requirement is to become familiar with the musical language through experiences based on fun activities making it enjoyable as well as useful.		

MUS237	Lebanese Music	3 cr.
This course is designed to: 1 – Sensitize students to Lebanese folk music. 2 - Make them aware of the danger that threatens this music: a Heritage endangered. The disappearance of the songs with the disappearance of the circumstances and opportunities serving their <i>raison d'être</i> . The disappearance of the 'old', guardians and deliverers of the tradition. A heritage uncollected, not recorded in a scientific way. 3 – Let them discover the diversity of forms: mostly little known and unknown forms. 4 - Study of the poetic-musical internal structure of each form of traditional song.		
MUS243	History of Lebanese Music	3 cr.
This course is designed to:		
1 - Sensitize students to Lebanese folk music.		
2 - Raise the students' awareness of the threat to Lebanese folk music as an endangered and uncollected heritage that is hardly recorded in a scientific way; This includes the disappearance of certain songs as the circumstances underlying their writing and their <i>raison d'être</i> are no more, and the passing away of the old guard and keepers of tradition.		
3 – Introduce the students to the diverse forms – the well-known and the lesser known ones – of Lebanese music.		
4 - Study the internal poetic and musical structure of each traditional singing form.		
MUS250	Introduction to Voice Mastering	2 cr.
Development of voice and speech techniques for the stage, including those of relaxation, breathing, resonance, and development of speaking voice. Speech training uses text work to train students in standard Arabic speech.		
MUS455	Advanced Voice Mastering	2 cr.
Advanced voice techniques, with increased demands on range, resonance, and breathing capacity extension. Articulation and phonetic alphabet is emphasized. Text work in poetry and prose.		
MUSC210-5 / MUSC310-5 / MUSC410-5 / MUSC505-10	Choral Singing I - II - III - IV - V - VI - VII - VIII	1 cr.
Choral singing closely follows the course of history. Each year the students learn to interpret, in the context of Western choral singing of the Faculty, the corresponding repertory according to the current history course.		
MUSC220/5-		1 cr.
MUSC320/5	Music Critique and Aesthetic Judgment I - II - III - IV	
This course includes a guided reading and musical critique, taking in readings in the literature and the science of music. Each student will have to read a book (or chapters in a book) per semester and present the content to others. The criticism is about:		
<ul style="list-style-type: none"> • Various reports and interviews, mainly in the field of contemporary musical creation. • Conception, realization and animation of a series of programs devoted to classical, modern and contemporary music. • A roundtable around musical works by various composers. • A report on a festival and concerts presented as part of this festival. • Leaflet of a compact disc, published flyers or texts in concert programs. • Symposia concerning music and conferences contained therein. 		
MUSC246	Arab Music I	3 cr.
This course aims to educate students on various aspects of Arab music, including folk and art music, theoretical and practical knowledge, the Maghreb and the Mashreq, etc. The themes to be discussed encompass a general history of Arab music, the <i>maqams</i> , the Arab musical scale and modal system, as well as the rhythms and musical writings of Ibn Al-Munajjim, Al-Kindi and Al-Farabi.		
MUSC250	Musical Computing	2 cr.
The course is intended for students interested in the world of sound (training, recording, publishing and editing), as well as musical production. This is a theoretical course illustrated by multimedia examples and completed by practical application sessions.		
MUSC255	Applied Musical Computing	1 cr.
The course is intended for students interested in the world of sound (training, recording, publishing and editing), as well as the musical production. This is a theoretical course illustrated by examples multimedia and completed by practical application sessions.		
This course offers the students the M.I.D.I. Norms and the technique of the DIGITAL AUDIO, presenting to the manipulator of huge facilities such as the creation of libraries containing thousands of sounds "samples" and ready to be used, registration of an infinity of tracks in M.I.D.I and more than 64 tracks in audio, the correction of wrong notes and tempo notation and printing of the music sheet and a lot of other very mundane tasks of our time, but which were considered impossible, in the audio field, twenty years ago. Man is the only creator and innovative element and the computer is that his tool towards the accomplishment of his work in a faster and more advanced ways.		
MUSC340	Musical Forms	2 cr.

The examination of the form is a fundamental element of any analysis, because the form depends on the various components of a work, namely melody, rhythm, instrumentation, dynamics, tonal course, elements of unity and contrast ratio, relationship between text and music if it is a voice composition and other components. To understand musical forms, is to discern the sound architecture.

MUSC350 History of the 18th Century Music 2 cr.

This course opens on the years that mark the death of Jean-Sébastien Bach, the decline of the baroque era, with the dawn of the classical musical style. It deals with the following subjects: French (from 1661 to 1764) music, music of the Germanic countries around Bach and Handel, English music in the 18th century, the birth and diffusion of classicism in Polish music, music in Spain, the music in Italy from the death of Carissimi to the end of the eighteenth century, classicism in Austria and the German-speaking countries, from the death of Telemann to the death of Beethoven, the formation of the classical style in Europe and the classical masters: Haydn and Mozart.

MUSC355 Analysis of the 18th Century Music 2 cr.

Analysis of corresponding parts in the history course of the 18th century.

MUSC400 Organology and Instrumentation 3 cr.

This course studies different musical instruments from antiquity to the present day, including the history, classifications, mechanics, acoustics, development, manufacturing, the different families of instruments, and helps deepen the concept of instrumentation and know the specificity of each instrument, in terms of timbres, register, transposition, combination of timbers, transcription, etc.

MUSC420 Choir Conducting I 1 cr.

This course aims to train musicians on vocals, choirs and choir conducting. It includes concepts about the human voice and its education, the choir and its training, the conductor of the choir (values, posture, technique, behavior, etc.), choral conducting (departure gesture, the fermata, the stop gestures, the syncopation and offbeat, repeat, etc). This course includes exercises on the evolution of the musical ear, on conductor gestures, on the conducting of simple meters (2/4, 3/4, 4/4).

MUSC425 Choir Conducting II 1 cr.

This course deepens the knowledge learned in choral I. Continuing to work on the technique of direction, on the didactics of voices, on polyphonic conducting, on meters and more complicated rhythmic formulas, the student will also learn how to prepare a piece for choir, how to deal with technical difficulties, how to practice with the choir and how to direct before an audience. By watching movies about great choir masters and orchestra rehearsals, we observe their actions and their methods of work.

MUSC450 History of the 19th Century Music 2 cr.

This course explores the music of the Romantic era. 1 - Characteristics of Romantic music: themes of Romanticism, individuality of style, expressive subjects, nationalism and exoticism, the use of timbers to obtain a variety of sensations and atmospheres, the use of chromatic harmony, contrasts in nuances etc. 2. Vocal music, program music, the Romantic Symphony, the brief forms and developed forms. 3. Romantic composers: Beethoven, Schubert, Schumann, Chopin, Liszt, Mendelssohn, Berlioz, Tchaikovsky, Smetana, Dvorak, Brahms, Verdi, Puccini, Wagner, Mahler.

MUSC455 Analysis of the 19th Century Music 2 cr.

Analysis of corresponding parts in the history course of the 19th century.

MUSC525 Music Computing III 3 cr.

This course helps both musicians, students and engineers better design their music, providing access to its standard and technique of DIGITAL AUDIO, that presents to the manipulator enormous facilities, such as the creation of libraries containing thousands of "sampled sounds" ready to be used, the registration of an infinity of its tracks in M.I.D.I and more than 64 tracks in audio, the correction of false notes and tempo, the notation and printing of scores and many other mundane tasks of our time, which were considered impossible in the audio field, twenty years ago. Humans are the only creators and innovative elements and computers are their tools, used in the fulfilment of their work in a faster and more sophisticated way. Finally, students put into practice what they have acquired and completed: a project showing their knowledge in the field of the M.I.D.I and audio.

MUSC535 Musicological Meetings 2 cr.

This course articulates in two ways. - Scientific: conferences, interviews and discussions around a musicological theme following meetings with musicians, and musicologists, of the famous amateurs. - Cultural: proposed manifestation of various and varied cultural demonstrations (movies, theater, music, reading of musicological texts, etc.).

MUSC540 Curriculum and Music Teaching Handbooks 2 cr.

This course deals with Lebanese curriculum of music education and its development over the years (sixties to the present day). It also deals with the textbook as a multifaceted tool; the textbook from here and elsewhere, from yesterday to tomorrow. In a cross-cultural aim, taking into account both the specificity of our culture and the trend towards globalization, this course introduces students to prepare a syllabus for the musical material to teach in interrelation with other subjects, using technological means, and taking into account the importance of group work.

MUSC545	The Great Masters of Arab Music	2 cr.
This course covers the Cairo Congress and the 20 th century great masters of Arab music.		
MUSC605	History of 20th Century Music	3 cr.
This course discusses: The different currents and musical styles of the 20th century: Impressionism, symbolism, neo-classicism, expressionism, dodecaphony, serial music, electronic music, electroacoustic and concrete music, random music. The characteristics of the 20th century are also studied: the importance given to the different timbres of instruments especially percussion instruments and their use in a new way. Percussion instruments become prominent and numerous, reflecting the interest of this century for unusual rhythms and timbres (tone colors). Fundamental changes in the treatment of chords. The traditional distinction between dissonance and consonance is abandoned. New structures of chords: Polychord (new structure not based on third but on fourths), and tone cluster etc. The exploration of alternatives to the traditional tonal system. The musicians of this period are also discussed: Debussy, Ravel, Stravinsky, Schoenberg, Berg, Webern, Bartok.		
MUSC610	Analysis of 20th Century Music	3 cr.
Analysis of corresponding parts in the history course of the 20th century.		
MUSC615	Research Methodology	2 cr.
This course aims to foster the ability to research, to develop a working process, to master the method specific to science, to find simple, authentic and objective, methods to organize the stages of data collection, and to carry out the results of scientific research. This course discusses: The key concepts, names and references, drafting and presentation protocols, the different stages of a scientific work from the position of the problem, to the collection of data - until the final draft.		
MUSC625	Orchestration	2 cr.
The purpose of this course is: 1- Empowering students to make orchestrations or musical arrangements from a specific format (Piano Sonata) for any format orchestral format (Duo, Trio Quartet, Chamber etc.). 2- Teaching them how to reduce orchestral scores to piano score. The student will: - learn the fundamentals of arranging for different orchestral ensembles. - acquire the basic element such as writing a melody/harmony for strings, woodwinds, brass and percussions. - examine and analyze orchestral scores from the repertoire. - anticipate musical colors and texture, as created by instrumental combinations.		
MUSC630	Philosophy and Music	2 cr.
Philosophy and music and not Philosophy of Music because music is an art, a science, a school, and creativity; it is not, therefore, just a concept addressed by philosophy diagnosing, analyzing and criticizing. It is an objective epistemological and analytical approach, implicating the philosophy of music, as a latter attempt to understand humans and help them understand the mysteries of the universe, the sound, the melody, and the rhythm. It also does not exclude this scenography, because fantasy creator is mostly interested in the colors of the Sun of reality and the vibrant life of existence. After trying to get closer to the music and its place in human knowledge priorities, we will identify the most important theories of philosophers who read this art and built philosophical representations for this art in general, and the role of avant- garde music, in particular. What is the relationship of music with humans, with society, with the world, with God etc. ? This is one of the questions we will try to answer in this course.		
MUSC635	Psycho-Musical and Music Therapy Techniques	2 cr.
This course covers the theories and processes of music therapy, the history of the profession, and a survey of basic principles, methods, techniques, and applications. Students will visit facilities where music therapy is practiced, observe music therapists in action, and discuss the role of music in therapy within a wide variety of clinical and community settings. In addition, they will be introduced to music therapy practices in different countries, through published literature.		
MUSC640	Music and Mass Media	2 cr.
Mass media refers collectively to all media technologies capable of reaching and influencing a large audience. This course studies music through and in relation with the mass media of today: the television, the radio, movies, the written press cartoons, CD and DVD, display posts. the web and internet		
MUSC645	Law and Music	2 cr.
This course provides (according to the specialization) specific information on: - the rights of authors and performers, the role and the functioning of authors' societies (Sacem, SDRM, SACD), and interpreters (Adami, Spedidam), and producers, - the right to work, including for employees of a show, for the hiring of artists, the amount of fees, taxes, - music contracts, which govern the dissemination of live performance, audiovisual production, musical or phonographic edition and career management, - legislation and legal rules concerning the management of associations and cultural enterprises, - the organization and the occasional production of shows, the rules for amateur musicians - the legal developments related to new technologies and Internet; contracts and obligations concerning teachers, such as salary scale and indemnity.		
MUSC650	Comprehensive Analysis	2 cr.
The aim of this course is to analyze, in order to understand and transfer a written musical piece developed in any time, style, genre, or form.		

MUSM610	Preservation Management	3
<p>This course focuses on the preservation of materials found in museums and other cultural and historic institutions, and covers topics such as the chemical and physical nature of the cultural work, agents of deterioration, preventive conservation strategies and proper care and handling of artifacts, as well as the appropriate cleaning and maintenance of art objects and historic artifacts. The course also covers the storage environments for archaeological objects, and the packaging and support materials for collections.</p>		
MUSM615	Inventories and Documentation Practices	3
<p>This course deals with the new developments in inventory making techniques, documentation and exploitation of preventive conservation files, and the links that these tools have with specific professions. It aims at looking into manual and computerized inventory methods based on concrete cases. The course will be divided into two parts. The first one is dedicated to the marking principles and methods on different aids and media: it consists of “security” markings such as inserts, invisible ink, and “management” markings such as barcode labels and radiofrequency. The second part will revolve around two basic modules: knowing how to establish an archiving chart; understanding its uses, functions and applications (for the current and intermediary archives); and implementing the different phases for the processing of the final archives collections.</p>		
MUSM635	Communication, Dissemination and Development of Archival Heritage	3
<p>This course aims at providing different operating elements to people working in an archiving department, so as to meet the expectations of the public using such a service. It focuses on the different actions aimed at emphasizing the value of archives and on the analysis of the means needed for organizing cultural activities. Also, the essential elements for setting up an exhibition will be discussed: material, premises, partners, documents selection and costs. It will discuss any event aiming at valuing the archives collections and at identifying the expectations of the audience, as well as the development of the skills and know-how of a quality welcoming, in order to provide the community with scientific information.</p>		
NSBT520	Language and Communication	1 cr.
<p>The main objective of this course is to enhance skills in basic modern languages (French and English) and adapt them to communication and scientific language. It is also to improve integration in the professional world on one hand and validate mastery of a language on the other.</p>		
NSBT525	Biotechnology and Bioinformatics	3 cr.
<p>The objective of this course is for the students to: know the cell cultures, have an ability to apply plasmid construction technology, of transfection and protractors genes, know the main morphological cellular imaging, know the biochemical approaches, know the databases and their importance in biotechnology and neurobiology, understand the methods used in structure prediction, and understand the methods used in the analysis of sequences.</p>		
NSBT530	Functional and Cognitive Anatomy	2 cr.
<p>The objective of this course is to give the students a vision that is both comprehensive and detailed of functional neuroanatomy, to know: the basic principles of the organization of the nervous system and the main function of each part; the main neural pathways involved in the main functions of neural processing; the sensory input and behavioral responses; the basic methods of functional neuroanatomy; understand how the information is generated in each system and subsystem; how different modalities of information are superimposed along the neural pathways; how neural processing in a nucleus or a structure can induce behavioral changes; and how an injury can induce a variety of symptoms.</p>		
NSBT535	Cellular Neurobiology and Physiology	3 cr.
<p>The educational objectives are to clarify the mechanisms that steer the transmission and integration of messages in the nervous system. The mechanisms of synaptic transmission and its modulation, the role of interactions between neurons and glial cells and the functioning of neural networks (genesis and control of rhythmic electrical activity) will be the main topics in this course.</p>		
NSBT540	Methodologies	2 cr.
<p>The objective of this course is to introduce and implement the various methodological approaches used in research in neurosciences. The various practical sessions, organized in workshops (4 hours) are associated with a session of tutorials (1 hour) to present the problems, or analyze experimental results. Practical sessions were chosen in order to implement the latest technologies used in research in neurobiology (pharmacology, imaging, cellular and molecular biology, behavioral analysis). In addition, this course includes concepts of biostatistics which aims to provide students with knowledge bases in biological data analysis, including the ability to determine methods adapted to current situations. A high level knowledge of statistical methods is essential for proper planning of numerous scientific investigations. Students also learn how to use specialized software using concrete examples.</p>		
NSBT545	Experimental Approaches of Neuropathology	2 cr.
<p>This course aims to give students a clear view of pathophysiological mechanisms that lead to disease through the development of animal models. These bases will enable the students to understand the origin and molecular cellular dysfunctions of neural networks that can result in neurological or psychiatric disorders.</p>		

NSBT550	Behavior, Emotion and Cognition	2 cr.
The main objective is to provide solid and updated training in a number of specialties including cognitive neuroscience. This module will indeed help students to know the anatomical and functional bases and fundamental mechanisms of emotions and cognitive functions in relation to behavior, and to understand the nature of interactions between emotion, cognition and behavior.		
NSBT555	Neuropharmacology	2 cr.
The objective of this course is to give students the basics of neuropharmacology covering the molecular, cellular and integrated neurotransmission, for the study of psychotropic pharmaceuticals and their modes of action. This will enable them to understand the specifics of each of these neurotransmitters including questioning their functional organization in the brain, their involvement in cellular and behavioral responses and pharmacological interactions between these systems. This course is an important prerequisite for the development of central nervous system pharmaceuticals.		
NSBT557	Biophysics	2 cr.
Molecular and cellular biophysics: structure of macromolecules in solution, forces of interactions and stabilisations of macromolecular ultrastructures, organised systems and biological membranes, dynamics of biological pairs: modelization and theory, flux cytometry; Techniques of spectroscopic and sensory analysis and separation of biomolecules: visible-UV spectroscopy, spectroscopy of middle infrared, Raman spectroscopy, emission spectroscopy: fluorometry (FRET, FLIM, FRAP...), radioactivity and biomolecules.		
NSBT560	Genomics and Proteomics	2 cr.
The objective of this course is to introduce students to the intellectual approach of genomics, transcriptomics and proteomics, explaining the different techniques used in these areas. These concepts will be illustrated with examples in the field of basic and clinical neurosciences.		
NSBT562	Developmental Biology and Ageing	2 cr.
Neural induction and pattern formation, cell lineage and fate determination, neuronal migration, axon guidance, synapse formation and stabilization, development of neuroendocrine systems, molecular tools in developmental biology and biotechnology, evolution and development, mechanisms of somatic selection, biological aging processes and age-related diseases affecting the nervous system.		
NSBT565	Economy	1 cr.
The management and use of animals, plants or micro-organisms raises issues of philosophy, ethics, environmental sustainability and the biosphere. Thus it becomes necessary to take into account operating conditions of biological material and compliance with ethical rules. The objective is to provide an overview of the principles of development, bioethics, economic rules and studying drug development: ethical and legal bases that should govern research in neuroscience; understand the reasoning mechanisms and choices in situations that challenge the ethics in this field, principles and economic laws that run the research; understand the implications of these principles and the practical steps that should be installed to ensure quality, profitability and sustainability; describe the different stages of clinical research; the various research oversight bodies; and understand the major stages of pharmaceuticals development.		
NSBT570	Regulations, Laws and Bioethics	2 cr.
The course aims to promote students' reflection on current problems and teach them how to analyze and solve ethical problems such as cloning, abortion, sperm donation, confidentiality and privacy, informed consent, body dignity and integrity, aggressive treatment, euthanasia and genetic therapies.		
NSBT575	Drug Development	1 cr.
The purpose of this course is to enable the students to acquire the necessary concepts of neuroscience and biotechnology, to understand the basic principles of current drug design and to be informed about the different stages of drug development (identification of the therapeutic target, identification of possible HITS, optimization of lead compounds), preclinical testing, clinical stages and administrative steps (registration, pharmacovigilance).		
NSBT580	Morpho-functional Imaging	3 cr.
Students in this course can acquire relevant knowledge and deepen the perspective of fundamental and clinical research in neuromorphology and functional imaging of the brain. The skills acquired by students at the end of this course are: the ability to recognize the main anatomical structures of the brain in 2D and 3D MRI in humans and primates in vivo and post mortem; ability to analyze and identify the cerebral cortex primary furrows, secondary and tertiary main grooves, and recognize the major interindividual variations; ability to identify key eloquent areas of the brain on MRI volumetric representations and f-MRI; ability to perform a tractographic analysis and recognition of the main projection pathways and associations, such as the corners on the imaging workstation.		
NSBT585	Physiopathology of the Nervous System	2 cr.
The purpose of this course is to acquire and deepen knowledge relevant in a clinical research perspective of pathophysiology of diseases of the central and peripheral nervous system.		
NSBT590	Diagnostic and Therapeutic Tools Development	2 cr.

Students will acquire and deepen their knowledge relevant in the biotechnology research oriented perspective, in highly advanced therapeutic and diagnosis techniques.

NSBT620 From Sensation to Perception 2 cr.

This course will focus on two main examples: somatosensory and visual perception (transduction, coding, elaboration of the sensation, representation, and integration).

NSBT625 From Perception to Action 2 cr.

Students will study neuronal pathways, specifically the cortex, subcortical pathways, the spinal cord, and effectors.

NSBT630 Integrative Physiology 2 cr.

The aim of integrative physiology is to understand the mechanisms underlying the various physiological functions at every level of integration at which they appear: from the cell to the organism as a whole. The nervous system has a major place because it coordinates the activity of the different organs. After the first section of this course, students will realize that many events in a body are rhythmic, and that any individuals or species are defined by their temporal organization as much as their anatomy. It is why this course is a "focus on biological rhythms".

NSBT635 Computational Neurosciences 1 cr.

This course covers the basis of computational neuroscience from ionic channels to networks from both theoretical and practical perspectives.

NSBT690A Long Training Period 6 cr.

Students must complete a 6 credits research project applied to the major. They are expected to realize a research work in the laboratory, submit a written report and give an oral presentation.

NTR211 - NUT211 Fundamentals of Human Nutrition 3 cr.

This three-credit course introduces the basic concepts related to nutrition. It gives an overview of nutrients, including their food sources, digestion, metabolism, functions, and requirements in humans. This course also examines the use of dietary guidelines and recommendations to assess the nutrient intake of healthy individuals. Upon completion of the course, students will be able to make optimal food choices for better health.

NUT212 Advanced knowledge in Nutrition 3 cr.

Pre-requisites NUT211

This course is a completion of the NUT211 to acquire in-depth knowledge and understanding of the dietary requirements, functions, food sources of vitamins and minerals. Knowledge acquired during this course will be of great asset to master for assessment of nutritional status, and screen deficiencies in micronutrients, which are cornerstone skills required for any dietician. The food exchange system and the food composition list will be treated to provide skills and tools to be ready to hang over easily to the next course of Clinical Nutrition.

NTR218 - NUT218 Food Economy 3 cr.

This courses analyzes different activities related to food consumption in a certain society. It allows the students to evaluate certain food consumption situations in order to examine the consumer's reaction and behavior according to the economic theory.

NUT221 Fundamentals of Anatomy, Human Physiology 4 cr.

Pre-requisites BLG211 or NUT211

This course focuses on the study of the functions of living things with an emphasis on the relationship between the anatomy and functions of tissue and systems essential to sustain body homeostasis. This relationship is the central theme of this course. We will describe how cells are organized according to specialization into body systems and unveil how homeostasis is essential for cell survival and how body systems maintain this internal constancy. All organs and systems involved in nutrition-related diseases will be discussed like the Digestive's, Cardiovascular's, Urinary's, Renal's, Immune's, Skeletal's, Circulatory's, Endocrine's and Nervous's. This course serves as a foundation and capstone to facilitate understanding in the context of normal body conditions to be ready to hang over easily to the next courses of Clinical Nutrition and Clinical Nutrition Practice.

NTR222 - NUT222 Nutrition and Physiology I 3 cr.

Co-requisites NTR223

Pre-requisites BLG211

Students will study the anatomical structures of the animal body as arranged into systems and they will correlate forms with functions performed, under specific laws and principles in an overall homeostatic setup. The course covers a range of topics where students will gain a general understanding of the organic structures and functions of the body systems and the coherence between organs of the body. They will also learn about homeostasis and steady state of the human body, as well as the overall laws and principles that rule body functions.

NTR223 - NUT223 Nutrition and Physiology II 2 cr.

Co-requisites NTR222

The course describes the structure and function of the digestive, endocrine and reproductive systems. It also gives a clear idea of fluid and acid balance taking place in the human body, as well as energy balance and temperature regulation.

NUT314	Principles and Practices in Food Service Management	3 cr.
<p>This course offers comprehensive, current, and practical overview of foodservice operations and business principles. It introduces students to the basic principles of foodservice management, which can be applied to all types of foodservice organizations. Menu planning process, design, budgeting and analysis of the different service operations will be covered. After completion of this course, students will have all necessary information to manage operation functions in food service such as financial management, human resources and marketing.</p>		
NUT320	Food Processing	2 cr.
Pre-requisites	NUT211 or NTR211	
<p>This food processing course is considered as a scientific and technological activity covering the major food processes in the industry. It involves the application of scientific principles in industries in order to produce convenient products for the market while preventing spoilage. This course gives the students the opportunity to discover conventional and new techniques used for processing and preservation of food materials. In addition, a nutritional and sensory evaluation of food will be discussed.</p>		
NTR322 - NUT322	Human Nutrition I	3 cr.
Co-requisites	NTR211	
Pre-requisites	BCH215	
<p>This course provides a comprehensive overview of human physiological needs and outlines the various parameters of the energy equation. The metabolism and impact on health of certain food substances will be developed (carbohydrates, lipids and alcohol-including essential fatty acids and their derivatives). Body composition and its evaluation methods will be explored. Muscle activity will be addressed in the physiological dimension, nutritional (energy systems, use of substrates), benefits (cardiovascular and others), etc. The Recommended Dietary Allowances will also be discussed.</p>		
NUT324	Advanced nutrition and human metabolism	3 cr.
Pre-requisites	NUT211 and NUT212	
<p>This course will discuss primary metabolic pathways for macronutrients carbohydrates, lipids, and proteins, and their interrelationships with emphasizing those reactions particularly relevant to issues of health. Energy metabolism and regulatory nutrients and their health implications of altered body weight will be explored. This course content include pertinent nutrition science-based to provide students with the fundamental information for assimilating new scientific discoveries and develop their writing and critical-thinking competencies in the context of a report assignment.</p>		
NTR325 - NUT325	Inborn Errors of Metabolism	2 cr.
Pre-requisites	NTR222 and NTR223 and BCH215	
<p>Genetic diseases of the metabolism are hereditary diseases resulting from a lack of activity or absence of a specific enzyme. Treatments could be the well renowned nutritional therapy. This course intends to study physiopathology of each of the metabolic diseases as well as their specific nutritional treatment.</p>		
NTR326 - NUT326	Drug-Nutrient Interactions	2 cr.
Pre-requisites	NUT446	
<p>This course examines the interactions between nutrients and drugs. It includes the basic concepts essential for understanding the interactions, and the specific interaction between nutrients and drugs most frequently prescribed in different pathologies. It also presents the influences of nutrients on the pharmacokinetics of drugs and their effects, and those drugs on weight, metabolism, and minerals. The course also treats equally the particular interactions between nutrients and drugs, especially in children, pregnant women or nursing mothers and the elderly. The course also includes a research project with a report on a theme that is consistent with the concept of the course, and a brief oral presentation of the topic. This course is based on fundamental concepts and provides the students with useful recommendations that will apply in practice.</p>		
NUT327	Food-Drug interaction	1 cr.
<p>This course examines the interactions between nutrients and drugs. It includes basic concepts essential for understanding the interactions, and this interaction between nutrients and drugs most frequently prescribed in different pathologies. It also presents the influences of nutrients on the pharmacokinetics of drugs and their effects, and those drugs on weight, metabolism, and minerals. The course also treats equally the particular interactions between nutrients and drugs, especially in children, pregnant women or nursing mothers and the elderly. The course also includes a research project with a report on a theme that is consistent with the concept of the course, and a brief oral presentation of the topic. This course is based on fundamental concepts and provides the student with useful recommendations that will apply in practice.</p>		
NTR327	Community Nutrition	2 cr.
<p>This course studies the influences of country parameters in general and community ones in particular on the eating trends and habits of a population, in addition to the training and nutritional information means. It also introduces concepts, study methods and interventions (food and nutrition projects and policies) on food security within the context of the FAO.</p>		

NTR328 - NUT328	Eating Behaviors and Disorders	2 cr.
Co-requisites	NTR211	
<p>This course enables students to learn about the psychology of human beings in their relationship with food. It also sensitizes the psychopathological dimension and different eating disorders. It deals with basic psychological concepts, different psychological approaches, relationship between psychology / nutrition and it also includes an overview concerning the concept of weight, body image and body schema. This course offers to the future dietitians some tips keys and techniques essential to their future practice. It is intended to provide accurate and useful information with regard to the subject matter covered.</p>		
NTR331 - NUT331	Community Nutrition	3 cr.
Pre-requisites	NUT211	
<p>This course focuses on the nutrition and food patterns of individuals and cluster of individuals constituting a community. It includes specificity of models of food consumption in different communities in the world .this course highpoints differences in socio-economic, cultural and psychological factors which impacts on the individual's and the community's food consumption and emphasizes on elaborating evaluation programs and planning nutritional interventions.</p>		
NUT332	Pharmacology and food-nutrient interaction	3 cr.
<p>This course provides the basic principles of pharmacology with special consideration for students studying nutrition and dietetics. It introduces the students to the fundamental concepts and the usage of various drugs in the treatment of different nutritional diseases and the influence drug-nutrient interaction on nutritional status.</p>		
NTR334 - NUT334	Food Service Management	3 cr.
<p>This course aims to introduce students to the different types of food service organizations and to guide them throughout the concept research and development process. It also offers the students the ability to closely look into menu planning, and the design, analysis and understanding of the different service operations including purchasing, receiving, storage, inventory, production, and service. Finally, it provides them with the necessary information in order to manage operational functions in food service: financial management, human resources and marketing.</p>		
NTR335 - NUT335	Nutrition in the Life Cycle	2 cr.
Co-requisites	NTR211	
<p>This course covers nutrition issues from preconception throughout life, with a particular emphasis on nutrition correlates of pregnancy, normal growth and development, infant and child nutrition, adolescent and elderly nutrition. It considers the role of nutrition in the context of the normal physiologic changes that occur with aging. This course will also focus on vegetarianism and its positive and negative aspects on health.</p>		
NTR336 - NUT336	Human Nutrition II	2 cr.
Pre-requisites	NTR211 and BCH215	
<p>This course emphasizes on metabolic, biochemical and physiological processes related to nutrition. It focuses on the anatomy of the gastrointestinal tract and its function with respect to digestion and absorption. This course will address the interrelationships among the metabolic pathways that are common to the macronutrients, fluid and electrolyte balance as well as the macronutrients' exchange system.</p>		
NTR338A-NUT338A	Food Service Management and Community Internship	1 cr.
Pre-requisites	NTR334	
Co-requisites	NTR331 or GAA339	
<p>This 8 weeks rotation is coordinated through the university where internship placement for 2nd year students takes place. In the Food Service Management rotation, the intern will rotate through purchasing, inventory, food production, food service administration and management. During the Community rotation, the intern will have the opportunity to experience the role of a dietitian within a local community setting.</p>		
NUT339	Food Community management practice	2 cr.
<p>These 3-4 week rotation of a minimum of 120 hours is coordinated through the university where internship placement for 3rd year students takes place. During the Community rotation, the intern will have the opportunity to experience the role of a dietitian within a local community setting.</p>		
NUT340	Nutrition in the Lifecycle - Practice	1 cr.
Pre-requisites	NUT211 and NUT212	
Co-requisites	NUT342	
<p>This laboratory covers case studies and a practical exposure of nutrition conditions from preconception throughout life until the elderly age, with a particular emphasis on nutrition correlates of pregnancy, normal growth and development, infant and child nutrition, adolescent and elderly nutrition. It considers the role of nutrition in the context of the normal physiologic changes that occur with aging in addition to the main health conditions that may occur during these stages of life.</p>		
NUT342	Nutrition in the Lifecycle	3 cr.
Pre-requisites	NUT211 and NUT212	

This course covers nutrition issues from preconception throughout life, with a particular emphasis on nutrition correlates of pregnancy, normal growth and development, infant and child nutrition, adolescent and elderly nutrition. It considers the role of nutrition in the context of the normal physiologic changes that occur with aging. This course will also focus on vegetarianism and its positive and negative aspects on health.

NUT345 Ethics and Nutritional Care Process 2 cr.

The course cover the Nutrition Care Process and surveys all standardized nutrition terms for individuals depending of their health status ,and meets the requirements for completion of the dietetic internship according to the Accreditation Council for Education in Nutrition & Dietetics (ACEND) criteria.

NUT347 Nutrition in Communities 3 cr.

Pre-requisites NUT211 and NUT212 and NUT342

This course provides students in nutrition and Dietetics the necessary knowledge, tools and skills they require to evaluate and achieve community-based nutrition interventions that promote public health and prevent diseases among communities.

NUT348 Food Festival Workshop 1 cr.

Pre-requisites NUT211 and NUT212 and NUT342

This 1-credit course intends to raise students' interest on international food culture throughout the organization of an open Food Festival to be held on the University Campus. This course will fulfill organizational, managerial, evidence-research based information and communications skills necessary for student to hangover with dietetics practice among communities.

NUT411 Clinical Nutrition I 3 cr.

Co-requisites NUT412

This course focuses on all aspects required to prepare graduates for a comprehensive practice of dietetics through the Scope of Nutrition and Dietetics Practice and The Code of Ethics for the Profession of Nutrition and Dietetics via the implementation of the Nutritional Care Process for the evaluation, diagnosis, treatment and monitoring of various conditions related to nutrition.

NUT412 Clinical Nutrition I Lab 1 cr.

Pre-requisites NUT221 and NUT212

Co-requisites NUT411

This course focuses on all aspects required to prepare graduates for a comprehensive practice of dietetics through the Scope of Nutrition and Dietetics Practice and The Code of Ethics for the Profession of Nutrition and Dietetics via the implementation of the Nutritional Care Process for the evaluation, diagnosis, treatment and monitoring of various conditions related to nutrition.

NUT425 Food Processing Principles and Applications 2 cr.

Pre-requisites GAA340 and GAA378

Co-requisites NUT430

Food processing as a scientific and technological activity covers a broader area than food preparation and cooking. It involves the application of scientific principles to slow down the natural processes of food spoilage, and to provide convenience and a safe marketplace. This course introduces conventional and novel processing and preservation technologies. Sensory and nutritional implications of food processing will also be discussed.

NUT430 Food Processing Principles and Applications- Practice 1 cr.

Pre-requisites GAA340 and GAA378

Co-requisites NUT425

Food processing as a scientific and technological activity covers a broader area than food preparation and cooking. It involves the application of scientific principles to slow down the natural processes of food spoilage, and to provide convenience and a safe marketplace. This course introduces conventional and novel processing and preservation technologies. Sensory and nutritional implications of food processing will also be discussed.

NUT431 Clinical Counseling Skills Workshop 1 cr.

Pre-requisites NUT345 and NUT348

This course allows the students to practice their ability to nutritionally assess a patient using Anthropometric and Dietetic measures. Students must provide overall nutritional assessment of random patients. In order to provide appropriate nutritional and dietetic recommendations at the end of each assessment, students prepare their own learning material such as medical/nutritional brochures and samples of detailed healthy diets that can be followed by the patients after taking into consideration the patients' objectives and nutritional needs.

NUT432 Sports Nutrition 1 cr.

This course tackles the type of nutrition related to sports activities with a practical side concerning each person. It will cover the nutritional status of the athlete, his anthropometric measurements, energy needs in macro and micro nutrients .In addition, a part of the course will be assigned for the nutritional preparation before and after the exercise for recovery.

The rest of the course will cover the athletes weight changes , their food implications and the different ergogenic supplements.

NTR433 - NUT433 Nutrition for Athletes 2 cr.

Pre-requisites NTR322

This course tackles the type of nutrition related to sports activities with a practical side concerning each person. It covers the nutritional status of the athlete, his anthropometric measurements, energy needs in macro and micro nutrients. Furthermore, this courses includes the nutritional preparation before the exercise and after the exercise for recovery.

NTR435 - NUT435 Preventive Nutrition and Public Health 2 cr.

Pre-requisites NTR331

This course gives students the opportunity to understand nutritional public health, in addition to the tasks of nutrition professionals and the programs used to promote nutritional public health in the community. The course deals with public health problems with emphasis on alimentation and primary prevention of these problems by nutrition. It also shows the different types of foods linked to public health, together with the global strategies of preventive nutrition at an international level, adopted by the Organization of the United Nations.

NUT439 Food service management Practice 2 cr.

Pre-requisites NUT314

These 3-4 weeks rotation of a minimum of 120 hours is coordinated through the university where internship placement for 2nd year students takes place. In Food Service Management rotation, the intern will rotate through purchasing, inventory, food production, food service administration and management.

NUT440 Managerial skills in dietetic practice 2 cr.

Pre-requisites NUT345

This course will cover leadership and management skills for dietetic practitioners taking into account the competency standards. It will cover innovative practices covering business and entrepreneurship. This course will allow the students to develop their leadership skills and help them to be more confident in managing conflicts.

NTR441 - NUT441 Clinical Counseling and Nutritional Assessment + Lab 3 cr.

Co-requisites NTR471

Pre-requisites NUT447

This course takes as its premise that patients should be guided to understand that they must take charge of their own lives. "Don't take your body to the doctor as if he were a repair shop", (Quentin Regestein). Healthy eating is not about strict dieting, staying unrealistically thin, or depriving yourself of the foods you love. Rather, it is about maintaining and improving general health, having more energy and stabilizing your mood. Clinical consultation is important to teach people how to deal with food in a positive way, to control their weight, as well as to prevent health problems. This course deals with the different steps of this nutritional consultation. It details all parts of a complete clinical consultation and allows students to perfect their clinical approach towards patients.

NUT442 Clinical Counseling and Nutrition Assessment 2 cr.

Co-requisites NUT447

Pre-requisites NUT471

This course examines in detail the various stages of clinical nutrition consultation. It allows students to improve their clinical approach towards the patient. It covers all parts of an ideal model of clinical nutrition consultation. Moreover, this course teaches the students how to deal with food in a positive way, to control the weight as well as to prevent health problems.

NUT443 Clinical Nutrition II 3 cr.

Pre-requisites NUT212 and NUT345

This course focuses on all aspects required to prepare graduates for a comprehensive practice of dietetics through the Scope of Nutrition and Dietetics Practice and The Code of Ethics for the Profession of Nutrition and Dietetics via the implementation of the Nutritional Care Process for the evaluation, diagnosis, treatment and monitoring of various conditions of nutrition-related diseases.

NUT444 Clinical Nutrition II Lab 1 cr.

Co-requisites NUT443

This course focuses on all aspects required to prepare graduates for a comprehensive practice of dietetics through the Scope of Nutrition and Dietetics Practice and The Code of Ethics for the Profession of Nutrition and Dietetics via the implementation of the Nutritional Care Process for the evaluation, diagnosis, treatment and monitoring of various conditions of nutrition-related diseases.

NTR445 - NUT445 Current Topics in Food Sciences and Nutrition 0 cr.

This course is designed to provide students with key concepts, current issues, researches and new trends that are pertinent to professionals working in nutrition, dietetics and food sciences field.

This seminar course is given by invited national and international key-speakers.

NTR446 - NUT446	Pharmacology and Human Health	3 cr.
Pre-requisites	NUT222 and NTR223	
This course covers the general pharmacology and specific Pharmacology. It introduces the students to the fundamental concepts, and to the usage of various drugs in the treatment of different diseases. Moreover, this course deals with different therapeutic classes of drugs that are frequently prescribed by physicians, and those that have been lately introduced into the drugs market involving preventive measures and practical and useful notices, such as impact of special food on some effects of drugs.		
NTR447 - NUT447	Pathophysiology of Nutrition Related Diseases	4 cr.
Pre-requisites	NUT222 and NTR223 and BCH215	
This course enables students to understand the basic mechanisms of the genesis of these diseases and their clinical manifestations. It covers the definition of the pathophysiology, the concept of "nutritional diseases". This course allows the students to understand the signs and symptoms and clinical aspects of various diseases such as diabetes, dyslipidemia, cardiovascular problems and other.		
NUT448	Scientific Reasoning in Nutrition and Dietetics	2 cr.
This course focuses on the scientific reasoning to give students a deep understanding of research from domain-general and domain-specific knowledge. This course aims at mastering student to convert scientific information into practice using argumentation, critical-thinking and communication skills. After completion of the course, students will be ready to exploit their competencies for academic writing, workshop presentation from evidence-based research in the field of Nutrition and Dietetics.		
NTR452 - NUT452	Medical Nutrition Therapy I	2 cr.
Pre-requisites	NTR336	
Co-requisites	NTR475 or NTR447	
This course covers the nutritional strategies in situations of aggression and various diseases that may benefit from nutritional support such as lung diseases, neurological diseases, cancer, inborn errors of metabolism It aims to convey to students the basic pathophysiology of these diseases, their impact on nutritional status and nutritional value of measurements.		
NTR454 - NUT454	Medical Nutrition Therapy III	2 cr.
Co-requisites	NTR478	
Pre-requisites	NTR447 and (NTR452 or NUT452)	
This course focuses on the medical nutrition therapy of several pathologies affected by nutrition. Bone diseases (osteoporosis, osteomalacia), allergies and food intolerances (celiac disease), anemia and other hematologic diseases that affect or are affected by nutrition, as well as digestive disorders (intestinal, pancreatic, and hepatic) will be discussed. In addition, a physiological, pathological, semiology and diagnostic overview will be presented.		
NTR453 - NUT453	Medical Nutrition Therapy II	2 cr.
Pre-requisites	NTR447 and NTR452	
Co-requisites	NTR476	
This course will allow students to understand in detail the nutritional aspects of disease and its effect on the body, as well as the role of nutrition in the etiology, prevention and treatment of the following non-communicable conditions: weight management, diabetes, cardiovascular diseases, and renal diseases.		
NUT471	Clinical Counseling and Nutrition Assessment Lab	1 cr.
Co-requisites	NTR442	
This lab helps the students translating the nutrition counseling theories and techniques into practices on different types of patients. It introduces the students to the practical recommendations related to different types of diseases such as diabetes, cardiovascular diseases, etc.		
NTR475 - NUT475	Medical Nutrition Therapy I Lab	1 cr.
Co-requisites	NTR452	
This lab targets the acquisition of the medical terminology, estimation of energy needs of patients and diet composition as well as an overview of the new international Exchange System. Furthermore, it handles case studies in which special diets and recommendations are necessary for the following situations or pathologies: pulmonary diseases, cancer, AIDS etc....		
NTR476 - NUT476	Medical Nutrition Therapy II Lab	1 cr.
Co-requisites	NTR454	
This course will allow students to understand in detail the nutritional aspects of disease and its effect on the body, as well as the role of nutrition in the etiology, prevention and treatment of the following non-communicable conditions: weight management, diabetes, cardiovascular diseases, and renal diseases.		
NTR478 - NUT478	Medical Nutrition Therapy III Lab	1 cr.
Co-requisites	NTR454	

This course focuses on the medical nutrition therapy of several pathologies affected by nutrition. Bone diseases (osteoporosis, osteomalacia), allergies and food intolerances (celiac disease), anemia and other hematologic diseases that affect or are affected by nutrition, as well as digestive disorders (intestinal, pancreatic, and hepatic) will be discussed. In addition, a physiological, pathological, semiology and diagnostic overview will be presented.

NUT481 Food and social media 2 cr.

This course will introduce the students to current knowledge related to the influences of mass media on young population. In addition, it will enhance evidence-based understanding of the impacts of social media on young people's health and wellbeing. Students will be able to analyze the diverse uses of social media in the current health and nutrition field.

NUT482 Basic Concepts in Nutritional Genomics 2 cr.

Diet is a key environmental factor that affects the incidence of many chronic diseases. Nutrigenomics is an emerging discipline that studies how diet influences the expression of genetic information, or how each individual interacts with, and responds to environmental factors. This course presents nutritional genomics concepts, as well as functional genomics techniques and strategies applied to nutritional disease prevention. Upon completion of the course, students will acquire fundamental concepts of technologies and strategies to understand nutritional genomics research approaches and the complex gene-nutrient or gene-gene interactions and their link with human diseases.

NUT507 Dietetics Seminar 2 cr.

This course offers opportunities to students to develop their critical-thinking, communication and argumentation skills. Students will apply their scientific reasoning competencies acquired during the course NUT443. Assignments, self-report and oral presentation will be the major activities of this course to apply all necessary communication and reasoning competencies for entry-level dietitian.

NUT510 Clinical Nutrition III 3 cr.

Pre-requisites NUT443

This course focuses on all aspects required to prepare graduates for a comprehensive practice of dietetics through the Scope of Nutrition and Dietetics Practice and The Code of Ethics for the Profession of Nutrition and Dietetics via the implementation of the Nutritional Care Process for the evaluation, diagnosis, treatment and monitoring of various conditions related to nutrition.

NUT511 Clinical Nutrition III Lab 1 cr.

This course focuses on all aspects required to prepare graduates for a comprehensive practice of dietetics through the Scope of Nutrition and Dietetics Practice and The Code of Ethics for the Profession of Nutrition and Dietetics via the implementation of the Nutritional Care Process for the evaluation, diagnosis, treatment and monitoring of various conditions related to nutrition.

NTR512 Advanced Food Service Management 3 cr.

This is an advanced course of food management to complement undergraduate training .It encloses all necessary management notions to effectively direct food establishments (hotels, restaurants, diet centers...). This course details managerial and operational concepts essentials to food service management i.e. Marketing, finance, human resources and Leadership.

NTR514 Advanced Nutrition: Macronutrients and Micronutrients 3 cr.

This is a master course shedding a more in depth look at the metabolism of certain nutrients as well as practical course that allow students to research and present the recent literature on main topics.

They will deeply understand the nutritional aspects of diseases and its effect on the body, as well as the role of nutrition in the etiology, prevention and treatment of non-communicable/communicable diseases.

NUT543 Writing Skills in Current Topics in Food Sciences and Nutrition 1 cr.

Pre-requisites NUT448

This 1-credit course is designed to provide students with key concepts, current issues, researches and new trends that are pertinent to professionals working in nutrition, dietetics and food sciences field. This seminar course is given by invited national or international key-speakers.

NTR545 Advanced Topics in Food Sciences and Nutrition 0 cr.

This course is designed to provide students with key concepts, current issues, researches and new trends that are pertinent to professionals working in nutrition, dietetics and food sciences field.

This seminar course is given by invited national and international key-speakers.

NTR552 Advanced Medical Therapeutic Nutrition 3 cr.

This master course gives a more in depth look at how nutrition is a perpetually evolving science where some advice is yet to be proven and deemed conventional medicine such as the intake of diet supplements. Students will further grasp how to screen the nutritional status and advise the patient on the best course of action to take through oral / enteral / parenteral feeding.

Students will also be asked to research and present the recent literature on main topics.

NTR611	Clinical Sports Nutrition	3 cr.
<p>This course is meant to introduce the students to sports nutrition and its biological basis and basics. It will prepare him to prescribing diets for individual needs of sportspeople. An almost-complete-array of sports nutrition topics and fields are covered and eventual applications to different types, intensities and levels of professional and non-professional exercises are treated.</p>		
NTR617	Nutrigenomics	3 cr.
<p>This course describes functional foods, their plant, animal or mineral origin and their pharmacological effects in the prevention and treatments of diseases. An important part of this course describes the transformation of nutritional signals into gene expression patterns and epigenetic. In the last part will be discussed the aspects of personalized nutrition and the concept of "food for me".</p>		
NTR635	Economics for food and Nutrition policy	3 cr.
<p>This courses covers the different economic analysis methods applied in nutrition and food policy. It allows the students to select the proper and effective food consumption and production methods. In addition this course tackles the different methods of intervention used by the government in the different stages of the food system and its effect on the economy.</p>		
NTR650	Advanced Lifecycle in Nutrition	3 cr.
<p>This course focuses on the nutrition and food patterns of individuals and cluster of individuals constituting a community. It will tackle the health promotion initiatives, food policies implemented in different communities in addition to different community program planning throughout the lifecycle targeting different populations (women, children, elderly...). This course will include practical research topics and discussion related to the latest updates in community nutrition and educational programs.</p>		
NTR652	Diabetes, Dyslipidemia & Obesity	3 cr.
<p>This course, which is already taught in cycle one of Human Nutrition and Dietetics, will be presented in the form of theoretical sessions with a clinical aspect, followed by practical training in the form of medical practice in central obesity and endocrinology.</p>		
NTR657	Elaboration and evaluation of health programs	3 cr.
<p>Health programs are usually implemented to achieve specific outcomes by performing some type of intervention or service. While evaluation may be performed for a variety of reasons, most are conducted to answer two fundamental questions: is the program working as intended? And second, why is this case? Evaluations help decision makers, program managers and other groups to understand the reasons for program performance, and to make informed judgment about improving a program, extending it to other sites, cutting back or abolishing a program so that resources may be allocated elsewhere. In essence, evaluation is a management tool for administrators, planners, policy makers and other health officials.</p>		
NTR658	Public Health in Lebanon	3 cr.
<p>The course examines policies, legislations, institutional organization, competent authorities, and liability as they relate to public health sector in Lebanon. It also emphasizes on the practical application of community health research to enhance the practice of public health in the Lebanese community.</p>		
NTR688	Seminar in Nutrition	3 cr.
<p>This is an advanced course of food management to complement undergraduate training .It encloses all necessary management notions to effectively direct food establishments (hotels, restaurants, diet centers...). This course details managerial and operational concepts essentials to food service management i.e. Marketing, finance, human resources and Leadership.</p>		
NTR696	Practical Statistics in Agrifood and Nutrition	0 cr.
<p>Application to the MS course NTR510 (Research Methodology in Nutrition) based on individual topics chosen by students with personal coaching/advising regarding accurate statistic types of the test to be used during their thesis and how to select a correct/representative sample in term of size relative to the general population.</p>		
NTR697A	Thesis in Nutrition, Option: Nutrition and Public Health	6 cr.
Pre-requisites	NTR688	
<p>The thesis study is a research project on a topic chosen in agreement with the tutor and approved by the thesis topics evaluation committee of the department of nutrition. The proposal must include the subject's background, purpose, research questions, and methods, preparation of the study, time, statistical analysis, and bibliography. The paper includes a literature review and research practice. It measures the level of students' knowledge, their capacity for analysis and presentation. The student must submit a final written report with a theoretical part, a practical study, followed by an analytical part, conclusion and recommendations. He defends his thesis before a jury. It must then also write an article based on his thesis and present a Poster. The time allowed for this study is 2 semesters, renewable.</p>		

NTR698A	Thesis in Nutrition, Option: Food Service Management	6 cr.
Pre-requisites	NTR688	
The thesis study is a research project on a topic chosen in agreement with the tutor and approved by the thesis topics evaluation committee of the department of nutrition. The proposal must include the subject's background, purpose, research questions, and methods, preparation of the study, time, statistical analysis, and bibliography. The paper includes a literature review and research practice. It measures the level of students' knowledge, their capacity for analysis and presentation. The student must submit a final written report with a theoretical part, a practical study, followed by an analytical part, conclusion and recommendations. He defends his thesis before a jury. It must then also write an article based on his thesis and present a Poster. The time allowed for this study is 2 semesters, renewable.		
NTR699A	Thesis in Nutrition, Option: Clinical Nutrition	6 cr.
Pre-requisites	NTR688	
The thesis study is a research project on a topic chosen in agreement with the tutor and approved by the thesis topics evaluation committee of the department of nutrition. The proposal must include the subject's background, purpose, research questions, and methods, preparation of the study, time, statistical analysis, and bibliography. The paper includes a literature review and research practice. It measures the level of students' knowledge, their capacity for analysis and presentation. The student must submit a final written report with a theoretical part, a practical study, followed by an analytical part, conclusion and recommendations. He defends his thesis before a jury. It must then also write an article based on his thesis and present a Poster. The time allowed for this study is 2 semesters, renewable.		
OCSR32.00	Liturgy of the Hours	2 cr.
This course will consider the liturgical aspects of The Liturgy of the Hours and its evolution history. The course highlights the contribution from the Jewish heritage and the Christian meaning of the Hours.		
OCSR33.00	The Liturgical Seasons	3 cr.
This study examines the different concepts of time and of multiple dimensions. It seeks to write the history of the origins of the calendar and the seasons in general. This study presents the liturgical year in each Eastern rite, its structure, characteristics and spirituality.		
OCSR34.00	Liturgical Community	2 cr.
This course focuses on the liturgical community, and how liturgy celebrates the faith of a community as it was the case for the first Christian communities. To the extent that the community is "liturgical" and alive, its liturgy will be meaningful and will be the "incarnation of the Church". The celebration of the paschal mystery opens to communion and sharing, and makes the sanctifying Spirit active in the lives of Christians. There is, therefore, a logical sequence between the paschal mystery, Christian worship, liturgical assembly and Christian life leading to the incarnation of the Church.		
OCSR35.00	Law of Praying Law of Believing	2 cr.
This is a course that analyzes and comments on the famous saying: Lex Orandi, Lex credendi, "the law of prayer is the law of faith", and offers a preliminary explanation of the meaning of "liturgy" that will be followed by three illustrations of the saying.		
OCSR36.00	Sacred Music and Dance of the World	1 cr.
This course is a panoramic overview of music and sacred dances in the world. These music and dances are closely related to religious and ritual celebrations and are an expression of faith and prayer.		
OCSR37.00	Sacred Triduum	3 cr.
The objective of this course is to pursue the scientific research of students through the biblical and patristic sources and through the offices and the celebrations of Holy Week, to create awareness of the importance of this Holy Week, the summit of the liturgical year.		
OCSR38.00	Matrimonial Rites	2 cr.
God has established marriage by "creating man and woman" that owes nothing to the state or to the Church. It is a natural institution called "customary marriage": a union based on marriage and family more than on formalities. Even for the chosen people, marriage is an earthly reality. The Church, in turn, believes that "marriage has God as its author. It was from the beginning as a figure of the Incarnation of the Word of God". The Vatican does not diverge from this biblical vision. This course examines the development of the celebration of marriage throughout history.		
OCSR39.00	Eucharistic Liturgy	3 cr.
The course is presented through a liturgical, historical and theological perspective. The first part considers the historical and liturgical development of the parts of the Mass, through the various Eastern liturgies, and distinguishes between the Antiochian and the Alexandrian structure. The main parts of the Mass will be detailed. A major importance will be given to the anaphora.		
OCSR40.00	Liturgy and Sacred Music	2 cr.
This course is an introduction to music in its relation to Liturgy. It includes general concepts on religion, music, philosophy, the sacred and its rapport with music. The Subjects to study are: the function of sacred music, the		

relationship religion-music, tradition and renewal in sacred music; sacred music categories, forms and genres of sacred music, classification of sacred songs, the characteristics of sacred music etc

OCSR41.00 Introduction to the liturgy 2 cr.

Liturgy in the Sacrament of the Church, the Sacrifice of the Salvation, the Presence of Christ in the World, the Purpose of Liturgical Action, Liturgy Peak of the Church's Life and Fountain, Liturgy and Acts of Piety, Renewal of the Liturgy, Liturgical Committee, Source of Liturgical Liturgy. The Sacrament of the Eucharist, Divine Management, Word Section, Sacrifice Section (Anaphoras/ Eucharist Prayer). Symbols of secrets, quasi-secrets, folk liturgy, the importance of the sacramental sacrament, the primary purpose of the sacraments. Permanent prayer, the importance of obligatory prayer.

OCSR42.00 Baptism and Eucharist 2 cr.

The meaning of the word baptism, baptism of John, baptism and the cross, baptism and Jesus' missionary life, baptism and incarnation Baptism in the Acts of the Apostles, Baptism in the Epistles of St. Paul, baptism in the writings of St. John, the test of baptism in the first three centuries, the theology of baptism, the need for baptism, the historical evolution of baptism, baptism and baptism In the sacrament of baptism, the baptism of baptismal water, baptism and spiritual divinity, Baptism and the new Adam. Prayer of thanksgiving on bread and wineglass, bread of the offering in the Old Testament, bread of heaven and the cup of salvation in the New Testament, kiss of peace, prayer of thanksgiving and praise through the song of "Holy," summoning the Holy Spirit, requests, the prayer of the Father, conclusion and Thanksgiving, at the end of the Liturgy interrelationship between the three mysteries of upbringing.

OCSR43.00 Priesthood, Repentance and Anointing of sick 2 cr.

The sacrament of the priesthood completes the work of Christ in his church to care for man and develop him through the service of the sacraments and through the functions of teaching, sanctification and management. In the times of weakness, sickness, pain, and even conflict, the Christian faith comes to light up a new flame of hope through the secret of healing. The human being is reminded that he is carefully covered by God and reveals the God of love and forgiveness that accepts man as he is. He invites him to accept himself with sincerity and humility, and to work with her ability to renew his life. In the mystery of repentance, Christ touches the believer's heart, and the transformation takes place. In the sacrament of the sick, we see the presence of the healing and sincere power of Christ, the patient feels the continuity of the love of Christ represented by the presence of the Church beside him. The disease does not negate the love of God to man, but it reveals this great mystery, it is discovered that this love expresses the act of faith.

OCSR44.00 Introduction to the Bible 2 cr.

Introduction to the Old Testament: The Hebrew division of the Bible, the Old Testament, the Greek division, the Septuagint translation, the Catholic division of the Old Testament, the geographical and historical environment in which the Old Testament was created, the land of the Bible, the most important stages of Israel's history, the Jewish community, the tradition of religious observance, the Elohim tradition, the historical and critical study of the Old Testament. Introduction to the New Testament: New Testament language and its 27 sections, legal books, New Testament books of the New Testament, an interpretive study of the New Testament, historical study, literary study, defensive study, the formation of the Gospels and the meaning of differences in biblical texts. The role of the Holy Spirit in the inspiration of the four apostles and evangelists, the religious parties, the Sadducees, the Pharisees, the Jealous, the Asians, the stages of writing the Gospels, and the Acts of the Apostles.

OCSR45.00 Introduction to the pastoral theology 2 cr.

This course is an introduction to pastoral theology. If theology was the Christian faith in search of its intelligence, the theological disciplines that offer theology students the keys to the broad "Science of God" and to its salvation in the world would be numerous and various. Pastoral theology is one of these disciplines, but with the distinction of being more oriented towards the Christian praxis which brings together the different aspects of the Christian faith and its various transmissions in communities, parishes, groups, catechesis or others. The Christian experience is understood at this point as a "response" to the Word of God received by Revelation and "recovered" in the Tradition. This experience is "imposed" in pastoral theology in a theological place where intelligence of the Christian faith occurs. This discipline, as entitled in this course pastoral, covers two levels of thinking and research; the first "empirical" and the second "applied".

Among the Greeks, nature is physical, all of which appears; hence the problem of natural, supernatural and the supernatural. In Christian theology, nature is one; hence the problem of the two natures of Christ. In Latin, natura is "character", which poses the problem of nothing less than human nature. In the medical sciences, nature bounds genetics. In law, it opposes the Civic. In literature, he opposes romanticism and classicism. Today, ecology seems to oppose nature and man; it is even about "green policy" as of 'ecological theology,' 'brief' 'ecological philosophy.' Nature is everywhere, but is the concept of nature he said the same thing everywhere in all areas? What is then "nature"? Will he act or nature? An act or nature? And why is his definition a hermeneutical problem? That's what our course will try to address.

The course objective is to study the concept of "nature" existing on a platform of ideas from different fields, such as physics, metaphysics, theology, psychology, genetics, law, literature, and ecology, without however being well-defined.

PAC201-2 / PAC303-4 / PAC405 **Accompaniment Practice I - II - III - IV - V** **1 cr.**

This course offers an introduction to the many particular skills that the professional accompanist needs, including:

- knowledge and experience in duo repertoire and chamber music
- competencies in sight-reading and transposition
- experience in playing for choir rehearsals
- experience in vocal coaching
- experiences in orchestral accompaniment

PAC406 **Accompaniment Practice VI** **2 cr.**

This course offers an introduction to the many particular skills that the professional accompanist needs, including:

- knowledge and experience in duo repertoire and chamber music
- competencies in sight-reading and transposition
- experience in playing for choir rehearsals
- experience in vocal coaching
- experiences in orchestral accompaniment

PHA510 **Anthropology of Interiority** **3 cr.**

This course focuses on man, being of desires. From a phenomenological approach of the constitutive dimension of interiority and the founding experience of lack, he is interested in the communicability of the inner life and his achievements in contemplation and in action. A privileged place is conferred to the modalities of expression of such an experience, notably in the mysticism and art. The inner experience is always experience of transcendence. The course will reflect on the manifestations of transcendence, its modalities and modulations, as well as the metamorphosis of the self and the relationship between inner experience and language. Among the important specific issues will be addressed that of the ineffable and the paradox of a "discourse on" the ineffable, that of a possible (or impossible) knowledge to the inner experience and that of the interest of inner experience for philosophy.

PHA520 **Philosophy of Otherness** **3 cr.**

The self-questioning have always been simultaneously questioning about the other. The fundamental course focuses primarily on the onto-theological issue of otherness, founder of me starting from, notably, the now classic approaches of Buber, Levinas, Scheler, Marcel but also recent works of Housset on the person vocation and the communitarian dimension for example. It also finds an original development by Edith Stein in her dissertation on empathy or its feminine phenomenology.

PHA525 **Humanism, Post-Humanism** **3 cr.**

Retracing the history of the individual through the great moments of evolution of his consciousness from himself and from those of the history of knowledge and societies (the emergence of the individual, the advent of the machine, neuroscience, digital technologies ...), this course offers a reflection on the following questions: Is it possible to define the human? Is Post-humanism engaged even in the historicity of the individual or does it allow itself to be indulged as the end of humanism? Can we speak of transhumanism in light of changes in the human? The approach of the ontological and ethical issues and implications of these questions is based primarily on the work of Steiner, Ellul, Stiegler, Jonas and Morin.

PHA530 **Philosophy of Freedom** **3 cr.**

Based on the triple theoretical dimension of freedom (metaphysical, ethical and psychological), this course develops an anthropological approach to freedom in a very modern praxeological perspective which submits new easements in light of the growth of concepts, progress and change in areas such as the economy or the environment.

PHI201 **Introduction to Philosophy** **3 cr.**

The course will introduce students to philosophical thinking and practice. It will cover, on the one hand, the main philosophical currents, highlighting their specificity and their creative input and, on the other hand, the most representative authors in the history of philosophical thought. In an effort not to separate these themes and the fundamental questions of mankind, the course attempts to show the relationship that develops between the aforementioned notions, with the aim of addressing their impact on certain world views that constantly interpolate us within contemporary societies.

PHI210 **Greek Philosophy** **3 cr.**

This course is divided into two parts: the first part examines pre-Socratic sources that give students the proper tools to acquire philosophical thinking in their quest for the nature of things, and in their attempt to unveil both natural and human phenomena. It thus includes the main schools of thought such as the School of Miletus (Thales, Anaximander, Anaximenes), the Pythagorean school (Pythagoras), the Ionian school (Heraclitus), the Eleatic school (Parmenides), as well as the Sophists. The second part deals with Socrates, Plato and Aristotle.

PHI301 **Medieval Philosophy** **3 cr.**

Pre-requisites PHI210

This course is designed to analyze the highlights of the thought of St. Augustine, St. Thomas Aquinas and Meister Eckhart. We seek, from the analysis of the Augustinian singular experience of truth, to understand in depth the issues relating to the problem of knowledge, the metaphysics of inner experience, the self-certainty based on the truth of God inherent in our interiority, temporality and eternity and the unitive and tripartite constitution of the same soul to the constitution of the Trinitarian life in God. We will study, starting from a critical reading of the writings of St. Thomas, the themes related to the receipt of Thomistic Aristotelian heritage, the question of creation and the evidence of the existence of God, the question of analogy and the problem of knowledge. A contemporary reading of the mystic Meister Eckhart, which largely contributed to the emergence of German philosophical speculation, will be analyzed as well. The research will, at this level, tackle Eckhart's unitive structure of knowledge and life, that animates the vital relationship between God and man.

PHI325 Philosophical Reading 3 cr.

An analytical and critical reading of a philosophical text in its entirety is a necessary and formative exercise. After an introduction to the author and his work, and in context of the work in question, a reading workshop, directed and supervised by the teacher, will develop around the statements of work, comments and thematic overviews, for the establishment of a reference file. The workshop will be provided each semester by a different teacher, for a greater variety of approach. The work chosen by the teacher in charge of the course generally will correspond to its competences. It must, however, be a major and referential work in the history of thought. A list of authors will be established for this purpose, such as Plato, Aristotle, Augustine, Descartes, Kant, Hegel, Nietzsche, Heidegger, Husserl, Arendt, Derrida, Merleau-Ponty, etc. The work chosen will be announced at the beginning of each semester.

PHI327 Philosophical Anthropology 3 cr.**Pre-requisites** PHI210

The question "What Is Man?" is at the heart of philosophical questioning. Starting from the anthropocentrism need of philosophy, the course firstly explores the meaning of the question about the essence of man through its history, the challenges imposed by the cyborg, the computational world or gender theory (Gehlen, Leach, Butler, Blumenberg, etc.). The course questions the difficulties of defining the human being through current changes by building on the thinkers of classical humanism and post-humanism. Secondly, the course presents the basic categories of philosophical anthropology and offers a thorough analysis of the being-in-relation (or the human being-in-relationships) and discussion of political, social and cultural implications, with reference to contemporary thinkers of otherness (Levinas, Buber, Marion, etc.)

PHI333 Modern Philosophy 3 cr.**Pre-requisites** PHI301 or PHI210

The students will be introduced to two great philosophical currents, both stemming from the works of Francis Bacon, rationalism (Descartes, Leibniz and Spinoza) and empiricism (Locke, Condillac, Hume), leading to Kant's philosophy of knowledge - critical rationalism.

PHI375 Internship 3 cr.

The purpose of the course is to propose several approaches to the current teaching of philosophy in high schools, and to highlight the various and complex problems specific to this area. It is divided into three parts: the first is an appropriation of various acquired theories relative to the plan of pure didactics. The second is an appropriation of the acquired theories related to the specialized philosophy didactic. The third is testing these theories acquired by a teaching internship in schools, which confirms the skills already acquired by the student concerning both pedagogical and philosophical plans.

PHI419 Philosophy and Sciences 3 cr.**Pre-requisites** PHI333

This epistemology course centers around a double axis: firstly it tackles the gnoseological question with an inquiry into the genesis of knowledge or the basic stages of the transition from anthropomorphism to anthropocentrism (Kepler, Galileo, Newton). Secondly it tackles methodology in reference to exact sciences and deals with the requirements of the elaboration of a scientific method: its different stages, the means it uses, in order to avoid, overcome or circumvent all sorts of epistemological conundrums that stand in the way of an objective scientific progress (Bachelard, Popper), with a thorough critical study of the validity of its founding criteria (Wittgenstein).

PHI420 Logic and Philosophy of Knowledge 3 cr.**Pre-requisites** PHI333

This course initially outlines a perspective of language as an object of study that shows how much of the philosophy of the twentieth century developed as a "philosophy of language" (Analytic Philosophy). Secondly it deals with the general theoretical framework of the argument as a discursive act, based on the theory of acts of language (speech acts), that the two philosophers Longshaw John Austin and, later, John Searle paved the way for. Thirdly, general issues related to logic are discussed, and are treated by the induction and deduction master concepts - truth and validity. A brief

discussion is given on the methods and endorsements of formalization. The formal approach is exemplified, when it comes to conducting the analysis and evaluation of simple deductive arguments, called syllogism.

PHI433 Far-Eastern Philosophy

3 cr.

The course is divided into two parts: the first part educates students to draw their knowledge from the sources of Far-Eastern philosophy and enhance their knowledge of the cultural environment therein. The second part allows students to comment on a range of texts relating to the two Chinese and Hindu traditions: LaoTse, Confucius, the schools and sacred writings of Indian Brahmanism, Buddhism and Vedanta.

PHI445 Metaphysics

3 cr.

Pre-requisites PHI210

The purpose of this course is to present a reflection on metaphysics and its relation to primitive philosophy, which discusses, for example, "The science of Being as Being." It is divided into three areas. The first focuses on Aristotelian metaphysics. The second reflects upon the problems of the world, the soul and God, from the analysis of two antithetical philosophers, Leibniz and Spinoza. The third examines the different theories of the nineteenth and twentieth century, taking an in-depth look into the philosophies which were eager to put an end to metaphysics; philosophies which are attributed to Kant, Nietzsche, Heidegger and Habermas.

PHI447 Moral and Political Philosophy

3 cr.

Pre-requisites PHI210

The course aims to consider a reflection on the foundations and the meaning of democracy, in order to find the place of morality in politics; knowing that the two concepts "moral" and "politics" are written mostly in separation rather than in conjunction. This is how we can understand the great debates relative to moral and political philosophy, from the ancient Greeks - particularly those of Plato and Aristotle - until modern or contemporary times. Starting with an approach to these two concepts, the course is essentially questioning, on one hand, the need for the interaction of these two areas of morality and politics, and also that of their separation. Students will analyze in-depth the answer to these questions by drawing on texts of classical and modern philosophers such as Plato, Aristotle, Kant, Machiavelli, Thomas Hobbes, Max Weber, Hannah Arendt and Julien Freund, who have pondered this topical issue.

PHI448 Arab Philosophy in the Middle age

3 cr.

Pre-requisites PHI210

The course of Arab-Muslim philosophy is envisaged in the form of problems: the theory of Knowledge - the topic of Reason in Arab-Muslim philosophy and the question of the compatibility of Reason and Faith (Mu'tazila, Ibn Tufayl, Ibn Rushd); God - the traditional proofs of his existence and attributes (Ibn Sina); the Universe - the hierarchy of beings, creation or non-creation of the world (Ibn Sina, Ghazali, Ibn Rushd); morality and politics (Al-Farabi); sociology and history (Ibn Khaldūn); and the Mystique (Ibn 'Arabi, Al- Hallaj).

PHI449 Islamology

3 cr.

The course covers the range of religious sects and trends that have marked the history of Islam. The focus will be on the Umayyad and Abbasid periods that experienced the early schism in Islam within the divergence of views, in conjunction with the mastery of the profound meaning of the Qur'an, the invitation of the Prophet, the authenticity of the hadith, etc.; and the notion of government and the dimension of legality, frequently confused with moral and religious legitimacy. As a first step, the course covers the schools born at a pivotal moment in the history of Islam: the Kharijites, the Qadarites the Mu'tazilites, the Ash'arites, etc. Secondly the course will deal with ijthihad, the tqalīde among Maliki, Hanbali, and Hanifites Shafi'is on the Plan Sunni Islam, and Shi'ite strategy, Ja'fari, 'Alawite, etc., on the plan Shia Islam. The work will focus on this project of studies and interpretations relating to the concept of power in Islam. Wide room for manoeuvre will be reserved for fiqh, the kalam, the allegorical exegesis, and falsafa - globally and within the framework of the course.

PHI453 Hermeneutics

3 cr.

Having originated within the context of biblical interpretation, hermeneutics was freed from its dogmatic and institutional limits to become a discipline that mediated and reconciled stylistics, trans-linguistics, word-for-word linguistics and dissertation analysis, as well as a reading of the world as text. It is the restoration and disclosure of meaning that interprets and identifies the significance of the written and spoken word. The course traces the journey that this discipline has made from Schleiermacher to Ricoeur, as well as Dilthey, Heidegger, Gadamer, Szondi, Jausser and Appel.

PHI455 German Idealism

3 cr.

Pre-requisites PHI333

This course aims to analyze the truth systems constructed by Fichte, Hegel, Schelling and the great fundamental institutions that structure all idealist comprehension of the truth. This course will be divided into three parts. Firstly we will study Fichte and his vision of the fundamental task of philosophy. In this manner, we will look at the themes of the self-awareness, the Being and the Apparition according to his masterpiece "The Science of Knowledge" of 1812, and we will also examine Fichte's three images of the Absolute and philosophy of religion, as they are developed in "Die

Anweisung zum seligen Leben oder auch die Religionslehre". Secondly, we will read "The Phenomenology of Spirit" of Hegel, which is based on the major philosophical orientations that form the systematical structure of the truth. The main analysis is over the dialectic of knowledge and the three moments of the autorealisation of the Spirit: Art, Religion and Philosophy. Lastly, we will study the evolution of Schellingian thought from 1801, with the emergence of the philosophy of absolute identity - until Schelling's intermediate philosophy in Stuttgarter Privatvorlesungen.

PHI456 Modern and Contemporary Arab Thought 3 cr.

The course focuses on two distinct but complementary parts. The first socio-political and historical part is the source of modern Arab thought, born in the Ottoman Middle East, of language and Arab cultural heritage. At the origin of this modern thought, expressed in the Arabic language and in the service of the promotion of the Arab society, are Lebanese Christians, mostly, and in particular, Syrian and Egyptian. New concepts circulate, such as "tolerance", "freedom", "equality", "brotherhood", "citizenship", etc., allowing the contribution of new transnationalistic, Arabic and nationalistic ideas, operating progressively in favor of the introduction of a democratic political regime that would terminate the dictatorship and the cult of "me" politically translated into a sultanate recognized as the shadow of God on earth. The second part focuses on the emergence of a political, socialist, communist, progressive, Baathist, Nasserist, and democratic thought; work of the enlightened Christians and Muslims in the Arab world in search of a new national ideology, which tried to contribute to the emergence of a state concept, an identity that includes all the components of a national community and a political philosophy capable of challenging the rapid changes within the global plan. The aim of the course is to enable students to grasp the dimension of Arab thought outside the religious framework that limits the concept of state and denies democracy the right to be admitted.

PHI458 Contemporary Philosophy I: Phenomenology 3 cr.

Pre-requisites PHI455

The main objective of this course is to study phenomenological thought in two particular ways. The first one analyzes the principles of phenomenology, in the manner elaborated by Edmund Husserl. The second one brings to light the numerous manifestations of the phenomenological practice and its particular development by the French phenomenological school, which is essentially represented by M. Merleau-Ponty, J. Derrida, E. Levinas, M. Henry and J.-L. Marion.

PHI459 Contemporary Philosophy II: Existentialism 3 cr.

Pre-requisites PHI458

Starting with the knowledge of Existentialism, "Kierkegaard, Heidegger and Sartre", the course initially questions their take on existential and "existential" philosophy, on contemporary thought, as well as on the distinction between Heidegger's philosophy and that of Sartre. Secondly, the course discusses major ontological questions raised by Existentialism such as freedom, anxiety, responsibility, death, and God. Finally, the course examines how structuralism in its foundations (Lévi-Strauss, Michel Foucault), presents itself as a critique of Existentialism.

PHI485 Philosophy and Societies 3 cr.

Pre-requisites PHI447

This course introduces students to a philosophical reflection upon the concept of society. Firstly, it attempts to identify the origin of society, through the problem related to the two corollary concepts of nature and culture. Secondly, the course tackles factors maintaining a social link, explaining the relationship between the state as artifact according to Aristotle, and political societies. There are thus different possible societies such as the individualistic society, communitarian society, holistic society, closed society, open society, etc. Finally, starting from a general approach to social institutions, the course questions the concept of distributive justice and what follows as a dilemma between procedural justice and communitarian justice; which leads ipso facto to a topical problem, that of justice as a social, political and legal recognition.

PHI514 Will to Power Philosophy 3 cr.

The study of the will in philosophy focuses on the main question: To what extent is volition a free act? If the will expresses a complex dynamism that translates a pluralistic complicity between one or more desires or needs with any other discernment, to reach a decision, the transition to the act or the gratification of the desire is not always the product of a pure rationalization. Indeed, the study of philosophical texts of the post-idealistic period of Schopenhauer to Ricoeur, through Nietzsche and Freud, marks out the itinerary of a volition, which is affirmed by excess. So first, we ask the question of the historical development of wanting and not wanting, since antiquity to the present day, focusing on the analysis of the mystical and psychological approach of the term. Secondly, we deepen the philosophical contributions of the Romantics and contemporary philosophers concerning volition as a free and premeditated act. Thirdly, we examine the issue of will, as it has been treated by any philosopher of modern and contemporary times.

PHI515 Philosophy and Intercultural Dialogue 3 cr.

This course focuses on a revisit of the issue of dialogical philosophy and its impact on the intercultural encounter and reciprocity. Its purpose is to show that no cultural entity can monopolize the space of the historical manifestation of the truth. It covers five specific areas: an attempt to define interculturalism in the era of global pluralism; a focused discussion

This course develops, from a cultural and political perspective, identity strategies, a philosophical reflection on the three concepts of difference, recognition and tolerance.

PHI671 Philosophy and Communication 3 cr.

The course aims to deepen the principal mutations in the philosophy of communication from the twentieth century and to develop critical reflection of the media. It covers two areas. Firstly, it interrogates the meaning of this new "paradigm" of contemporary philosophers who revisit the problem of truth in a post-metaphysical context (Jean-Marc Ferry). Hence the relationship of this new philosophy to analytical philosophy. Secondly, it studies the issue of communication and, more precisely, contemporary communication, through its various aspects, namely communication and relationship, communication and intersubjectivity, philosophy media, the Internet and new mass media. It places the media in contemporary culture, hermeneutical theory and the main methodological tools, criticism of cultural industries and reflexive appropriation of symbolic imagery, etc.

PHI681 Philosophy and Religion 3 cr.

The course focuses on the study of the complex relationships between philosophy and religion. Considering philosophy as reflexive, essentially rational attitude, and religion as a belief in the sacred and the supernatural, which can only be grasped by privileged people and appropriate methods, it releases the essential characteristics that marked the historical relations between the two religious and philosophical currents, thereby allowing them to define a position of principle regarding their mutual relations. Three components underpin this course. The first analyzes the fundamental aspects of philosophy, as human work and relative truth. The second explains the features of religion, revealed as the work of God and absolute truth. The third examines the reciprocal relationship between these two areas, and identifies the principled position of philosophers and theologians faced with the problems raised by the binomial Faith and Reason.

PHI682 Political Philosophy Problems 3 cr.

How to orient ourselves in the political world? Several specific courses regarding the various problems of political philosophy answer this question over more than one plan. A reasoned array of themes relevant to modern and contemporary political philosophy, are offered every year, alternately by professors and specialists in political philosophy. Each develops, according to their competencies, a problematic to look at with their students, covering: contractual and contractual theories, pure theory of law, pure law, natural law and positive law, legitimacy and legality, distributive and commutative justice, power and abuse of power, state and revolution, a phenomenological conception of state, etc.

PHI683 Philosophical Approaches to Phenomena - Limit of Existence 3 cr.

The studies conducted in the framework of the rotating courses related to a specific thematic focus of phenomenology, are located in the most ample philosophical horizon of contemporary phenomenology. Each issue relating thereto is treated each year according to the choice of the researcher, the Professor in charge of the course. This main axis, around which rotate the problems of various courses, focuses on the study of phenomena-limit of existence. They specifically refer to the primordial events of life and affective tonalities fundamental to existence, which manifest an excess of sense and experience, overwhelming any representation made by a reflexive and intentional consciousness. Of these borderline phenomena revealing "phenomenality saturated and saturating" we quote: God, the world of life, transcendental birth, death, anguish, transcendental emotions, living flesh, live temporality and eternity, suffering, love, the experience of the other or the ethical paradox as well as the esthetic truth.

PHL135 Ethical Issues: Moral Doctrines of Religions 3 cr.

This course studies the difference between man and animal then proposes a challenge to the human nature. It examines the question of man and human nature that seeks to determine if the man is the product of nature or culture. It also analyzes the problem of the plurality of cultures and the unity of humankind.

PHO224 Introduction to Photography 3 cr.

Students will acquire the tools needed to manipulate and control cameras. Students will apply these tools to achieve a specific effect in photographic digital images. Students will understand the principles of framing, composing and balance.

PHO225 Advanced Black and White 3 cr.

Pre-requisites PHO224

Students will acquire and implement the exposure and development techniques of black and white photography by using Ansel Adams' Zone System.

PHO226 Introduction of Image Technology 3 cr.

Students will understand the different optical terms used in photography. They will be able to identify formulas used generally in photography. They will acquire the necessary terms used in photography and communicate with professionals using them accordingly.

PHO235 Introduction to Photography Story-telling 3 cr.

Students will acquire techniques and tools to produce still images with sound tracks. Students will apply these techniques on a visual and audio project.

PHO320	Color Photography	3 cr.
Pre-requisites	PHO224	
This course introduces students to the principles of producing quality digital prints. Topics include color balance, color temperature and the psychology of color. The students will also explore the expressive and aesthetic aspects of digital color photography		
PHO461	Fine Arts Photography	2 cr.
Pre-requisites	PHO202 Or PHO447	
Students will gain an appreciation and understanding for the fine art of photography through the study of basic photography skills and concepts. Students will start with a digital unit emphasizing composition and color. Students will also learn to operate and manipulate a 35mm SLR camera along with black & white film processing and printing in the darkroom. In addition, students will experiment with hand-tinting, multiple images and computer manipulation with Photoshop. Students will also learn various presentation techniques including dry mounting with a hot press and mat cutting.		
PHO463	Landscape Photography	2 cr.
Pre-requisites	PHO202 Or PHO447	
Students will acquire the know-how of photographing natural and cultural aspects of landscapes and will develop a portfolio of digital photographs.		
PHO464	Architecture Photography	2 cr.
Students will demonstrate understanding of volume, texture and form. Students will implement techniques acquired through hands-on assignments.		
PHY210 - PSC210	General Physics	3 cr.
The objective of this course is the introduction of various laws, principles and physical mechanisms, whose understanding is essential to students pursuing studies in various branches of science. This course consists of several independent parts. The first one deals with dynamics, the different types of motion, Newton's laws, and conservation of energy. The second part deals with hydrostatics and fluid dynamics. The third part deals with thermodynamics, calorimeters, the first principle and the basic transformations, the ideal gas, and thermodynamic cycles. The fourth part concerns the analysis of simple electrical circuits using Kirchhoff laws and the movement of a particle in an electromagnetic field. In the fifth part we talk about relativity, the theory of photons, and the photoelectric effect. Upon completion of this course the students will have acquired sufficient knowledge of several basic principles in physics and be familiar with these various topics.		
PHY211	Fundamentals of physics for life sciences I	3 cr.
The objective of this course is the introduction of various laws, principles and classical physical mechanisms, whose understanding is essential to the student in pursuing his studies in various branches of science especially in the medical field. To this end, this course consists of several independent parts. The first one deals with mechanics including kinematics of a particle, the laws of motion, work, energy, momentum, collision, rotational mechanism and rotational dynamics. The second part deals with solids and fluids including pressure, Buoyancy, surface tension, capillary and fluids in motion. The third part deals with heat and gas dynamics including the first and second law of thermodynamics. Finally the fourth part concerns vibrations and wave phenomena including sound. Upon completion of this course the student will have acquired sufficient knowledge of several basic principles in physics and is familiar with these various topics.		
PHY215	Optics and Modern Physics	3 cr.
The goal of the course is to introduce, first, geometric optics to study the phenomena of light and the behavior of the light beam passing from one medium to another. In the second part we will study the acoustic wave model to understand the propagation of vibrational waves and their overlays. In the last part, the course gives an introduction to basic concepts of relativity. This course is designed to educate students in the process of scientific discovery in general and the important role of experimentation in the development of scientific models of nature.		
PHY270	Laboratory of General Physics	1 cr.
Prerequisites	PHY210 - PSC210	
The physics lab provides students with a unique opportunity to test theories and scientific laws and initiates them into the methods and techniques of measurement that are the basis of these theories. In the laboratory, the students learn the limits in the application of theories and the importance of experiments in the evolution of concepts and theories. The following experiments are carried out: metrology in mechanics, Wheatstone bridge, ideal gas law, water-vapor latent heat, Venturi tube, study of a magnetic field, Michelson interferometer, Stephan-Boltzmann law, and a study of the centrifugal force.		
PNO303	Piano III	2 cr.
Pre-requisites	MPR402 Or MPR323 Or MUP202 Or PNO202	
Exercises:	-SCHMIT and then Hanon (No. 21-31)	
Scales:	-major and minor with arpeggios + inversions and in opposite direction over 2-3-4 octaves + chromatic scale starting with each note.	
Studies:	-CZERNY Op. 849 "studies of the mechanism" (10 studies)	

- Bach: - CZERNY "Small velocity" Op. 636 (12 studies)
 - "Small Preludes and Fughettas", only the preludes (at least 8 preludes)
- Pieces: - "From Bach to the Present Day" volume II, III.
 - les classiques favorites, volume II
 - SCHUMANN "Album for the Young" op. 68
 - PROKOFIEV "Music for Children" Op. 65 No. 1-2-3-5-6-10-12
 - KHACHATURIAN "Children's Album" No. 1-2-3-4.
 - KABALEWSKI "Plays for Children" Op. 27 (No. 8 up to 16)
 - TSCHAIKOWSKI: "Children" Op Album. 39
 - BARTÓK: Mikrokosmos book 3 - For Children Book I.
 - "Piano Pieces for children"
 - CHOPIN: Mazurka op. 68 no 2 - 3.

13 Pieces per course + 2 sonatinas (one of Beethoven and one of Clementi)

PPB201 Public Performance I 1 cr.

The student, guided by a teacher, must give a public performance in which he/she is to demonstrate an interpretation of quality with a certain degree of musical maturity.

PPB202 Public Performance II 2 cr.

The student, guided by a teacher, must give a public performance in which he/she is to demonstrate a high-standard of interpretation and a high-level degree of musical maturity.

PPB303 Public Performance III 2 cr.

The student, guided by a teacher, must give a public performance in which he/she is to demonstrate a high-standard of interpretation and a high-level degree of musical maturity.

PSY101 General Psychology 3 cr.

This course provides an overview of the basic concepts in Psychology. Topics may include human development, motivation, and personality, among others. Students should be able to understand psychology from historical and theoretical perspectives, to recognize various fields of psychology and different methods used.

PSY201 Introduction to Psychology 3 cr.

This introductory course is also enrolled in general education as a prerequisite for students who will pursue psychology training. This course will provide students with the basic concepts in psychology and will facilitate their access to knowledge during their academic curriculum. It includes the following objectives: understanding psychology from a historical and a theoretical perspective (Gestalt, phenomenological, experimental, scientific, psychoanalytic and cognitive, etc.); understanding the various fields of psychology (clinical, experimental, developmental, educational, social, etc.) and the different methods used (experimental, clinical, psychometric, projective, etc.); providing an appropriate approach to personality issues - basic needs, affective and emotional (feelings, emotions), intellectual (cognition, memory) and social (social influence).

PSY214 Developmental Psychology 3 cr.

Pre-requisites PSY201

The course has two segments given in two sequential phases: Childhood and Adolescence 1st segment: childhood allows students to become familiar with basic concepts and notions of childhood developmental psychology (stages, phases and developmental factors); understand the major theoretical approaches (maturational, behavioral, psychoanalytical, cognitive constructivism and psychosocial approaches); identify the main characteristics belonging to each developmental stage on the biological, intellectual, affective, sexual, social and moral level; 2nd segment: adolescence allows students to understand the adolescent phase in the developmental process, note each function belonging to this stage, pinpoint the process of self-consolidation, the construction of the identity, achieving maturity as well as choices and decision-making processes.

PSY219 Perceptual Motor Development 3 cr.

This course is a study of the physical, motor growth and development of children. It emphasizes the selection of activities that influence the development of perceptual motor skills in young children, and describes perceptual motor theory and practical application in child care programs. Focus will be placed on motor development and movement performance, and how these relate to cognitive and affective development.

PSY305 Clinical Psychoanalysis 1 3 cr.

Pre-requisites PSY201

This course is divided into two segments: the first segment enables students to recognize essential psychoanalytical notions based on Sigmund Freud's theories, particularly the discovery of the unconscious, psychic apparatus, psychosexual development and fundamentals of analytical therapy; the second segment allows students to identify leading figures in psychoanalysis, namely the post-Freudian authors (Anna Freud, Melanie Klein, etc.), as well as

neo-Freudians (Alfred Adler, Carl G. Jung, etc.) The course aims to offer the students a means to adopt a psychoanalytical method of interpretation that can be applied in clinical psychology.

PSY311 Theories and Models of Personality 3 cr.

Pre-requisites PSY201

The course consists of two complementary sections: the first section concerns a personality study through different standpoints of psychoanalysis and dynamic psychology, existential and humanistic psychology, psychometrics and factor analysis, behavioral psychology and through theories of learning including various affiliated methods and theories; the second section helps students in learning the application of various personality assessment methods.

PSY313 Psychology of Religion 3 cr.

This course enables students to acquire the basic concepts in psychology of religion and the thematic approach specific to the religious field.

It includes a theoretical aspect to identify the different approaches that have been used to study the religious phenomena. It also develops some aspects of the conscious and unconscious psychic functioning on individual and collective levels and highlights psychological aspects of normal and pathological religious behavior.

The second aspect is methodological, it involves the application of models and psychological instruments to interpret conducts or religious phenomena through studying and analyzing practical cases encountered in this area.

PSY315 Psychology and Health 3 cr.

Pre-requisites PSY201

This course develops the following: recognition of the theoretical and empirical foundations in psychology of health, their application on the dimensions and the psychological behavior of health and disease (styles and habits of life) in the predisposition, development and maintenance of physical illness, in health and the management of certain diseases.

The identification of themes related to the psychology of health (pain, stress, cancer, obesity, addictions, vulnerability, and others).

PSY318 Personality and Self-Development 3 cr.

Pre-requisites PSY201

The aim of this course is to explain the processes of personality construction through a progressive self-discovery. This is a multi-axial approach to the different dimensions of personality; its evolution and the interaction with the environment, will be addressed. This will provide a general overview of the concept of personality and its dynamic aspect from birth until old age. Also covered will be affective and social aspects in the relationship of the self to the world and, finally, "normal" vs. "pathological" personality development.

PSY325 Introduction to Psychosomatics 3 cr.

Pre-requisites PSY311

The course focuses on the field of psychosomatics and introduces different perspectives and schools examining somatic manifestations that are strongly associated with the psychological development of the individual. The course also studies symptomatology of psychosomatic disorders from early childhood to adulthood, resulting from psychological development. It also explains the different aspects of the therapeutic procedure addressing psychosomatic symptoms.

PSY330 Social Psychology 3 cr.

Pre-requisites PSY201 Or SOC201

Firstly, this course explains the basic concepts in the various fields of social psychology, namely values, norms, opinions, attitudes and roles, social interactions, communication and information. The course then develops the group notion and covers its theoretical perspectives (cohesion, interaction process, conflicts and resistances, etc.) and group animation (methods, techniques and applications). The practice of social interactions is inherent to this teaching (role play, information clips, case simulations, etc.).

PSY334 Psychology of Education 3 cr.

The course objective is to introduce and train the student in educational psychology and the different underlying theoretical principles of the discipline. The physiology of organic and psychological bases of cognitive functioning will be addressed (e.g. reading, language, memory, attention, etc.) as well as the cognitive educability and the problem of motivation, in addition to the pathological elements that can impede proper psychic functioning.

PSY335 Developmental Clinical Psychology 3 cr.

Pre-requisites PSY214

This course identifies the characteristics of the adult stage, crises and problems encountered during the different ages of the adult, maturity and crises (mid-life crisis, generational conflict, identity and professional problems of men and women, loss and mourning, etc.). In the second part, this course targets and analyzes the influence of environmental and cultural factors, attitudes, values and social representations.

PSY334 Psychology of Education 3 cr.

The course objective is to introduce and train students in educational psychology and the different theoretical principles underlying such a discipline. The physiology of organic and psychological bases of cognitive functioning will be

addressed (e.g. reading, language, memory, attention, etc.) as well as cognitive educability and the problem of motivation; in addition to the pathological elements that can impede proper psychic functioning.

PSY337 Child and Adolescent Psychopathology 3 cr.

Pre-requisites PSY214

This course defines the theoretical bases of child and adolescent psychopathology. Themes are selected with respect of the priority of hereditary, congenital or acquired pathologies and progressing to other psychiatric disorders.

A recurrent therapeutic overview follows the definition and identification of various psychological disorders that enables the students to reinforce any understanding of the psychopathology.

PSY366 Personal and Professional Development in Occupational Psychology 3 cr.

Pre-requisites PSY311

The course objectives are: personal development (psychological orientation and counseling); and professional development (establishing the necessary link between personality and professionalism, as the set of job-related skills needed to practice a trade). The course develops the following themes: key knowledge in Counseling Psychology; the main models and types of intervention in counseling; guidance in counseling and occupational mobility; knowledge of the different types of intervention (recruitment and guidance interview, review interview, counseling interview); and knowledge of various ethical and deontological aspects of human labor. At the end of the course, students will know how to conduct interviews in guidance, counseling, and support for personal and professional development.

PSY370 Counseling and Ethics 3 cr.

Pre-requisites SOC325

This course consists of two parts as follows: Part 1 (2 credits) raises awareness of the models and methods of guidance counseling to education, training and occupations; develops the concept of guidance and counseling as a helping relationship that supports young people in their educational and eventually professional paths, and adults in their working lives; allows the young psychologist in training to master the theories and the frameworks of the orientation (concept of professional project, representation of professional stereotypes, theories and strategies of the aid relation in counseling); Part 2 (1 credit) is reserved for the ethics of the psychologist in the workplace (code of ethics of the internationally recognized psychologist).

PSY378 Practice of Evaluation in Industrial Psychology 3 cr.

Pre-requisites PSY366

This course aims to teach students how to conduct an objective and scientific evaluation using instruments, trials and tests pertaining to the quality of work, workers' skills and organization system evaluation, in terms of productivity/performance.

The course is based on a methodological approach covering: the cognitive analysis of daily activities and work situations; project management and its conformity with the aims and means; personality assessment; assessment of skills; assessment of work conditions (healthwise - prevention of occupational risks and safety); and assessment of professional and interpersonal relations. At the end of the course, students will know how to provide a dynamic interpretation of the results obtained using evaluation methods and are capable of justifying an opinion formulated and based on these results.

PSY400 Group-Class Psychology and Educational Relationship 3 cr.

This course is designed specifically for teachers who manage a class within a class. The course consists of two interrelated components: the dynamics of the class group located in the class, in the school context by studying its internal psychological functioning and laws governing it; the problem of the atmosphere of the class and the interactions that occur there. The psychology of the educational relationship considers first the psychological mechanisms at the base of the relationship, then the foundations of the educational relationship, and clarifies the criteria for a healthy educational relationship within the triad of parents, students and teachers.

PSY414 Initiation to Work Psychology 3 cr.

This course provides students with the fundamentals of the psychology of work. The course sets itself objectives of situating the psychology of work compared to its history, its evolution, distinguishing working conditions and studying their effects on workers (stress, satisfaction, motivation, etc.), and approaching the various areas of intervention of the psychologist's work (personnel management, training, psychological assessment, etc.).

PSY415 Initiation to Ergonomics 3 cr.

This course intends to define ergonomics (adapting work to the operator) within the framework of labor sciences and to present its approach to human beings at work, with the practical objective of improving the work situation, particularly – albeit not exclusively – the relationship between men and machine. The course presents a history of ergonomics, its trends (physical ergonomics, cognitive ergonomics, macro-ergonomics, anthro-technology, and design) and its methods (observation of activity, analysis of communications at work, simulation, etc.). It enables students to get to know the fundamental concepts of ergonomics: real work–prescribed work, task and activity, modus operandi, regulation, responsibility and constraint and labor analysis. It also covers labor-health and labor-time relations. It will be

completed with a description of objectives and forms of action in ergonomics (correction, conception, organization, formation, etc.), and teaching will build on examples of ergonomic action.

PSY422 Cognitive Psychology

3 cr.

Pre-requisites PSY311

The course demonstrates how intelligence is implemented in cognitive activities such as attention, perception, memory, problem-solving, decision-making and reasoning. For each of these core activities, the information processing theories will be determined, as well the methods and techniques used by psychologists to understand, analyze and assess cognitive functioning.

PSY425 Creative and Cognitive Experiences For Young Children

3 cr.

This course prepares individuals to work with young children in creative age-appropriate activities and investigates affective classroom experiences through open-ended activities. It emphasizes theoretical and practical aspects of cognitive development for children ages 3 through 6 with a focus on planning integrated experiences and content in science, mathematics, and social sciences. It develops students' understandings of young children's creative expression through art, music, movement, play and drama, and emphasizes how to plan, implement, and evaluate appropriate learning experiences as well as selection of appropriate instructional materials.

PSY433 Fundamental Psychobiology

3 cr.

Pre-requisites PSY311

This course studies the physiological study of the human being, especially the biological human constitution and its influence on its psychological characteristics, the emotions, intellect, imagination, belief, etc., taking into account the important contribution of neurosciences. The course enables students to understand, from biology and neurobiology, the psyche and human behavior.

PSY437 Adult Psychopathology

3 cr.

Pre-requisites PSY335

This course identifies the psychiatric disorders of the adult; specifically their symptoms, etiologies, and the different modalities of management and treatment. It enables students to differentiate psychotic disorders (schizophrenia, delusional disorders), mood disorders (depression and bipolar disorders), anxiety and conversion disorders (OCD, phobia, panic disorder, GAD, conversion), alcohol and substance use disorders, as well as personality disorders. Another student objective for this course is to identify disorders, make differential diagnoses, and be introduced to the treatments used in psychiatry, in order to have a comprehensive understanding of adult psychopathology.

PSY439 Work Psychopathology

3 cr.

Pre-requisites PSY366

This course identifies the psychological problems caused by work: adjustment and adaptation to various working conditions, states of fatigue and neuroses of work, the concept of 'burn out', the problems caused by automation and the use of computers, the effects of unemployment on mental health, and the issue of the employment of sick and mentally disabled people. The course develops the topics of anxiety and stress at work, the causes of work stoppages, addiction to work, workaholism, etc.

PSY445 Clinical Psychoanalysis 2

3 cr.

Pre-requisites PSY305

The aim of this course is to develop further theories regarding personality structures and psychological disorders based on Freudian and post-Freudian concepts within contemporary psychoanalysis. More specifically, students will comprehend the relationship between theory and practice in the clinical framework, through a variety of theoretical constructs amongst current authors of the Psychoanalytical Society of Paris (Jean Bergeret, Pierre Marty, Françoise Dolto and others) and the International Lacanian Association (Jacques Lacan). Students will also be introduced to recent research from the European and American psychoanalytical schools, thus benefiting from the scientific activities and the recent publications of these schools.

PSY455 Psychological Management of Human Resources

3 cr.

Pre-requisites PSY414

This course is divided into two parts: - the first part includes the objectives, components and knowledge bases of the HR function within organizations; the second part addresses the psychological management of problematic issues pertaining to management, labor relations and their consequences. This course develops humanistic approaches (motivation- satisfaction-implication), interactionist approaches (illustrating the actors and their strategic approach) and symbolist approaches (illustration of corporate culture).

PSY467 Group Management Functioning and Dynamics

3 cr.

Pre-requisites PSY311 and PSY330

The course focuses on theoretical models of the functioning and management of groups, as well as on notions of inter-group communication and its application on different levels: group, family, individual and organizational. Students

will be required to participate in a group dynamics session and write a summary report of their personal experience within the group.

PSY469	Communication Techniques and Clinical Examination	3 cr.
Pre-requisites	PSY337	
This course is twofold: validate the clinical approach, maintenance procedures and clinical examination and the method of testing at the level of the child and adolescent; use and review data analysis of different tests - intelligence test (verbal and non-verbal), personality tests (questionnaire, scales, etc.), projective tests (CAT, Black Legs, scéno -test, drawings, etc.), in order to establish a diagnosis of mental and psychic functioning and prognosis of evolution, adapted to children and adolescents.		
PSY470	Adult Psychological Exam	3 cr.
Pre-requisites	PSY335	
This course enables the recognition and use of the psychometric tests adapted to adults: intelligence test, personality, recruitment or referral, psychopathology rating scale, etc. It also allows analysis, data processing and interpretation, in order to establish a diagnosis of mental functioning and evaluation prognosis. The students will learn to write a report (or psychological assessment) and to communicate the results as appropriate.		
PSY475	Internship of Clinical Psychology	3 cr.
This internship aims to guide students who, at the end of their third academic year, choose to access the Master of Clinical Psychology. Students, in agreement with the Head of Department, undergo an internship in an institution that supports the various cases and offers students the opportunity to observe them, to become familiar with the clinical territory rich in problems whose solutions fall within the competence of the clinical psychologist. The duration of the internship lasts for one semester for four days a week and five hours a day, from 8:00 am to 13h. 20 hours per week; in other words, an hourly volume of 300 hours per semester.		
PSY479	Internship of Industrial Psychology	6 cr.
The internship enables the students to learn about the functioning of organizations: public or private companies, administrations, associations, etc., and their place in economic and social life. The course is an introduction to the life of work, an openness to the system of communication and information within a company, a prerequisite for putting into practice the theoretical acquisition concerning human resources management and the management of contradictions in a particular undertaking. The phases of the course are: a) a stage of observation during which the trainee is limited to the observation of the progress of the work in contact with the leaders and, if possible, with staff, b) a stage of intervention, under the supervision of the organizational psychologist hired by the company, with cases, which constitute a problem within the institution. The response phase is controlled by the psychologist at work or under the control of the master psychologist of the course teacher. At the end of the course the students prepare a detailed report in which they present the company, describe the workings, the hierarchical distribution, the quality of work, the means put at the disposal of the worker to evolve or fall into mental impairment, working hours and respect for labor rights, possibilities of malfunctions, etc.		
PSY480	Personality Study with Projective Techniques	3 cr.
Pre-requisites	PSY311	
The course is divided into two distinct but complementary parts: Psychodiagnostic Rorschach and the Thematic Apperception Test. Psychodiagnostic Rorschach aims to examine the theoretical models that govern the diagnostic range, prognosis and treatment of the Rorschach test, wherein all ages and issues are involved. Students will learn the basics of operating the Rorschach and acquire technical interpretation of the different indices of Rorschach. The Thematic Apperception Test (TAT) aims to understand the foundations of psychoanalytic interpretation of TAT by the method of Vica Shentoub and its successors; and the counting chart developed by the school, without excluding other interpretations. After a theoretical overview of the two projective tests, an application will be based on a case study of clinical protocols of children, adolescents and adults on a normality and pathology level.		
PSY510	Occupational health psychology	3 cr.
The course allows for better understanding of the factors that promote employees' health and well-being in the workplace. The main theories and empirical knowledge on the following topics are addressed: psychosocial risks (PSR) and their identification (quantitative and qualitative assessment), quality of life at work, psychological well-being at work, psychological distress at work, epidemiological approaches to stress at work (stress auditing in the workplace), the labor clinic (work psychodynamics), harassment, violence and suicide at work. In addition, the position of the work psychologist is depicted through a two-track approach: strategies for prevention and recovery from PSR and health problems and risky behaviors at work.		
PSY515	Social psychology applied to work	3 cr.
The course outlines the main themes characterizing the structure and functioning of the actors within the organizations. It addresses the structural aspects of organizations and organizational culture while focusing on three main categories of organizational processes: leadership, power and influence and intergroup relations. It presents in particular the		

conflict mechanisms at work (interpersonal, between statuses, between production units) and its effects on relational dynamics within professional organizations.

The course presents as well the different models of organizational communication and their effects on the interaction process and sets out the specific communication forms and contexts (like mass communication, rumors, communication with employees).

It also deals with aspects related to development and change (learning and organizational memory, organizational development) and examines the recent challenges that organizations have to face (cultural diversity, new technologies).

PSY531 Clinical Cognitive Neuropsychology 3 cr.

This course aims to train students in the application of the major concepts and methods of cognitive psychology in the study of the dysfunction of consecutive cognition in brain damage. It aims to describe and decipher the cognitive and emotional disturbances related to brain and mental dysfunctions, which underlie them: dyslexia, spatial representations, selective attention, spatial heminegligence of the knowledge of the object (agnosia, etc.). The analysis of these alterations also allows for testing theories of normal mental functioning.

PSY532 Psychotherapies 3 cr.

The course focuses on the different psychological therapeutic approaches, in terms of both the theoretical framework of their principles and application techniques: psychoanalysis, the psychotherapy of analytical inspiration, psychotherapy of humanistic inspiration (personalistic existential), the methods of relaxation, familial, sexual, institutional, behavioral and cognitive therapies, hypnosis, etc.

PSY536 Learning Disabilities: Dyslexia, Dysorthography, Dyscalculia 3 cr.

This course comprises:

1. An analysis of the learning processes in a classroom situation
2. A study of neuropsychological or cognitive constraints underlying the learning process
3. An analysis of the main acquisition models of reading, mathematics, and cross-curricular competencies, such as problem resolution coupled with the emotional and social development of the child as well as the adolescent.
4. The main disorders: (dyslexia, graphic disorders, the dysorthographia, dyscalculia), along with their diagnosis, their causes and their signs.
5. The impact on academic performance and adjustment problems which these disorders pose. The psycho-pedagogical measures to be undertaken

PSY537 Behavioral Disorders at School 3 cr.

This course sheds light on the different behavioral disorders, such as attention, hyperactivity, oppositional disorders, violence, shyness... This course analyzes the points mentioned hereinafter:

1. The principles and framework of intervention with students;
2. The cognitive and affirmative behavioral methods of intervention ;
3. The processes of assistance and collaboration with parents.

PSY545 Practicum Training in Psychology 3 cr.

The internship's framework aims to further develop notions in psychology in a practicum scope. The student in agreement with the Head of Department, is responsible of seeking an internship in an association, dispensary, hospital, school, enterprise, etc. The trainee will undergo supervised training in assessment, evaluation, and preparing an intervention plan.

The duration of the internship is 300 hours that can be distributed as follows:

- Fulltime internship in an association, dispensary, etc.
- Participating in workshops/colloquiums and writing reports.
- Participating in the implementation of psychosocial projects.

PSY548 Personality and Health 3 cr.

This course addresses the study of psychological factors related to the personality, namely the cognitive, emotional, behavioral and biological aspects which exert influence in the predisposition, development and management of certain diseases. The personality as a factor of vulnerability

PSY550 Interventions and professional support in the organization 3 cr.

The course presents the different methods of intervention and support in occupational psychology and their theoretical bases.

At the organizational level, the course addresses the main intervention mechanisms of psychologists in the workplace (predictive management of jobs and skills, orientation, skills assessment, etc.) and analyzes the constraints systems that structure them as well as the social, organizational and individual demands related to them. It also presents the organizational strategies for primary, secondary and tertiary intervention that promote the adaptation of employees to work (tutoring, mentoring, management practices, Work Psychodynamics and Appreciative Inquiry).

In addition, the course outlines the psychological bases of professional support: cognitive-behavioral techniques at work, professional coaching (forms and stages of a professional coaching process), and support based on psychoanalytic approach.

PSY552 Taxonomy and Psychopathology 3 cr.

The objective of this seminar is to reflect on the history of classifications in psychopathology. The seminar provides insight into how nosography has transformed and enriched for over a century. Similarly, it focuses on the first descriptions of mental illnesses, on the evolution of ideas in psychopathology and the various etiologies found across the time. It takes its beginning from the descriptions of Bleuler, Charcot, Serious Capgras, etc., passing through the extremely rich writings of Henri Ey, until reaching the DSM and ICD.

PSY564 Evaluation Methods And Techniques In Health Psychology 3 cr.

This course addresses:

1. The training to evaluation, to diagnosis ;
2. The development of questionnaires, measurement scales and tests;
3. The observation and the clinical encounter;
4. The psychological assessments and the patient follow-up.

PSY569 Psychological Assessments in School 3 cr.

This course addresses:

1. Clinical and psychometric examinations at school: the examination stages, from the date of the application to the appearance of results;
2. Psychological testing in a school setting: intelligence and affectivity evaluation;
3. The annual assessment reports and the follow-up at the level of the child as well as the adolescent.

PSY570 School Psychologist Interventions 3 cr.

This course set sights on:

1. Being acquainted with the different tasks of the psychologist in a school setting, namely: the assistance, the Board, the interventions and participation in educational activities as well as in the school life.
2. Being able to put them into practice by children and adolescents in a school setting.

PSY576 Clinical Issues 3 cr.

This course examines clinical psychology: exploring its definition, its history, its method, its boundaries and the many application fields by showing how the models (psychodynamic, cognitive-behavioral, neuropsychological) influence clinical practice. Such teaching will be done through a variety of clinical cases and illustrations and is spanned by a critical and constructivist perspective.

PSY578 The Family Clinic 3 cr.

This course focuses on the different conceptual frameworks and methods of study in the psychology of family. It explores the different approaches - psychoanalytic (relationship and attachment); and systemic (morphology of the family relationship, the genogram, transgenerational). Then the pathology of family ties: pathology of intrafamilial communication. The course then looks at the various therapies.

PSY595 Project of Psychology 2 cr.

This training is a seminar aimed at enabling the students to conduct a research project in the field of psychology (clinical, health, school and work).

This seminar is linked to all courses and, in a special way, to the research methodology in Human Sciences. The students are assisted during the course in realizing the first steps of the research project. The main objective of this seminar is to build a research project which will be finalized in the Dissertation.

After attending the seminar, the students are required to submit a final written project (20 typescript pages).

Epistemology is a part of the course, covering a study of concepts and methods of the various trends of modern epistemology initiated in the early "epistemological breaks" that separate the pre-scientific period from the classical rational science period and highlight their involvement in the renovation of the statuses of science, epistemology and history of science.

PSY600 Stress, Trauma and Disability 3 cr.

The course begins by looking at the concept of stress, specifically covering: evolution of conceptions on psychosocial determinants of health and disease, stress issues, the concept of stress, and definitions; the epidemiological model (prospective research, retrospective, quasi-prospective, and risk factors); the biological model (Pavlov, Cannon, Laborit, Selye); the psychoanalytic model (concept of trauma, conversion mechanism, the concept of protective shield, the concept of self-skin, post-stroke mechanism); the psychosomatic model (Groddeck, Alexander, critic of the typology of Dunbar; School of Marty, concept of operational thinking; contemporary American school, concept of alexithymia); Stress Assessment Methods (scales of "life events", of daily hassles, of perceived stress); transactional stress approach (theories of Lazarus and Folkman, primary assessment, secondary assessment, identification and assessment methods of different concepts - perceived stress, perceived control, social support, coping strategies); links between personality

traits (locus of control, expectation, sense of coherence, self-efficacy, etc.); and coping and stress adjustment. The second part of the course examines Post Traumatic Stress Disorder (PTSD), covering topics on: definitions of trauma; the different approaches to trauma - (psychoanalytic approach for archaic trauma, cognitive approach (conditioning model of fear), neuropsychological approach (theory of Damasio); Trauma and Post Traumatic Stress Disorder; the various sources of PTSD; PTSD diagnostic criteria; psychosocial determinants of PTSD; protective factors of PTSD; PTSD Evaluation Methods; stress and war trauma; takeovers and prevention of PTSD; debriefing, hypnosis, EMDR, cognitive and behavioral therapies; Cells of Medico-Psychological Emergency (WAC); and specificities of takeovers in children and adolescents.

PSY610 Psychological management of human resources practices 3 cr.

This course aims to support the occupational psychologist's work in the face of the following professional issues: endowment, performance, discipline and conflicts, work relations, training, remuneration and mobilization. Through role playing and case studies, practical worksheets (performance evaluation form, formal evaluation interview form, performance action plan form, organizational mediation form, technical sheet for ongoing training plan, etc.) shall be made available to the psychologist to help him/her solve the real situations in his/her future work environment.

PSY615 Orientation Psychology: principles and practices 3 cr.

This course aims to enable students to develop their understanding of the links between orientation principles and practices.

It provides an exhaustive analysis of psychological and psychosocial determinants of lifelong orientation. It is based on several models and theories that can be used in adult orientation practices, such as the dispositional and interactionist approach, cognitive social theory, Erikson's models of identity formation, attachment theory, adaptation to transitions, the role of motivation and emotions in orientation...

In addition, the course presents the different (individual and group) intervention models in orientation while focusing on intervention skills grouped under five main functions: communication; emotional support; meta-communication; structuring and production.

PSY620 Research in Psychology 3 cr.

The setting of the research being Psyche the Laboratory of the Psychology Department, students are required to investigate behavioral patterns, cognitive functions, emotional development, communication, etc. It's within this framework that the laboratory enables students to define and choose not only the theme, but also the research strategy, and the preferred type of methodology (psychoanalytic, systemic, socio-clinical, behavioral, etc.).

The ultimate goal is that students devise a research paper in the field of psychology

PSY625 Analysis of Professional Practices 3 cr.

This seminar invites students to reflect on processes involved in interactive situations they will experience, especially during trainings in a professional environment.

These future professionals will be sensitized to the practical aspects of professional activities by developing their capacities of understanding and adjustment to others and by discovering the importance of an investigatory work based on their discourses about situations encountered in practice.

The aim of this seminar being only formative, the students will present clinical cases, inter-individual situations, theoretical references, etc., which will lead to a group elaboration.

PSY630 Ethics and Deontology 1 cr.

This course aims to introduce students, and eventually practicing psychologists, to continuous ethical concerns, which must be part of the practice of each psychologist. This course analyzes ethical problems pertaining to the practice of the psychologist (benevolent neutrality, professional secrecy, professional integration, professional identity, etc.).

PSY635 Thematic Seminar in Psychology 1 cr.

Through this course, students will be able to follow a research seminar involving international speakers and specialists in psychology (clinical, health, school and work). They may study concrete examples falling within the scope of current research in psychology focusing on the methodology (research systems designs, data analysis, etc.). Presentations will be organized to develop a given theme, each representing a specific disciplinary or methodological approach.

PSY668 Digital Activities Development 3 cr.

The objective of this course is to address a set of theoretical and empirical works on the development of numerical cognition. The following points will be considered:

- a. The pre-concept and concept construction of number in children;
- b. The recent approaches to solving arithmetic problems;
- c. The intervening disturbances in the development of numerical activities.

PSY672 Addictions 3 cr.

This course provides a general introduction to dependencies, the criteria of addiction, and the epidemiology of dependencies. It also looks at different drugs, addictions, the psychopathology of drug addicts, the takeover of a cure and post cure, and possible therapies in addictions. The alcoholic illness, psychopathology of dependent alcoholics,

and cognitive psychology are elaborated in this course. Self-regulation is seen as a skill and as a result of learning. The impaired person, who cannot seem to manage, entails the concept of hetero-regulation, i.e. a control process carried out by another person.

SENG605 Practice: Supporting People with SEN 3 cr.

The course is designed as a professional practice of coaching people with SEN. It has two components:

1-Citizenship of the person with special educational needs expressed in: a) knowledge promoting the skills of mentally deficient person; b) standardization that can induce behaviors which bring the person with disabilities from the "norm" and adapt the person to the environment; c) social participation or inclusion which is a Twofold Dynamics: from the side of the person with disability and that of the environment in relation to the person.

2- Body and Communication, Theatre, Music, Plastic Arts; (Workshop of your choice)

The student in training can choose a component and work on it. The work is designed in the form of artistic workshop that allows the person with disabilities to express and communicate. It is a form of support to learn to accompany people with special educational needs in their desire to express themselves and flourish since their mental disabilities often deny other forms of expression such as dialectics, the writing or sometimes just the word.

The objective of the workshop is to help the trainee to: a) make Art a way that helps the person with special educational needs to restore self-image, b) become familiar with the different adapted techniques that empower the individual with special educational needs to master his behavior, to refine his temperament, to reduce anxiety, demote hyperactivity and identify the possibility of deviant behavior.

SENG610 Psychomotor Activities for People with SEN 3 cr.

The course focuses on the relationship between motor skills, mind, and emotions and promotes the overall approach of the child. It deals with the concepts and principles of theoretical and practical bases (games, exercises, techniques, postures), enabling them to: a) develop a good body scheme; good laterality; a perception of time and space, b) discriminate psychomotor disorders and their causes; c) prepare the prerequisites of all learning; and d) knowledge.

SENG615 Learning Processes Applied to People with SEN 3 cr.

The course focuses on the appropriate educational process for people with special educational needs: a) the knowledge to teach, how to understand and apprehend them, b) didactic aspects and situations, c) the organization of optimal conditions teaching / learning to enable students to develop the knowledge and skills and access to culture. The steps to be implemented are: a) a reflection that examines the nature and meaning of teaching / learning and which is responsible for showing the relationship between the student and the knowledge and the relationship between the specialized teacher and didactics; b) an analysis of transpositive process is conducted to highlight the reference to knowledge, knowledge to be taught and the knowledge taught, c) development of the type of mediation to offer to the student in his acquisition of knowledge.

SDG303 Solfeggio/Dictation III 2 cr.

a- Solfeggio parlati : - Pozzoli: appendice al primo corso from n°1 till n°31.

b- Solfeggio cantati: - Pozzoli: appendiceal prima corso from no1 till no27.

c- Dictation:-Noel Gallon from no 41 till no60. - melodic intervals: all intervals, and major and minor chords.

SDG201 Solfeggio/Dictation I 1 cr.

1st course

a- Solfeggio parlati : Pozzoli: Primo corso du n° 1 au n° 31

b- Solfeggio cantati: Pozzoli: Primo corso du n° 1 au n° 31

c- Dictation: Noël Gallon du n° 1 au n° 20 – melodic intervals: 5th, 4th, octave, 3rd maj and min, 2nd maj and min.

SDG202 Solfeggio/Dictation II 1 cr.

Pre-requisites

SDG201

2nd course

a- Solfeggio parlati: Pozzoli: Primo corso du n° 32 au n° 60

b- Solfeggio cantati: Pozzoli: Primo corso du n° 32 au n° 60

c- Dictation: Noël Gallon du n° 21 au n° 40 - melodic intervals: Triton, 6th maj and min, 7th maj and min.

SDG303 Solfeggio/Dictation III 1 cr.

Pre-requisites

SDG202

3rd course

a- Solfeggio parlati: Pozzoli: appendice al primo corso du n° 1 au n° 31

b- Solfeggio cantati: Pozzoli: appendiceal primo corso du n° 1 au n° 27

c- Dictation:-Noël Gallon du n° 41 au n° 60 – melodic intervals: all intervals, and major and minor chords.

SDO304 Solfeggio/Dictation IV 3 cr.

Pre-requisites

MPR223 Or MPR431 Or MUP357 Or SDO303

4th course

a- Solfeggio parlati : - Pozzoli: secondo corso du n°1 au n°36.

- b- Solfeggio cantati: - Pozzoli: secondo corso du n°1 au n°28.
c- Dictation : - Noël Gallon du n°61 au n°80. - Noël Gallon (2 voix) du n°1 au n°20.

SDO405 Solfeggio/Dictation V 3 cr.

Pre-requisites MPR224 or MPR541 or MUP358 or SDO304

a- *Solfeggio parlati*: Pozzoli: *Secondo corso du n° 37 au n° 68*

b- *Solfeggio cantati*: Pozzoli: *Terzo corso du n° 1 au n° 25*

c- Dictation:

- Noël Gallon du n° 81 au n° 100

- Noël Gallon (2 voix) du n° 21 au n° 40

- *Accords à trois sons: 5^e ag et 5^e dim (à l'état fondamental)*

- Chords of 3 sounds: 5th aug and dim (at root position)

SDO406 Solfeggio/Dictation VI 3 cr.

Pre-requisites MPR225 Or MPR457 Or SDO405

Spoken Solfege: Il Nouvo Pozzoli Vol. 2: N. 59-90 (+ Ornaments 5 exercises)

A: N. 59-72 (Alternation of 7 keys, irregular meters, jazz style)

B: N. 73-84 (ditto most difficult and irregular and proportional time groups)

C: N. 85-98 (Idem more difficult)

Pages 70-71-72, N. 1, 2, 3, 4, 5.

Singing Solfege: Pozzoli (former) Appendix al Terzo Corso: N. 1 – 40

A: N. 1-13 (various 2nd, 3ce, 4te)

B: N. 14-25 (various 5te, 6te, 7th, 9th, chromaticism)

C: N. 26-40 (ornaments, enharmonic, Oriental and defective scales, modes)

SDO540 Solfeggio/Dictation IV 3 cr.

Pre-requisites MPR223 Or MPR431 Or MUP357 Or SDO303

4th course

a- Solfeggio parlati : - Pozzoli: secondo corso du n°1 au n°36.

b- Solfeggio cantati: - Pozzoli: secondo corso du n°1 au n°28.

c- Dictation : -Noel Gallon du n°61 au n°80. -Noel Gallon (2 voix) du n°1 au n°20.

SFA201-2-3 Accompanied Solfeggio I - II - III 2 cr.

The "accompanied solfeggio" course consists of singing solfeggio exercises, according to its level, accompanied by a pianist; this accompaniment is usually written by the author of the music theory manual for all levels. In this course students put their theoretical solfeggio into living practice and adapt it for a joint execution; to an aesthetic interpretation (phrasing, nuances and agogic respect) and a solid mastery of the intonation.

SOC201 Introduction to Sociology 3 cr.

This course provides a basic knowledge of general sociology: a) it presents an overview of the context of event-emergence of sociology on the basis of the main founders and focuses on the methodological perspectives and applied sociological methods and techniques; b) it focuses on the key principles of social themes, which description and definition have fueled the many debates that are changing this discipline within the vast corpus of scientific knowledge. This course provides the students with general sociology elements, sensitizes their "sociological perspective" and develops critical reflection on various social issues.

SOC210 Introduction to Anthropology 3 cr.

This course focuses on the complex question of humans and the place of anthropology within the science of humanity. It addresses the key conceptual notions of anthropological reflection (society, myth, ritual, tradition, symbol, etc.). Similarly, the course presents the components of the research framework, both practical and theoretical, of anthropological study. It develops the basic foundation of the entire social system and proposes the discovery of trends of current anthropological topicality and openness to contemporary anthropology. Upon completion of this course students will be able to understand the concepts of anthropology and its fundamental concern that allows it to guard against social, cultural, sexist and racial prejudice.

SOC211 Youth and Society 3 cr.

This course aims to reflect on the multi-dimensional experience of youth. It positions it in relation to other age groups, by conducting an analytical reading through the concepts and notions of value, norm, culture, ritual, symbol, engagement, life project, the social role of religion, etc. ; to reach the level of placing the youth in spaces and social times such as: family, friends, leisure, associative and political life. The course is particularly interested in young people as the key to any social construction and any change of mentality in favor of a humanist dialogue among societies.

SOC218 Statistics Applied to Human Sciences I 3 cr.

Most of the analysis within human and social sciences and decision-making is founded on statistical data. Students work individually on data collected either in their research or in their professional lives. This course provides students with the

tools and knowledge required to present, in tables and graphs, the data they have to handle, to analyze the characteristics of a statistical distribution to a character and to study the correlations between two variables. Particular attention is devoted to the choice of statistical methods and interpretation of results.

SOC310 Sociology; Fundamental Concepts 3 cr.

Pre-requisites SOC201

This course is based on an analysis of the basic notions and concepts necessary for any approach or field of study and sociological research. It notes, therefore, differences between concepts "encompassed" and concepts of "inclusivity", in order to cover external phenomena/internal to corporations. It addresses notions and concepts such as: culture, civilization, collective belief, modernity, habitus, norm, compliance, status and role, value, socialization, classes and social elite, etc. It develops in students a critical perspective in its comprehension of all social reality. After the course, the students will have gained an inductive construction of the concepts discussed and a mode of sociological thinking.

SOC311 Sociology of Education 3 cr.

This course focuses on the key concepts and theoretical foundations of the sociology of education. It includes a historical overview of the functioning of the school. It also explains the report of school social institutions and socio-economic and cultural parameters likely to influence the curriculum of students as well as their expectations and aspirations; reflecting "educational inequalities" and evaluating the role of policies and compensatory strategies. This course aims to develop the critical thinking of students about inequalities within the school system and enables them to undertake the documented analysis of 'social stratification' as 'school differentiator'.

SOC318 Statistics Applied to Human Sciences II 3 cr.

Pre-requisites STA201 or SOC218

This course introduces students to the concepts of statistical inference essential to research in the humanities and social sciences. Students are often required to collect information on samples of individuals and not on the entire population. They learn to draw conclusions about the population they are interested in, from the data collected on samples with prudence and necessary rigor. For this purpose, this course introduces the students to the laws of probability, the estimation of population parameters by an interval of confidence and benchmark testing of two, as well as many mediums, by analysis of variance.

SOC325 Psycho-Sociology of Communication 3 cr.

Pre-requisites PSY201

This course is divided into two parts. The first part includes a base of theoretical and conceptual skills of communication. This is how the communication will be detailed as a psycho-sociological object with its theories and ideologies, analyses of mass communication, psycho-sociological perspective, critique of contemporary currents analysis of communication and information, psycho-sociological reading of communication and professions. Analytical progress will be made on the study of public discourse in the media, and the media itself, through its policies, its positioning and audience. The second part focuses on practical skills. It includes listening, reformulation, argumentation, face to face communication, in groups or general public, as well as the mastery of oral intervention techniques to different types of audience and familiarization with media practices.

SOC335 Labor and Social Intervention, the Fundamental Concepts 3 cr.

Pre-requisites SOC201

This course is mainly based on an analytical explanation of the notional and conceptual fields used in social intervention; linking them to their different social and institutional uses as well as current social issues. It thus addresses several encompassing and encompassed notions and concepts including: planning, environment and space, individual, collective, social, societal, cultural, structural, intercultural, socio-cultural, community, etc., social pathology and therapy, social profitability, social development, underdevelopment, sustainable development, social change, partnership, co-operation, marginalization, social inclusion, awareness, commitment, citizenship, etc.

SOC345 Labor and Social Intervention Fields 3 cr.

Pre-requisites SOC335

This course enables students to understand the components of social intervention action on various socio-cultural, socio-educational, socio-political, socio-religious, and socio-economic plans related to community spaces, institutions and associations, through critically conscious, preventive and participant practices. Similarly, it aims to foster knowledge of cultural, socio-sportive and municipal structures. Upon completion of this course, the students will be able to identify the fields and practices of social intervention, to understand the issues related to the aforementioned fields and to think strategically as regards the levels of corresponding action.

SOC355 Social Marketing and Management of Social Structures 3 cr.

This course consists of two complementary parts: the management of social structures and social marketing through the aforementioned structures. The first part consists of understanding the institutional functioning of social structures, organizations and associative spaces concerned with social intervention. It raises awareness among future social workers, with regard to the concepts and specific management procedures of voluntary social organizations. The second part of

the course introduces students to social marketing and presents: a) the concepts and models of social marketing; b) the distinction between social marketing and commercial marketing; c) marketing of social causes, ideas and personalities attached to them; d) the target groups; and e) the development of a social marketing program, etc.

SOC360 Social Sciences Methods 3 cr.

This course familiarizes students with the various methods of research and analysis in the social sciences, and more specifically in sociology. Different methods will be illustrated with examples of sociological research. The course consists of three parts: a general introduction to social science research process; a presentation of the approach and systemic analysis; a deepening of quantitative and qualitative methods in sociology, such as structured interview, the survey (sample survey, etc.), observation, content analysis and focus group.

SOC411 Financial Economics 3 cr.

Pre-requisites SOC 402

This course introduces students in social sciences to the world of business and management. The main themes are: forms of enterprise, business management, general and analytical accounting financial profitability, the choice of investments, financial ratios and the banking sector. The course also aims to acquaint the students with the economic, financial, legal and social world and address business valuation, financial distress, the company's management and private accounting. Upon completion of this course, students should be able to implement the choices of financing.

SOC421 The Sociology of Deviance 3 cr.

Pre-requisites SOC201

The course focuses on causal theories and comprehensive theories of deviance. It includes, firstly, a sociological analysis of deviance and social control to capture the relationship between individual freedoms and collective constraints, and also a sociological analysis of integration and social exclusion, in order to explore the question of social ties within contemporary societies.

SOC422 Political Sociology 3 cr.

The course focuses on a central theme: power. This topic is treated in two parts with sub-themes which graft onto the central issue of the course. Indeed, the notion of power is undeniably linked to politics in its relation to the state and the social actor, as explained in the first part of this course. It is also an object of reflection and questioning, as shown by the study of different thinkers and sociologists of the twentieth century, in the second part of the course. Students learn not only to handle the theoretical concepts but also to build their own reflection in a methodical way. Ongoing exchange is operated between ideas of sociological conceptualization and the political reality.

SOC423 Organizational Sociology and Labor 3 cr.

Pre-requisites SOC201

This course provides a synthesis of different theories that explain structure, functioning and organizational transformation. In the first part, the course defines the field of analysis of the sociology of organizations as well as its main theoretical currents. In the second phase, it helps students comprehend the sociology of work in its various aspects and according to new trends (technology acceleration, globalization, current management of human resources, modern social stratification, activities of women, rising unemployment), i.e. according the professional development of trades. In a third part, students are required to perform an observation of a specific field, through the use of certain analytical models and key concepts, allowing them to sociologically analyze concrete organization and institutional environments.

SOC426 Theories and Practices of Development 3 cr.

In the first part, the course deals with the development that emphasizes the human's central place as a social being, as well as the state and political structures in the organization of collective action for development. It also addresses the development of the entire population, its human potential, and both physical and intellectual progress through education. In the second part, the course introduces the unidimensional theories, evolutionists and structuralists of development, as well as planning techniques and development of agrarian and industrial policies. In the third part, the theoretical, methodological and strategic foundations of community development will be addressed.

SOC430 Sociology of Religion 3 cr.

The course aims to provide the students with an understanding of the social components of religion through the trends of thought and relevant sociological concepts. It also includes an analysis of contemporary social phenomena related to religion and an analytical positioning of the socio-cultural influences of religion in Lebanon.

SOC431 Sociology of the Family 3 cr.

Pre-requisites SOC201

This course deals with the family in its various forms, which, while being universal, presents spatiotemporal peculiarities that the sociological analysis reveal, both structurally and functionally. The course offers a reflection on the circumstances and the contemporary transformations of the family institution (diversity of models, fragility of the marital bond, family recomposition), and draws a picture of sociological theories of the family, focusing on contemporary sociology specific to this area. Thus, the family, in new forms, appears as an element of sustainability among social turbulence, and as one of

the pillars of postmodernism to study. It is therefore necessary to highlight the multiple varied relationships that link the family to the whole of society, with particular emphasis on the current situation of the family in Lebanon.

SOC432 Sociology of Conflict 3 cr.

Pre-requisites SOC201

The overall objective of the course is to enable students to acquire the skills needed to analyze the many inter- and intra-societal conflicts. The course offers the challenge of a multidimensional approach: philosophical, sociological, psychological, political and otherwise. As a result, the four parts of the course present the root of the conflict phenomenon, the reasons of conflict, the conduct of conflict and conflict resolution. At the end of this course, students will be able to differentiate between the profound and circumstantial factors of conflict, to conceptualize the main theories of conflict, to identify elements of permanence and change in conflicts and carry out a critical analysis of this phenomenon and its future prospects.

SOC435 Social Protection Policy 3 cr.

This course focuses on the various socio-economic issues of the policy of social protection. It processes the elements of information (actors, concepts, devices, tools) and susceptible analysis of students to enable them to participate effectively in the development of proposals for change in strategies and public policy environment, housing, and unemployment. Furthermore, it helps students to understand the components of community life and its challenges in the development of awareness necessary for a civil society. It thus explains the theoretical and practical elements necessary for a comprehensive understanding of the social security system, in order to locate public intervention in social protection. Upon completion of this course, the students will have acquired a capacity to analyze the existing associative dynamics in Lebanon.

SOC438 Demographic Analysis 3 cr.

Pre-requisites SOC318

This course presents an overview of the techniques of demography, focuses on specific current issues of the demographic phenomena and analyzes their interdependence within social, economic and cultural characteristics of the observed society. Upon completion of this course, students will be able to collect the necessary demographic data to establish the main parameters (rates, ratios, tables, sex ratio, etc.), to build and analyze an age pyramid, to know the different sources of demographic data, to perform a population census, and to analyze the causes and consequences (social, economic, political) of demographic development.

SOC460 Survey Techniques 3 cr.

This course provides students with the basic knowledge essential to perform a survey in the service of a search. For this purpose, a knowledge of all stages of an investigation, of the preparation (setting objectives, questionnaire design, and choice of sampling method) is required to collect data and prepare students for the analysis and presentation of results. Students will also learn to use SPSS for compiling the data and the analysis of results.

SOC464 Project and Evaluation Techniques 3 cr.

Pre-requisites SOC201

This course is divided into two parts: the first part deals with the theoretical components, methodological and practical development of a project in a social intervention process. This is how the identification of the problem and the purpose of the intervention are alternately presented; the contextualization, and the conditions and stages of completion. Similarly, strategy concepts, planning and mobilization are presented in both conceptual and operational terms. The second part deals with the presentation of the concept and the corresponding methods of action evaluation in social intervention.

SOC465 Social Intervention and Social Groups 3 cr.

Pre-requisites SOC335

Firstly, students will develop their comprehension skills and ability to analyze groups and their typology, through the theoretical foundations of the group in general. Secondly, they will be able to distinguish the different levels of action and social intervention strategies with regard to different groups. Particular attention will be paid to the articulation of groups, societal environment relations and transformations affecting the main partners involved. Finally, students will be required to target the understanding of the characteristics of the crowd and the mass, and the components of events in the midst of a large audience.

SOC466 Internship/Laboratory/Workshop 6 cr.

The goal is to put into practice the theoretical and practical knowledge of the students in social sciences, and social intervention. This is the opportunity for immersing the students in the world of labor and this occurs through the following components: a) validating theoretical and practical knowledge and sharing experiences in an internship environment; b) designing the final report of internship that allows students to bring together their pre-professional practice with their achievements, in terms of knowing how to explain, how to write, how to design and how to negotiate.

SOC506 Institutional Sociology 3 cr.

This course focuses on the central role of institutions, in order to: a) understand social, economic, political, cultural and religious phenomena; b) define regularities in the behavior of individuals; c) reduce uncertainty; and d) render the aforementioned phenomena more predictable. It is articulated around three components: a) analysis of institutions through their various forms and functions; b) comprehension of the operational framework of institutions, such as frames of action, socialization forums, social hierarchy factors, etc.; and c) analysis of fitness levels that institutions exert on the individual and collective behavior in an evaluative perspective of the mutations and crises faced by some large contemporary institutions.

SOC511 Short-term and Structural Adjustment of Economic policies 3 cr.

The analysis of certain economic, cyclical and structural policies, allows examination through a strategic rationale for both the permanence of public and economic intervention and the transformations of its purposes and modalities. On the one hand, state economic intervention is questioned as much for its objectives and legitimacy rather than its effectiveness. On the other hand, the economic intervention of other subnational actors, such as local and supranational authorities within the European Union and international organizations, is advanced to raise the issue of coordination of these policies.

SOC513 Ethnology 3 cr.

This course highlights the major themes of ethnology. Thus, it deals in the form of reading, with a historical analysis of various research in Arabic ethnology; particularly Middle Eastern ethnology. The course offers some topics for study about the familial, cultural, political, social and economic plan, such as beliefs, the concept of democracy, development and underdevelopment, etc. The main focus of the course covers the pluralistic identity of the Middle East where the various components have been rather supportive for thousands of years, despite the differences that distinguish and characterize the widely diverse social fabric.

SOC521 Urban and Rural Sociology 3 cr.

This course locates the rural and urban worlds within the general framework of human activities and their changes. It synthesizes teachings on rural social environments and urban ones. It touches upon the main sociological trends that are interested in rural as well as urban sociology. Therefore, this course pays special attention to learning the conceptual tools that characterize a sociological approach applied to the problem of space. In this manner, it analyzes the dynamics of different urban functions (housing, industry, services, travel, and communication) by describing their interaction on the ground (especially urban), the way in which the evolution of these different functions and structures operate and deconstructs the territory in general and the city in particular. It also focuses on the reconstruction of cities.

SOC596 Project/Internship in Social Sciences 3 cr.

The first part is pre-project design in TIS (1cr). This is a seminar which leads to a pre-project in terms of methodological approach (preparatory phase, implementation phase, evaluation phase). It enables the students to choose a subject in social sciences, identify tools and ideas leading to concrete results. The knowledge required, with reference to the application of research, also will be developed. Upon completion of the seminar, the students are required to prepare a typescript draft of twenty pages. The second part is the internship (2cr). The two credits assigned to the course propose putting into practice, in terms of action, the topic chosen by students in social sciences. In this phase, students develop their internship in accordance with their subject and methodological bases specific to the design and evaluation of the pre-project in SCO acquired in the internship seminar. A prospective director appointed by the department will be responsible for supervising the students in the guidance of theoretical and practical foundations and in the conceptualization and evaluation of the corresponding response.

SOC638 Sociology of Minorities 3 cr.

This course is aimed at the acquisition of theoretical and empirical knowledge regarding issues of the sociology of ethno-cultural minorities and interethnic relations. It enables students to define the minor situation in various societies by appealing to designs, visions and studies of a number of sociologists, in particular the German sociologist Max Weber and French sociologist Pierre-Jean Simon.

SOC639 Sociology of Culture and Leisure 3 cr.

The course is designed to research culture and leisure, in terms of theories, relevant sociological approaches, and also cultural practices and interculturalism. This course is built around the following axes: a) problematization of culture and leisure concepts based on an analytical presentation of the main theoretical currents in sociology, and the relationship between the cultural, economic and political spheres ; b) analysis of the relationships between leisure - society - culture through the perspective of links between the main features of culture, recreation and sustainable development, the main features of leisure and its relationship with the family fields (political, educational, socio-cultural, etc.); c) proposition of analysis tools and cultural practices through the individual dimensions, institutional and political; d) putting in theoretical and practical terms; e) analysis of contemporary approaches of interculturalism and intercultural dialogue; and e) reflection on mass culture - its place and its impact within contemporary societies.

SOC691 Professional Practices in social sciences 3 cr.

This course gives to the student a space for reflection and practice of deepening of professional practices in social sciences.

In the first part, it summarizes the paradigms, themes, theories and research methods in the social sciences at both national and international levels.

In a third part it builds a platform for critical analysis of concrete situations and different problems, and this, for planning of a research program, databases and monitoring process of the team to implement (in relation with the theme of the chosen project).

SOC692 Project in Social Sciences 3 cr.

The project is a professional continuous training in Social sciences (SCO). The objective of the project is to make the student in Master degree a reflexive practitioner, able to identify a problem and respond by referring to the appropriate literature to the problem identified, followed by an implementation of an action plan that contributes to a solution or a recommendation. The project is being developed in a research work from 45 to 50 pages as the body text that includes the personal, technical and scientific criteria that motivated the student to undertake the project; the appropriate literature in the research project, field work and a solution perspective, remediation, or new thinking on an issue or a problem, etc., and a conclusion. (bibliography, annexes, are not part of the body of the text).

SPC505 Fundamentals of Pedagogical Training 3 cr.

This course coaches trainers who act in the context of the establishment and the institutional functioning of the educational training activities: supervision, coordination, training of teachers. It introduces to the students, the future trainers, the principles of the trainer function, namely to learn how to perform the study of training requests of any kind, how to analyze the needs, define the objectives of training, implement training plans and how to organize materially and educationally internships. This work will largely depend on the attitude, behavior and motivation of the trainer, analyzed in the course in light of data as of the training of trainers. Undeniably, and before considering the ways implemented, which change according to every difficulty, it is notable that the trainer verifies his motives and those of teachers and elucidates his formative project to further his method towards the goals he sets himself.

SPC510 Educational and Professional Guidance 3 cr.

This course deals with the orientation as a deeply interactive operation among secondary school students and further throughout the school as well as at every stage of the orientation process through exploration and discovery of trades. This presupposes to enrich their performances of professional prospects and uncover business lines, not only through data sheets and job profiles, but also discovering what this profession is in the labor market, through observation and simulated professional integration in the course and as from approximation of training towards the working world. The orientation will be taken as a process of transition from school to working life. The orientation will be taken as a process of transition from school to working life. The course also presents the major international referral mechanisms and the role of orientation professionals, based on a reflective approach from which students will make informed choices.

SPC520 Pedagogical Intervention and Accompaniment 3 cr.

This course provides students with educational coaching and intervention principles among teachers, aiming at developing professional expertise of the latter and help them succeed in school practices. The intervention of a trainer in a group of teachers in training will take a controlling character that can be accomplished through professional gestures and pedagogical actions in the field of the phenomena related to the time of teaching or animation properly so called, its specific constraints (didactic situations), its specific job (working methods) and its specific instruments (teaching techniques). It is also helping teachers to provide tools to edit and arrange them according to their practice and eventually invent new ones best suited to their goals and needs.

SPC605 Institutional Communication 3 cr.

The psych sociological training involves primarily the person's training, allowing each teacher to develop his formative potentialities in educational relations, such as: the relationship trainer-trained or teacher-learner, the relationship in the group (class group, in particular), relations in the institution (children, colleagues and management), and relations outside the institution. Such training must restore, even so, consciousness to teachers of their fundamental role in the future of individuals and institutions. Priority is given to the creation of a group living environment for everyone to feel comfortable and be able to get involved in both relationships and debates to investigate problems of training and their solution. It must further promote the flow of information so that all group members possess the necessary elements for their reflection, enable decisions necessary for the group action, to use all means appropriate to facilitate the course of trade.

SRO211 Introduction to the Bible 3 cr.

The goal of this course is to introduce students to biblical theology, based mainly on the subject of divine-human alliance. Through responses to the history of geographic and historic progression, particularly pertinent to us since Lebanon is a part of the Holy Land, the issue of inspiration, revelation and canonicity of sacred texts, the presentation of literary genres and direct contact with biblical texts, will give students a general idea about the divine-human process promised in the Book of Genesis and accomplished by Jesus Christ. The Bible, a book said to be hard to understand and sometimes impossible to even be considered as credible (especially in the Old Testament, which remains inaccessible), is made

approachable in this course because it introduces us, not only to the face of God the Teacher who never tires of understanding the “ungrateful” people, but also the Loving face of God who insists on establishing an alliance with the whole of humanity even though they crucified his Son. Students who finish the course will acquire the understanding that each biblical story is a reflection to their own story with the “Good God”.

SRO301	Education in Faith	3 cr.
Faith is the unifying and building agent of the Christian person and the Church. Thus, the believer finds growth or even the realization of his being in God his Creator and Savior. In addition, the Church, the Mystical Body of Jesus, by its experience of communion among its different members, is the "mother" feeding her children so they reach out to Christ. This course presents the main ideas of the Christian faith that contribute to the development of the students believing identity and their participation in the ecclesial community.		
SRO302	Management of Cultural and Religious Diversity	3 cr.
The world has become a "small village" open to any type of belief or culture. Therefore, no one can pretend to live in an "island". The encounter with the "other", now becoming daily, requires some preparation in order to spare ourselves unnecessary conflict. This course presents the main ideas of the existing religions and cultures in our environment; with a practical introduction to interfaith and cultural dialogue.		
SRO510	Pastoral Reading of the Gospels	3 cr.
This course aims at introducing the most important characteristics of the four Gospels (Matthew, Mark, Luke and John) and to perceive them as a catechesis designed to meet the needs of the Christian community to which they are addressed. This course also covers the major themes of the Gospels and allows students to be challenged by the Evangelists on an announcement that reflects the needs of today's communities.		
SRO515	Psalms and Biblical Wisdom: Spirituality of Daily Life	3 cr.
How to understand and assimilate the Psalms and biblical wisdom and their spiritualities? On the one hand, how are the Psalms words of God for believers today? How do they help us better understand the mystery of Christ? How are they prayers of humanity? And what life lessons do we learn in the search for God and happiness?		
SRO520	Symbolic Means of Religions (Prayers, Rites, Meditation)	2 cr.
Our faith in the living God is not only fed by experiences and ideas, feelings and actions, but also great symbols and powerful images. To speak of the encounter with the living God, the Bible uses prayer, rites and places that marked the Jewish people and the early Christians and have acquired a symbolic significance. The course will allow the exploration of these symbolic meanings, an identification of the spirituality attached to them and a reading of our experience in the light of these symbolic meanings.		
SRO525	Development, Religion, Culture and Society	2 cr.
The course addresses the issue of development in an intercultural perspective and in relation to the different religious and socio-cultural areas within a single culture. It also aims to show the interrelations between concepts, research methods and complexity of socio-cultural changes; and identify problems related to the transposition of assessment instruments from one religion to another and from one culture to another, as well as outline the educational implications and the clinical perspectives.		
SRO530	What is Believing?	3 cr.
What does "believe" mean in our time? Does God still reveal himself today? If so, how? In a world marked by science and technology, believing is becoming more difficult to explain. If one admits the spiritual search, it is very laborious to account for personal faith in the God of Jesus Christ. This course will enable students to become familiar with these two great themes of fundamental theology that are revelation and faith. Students will reflect on the human act of believing and the distinctions between spirituality/religion/faith. In addition to historical and theological considerations, this course tackles the transfer from Vatican I to Vatican II. Then it deepens the revelation as the mystery of God's communication that occurs in the heart of history and human existence.		
SRO535	Schools of Great Christian Spirituality	3 cr.
Christian spiritualities offer a great diversity of life paths for believers. These spiritualities aim to help them, through prayer and action, to become more human, to follow the Christ. Every Christian school of spirituality is inspired by a great saint and pours in it its originality. Although its schools are coming from very different eras and contexts in the history of the Church, their inspiration (from monastic, active life, apostolic life, mystic life and contemporary life) always remains current. Through different faces of the saints, the course invites students to find which spirituality schools they belong to.		
SRO540	Moral Doctrines of Religion	3 cr.
As part of this course students will be confronted with the foundations of the ethics of major religions, especially in the following areas: building an ethical discourse from the three dimensions that comprise it (universal, particular and singular), the human person, freedom, conscience, forgiveness, evil and suffering, and salvation. Students are invited to link these different foundations to a specific ethics issue (bioethics, social ethics) that they choose themselves and that they will present during the exam.		

STA220 - STS220	Probability and Applied Statistics	3 cr.
Prerequisites	MAT213 Or MAT215 Or MAT216 Or MAT218 Or NUT210 Or NTR210	
This course prepares students for the practical use of probability and statistics in the biomedical field (agronomy, chemistry, biochemistry, nutrition, medicine, etc.). Topics covered are: elements of descriptive statistics, population, statistical unit, frequency distribution characteristic of central tendency and dispersion; concepts of probability and combinatorics, conditional probability and Bayes' formula, applications, discrete and continuous random variables, expectation and moments, weak law of large numbers, empirical frequencies and probabilities customary laws (Binomial, Multinomial, Poisson, Normal) and asymptotic behavior, the law of large numbers, sampling and estimation, introduction to the use of hypothesis tests, and the Chi-2 contingency table.		
STA320	Applied Probability and Statistics	3 cr.
Prerequisites	MAT213	
This course aims to provide students with the most common concepts of probability theory and statistical inference, with a unique balance between theory and methodology. Interesting relevant applications using real data will be used to show how the concepts and methods can be applied to solve science problems in practice.		
STA321	Descriptive Statistics	3 cr.
Prerequisites	MAT213	
Descriptive statistics is to summarize quantitative information gathered on a concrete universe through an exhaustive investigation, such as the population of a country studied through a general census. Its purpose is not to explain but to describe, identify the essential and carry out syntheses using the numerical language. In this course, we study the statistical distributions of one and two characters, graphics and summaries of the major numerical knowledge of a distribution, time series and index number theory. At the end of this course, the student will be able to achieve a general descriptive study of the data series of one or several variables; he became familiar with the concept of regression and particularly linear regression. He will learn to decompose a time series and to make predictions. Finally, he would be able to calculate and understand key numeric indices widely used in economics.		
STA331	Statistical Analysis	3 cr.
Prerequisites	STA320 Or STS320	
This course reviews and expands upon core topics in probability and statistics through the study and practice of data analysis. Topics include sampling methods, numerical and graphical summaries of data, parametric and non-parametric hypothesis testing, confidence intervals, analysis of variance, and regression. Upon completion of this course, students should be able to think critically about data and apply standard statistical inference procedures to draw conclusions from such analyses. This course will be computationally intensive and will use the SPSS software for statistical computing and graphics.		
STA335	Statistical Survey and Analysis	1 cr.
Under the direction of the teacher, students will use a statistical survey on a small sample and prepare one or more documents that are a synthesis of the results. The methods will be adapted to the size of the sample. An attention will be paid to criticism and interpretation of the results as well as to the relationship between the statistical results and other sources (qualitative observations, literature).		
STA540	Random Modeling and Introduction to Stochastic Calculations	3 cr.
The main objective of this course is to initiate the students to the concept of random processes used in modeling of random phenomena. It focuses on the discrete Markov process or more commonly Markov chains. In the case of homogenous Markov chains we consider the set of States, the transition matrix, the initial distribution and the distributions at different times, the Chapman-Kolmogorov relationship, classification of States (stability, periodicity and recurrence), absorption in stable classes, stationary distribution, Newton diffusion gas problem, problem of the players ruin, one-dimensional random walk, multidimensional random walk, and study of the Poisson process and queues theory.		
STA515	Statistical Analysis Methods	3 cr.
The purpose of this course is to strengthen the knowledge of students in the field of applied statistics by minimizing the mathematical approach and developing practical and methodological aspects. It presents the main techniques of most known statistical tests (descriptive and inferential statistics, explanatory methods, and data analysis). The course provides an overview and practical main methods available in software, with an aid to the interpretation of the results and through fully processed examples using the statistical software SPSS. Most of the themes will be covered by this course including the analysis of Variance (ANOVA test), comparisons of samples (t-test and Chi-square), single and multiple regression.		
SYR211	Oriental Language I	3 cr.
This course presents the Syriac language and its importance among the Semitic languages. It teaches various Syriac writings, the alphabet, and the vowels. It also covers the grammar: the nouns, the verbs, the particles (prepositions, conjunctions, adverbs), the adjectives, the pronouns, numbers (singular, plural), gender (male, female), the declension of nouns, and the conjugation of verbs.		
SYR225	Oriental Language II	3 cr.
Prerequisites	SYR211	

This course is a continuation of the course SYR211. It provides a brief overview of the Syriac literature, along with practical texts to illustrate it. It compares between two languages: Syriac and Arabic.

THEO212 Synoptics and Acts of the Apostles 3 cr.

Prerequisites THEO 201 - THEO 210

The synoptic writings are introduced in this course, namely: the Gospels of Mark, Matthew and Luke, in addition to the Acts of the Apostles which is the second volume of the Lucan work.

The course starts with an introduction on the "synoptic question" and the adoption of the modified theory of the two documents, followed by the study of each of these writings and their most important themes.

The approach is synchronic. The method adopted is criticism of the composition which is a specification of the writing criticism which reviews the editorial activity of the author in order to discover the theological thought.

THEO221 Ecumenism 2 cr.

This course meets the recommendation of the Second Vatican Council to give future pastors of the Church, and also all believers, an ecumenical education which aims to strive for the construction of one Church of Christ in the world. This education is especially important in the life of our Oriental Churches that live beside one another.

After presenting the unity challenge and the divisions danger, especially the roots of certain doctrinal issues, their branching and development throughout history, the course explores the situations of today's Churches and Christian communities, explains the foundations of ecumenical behavior, and determines ways that contribute to the reestablishment of Christian unity. The course outlines clearly the history of the ecumenical movement which emerged in the early twentieth century and which had deeply influenced the life of various Churches, by stimulating the desire for visible unity and communion among all Christians.

THEO241 Basics of Sacramental Theology and Liturgy 3 cr.

The sacraments cannot be understood or experienced unless they are based on a fundamental theological approach that highlights the sacramentality of the Church in relation to the salvation of Christ and the active role of the Holy Spirit. The objective of this course is to shed light on this approach and introduce students to the extensive and particular study of each sacrament.

The sacraments are celebrated in the community and communicate the energies of the Risen Christ by the action of the Holy Spirit. This celebration is always liturgical. For this reason, it is important to have an introduction to the theology of the liturgy of the Church and the Churches (especially Oriental) which determines the theological or ecclesial foundations, and underlines liturgical practices in relation to the celebration of the whole Christian ministry.

THEO251 Fundamental Moral Theology 3 cr.

This course deals with the Christian action in a rational process, while relying on the Holy Scripture, and placing Tradition, Magisterium and human sciences within a contemporary situation scenario.

The course will particularly address: Biblical perspectives of moral theology, its creative evolution and fundamental principles, such as freedom, responsibility, will, the good and the bad in the act, conscience, law, sin, conversion, salvation and revelation, theological and human virtues, bliss as the end of all Christian actions.

Following a careful reading of the Veritatis Splendor encyclical and the document of the International Theological Commission on the natural law, we will present some new perspectives for moral thoughts, illustrated and enlightened by two concrete examples.

THEO312 Authorship of the Johannine Works 3 cr.

This is an introduction to the Johannine corpus, with particular emphasis on the fourth Gospel. The course will focus on the texts themselves, and on the different environments of their composition. In order to approach these testimonies of faith, passages under study are resituated in the historical context of their development and analyzed using narrative and rhetorical strategies used by the authors of communal and personal literary books.

THEO321 Theology of Religions 3 cr.

The course presents the Christian theology of religions within a perspective of fundamental theology in dialogue with other theological disciplines (anthropological, Christological, Trinitarian, ecclesiological and practical). Teaching focuses on the development of theology from the Second Vatican Council and aims to introduce students to the extensive reading of the relevant main texts of the Magisterium.

THEO341 Sacraments of Christian Initiation 3 cr.

The course aims to highlight the theological foundations of the Sacraments of Initiation: baptism which gives access to the Body of Christ and the divine adoption, completed by the confirmation that is the work of the Holy Spirit living in the heart of the believers as in a temple, and crowned by the Eucharist which is the real and historical incorporation into the ecclesial body of Christ. The course is largely based on the baptism catechesis of Cyril of Jerusalem, Theodore of Mopsuestia and John Chrysostom, and shows the evolution of sacramental doctrine of the Church with special emphasis on the teaching of the Council of Trent.

THEO361 Pastoral Theology Practice 3 cr.

This course is an introduction to pastoral and practical theology. If theology was the Christian faith in search of its intelligence, the theological disciplines that offer theology students the keys to the broad "Science of God" and to its salvation in the world would be numerous and various. Practical (and pastoral) theology is one of these disciplines, but with the distinction of being more oriented towards the Christian praxis which brings together the different aspects of the Christian faith and its various transmissions in communities, parishes, groups, catechesis or others. The Christian experience is understood at this point as a "response" to the Word of God received by Revelation and "recovered" in the Tradition. This experience is "imposed" in practical (and pastoral) theology in a theological place where intelligence of the Christian faith occurs.

This discipline, as entitled in this course (pastoral and practical), covers two levels of thinking and research; the first "empirical" and the second "applied". The empirical level is that of practical theology which proceeds to an analytical reading of how faith is experienced among the People of God (theology of practice). The "applied" level is that of the pastoral theology which seeks to find the best way to convey and accompany faith among the People of God. In their quests of meaning, both types of theology, pastoral and practical, refer to theological knowledge conferred by all other theological disciplines, as well as to many other disciplines related to human sciences and others.

THEO411 Pauline Corpus 3 cr.

The course mainly focuses on the thirteen epistles which are part of the Pauline school. It covers the epistles ranging from the Romans to Philemon, as ranked by our Bibles.

Before studying the epistles themselves, we start with two preliminary parts. The first part studies the life of the Saint according to the Acts and to the epistles; the second part presents the epistolary genre, the categories of epistles and some hints for a better understanding of the studied epistles.

THEO421 Islam 3 cr.

This course is an introduction to Islam, as both a religion and a tradition consisting of various schools of thought. After examining the origin of Islam and the history and themes of the Quran, it approaches the major doctrinal and philosophical patterns of the different branches of Islam and their practices. Students are encouraged to engage in a dialogue with Muslims who constitute the major religion in the region.

THEO431 Christian Anthropology 3 cr.

This course consists of three distinct parts, namely: the pact of creation, the pact of original sin and the pact of grace. It aims to explain the content of the Christian doctrine of creation of the human being in God's image, with different biblical positions in opposition to scientific theories of origins. Then, the course examines the doctrine of original sin and attempts to formulate the problem of evil by explaining the impact of sin on the situation of the human being. After a brief overview on the scriptural doctrine of the original sin, we cover the Augustinian doctrine of the original sin, by reviewing ecclesial decisions and scholastic theology. At the end of the course, we tackle the theme of grace in order to better grasp the significance of salvation that culminates in the incarnation of Christ and the meaning of the human being's life as a creature totally open to Him, and this in communion with all creatures.

THEO441 Ministries and Healing Sacraments 3 cr.

This course aims to help students discover the theological foundations of ministries and the sacraments of healing, repentance and anointing the sick.

The question of ministries is a particularly important chapter of ecclesiology, simply because the departments are above all in the service of the Church. This issue entails multiple dimensions: historical, sociological, theological, canonic, pastoral, and ecumenical, and it is conditioned by the realities of church life and, consequently, subject to constant evolution.

THEO471 History of Modern and Contemporary Church 3 cr.

This course covers five centuries, from the Renaissance Church (16th century) to Vatican II (1962-1965), and includes two parts: the first part focuses on the Renaissance in addition to the Protestant and Catholic reforms; the second part tackles the 19th and 20th century, the era of revolutions and adaptations. Luther's revolt in the 16th century and the 1789 Revolution are main events for society and the Church. What had paved the way for them? Who are the main actors and what are their motivations? What were the challenges facing the Church in all fields, both doctrinal and pastoral, life of the clergy and involvement of the lay persons? A council marks each studied period: the Council of Trent and the Second Vatican Council. We examine how each of them blends tradition and adaptation, their development, their key documents, their receipt, their actors and especially the Popes John XXIII to John Paul II. This course helps students learn to "read the signs of the times" through world events, in the middle of which the People of God live and to whom He was sent.

THT215 History of Theater 3 cr.

Study of history of theater from early western culture, Greek, renaissance, bourgeois, romantic, up to modern and post-modern theater. Egyptian and Lebanese theater is covered in this course.

THT230 Introduction to Mime 2 cr.

Development of the physical capacities of the facial and body muscles to meet the exigencies of the characterization of a role. Advanced physical training of individual actors to their maximum potential.

THT240 Physical Theater 1 cr.

THT250 Body Expression 2 cr.

This course introduces students to the discovery of the body's unique language, through exercises designed to explore and free the total instrument. It covers the development of a flexible actor with range, expression, and physical confidence, encouraging the awakening of the imagination while exploring the worlds of ritual, animal, conceptual, and modern dance movements.

THT260 Analysis and Critic of Performing Arts I 1 cr.

Since Aristotle's Poetics, the theatrical aesthetic appears as an intense questioning on theater and its practices. The aim of this course is to introduce the main theories of aesthetics. The positions of many movements and genres will be explored.

THT280 Introduction to Acting 3 cr.

Introduction to different fundamental techniques used in the creation of a character. Emphasis on relaxation, concentration, and development of a role through sensorial and emotional memories. Students will improvise and do monologues as exercises in this introductory course.

THT310 Dramaturgy 3 cr.

Theoretical and practical aspects of the dramaturge's work in contemporary theater. Introduction to the study of theory and practice of dramaturgy.

THT320 Advanced Acting 3 cr.

Development of an internal technique, beginning with an auto-drama which is a dramatization of one's personal history. Development of an external technique through comedy. Fusion of the internal by use of action and objective with the external.

THT350 History of Theater Directing 3 cr.

Investigation of the work of theater directors from the history of the world's theater, with special emphasis on the relationship to time in which the work was generated.

THT355 Costume & set design workshop 3 cr.

Investigation of the design research process, period style, and character analysis leading to visual presentation of the design. Study of costume design for theatrical productions, ballet, opera, and musical theater.

THT360 Creative Writing 3 cr.

Study and analysis of varied aspects of the playwright's art. Various aspects are selected from topics such as comedy writing, writing for children's theater, and adaptation from literature to stage.

THT365 Analysis and Critic of Performing Arts II 1 cr.

Following course 1, this course continues in introducing the main artistic movements. The aim of this course is to give a more solid academic grounding on theories of art criticism, providing a reflection on major issues concerning the creation and reception of artistic work.

THT400 Modern Drama 3 cr.

THT405 Performance and Contemporary Art 3 cr.

THT415 Puppet and Theater for Children 3 cr.

Students will be introduced to the basics of creative development and theater production for children, and explore the different techniques used in this field.

THT440 Directing and Production Workshop 3 cr.

Development of directorial skills through the medium of written preparations and directing of scenes. Application of stage directing techniques in the production of a short play. Students will direct a one-act play.

THT450 Lighting & Sound Workshop 3 cr.

Study of use of light and color to define space, effect of light on scenery and costumes, lighting for theaters, patterns and moving scenery. Study of use of sound and acoustics as they relate to performance environments, techniques associated with recording, effects and music tracks for theater sound design.

THT455 Acting for the Camera 3 cr.

Techniques of acting for the camera, including framing, face and body movements and how it relates to the filmic space.

THT460 Analysis and Critic of Performing Arts III 1 cr.

The aim of this course (level 3) is to deepen the knowledge in art theories and the interrelation between different arts. An intense exploration of the evolution realized since modernism and postmodernism and the introduction to arts of new technologies. Applying the analysis and criticism technics to more complex artistic work of arts.

THT465	Performing Arts Production	3 cr.
Students will demonstrate knowledge of the performing arts industry, including live performance genres, production processes, careers, and work environments. They will work creatively as part of a team to prepare and execute a live performance.		
THT470	Final Project	3 cr.
Students must produce a short play, 30 minutes maximum.		
THT506	Modern Theatricalism	3 cr.
Selected studies in symbolism and avant-garde theater. Exploration of dream experience and private psyche, religious experience, and revitalization of myth and ritual.		
THT510	Arab Theater	3 cr.
Selected studies in the development of theatrical production and dramatic writing in Arab theater.		
THT512	Greek Theater	3 cr.
Selected studies in the development of theatrical production and dramatic writing in Greek theater.		
THT517	Practicum in Dramaturgy	3 cr.
Demonstration of competence in the practice of dramaturgy through completion of an approved dramaturgical assignment.		
THT521	Theory and Criticism	3 cr.
Studies in theory and criticism of theater, dramatic literature, and performance, through the 16th to the 19th century.		
THT542	Manuscript Analysis	3 cr.
Critical and constructive study of dramatic techniques as employed by playwrights and screenwriters in selected examples of contemporary work.		
THT615	Aesthetics of Theater	3 cr.
Discussion of essential issues in esthetics of theater and drama based on philosophy of art and theories of the theater.		
THT616	Authors and Genres in Theater	3 cr.
Investigation of the work of theater artists and the literature of the theater, as manifested in one or more of its major forms or genres.		
THT619	Literary Adaptation	3 cr.
Playwriting of selected literary work from literature, and demonstration of competence in playwriting through the completion of a short play.		
THT620	Scenic Design Workshop	3 cr.
Advanced study and practice in scenic design for theater. Imagination as impetus for design, text analysis, metaphor, and conceptualization. Investigation of the design research process, composition, and style leading to visual presentation of the design.		
THT623	Acting for Camera	3 cr.
Development of an internal technique, improvisations capturing the circumstances, life of the character, and intentions of the scene.		
THT630	Semiology of Theater	3 cr.
Investigation of the study of semiotics, Saussure, Peirce, Barthes, Derrida, and Beneveniste and its relation to theater.		
THT662	Directing as Theory and Practice	3 cr.
Development of directional skills of analysis, planning, staging, and criticism through the medium of written preparations and directing of scenes under minimal production conditions.		
TIS597	Project/internship in Work and Social Intervention	3 cr.
<p>This course will be divided into two parts: a) Preproject design in TIS (1cr) This is a seminar which leads to a pre-project in terms of methodological approach (preparatory phase, implementation phase, evaluation phase). It allows the student to set a subject in labor and social intervention, and identify tools and ideas which will lead to concrete results. The knowledge required, with reference to the application of the assessment methods of institutional, collective and social intervention will also be developed. Upon completion of the seminar, the student is required to prepare a typescript draft of twenty pages. b) Internship (2cr) The two credits assigned to the course propose putting into practice, in terms of action, the topic chosen by students in labor and social intervention. In this phase students develop their internship in accordance with their subject and methodological bases specific to the design and evaluation of the pre project in TIS acquired in the internship seminar. A prospective director appointed by the Department will be responsible to supervise the student in the delimitation of the theoretical and practical foundations and in the conceptualization and evaluation of the corresponding response. Introductory notes consecrated to the ethics of professional practice in labor and social intervention. They have the following objectives: 1) To raise awareness in future social workers, of their own ethical positions, and in explaining and criticizing them; 2) To analyze the ethical conflicts that arise in labor fields of action and social intervention; 3) To become equipped to argue in support of professional positions founded and estimated ethically and thus develop testing of stress management, conflict and time. Upon</p>		

completion of the course, a ratio of 20 typescript pages linked to the end of the dissertation, is presented by the student.

TIS605	Management and Group Facilitation	3 cr.
<p>This course aims to develop the skills of students in management and group facilitation. It offers a reading of group and communication phenomena, as well as learning methods and animation techniques in accordance with the types of group and societal and cultural situations. Similarly, knowledge of theories in working with small groups allows students to understand the dynamics of a team and interact appropriately to different situations.</p>		
TIS610	Sociology of Administration and Public Action	3 cr.
<p>This course trains students in theories, methods, paradigms and sociological concepts intended for analysis and practice of public policy, and those of administrative systems. The course provides an analysis of the interventions of public authorities (State, local authorities, etc.) from the company, through their various functions. It focuses on the development of the constitution of the administrative system, its components, its actors and its role. It enables students to take ownership of a methodological approach and a toolbox for the analysis of public action in a particular field. Several lines of investigation and analysis of administrative practices are also available to students.</p>		
TIS615	Social Marketing	3 cr.
<p>The management of organizations and associations, as well as the promotion of causes, ideas, and social and sociocultural policies are the main fields of action of the social workers. This course is built around the following learning areas: 1) Master the principles and tools of management of different types of organizations, as well as issues of associative action from a sociological perspective; 2) Master the concepts, theories and models of social marketing; 3) Know the types of societal and sociocultural issues that can be subjects of social marketing projects; 4) Appropriate tools, new techniques and planning processes of social and sociocultural marketing strategies; 5) Study practical cases showing the conditions and challenges of the circulation of ideas and new practices in the social body.</p>		
TIS620	Internship in Work and Social Intervention	1 cr.
<p>This course allows students to experiment and perform their institutional and community response capabilities. To do this, they will be incorporated into municipal spaces or local development NGO specialists, where they will be called to build an intervention project and corresponding policy proposals.</p>		
TIS630	Governance and Ethics	3 cr.
<p>The objective of this course is to form social actors capable of identifying and building the main uses of governance of associative and organizational environments in concordance with theories and communicative approaches, as well as their proper ethical basis. The course covers the following: a) To clarify the concept of associative governance through its constituent dimensions and areas; b) Define the communication process, relations with the environment and ethical approaches in terms of social responsibility; c) Identify appropriate communicative approaches to sustainable development.</p>		
TIS635	Social Responsibility and Sustainable Development	3 cr.
<p>This course trains students to design and understand the implementation of social responsibility programs in various types of organizations and societal areas, all in a perspective of sustainable development. It has the following learning objectives: a) Master the theoretical and conceptual foundations of the concepts of social responsibility and sustainable development; b) Know the methods and techniques to develop a perspective and proposals for action related to such notions, and to assess their relevance; c) Observe and compare social responsibility projects developed in the spirit and scope of strategic sustainable development.</p>		
TIS640	Advanced Practices in Community Social Intervention	3 cr.
<p>This course is designed for the mastery and knowledge, both theoretical and practical, of methodology of intervention in community settings, especially in terms of local development. In addition to the application exerted through the study of conducted monographs, concepts and varied topics - such as awareness, public education, and heritage action will also be taught as a tool for local development. Movements, trade unionism, etc. will be further developed and reinvested in projects being done by the students.</p>		
TIS597	Project/internship in Work and Social Intervention	3 cr.
<p>This course will be divided into two parts: a) Preproject design in TIS (1cr) This is a seminar which leads to a pre-project in terms of methodological approach (preparatory phase, implementation phase, evaluation phase). It allows the student to set a subject in labor and social intervention, and identify tools and ideas which will lead to concrete results. The knowledge required, with reference to the application of the assessment methods of institutional, collective and social intervention will also be developed. Upon completion of the seminar, the student is required to prepare a typescript draft of twenty pages. b) Internship (2cr) The two credits assigned to the course propose putting into practice, in terms of action, the topic chosen by students in labor and social intervention. In this phase students develop their internship in accordance with their subject and methodological bases specific to the design and evaluation of the pre project in TIS acquired in the internship seminar. A prospective director appointed by the Department will be responsible to supervise the student in the delimitation of the theoretical and practical foundations and in the</p>		

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TIS692	Project in Intervention and Social Work	3 cr.
The project is a professional continuous training in Intervention and Social Work (TIS). The objective of the project is to make the student in Master degree a reflexive practitioner, able to identify a problem and respond by referring to the appropriate literature to the problem identified, followed by an implementation of an action plan that contributes to a solution or a recommendation. The project is being developed in a research work from 45 to 50 pages as the body text that includes the personal, technical and scientific criteria that motivated the student to undertake the project; the appropriate literature in the research project, field work and a solution perspective, remediation, or new thinking on an issue or a problem, etc., and a conclusion. (bibliography, annexes, are not part of the body of the text).		
TLV307	Writing for Television	3 cr.
The students will acquire knowledge of documentary and segment program writing. Students will implement these skills in short exercises destined for television broadcasting.		
TLV351	Introduction to Editing	3 cr.
Students will understand the various theories of montage (Eisenstein, Bazin, Deleuze, etc.), as well as the different styles of montage. Students will be able to use the different tools of nonlinear editing, as well as implement them by making several short videos.		
TLV352	Advanced Editing	3 cr.
Pre-requisites	TLV230 Or TLV351	
Make several short video projects, and study various theories of montage (Bazin, Poudovkine, Eisenstein) as well as various styles of montage.		
TLV416	Television News	2 cr.
Students will apply news writing techniques used in electronic media and television. Students will implement these techniques in short written exercises destined to be broadcast.		
TLV420	Television Production	3 cr.
Students will acquire an introductory knowledge of different phases of production. Students will apply skills on pre-production, casting, technical production, locations, and on the production phase scheduling, transportation, catering, and equipment rentals.		
TLV431	Sound Techniques	3 cr.
Students will understand the different techniques of acquiring sound in film and television. Students will develop skills in sound pick-up and recording using the appropriate microphones for indoor and outdoor sound recordings.		
TLV435	Video Technology	3 cr.
Students will understand the different pieces of equipment used in television, specifically the studio and stage equipment, sound mixers, microphones, image mixers, lights, recorders, etc. Students will learn how digital and analogue signals work, and use the appropriate workflow.		
TLV461	Commercials for Television	3 cr.
Students will produce commercials destined for television broadcasting. Students will implement skills and produce a commercial in this course.		
TLV462	Television Control Room	3 cr.
Students will acquire hands-on experience in the use of visual and sound mixers in the television studio control room. They will produce a program using multi cameras.		
TLV463	Music Video	3 cr.
Students will use team work to produce a music video. Students will start from scratch and go through all the phases of music video production from idea, casting, location, editing, etc.		
TLV464	Drama for Television	3 cr.
Pre-requisites	TLV462 Or TLV305	
Students will apply acquired knowledge in production of a dramatic episode. They will write and direct, then edit a pilot destined for television broadcasting.		
TLV470	Final Project	3 cr.
Students will shoot, edit and finalize a documentary film which will not exceed 20 minutes. Students will consult their assigned academic supervisors in the different phases of production and post-production.		
TLV506	Editorial News Production	3 cr.

Student will research, produce, write, shoot and edit a news story. Student will implement the steps which nearly all reporters use to produce their stories.

TLV507 **Mass Communication Theory** **3 cr.**

This course will provide a broad working knowledge of the main interventions in the field of Mass media and of the scholars whose work fueled new trajectories in media and cultural studies. Various schools of thought are discussed, students will acquire a familiarity with the key concepts, movements, and approaches to media and cultural studies.

TLV514 **Advanced Reporting & Newswriting** **3 cr.**

Student will acquire the ability to gather, evaluate, report and produce multi-platform, multimedia news, and news feature stories. The student will develop skills of writing articles, shooting videos, recording audio, editing video and sound.

TLV516 **Writing for Television** **3 cr.**

This is a course where the student build and reinforce skills of a professional television screenwriter. It covers the key craft elements of story structure, scene development, character and dialogue. It introduces the student to the pilot format. Students will write a series outline and the first act of an original pilot.

TLV560 **Editing and Special Effects** **3 cr.**

This course allows the student to explore creative possibilities of non-linear film and video editing. It includes reinforcement of editing technics, and a practice of basic compositing technics, including keying, matting and key-framing using alpha channel controls.

TLV605 **Programs Production** **3 cr.**

Fundamentals of television production and the process of operating television and video equipment. the process of planning for a television or video production, the pre-production, and post-production stages of videoing an event are covered in this course.

TLV607 **Documentary** **3 cr.**

To study the "documentary problem" through definitions, works, styles, forms, strategies, attitudes, conventions, practitioners, and history of documentary film. Using the central concept of 'voice' or that, which conveys the sense of a text social point of view, or how the film speaks to the viewer and how it organizes the historical material it presents, we will investigate current theoretical debates and dilemmas in documentary filmmaking, discussing both form and content as we consider the variable boundaries of the documentary film. Particular attention will also be paid to the social and political documentary that has been a key component of the genre.

TLV652 **Sound Recording** **3 cr.**

student will acquire recording techniques and editing. Student will learn to use various microphones effectively to record sound and voice on location and in a controlled environment.

TRD220 **Initiation to Translation** **3 cr.**

Pre-requisites LFR201 and ARA210

This course's objective is to introduce the student to the preliminary Translation strategies, let him acquire its techniques, and apply these general rules by solving exercises. It introduces the student to different types of translation: general translation and mainly journalistic translation, the literary, philosophical, poetic, scientific (ecological, medical, technological...), economical, religious, legal translations... It familiarizes him with the technical procedures of translation that he will use in his professional life.

TRD310 **Methodology and Rules of Translation** **2 cr.**

The goal of this course is to bring students to discover, by themselves and through texts, the fundamental principles of "Translation Studies" by making them confront its various theories. It also allows them to go beyond the limits of correspondence translation (transcoding), towards interpretive translation or by equivalences, by giving the context as much importance as the text, and by helping them understand, through practice, the stages and the mechanisms of the interpretive theory of translation.

TRD321 **General Translation A-B/B-A** **3 cr.**

Pre-requisites LFR201 and (ARA210 or LLA210)

This course is designed to exercise linguistic habits (competence and performance) of students, to enable them to translate a French text into Arabic and vice versa, making it easy to read and avoiding, as far as possible, the usual interference.

TRD322 **General Translation A-C/C-A I** **3 cr.**

Pre-requisites TRD220 and ENG240

The objective of this course is to introduce students to translation from Arabic into English and vice versa, through a wide variety of texts that may range from technical and scientific to literary; with emphasis on the concepts in both languages rather than on lists of vocabulary.

TRD415 **Computer-Assisted Translation** **2 cr.**

Pre-requisites TRD321

This course aims at familiarizing students with the translation using the various useful computer tools necessary for their work as professional translators, or other similar professions that deals with languages (editor, publisher, journalist, etc.).

The Computer-Assisted Translation (CAT) consists of a set of tools designed to introduce the student to use the computer in his practice of translation. It is designed to guide them through using software, terminology databases, electronic and online dictionaries, and language programs. Thus, the SDL Trados Studio 2014 software, was installed specifically for this course to introduce students to its use. This software is a CAT tool, a translation memory software which helps the students to translate faster, and better manage their translation projects. The importance of this software lies in the ability to create a database that could be inserted into the software memory

The use of technological tools in translation appears with the effective use of various monolingual and multilingual dictionaries, in addition to the good use of the translation software and ensure consistency of terminology and syntax in translation.

In addition, this course is a practical application of translation using the computer as a tool supporting the translation work, and it introduces students to the fast delivery of translation projects in a proper time management.

TRD416	Linguistics and Translation	3 cr.
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This course aims to make students aware of the fact that the advent of the first language and terminology had some impact on the translation process. It assesses the contribution of linguistic and terminology in translation studies, explaining how the translators accept the science of language as a precision tool in their professional practice. On the theoretical level, it will explain the decisive influence of language and terminology on translation, in the context of structuralism, Europe, the Prague Circle, and the United States, under the leadership of Eugene Nada, whose work marked a new attitude showing that translation is no longer considered as only an art. Finally, it will demonstrate how the theoreticians of language and terminology are many, and to emphasize the need to link the theory of translation to a theory of language. In practical terms, this course will include an overview of the morphology, lexicography, lexicology and terminology, etc.

TRD421	Legal Translation A-B/B-A	3 cr.
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Pre-requisites TRD321

The course aims at introducing students to major legal documents and to the language used to write them. It also seeks to show the importance of respecting the relevant structures and terms. Students will therefore learn to tell the difference between the structure of a law, a decree, a contract, etc., and to find the appropriate equivalence in the target language. Moreover, the course aims at showing the importance of rigour, clarity and consistency in translating texts in which there is no room for vagueness or inaccuracy.

TRD423	General Translation A-C/C-A II	3 cr.
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Pre-requisites TRD322

The objective of this course is to let students translate, from Arabic into English and vice versa, a wide variety of long texts that may range from technical and scientific to literary, with emphasis on cultures and civilizations. Students are also invited to do documentary research based on the notion of "translation documentation", in order to completely understand the key concepts related to any domain whatsoever.

TRD424	Economic Translation A-B/B-A	2 cr.
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Pre-requisites TRD321

This course aims to introduce students to an understanding of economic reasoning and fundamental concepts and mechanisms of the economy at national and international level, in order to familiarize them with the specific terminology in this area and help them to translate specialized texts from French into Arabic and vice versa.

TRD425	Economic Translation A-C/C-A	3 cr.
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Pre-requisites TRD322

The course seeks first of all to introduce students to the different economic and financial processes in order to avoid any misunderstandings that could eventually lead to incorrect translations. Secondly, it focuses on the technical and context-specific terms, idioms and collocations used in the economic discourse. A special attention will also be given to consistency, structure and finding or creating proper equivalences while translating.

TRD428	Conference Translation A, B, C	3 cr.
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The course aims at introducing students to the translation of all documents used in international organisations, mainly the United Nations System. To this end, students need to learn how to tell the various types of documents apart, how to translate particular sentence structures used in these documents and how to use the appropriate terms and language for a translation that is consistent with the requirements of the UN.

TRD429	Sight Translation A, B, C	3 cr.
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By learning how to translate orally a written text in the target language without previous preparation, students will develop their ability to quickly spot the main components of a sentence in order to understand the structure and the

meaning behind it. Moreover, sight translation enriches students' vocabulary, stimulates their memory and general knowledge and develops their ability to rephrase the ideas as a quick solution to difficult structures and terms.

TRD511 General Thematic Translation A-B/B-A 2 cr.

This course uses the same structure as the course of TRD 411, putting particular emphasis on the varied choice of topics related to modern history, geography, sociology and all areas of knowledge.

TRD514 Economic Translation A-B/B-A II 2 cr.

The purpose of this course is to allow the students to develop a high level of skill, to translate from French into Arabic and vice versa, some long and quite difficult economic texts, relating to various topics, including oil, banks and the IMF international concepts and terminology, etc. This is in order to deal with any kind of economic text or newspaper article, and to develop a dual Arabic-French glossary.

TRD520 Economic Translation A-C/C-A II 2 cr.

This seminar trains students to understand and translate economic texts from English into Arabic, and vice versa. The topics of the translated texts are related to current issues as viewed by journalists and scientists of economics. The level of the texts can be described as intermediate specialized. All texts require terminological and syntactic analysis.

TRD521 General Thematic Translation A-C/C-A 2 cr.

In this course, students will have theoretical and practical classes. They will be exposed to the translation of various topics from English into Arabic and vice versa. Special emphasis will be placed on how to deal with cultural differences that constitute the main challenge to many translators, and how to use the accurate equivalence of expressions, proverbs and idioms. Students will also have the opportunity of knowing the weak forms of translations in order to avoid them when they translate. They will also learn how to keep the exact meaning of what they translate, by having a deep insight into the cultural differences.

TRD526 Legal Translation A-B/B-A; A-C/C-A 2 cr.

The aim of this course is to improve students' knowledge and translation of various legal documents and legal styles, mainly through the translation of a wide variety of legal documents. Different types of contracts, acts and declarations, as well as legal texts about them, are to be translated from French into Arabic and vice versa, and from English into Arabic and vice versa. To add to the variety of styles, journalistic legal texts are also translated.

TRD527 Seminar: Contemporary Culture and Civilization 2 cr.

As globalization brings radical changes and new cultural demands to contemporary civilization, which made the international scene witness from time to time, since the end of Cold War, what can be described as a clash of civilizations, and necessitates learning about how different language groups (English-speaking, French-speaking or Arab-speaking groups) see their own cultures, and the problematics caused by interconnecting with the global human civilization. It also requires examining what distinguishes all these multiple cultures, and their willingness to co-exist with different unilateral and multilateral cultures and civilizations.

It is necessary to consider cultural diversity and pondering in the shattering or richness it may lead to.

The research explores the position of each of the major cultures mentioned in the international civilization: their diversity, encounter, contradiction, intertwinement, variations and development.

One of the problematics raised in this course, is facing the tendency to encourage either more diversity or more identification and unilateralism.

TRD528 Technical and Scientific Translation A-B/B-A ; A-C/C-A 2 cr.

This course aims to help students become aware of the specific problems caused by scientific and technical translation in the Arab world in general, and to familiarize them with technical and scientific terms in Arabic, French and English. It also enables them to acquire a working method, enabling them to understand any technical or scientific text.

TRD529 Film Translation: Subtitling and Dubbing 2 cr.

This course aims to raise awareness, in the future translators, of the different registers of language (maintained, familiar, slang registers, etc.) made in the movies, in novels or in the works of general literature, in order to initiate translation practice. It may offer opportunities in television stations or publishing houses, and to make use of audiovisual aid and laboratory translation; and perform many translation assignments of movies, or television broadcasting, excerpts from novels, plays or work of general literature.

TRD620 Liaison Interpretation A, B, C 2 cr.

The aim of this course is to improve students' knowledge and translation of various oral documents styles, through the consecutive translation of a wide variety of texts. Different types of usually spoken discourses are to be translated from French into Arabic and vice versa, and from English into Arabic and vice versa.

TRD621 Editorial and Economic Translation A-B/B-A 2 cr.

This course aims to introduce students to the understanding of economic reasoning, the main concepts and fundamental mechanisms of the economy at both national and international levels, in order to familiarize them with the specific terminology in this area and allow them to translate specialized texts.

TRD622 Editorial and Economic Translation A-C/C-A 2 cr.

This seminar trains students to understand and translate advanced economic texts from English into Arabic, and vice versa. The topics of the translated texts are related to current issues as viewed by journalists and scientists of economics. Students will be able to understand and apply terminology research principles and a methodology for creating terminology records.

Students translate advanced economic texts and analyze terminological and syntactic issues.

TRD623 Legal Translation A-B/B-A II 2 cr.

The course will help the students to develop a legal translator spirit. In continuation of the course TRD 421, the Legal Translation AB / BA - initiates the translator apprentices in the legal terminology and structure of a written law.

TRD624 Legal translation A-C/C-A 2 cr.

This seminar trains students to understand and translate advanced legal texts from English into Arabic, and vice versa. Different legal topics are examined, and the texts to translate are published by national and international legal organizations. Students will be able to understand and apply terminology research principles and a methodology for creating terminology records.

Students translate legal texts and analyze terminological and syntactic issues.

TRD690A Master Dissertation 6 cr.

A work of about 150 pages, most of which is the translation of 50 pages of a current book, which will be an analysis of the traductology problems.

TRD731 Seminar: Research Methodology 3 cr.

This seminar aims to give graduate students the means to acquire methodological skills that are essential to the development of their dissertation, according to internationally accepted standards. It aims to help them respond quickly to the questions coming from the topic they choose, to organize their work, using the information available to them, in the writing of the dissertation and to learn how to manage the defense.

TRD732 Seminar: Interpretive Theory of Translation 3 cr.

This seminar aims to give graduate students the opportunity to understand the dimensions of the interpretive theory, especially its triple process of understanding, deverbalization and re-expression. It also aims to help them to situate this theory among other contemporary translation theories.

TRD733 Seminar: Pedagogical Translation 3 cr.

This seminar aims to give graduates the opportunity to explore the different techniques of pedagogical methods of translation, especially at the University.

TRD734 Literary Translation Seminar 3 cr.

This seminar concerns the theoretical framework, on one hand, and practice and evaluation of the translation of French literary texts into Arabic and vice versa, on the other. It enables exchanges between students, who may be interested in the translation of literary works, and could one day become professional literary translators.

TRD790A PhD Thesis 0 cr.

The PhD thesis, which is about 300 pages long, is the culmination of extensive research focused on a problem of translation studies. It must be innovative and comply with international standards for the development of doctoral theses.

School of Architecture and Design

Overview

The School of Architecture and Design was established in 1974, under the name of Faculty of Fine and Applied Arts. Its objective is to orient young people towards a brilliant future, while its mission consists of the development of creativity and human potential. The programs offered by the Faculty enable students to acquire a cultural education, in addition to competence that will enable them to be distinguished in their discipline. The diversity of the proposed programs promotes interactivity in multidisciplinary research workshops and provides them with a high level of dynamism. Curricula are regularly updated according to the requirements of the professional situation.

During the period of studies, students will develop analytical minds, and creative skills, as well as the ability to adapt to any change; qualities that have become unavoidable in the world of business. The School follows a development plan that combines, on the one hand, classic teaching methods with the latest technologies, and on the other hand, theory with practice. It has a cooperation network with various local and international academic institutions: exchange programs, participation in seminars and common projects.

Mission

The School of Architecture and Design main mission is to prepare tomorrow's qualified, creative, and high-level experts, who are willing to participate in their communities' improvement and to contribute to humanities progression, using the top-level quality and intercultural education they acquire. Our Faculty members implement their knowledge and proficiency to anchor in our students' spirit, leadership ability, sustainable social and environmental responsibility, as well as passion and innovation. We are also keen on arousing our students' civic responsibility, honesty, reliability and loyalty as well as their sense of commitment, openness and tolerance.

Furthermore, and since we are located in the heart of a region, known historically for its immeasurable value, we are driven to be worthy of this noble heritage by working with all our means to safeguard and protect our patrimony.

The School of Architecture and Design consists of the following departments/programs:

Department of Architecture

- Bachelor and Master of Architecture (Combined program)
- Minor in Art and Architecture History

Department of Interior Design

- Bachelor of Arts in Design and Applied Arts
- Minor in Interior Design
- Master in Interior Architecture

Department of Design and Digital Media

- Bachelor of Arts in Communication and Visual Arts
- Bachelor of Arts in Digital Media
- Master of Arts in Communication and Visual Arts
- Master of Arts in Digital Media
- Master of Arts in Contemporary Art

Administration and Full-time Faculty

Dr. Paul Abi Khattar Zgheib, Associate Professor, **Dean**
Mr. Maroun Kosseifi, Assistant Professor, **Associate Dean**
Dr. Victor Takchi, Associate Professor, **Associate Dean for Research**

Professors:

Prof. Antoine Fichfich

Assistant Professors:

Mr. Antoine Younan
Mr. Bechara Mouannes
Mr. Charles Bteiche
Mr. Joseph Zaarour
Mr. Louis Hachem
Mr. Maroun Kosseifi
Ms. Odile EL Khoury
Mr. Robert Karam
Mr. Zafer Sleiman

Associate Professors:

Mr. Elias Tohmé
Dr. Joseph Nasr
Dr. May Farhat
Dr. Paul Abi Khattar Zgheib
Dr. Victor Takchi

Lecturers:

Mr. Assaad Awad
Mrs. Eliane Noujaim Moughabghab
Mr. Jean-Claude Bassil
Mr. Naji Ghostine
Mr. Nagib Lahoud
Mr. Richard Khalil
Mrs. Mirella Fahed

Undergraduate Programs

Bachelor and Master of Architecture (Combined Program) - Hybridⁱ

Offered in Main Campus Kaslik (all levels), in RUC Zahle (only undergraduate level courses) and in RUC Chekka (only Sophomore and Junior level courses)

The Master of Architecture is a combined program of undergraduate and graduate studies that requires students to earn 193 credits in order to graduate. However, students are eligible to obtain the Bachelor of Science in Architectural Studies while completing the 138 credits.

The Holy Spirit University of Kaslik, School of Architecture and Design has received the substantial equivalency designation from the National Architectural Accrediting Board (NAAB) for the Master of Architecture Degree for a term of six years, effective 1 January 2019.



This Program is also recognized as being equivalent to the French Diploma in Architecture, by decision of the French Minister of Culture on April 24, 2018.

Mission

The mission of the Master of Architecture program is to prepare students for a profession as an architect by offering undergraduate and graduate courses that provide them with an educational experience in architectural Design, architectural history and theory, structures and materials, building technology, vernacular and regional studies, with a strong focus on heritage preservation and social and environmental responsibility.

Program Educational Objectives

1. The Master of Architecture program qualifies its graduates to become registered professional architects and allows them to grow into active members of different civil societal bodies through ethical and social engagements that improve the livelihood of their communities.
2. Graduates will be able to have leading professional roles as both entrepreneurs and efficient members of projects that are larger and in more complex architectural settings.
3. In addition to conceptual design, execution, site development and management, graduates will be able to employ their architectural education to adapt and evolve existing requirements by engaging in heritage preservation and restoration, scenography, building technology, urban planning, landscape and sustainable architecture, and development in a professional and ethical manner.
4. Graduates will be able to lead teams as well as be effective team members who can work and communicate effectively with diverse team members to identify and solve problems and make responsible recommendations.

Program Outcomes

- a. Students will be able to interact between different components (social, theoretical, cultural, and contextual) in the process of design thinking, and communicate clearly with the appropriate tools and media.
- b. Students will be able to comprehend that projects can be built both by respecting the environmental charts and by transmitting technical information.
- c. Students will be able to gather and comprehend the essential value of research within the design process, analyzing and evaluating the different options related to the predesign issues, and synthesizing the different scenarios related to different analysis in integrating architectural solutions. Solutions must respond to different environmental issues.

ⁱ Hybrid: Courses offered in French and/or English

- d. Students will be able to understand the typical career path of an architect and the means of progressing. They will recognize and preserve the valuable role of different partners and disciplines by the application of legal codes, professional responsibilities, and ethical values.

Degree Requirements

This program requires 193 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Studies - Undergraduate	36
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Behavioral, Social Sciences and History	3
General Education - Science and Health	6
General Education - Sports	1
General Education - Religious Sciences	3
PHO224 - Introduction to Photography	3
ECO222 - Macroeconomics	3
DAA250 - Sketching	3
DAA241 - General History of Art	3
MAT212 - Calculus Applied in Architecture	3
General Studies - Graduate	9
HUM610 - Professional Ethics and Social Behavior	3
SOC201 - Introduction to Sociology	3
SOC210 - Introduction to Anthropology	3
Professional Studies - Undergraduate	95
ARCH205 - Basic Design I	2
ARCH210 - Technical Drawing	2
ARCH215 - 2-3D Representation Skills	2
ARCH220 - Vernacular Architecture *	4
ARCH225 - Basic Design II	2
ARCH230 - Architecture Analysis and Perception *	4
ARCH235 - Strength of Materials I	3
ARCH310 - History and Culture of Architecture I	3
ARCH315 - CAAD	2
ARCH320 - Structural Design	2
ARCH330 - Building Technologies	2
ARCH335 - Strength of Materials II	3
ARCH340 - Reinforced Concrete I	3
ARCH345 - Architecture Design Studio I *	6
ARCH350 - Architecture Design Studio II *	6
ARCH405 - Architecture Schematic I	2
ARCH410 - History and Theory of Architecture II	3
ARCH420 - Sanitary and Mechanical Equipment's	2
ARCH425 - Electrical and Lighting	2
ARCH440 - Reinforced Concrete II	3
ARCH445 - Design Studio III *	6
ARCH450 - Design Studio IV *	6
ARCH455 - Architecture Schematic II	2
ARCH460 - Urbanism I	3
ARCH465 - Urbanism II	3
ARCH470 - Standards, Codes and Building Laws	2

ARCH475 - Construction Document	3
ARCH485 - Design Studio V *	6
ARCH490 - Final Design Studio **	6
Professional Studies - Graduate	34
ARCH505 - Architecture Research Methodology	3
ARCH510 - Theory and Critic of Contemporary Architecture	3
ARCH540 - Graduation Project Thesis	3
ARCH545 - Professional Internship	1
ARCH570 - Master Architecture Design Studio I	6
ARCH580 - Master Architecture Design Studio II	6
ARCH670 - Senior Project I	6
ARCH680A - Senior Project II - A ***	6
ARCH680B - Senior Project II - B ***	0
Required Optionals - Professional Practice - Graduate	3 out of 9
ARCH535 - Working Documents for Project Management	3
ARCH550 - Construction Scheduling and Management	3
FIN501 - Essential of Finance	3
Required Optionals - Research Workshop - Graduate	6 out of 21
ARCH610 - City, Landscape and Territory Workshop	3
ARCH615 - Architecture and New Technologies Workshop	3
ARCH620 - Sustainable Architecture Workshop	3
ARCH630 - Built Heritage Workshop	3
ARCH635 - Archeology and Restoration Workshop	3
ARCH640 - Aesthetic Theorizing and Poetics of Architecture	3
AVS625 - Architecture, Visual Arts and Communication Workshop	3
Student Chosen Optional - Undergraduate	7
AGP410 - Infographic	2
ARCH325 - Virtual Reality in Architecture	2
ARCH355 - Geographic Information Systems	2
ARCH360 - Soil Mechanics	2
ARCH365 - Safety and Physical Disability Regulations	2
ARCH430 - Stereotomy	2
ARCH435 - Acoustics and Insulation	2
ARCH480 - Building Modeling and Information	2
ARCH482 - Surveying	2
ARCH484 - Landscape Architecture	3
ARCH486 - Architectural Heritage Buildings	3
ARCH487 - Intercultural Contexts Studies	3
Student Chosen Optional - Graduate	3
ARCH515 - Complex Buildings Structural Systems	3
ARCH520 - Intelligent Buildings	3
ARCH530 - Architecture Detailing	3
ARCH645 - Intercultural Architecture	3
Total	193

*Undergraduate courses with minimum passing grade of 70/100

**Undergraduate courses with minimum passing grade of 75/100

***Graduate courses with minimum passing grade of 80/100

Bachelor of Arts in Communication and Visual Arts (English)

Mission

Due to the evolution of today's technology, Communication and Visual Arts program allow the students to know that there is interdependence between Advertising, Branding, Corporate Design and technology fields. Because we are connected to the world around us like never before, the students will explore the use of Above the Line (ATL) and Below the Line (BTL), social media and sites as platforms to promote effectively any brand, in a very competitive and challenging environment, investigating recent methods, expending their eagerness to find creative and useful solutions in the future.

Program Educational Objectives

1. To learn how to use creativity to visualize, design and print and TV commercials by using Typography, Photography, Animation, Editing and Printing, in an artistic and aesthetical environment.
2. To learn how to create solutions in a non:stop changing digital environment, to improve competitiveness, and to deal with the upcoming innovations.
3. Graduates will practice identifying the real needs of the market, either by developing and implementing new ideas, by creating start ups, studios, production houses, agencies, etc. and/or by collaborating with already existing firms.

Program Outcomes

- a. Students will learn to apply industry knowledge and aesthetic and/or practical design to create, develop and implement effective visual communication solutions that meet professional standards.
- b. Developing design thinking, ideation and copywriting.
- c. Technology and proficiency in production
- d. Critical thinking, presentation skills, promoting projects and business ethics.

Degree Requirements

This program requires 108 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Quantitative Reasoning	3
General Education - Science and Health	6
General Education - Sports	1
General Education - Religious Sciences	3
DAA241 - General History of Art	3
Common Core	30
CVA200 - Fundamentals of Typography	3
CVA205 - Design Foundations	3
CVA210 - Fundamental of Computer Graphics	3
CVA215 - Advanced Computer Graphics	3
CVA220 - Drawing for Animation and Sketching	3
CVA225 - Introduction to 2D Animation	3
CVA230 - Introduction to Digital Media	3
CVA300 - Computer 3D Modeling	3
PHO225 - Advanced Black and White Photography	3
TLV351 - Introduction to Editing	3
Specialization	33
CVA235 - Grids	3
CVA240 - Arabic Typography	3

DIM210 - User Centric Design	3
CVA310 - Principles of Advertising	3
CVA315 - Marketing and Advertising	3
CVA320 - Writing for Advertising	3
CVA325 - Freehand Graphics	3
CVA425 - Branding and Packaging	3
CVA340 - Graphic and Advertising Design I	3
CVA350 - Graphic and Advertising Design II	3
CVA440 - Advertising Design	3
Capstone	6
CVA450 - Final Year Project	6
Electives	9 out of 97
CVA250 - Critical Thinking	3
CVA255 - Cultural Studies	3
CVA260 - Illustration Art	3
CVA265 - Calligraphy	3
CVA270 - Advanced Typography	3
CVA275 - Advanced Photoshop	3
CVA280 - Printing Techniques	3
CVA285 - Comics	3
CVA290 - History of Graphic Design	3
CVA295 - History of Advertising and Media	3
CVA365 - Media Strategies	3
CVA370 - Radio Spot	3
CVA375 - Consumer Behavior	3
CVA380 - Corporate Design	3
CVA390 - History of Digital Media	3
CVA395 - History of Contemporary Art	3
CVA470 - Advertising Photography	3
CVA475 - Seminar in Design	3
CVA480 - Portfolio Design	3
PHO461 - Fine Arts Photography	2
PHO463 - Landscape Photography	2
CVA245 - Storyboard for Film	3
CVA355 - TV Idents Design	3
CVA485 - Game Design	3
FLM316 - Introduction to Script Writing	3
FLM319 - Introduction to Cinematography	3
AVC204 - Introduction to Contemporary Cinema	3
DIM220 - Fundamentals of Interaction Design	3
AUV536 - Advanced 3D Animation	3
DIM325 - User Interface Design	3
DIM420 - Advanced User Interface Design	3
AUV451 - Sound Design	3
AUV223 - Digital Illustration	3
Total	108

Bachelor of Arts in Design and Applied Arts (Hybridⁱ)

Offered in Main Campus Kaslik and in RUCs Zahle and Chekka

Mission

The mission of the Bachelor of Arts in Design and Applied Arts is to set up an educational and creative environment that rigorously prepares students for their professional career while providing them with the necessary data to meet the needs of the society and be responsive to the project sponsor, taking into account his/her needs and wishes. This mission will be accomplished through a program that offers both theoretical and professional courses.

The interior designer's mission is to restructure a space, design a project, monitor the work site until reception and manage the various stakeholders (companies, craftsmen, etc.), while taking into consideration the budget, technical constraints and compliance to the applicable standards.

The interior architect designs and implements domestic spaces while considering the aesthetic and functional issues through spatial factors such as the material, furniture, form, colors and light.

Program Educational Objectives

1. Graduates will be able to administer various tools and basic know-how in the field of project design (drawings, freehand sketches, plans, perspective, models, etc.) as well as mastering different digital software (Autocad, Photoshop, IDesign).
2. Graduates will be able to develop the diversity of connections between inhabitants and their environment, built by acquiring theoretical, historical and cultural landmarks for a good understanding of the evolution of architecture and design and by the acquisition of plastic and technical tools (expression, drawing, representation, materials, technology and construction system).
3. Graduates will master a meticulous methodology in the design of an interior architecture project; in order to apply this methodology in directed works/tutorials, the proposed projects will show a variety in terms of themes, functions and scale.

Program Outcomes

- a. Acquire a vocabulary and a background in plastics through an artistic and technical expression to target a reflexive study of the morphostructure and the spatial composition.
- b. Experiment with several graphic tools in order to develop the ability to draw the world and the images that surround us on one hand (space drawings and objects in space) and present the stakes of the technical representation and the conventions of drawing (descriptive geometry, sketches, standardization) on the other hand.
- c. Observe, analyze, represent and diagnose existing spaces, with regard to the notion of the program, the site, the client and the context.
- d. Master the communication and the layout of the project through an oral approach, a graphic and visual concept.
- e. Be able to operate digital tools in their diversities and professional specificities.
- f. Be able to keep up with the technological development through new materials and constructive systems in regards to the usage of spatial situations.
- g. Examine the technical and economic constraints and challenges of the implementation and the management of the project.
- h. Acquire knowledge specific to historical and cultural development with regard to space and objects and master conceptual theoretical and aesthetic aspects, by articulating a set of issues linked to the notion of inhabiting and by dealing with the multiple existing interactions. Master the treatment of atmospheres, materials and the choice of furniture.
- i. Create a preliminary work plan with regard to a thematic and a research object, which will allow the student to identify, analyze, and develop his subject and select his keywords. Learn how to choose sources to consult and carry out surveys on relevant samples in the field of architecture and design.
- j. Discover the business through a professional internship.

ⁱ Hybrid: Courses offered in French and/or English

Degree Requirements

This program requires 108 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	6
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
DAA241 - General History of Art	3
Common Core	16
ARC222 - CAD I (Computer Aided Architectural Design)	2
ARC322 - CAD II (Computer Aided Architectural Design)	2
ARCH205 - Basic Design I	2
ARCH210 - Technical Drawing	2
ARCH215 - 2-3D Representation skills	2
ARCH230 - Architecture Analysis and Perception	4
ARS213 - Material, Color, Light	2
Specialization	50
DAA208 - Introduction to Space and Object	4
DAA211 - Sketching and Drawing I	2
DAA215 - Architectural Sketching	2
DAA260 - History and Culture of Furniture and Design	2
DAA303 - Architecture and Design Schematic I	2
DAA310 - Advanced Technical Drawing	2
DAA320 - Wood Technologies and Constructions	2
DAA332 - Materials, Technologies and Construction Systems	2
DAA342 - History of Art and Architecture	3
DAA360 - Communication and Graphic Design of the Project	1
DAA370 - Interior Design Studio I	4
DAA375 - Interior Design Studio II	4
DAA405 - Introduction to Research Methodology	1
DAA415 - Architectural Project	3
DAA433 - Technical Equipments and Building Services	3
DAA434 - Internship	1
DAA453 - Design Studio I	2
DAA454 - Design Studio II	2
DAA455 - Design Studio III	2
DAA460 - Habitable Architectural Atmospheres	2
DAA470 - Interior Design Studio III	4
Capstone	6
DAA472 - Interior Design Studio IV*	6
Electives	6 out of 40
AGP251 - Painting	2
AGP410 - Architectural Computer Graphics	2
ARCH225 - Basic Design II	2
ARS211 - Ceramic I	2

ARS214 - Mosaic I	2
ARS314 - Stained Glass I	2
ARS316 - Engraving I	2
ARS431 - Architecture and Planning of Religious Edifices	3
ARS445 - Cultural Properties	3
DAA209 - Volume I	2
DAA212 - Sketching and Drawing II	2
DAA213 - Volume II	2
DAA216 - Plastic Expressions	2
DAA304 - Architecture and Design Schematic II	2
DAA312 - Sketching and Drawing III	2
DAA412 - Sketching and Drawing IV	2
DAA431 - Textiles	2
DAA432 - Detail in Interior Design Projects	2
PHO464 - Architecture Photography	2
Total	108

**Undergraduate courses with minimum passing grade of 70/100*

Bachelor of Arts in Digital Media (English)

Mission

The Digital media program allows the students to learn how to find creative solutions in the fields related to web, 2D and 3 animations; the students will learn as well to use social media techniques and sites as platforms along with smartphones and streaming videos to connect to the professional circle and to use these digital tools to show how strong is the impact of design and technology in reshaping our presence and their eagerness to find creative and useful solutions in the future.

Program Educational Objectives

1. To learn how to use the newest digital techniques to visualize, design and promote websites, mobile apps and advertisement by using Typography, Photography, Video Editing and Animation programs, in an artistic and aesthetical environment.
2. To learn how to be innovative and creative efficiently in the digital ecosystem, and to deal with specific briefs and to progress effectively semester after semester.
3. The graduates will learn to recognize the signals sent by the real needs of the milieu to tailor-made creative solutions designed accordingly.

Program Outcomes

- a. Students will operate in a multitasking industry where they have to innovate and apply efficient digital and numerical solutions guided by their know-how.
- b. Students will be able to create bridges between the database, design and up-to-date deliverables, and to learn how to guide the final results according to a comprehensive marketing plan.
- c. Students will master a wide range of computer graphics and animation platforms.
- d. The students should be able to express their vision and to promote themselves confidently and ethically.

Degree Requirements

This program requires 108 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral and Social Sciences	3
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - History of Lebanon	3
General Education - Quantitative Reasoning	3

General Education - Science and Health	6
General Education - Sports	1
General Education - Religious Sciences	3
DAA241 - General History of Art	3
Common Core	30
CVA200 - Fundamentals of Typography	3
CVA205 - Design Foundations	3
CVA210 - Fundamental of Computer Graphics	3
CVA215 - Advanced Computer Graphics	3
CVA220 - Drawing for Animation and Sketching	3
CVA225 - Introduction to 2D Animation	3
CVA230 - Introduction to Digital Media	3
CVA300 - Computer 3D Modeling	3
PHO225 - Advanced Black and White Photography	3
TLV351 - Introduction to Editing	3
Specialization	33
DIM210 - User Centric Design	3
AUV240 - Fundamentals of Interaction Design	3
DIM225 - Character & Object Design for Animation	3
PHO320 - Color Photography	3
DIM230 - Advanced 2D Animation	3
AUV438 - Digital Video	3
AUV431 - Introduction to Sound	3
DIM315 - Mobile User Interface	3
DIM320 - Social Media Techniques	3
DIM325 - User Interface Design	3
TLV352 - Advanced Editing	3
Capstone	6
DIM400 - Final Year Project	6
Electives	9 out of 97
CVA250 - Critical Thinking	3
CVA255 - Cultural Studies	3
CVA260 - Illustration Art	3
CVA265 - Calligraphy	3
CVA270 - Advanced Typography	3
CVA275 - Advanced Photoshop	3
CVA280 - Printing Techniques	3
CVA285 - Comics	3
CVA290 - History of Graphic Design	3
CVA295 - History of Advertising and Media	3
CVA365 - Media Strategies	3
CVA370 - Radio Spot	3
CVA375 - Consumer Behavior	3
CVA380 - Corporate Design	3
CVA390 - History of Digital Media	3
CVA395 - History of Contemporary Art	3
CVA470 - Advertising Photography	3
CVA475 - Seminar in Design	3
CVA480 - Portfolio Design	3
PHO461 - Fine Arts Photography	2

PHO463 - Landscape Photography	2
CVA245 - Storyboard for Film	3
CVA355 - TV Idents Design	3
CVA485 - Game Design	3
FLM316 - Introduction to Script Writing	3
FLM319 - Introduction to Cinematography	3
AVC204 - Introduction to Contemporary Cinema	3
DIM220 - Fundamentals of Interaction Design	3
AUV536 - Advanced 3D Animation	3
DIM420 - Advanced User Interface Design	3
AUV451 - Sound Design	3
AUV223 - Digital Illustration	3
Total	108

Academic Minors

Minor in Art and Architecture History (Hybridⁱ)

Mission

The mission of the minor in art and architecture history is to give students an introduction to the architecture profession by offering undergraduate courses that provide them with a preliminary education in architectural culture.

Program Educational Objectives

1. The minor in art and architecture history qualifies its students to become familiar with architectural tools.
2. Students will be able to communicate and coordinate with architectural firms and professional engineers.
3. The program gives its students an understanding of heritage preservation, archeology and contemporary architectural projects.

Program Outcomes

- a. Students will be able to enlarge their architectural knowledge by understanding the social and environmental impacts of an architectural project.
- b. Students will be able to interact with all the professional sectors that take part in architectural projects.
- c. Students will become knowledgeable about the intricacies of Lebanese heritage buildings, sacred monasteries and churches, and archeological sites.
- d. Students will be able to understand the history of architecture and its evolution through the ages.

Minor Requirements

ARCH310 - History and Culture of Architecture I	3
ARCH410 - History and Theory of Architecture II	3
ARCH484 - Landscape Architecture	3
ARCH486 - Architectural Heritage Buildings	3
ARCH487 - Intercultural Workshop Studies	3
ARS430 - Traditional Religious Architecture	3
Total	18

Minor in Interior Design (Hybridⁱⁱ)

ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Hybrid: Courses offered in French and/or English

Mission

The mission of the program is to set up an educational and creative environment while considering the esthetic and artistic issues through spatial factors such as the material, furniture, form, color and light.

Program Educational Objectives

1. Developing creativity in a plastic dimension and practicing skills in the fields of textiles, design, materials and surfaces, linking the specialization's different materials (drawing, free hand sketching, plan, perspective, color, and model).
2. The acquisition of historical and cultural benchmarks for a good understanding of the evolution of design. This approach will be chronological and thematic.
3. Developing an experience of sensitivity and reflection through the discovery of exploration tools and several sources of creativity.

Program Outcomes

- a. Interpret a vocabulary and a background in plastics through an artistic and technical expression to target a reflexive study of the morphostructure and the spatial composition.
- b. Experiment with several graphic tools in order to develop the ability to draw the world and the images that surround us (space drawings and objects in space).
- c. Master the treatment of atmospheres, materials and the choice of furniture, by articulating a set of issues linked to the notion of inhabiting and by dealing with the multiple existing interactions.
- d. Acquire knowledge specific to historical and cultural development with regard to space and objects.

Minor Requirements

ARCH205 - Basic Design I	2
ARCH215 - 2-3D Representation Skills	2
ARS213 - Material, Color, Light	2
DAA211 - Sketching and Drawing I	2
DAA212 - Sketching and Drawing II	2
DAA216 - Plastic Expressions	2
DAA260 - History and Culture of Furniture and Design	2
DAA431 - Textiles	2
DAA453 - Design Studio I	2
Total	18

Graduate Programs

Master of Arts in Contemporary Art (Hybridⁱ)

Mission

The Interdisciplinary Master's program is a general education in Art that tackles different artistic disciplines and develops the critical reflection that allows the student to achieve his theoretical and analytical skills. This Master establishes the link between art and various disciplines such as communication, philosophy, literature, anthropology, history and semiotics, while encouraging the reflection around the methods of thought. A director follows the general progress of the research thesis.

Program Educational Objectives

1. Acquire theoretical knowledge related to a multidisciplinary and a transversality, allowing the student to develop a personal research on a specific topic.
2. Acquire a high-level methodological and theoretical knowledge of contemporary art and its practices through an articulation between history, theory and criticism.
3. Develop an approach of reflection and conceptualization in the field of contemporary art, reflecting an aesthetic conception open to all the worlds of the arts.
4. Participate in seminars and debates on the strategic issues of contemporary art, setting up exchanges with international universities and promoting teacher and student mobility.
5. Pursue the research on a doctoral level.

Program Outcomes

- a. Strengthen the mastery of scientific fields in the world of Contemporary Arts through theoretical tools and methodological means of research.
- b. Refine the capacity of synthesis and theoretical criticism of contemporary art and its aesthetic approaches.
- c. Formulate a problematic in regards to the multidisciplinary and interdisciplinary fields of Design (Medias, photography, objects, cinema ...)
- d. Analyze and problematize the different aspects of cultural mediation in relation to social practices.
- e. Evaluate the notions relating to the spatial dimension in a social criticism form, following an experimental research and a sociological, urbanistic and architectural approach.
- f. Formalize a thought and rationalize a practice of conception by drafting a research paper written in interface with literary, poetic, anthropological, philosophical and social references.

Degree Requirements

Common Core	3
CTA605 - Methodology in Art Research	3
Specialization	27
CTA610 - Design, Space & Communication	3
CTA615 - City, Home, Social Practices and Changes	3
CTA620 - Film and the other Arts	3
CTA625 - Design: Innovation, Technology & Arts	3
CTA630 - Media, Design & Contemporary Arts	3
CTA635 - Critical Studies and Aesthetics	3
CTA640 - Architecture, Design & Environment	3
CTA645 - Photography and Contemporary Arts	3
CTA650 - Art and Modernity	3
CTA655 - Identities and Societies	3
Capstone	6
CTA690A - Thesis Dissertation	6
Total	36

Master of Arts in Communication and Visual Arts (English)

ⁱ Hybrid: Courses offered in French and/or English

Mission

The mission of this Master is to provide multidisciplinary training that begins with the study and collection of data and its analysis, the market, the creative process, the realization of Graphic Design and Advertising campaigns, to analyze practical, social, financial, and cultural constraints for the purposes of coming up with the most compatible and cost-efficient solutions to the graphic, advertising and conceptual problem at hand. Online, print, BTL, and ATL, installation art and video are aimed at as media to best showcase the artistic and esthetic solutions proposed.

Program Educational Objectives

1. Learn the history of graphics and advertising, the rise of social media and the importance that design plays in the branding sector, providing the students with conceptual, historical and cultural landmarks.
2. Interpret abstract imagining concepts based on visual research and psychological/sociological fields. Understand how graphic, copywriting and/or the image works in the real life situations and vary across cultures and contexts.
3. Demonstrate the ability to integrate and realize a design idea in several types of social media and in an increasingly multicultural world. The role of the global economy is taking into account all the factors in countries with different cultures while assessing semiotics and signifiers in the implementation.

Program Outcomes

- a. Being able to use a series of manuals and tools, on both intellectual and technical levels, to make a creative, relevant, socially-compatible design executions.
- b. Formulate and apply concepts in the professional field of advertising and graphic design through an adequate visual expression used in professional and social media online and in print.
- c. Learn to analytically criticize their concept and that of others without prejudice and prior bias.
- d. Show an understanding of the field of design: Above the Line and Below the Line (ATL and BTL) and the related fields of artistic professions and gain enough knowledge in order to avoid duplicating previous concepts/executions.

Degree Requirements

Common Core	12
ADI540 - Research Methodology	3
AGP503 - Online Advertising	3
AGP510 - Graphic Design and Advertising Thesis	3
AGP601 - New Media	3
Specialization	19
ARG504 - Typography in Motion	4
ARG506 - Mobile Application Design	4
ARG602 - BTL Design	4
ARG606 - Installation Art	3
PUB506 - Advanced English Copywriting	4
Capstone	6
ARG680A - Final Project I	6
Electives	6 out of 33
ARG505 - Exhibition Display	3
ARG605 - Art and Modernity	3
ARG607 - Thematic Illustration	3
ARG610 - Museography	3
ARG611 - Advanced Animation	3
ARG612 - Silkscreen	3
FLM537 - Screenwriting for Film and Television	3
FLM640 - Film and the other Arts	3
PUB604 - Media Strategy	3
PUB608 - Propaganda and Critical Analysis	3

TLV560 - Digital Editing and Animation	3
Total	42

Master of Arts in Digital Media (English)

Mission

The mission of the MA in Digital Media is to prepare students that contribute to the advancement of the fields of film and animation and that strive for originality, creativity and innovation by providing them with advanced knowledge and competencies allowing them to produce innovative research projects in this ever evolving field.

Program Educational Objectives

1. Graduates will acquire critical knowledge in the field of film and animation, and will have the capacity to develop ideas based on an awareness of the needs of their respective community.
2. Graduates will acquire a proficient approach to collaborate on projects through group ideation.
3. Demonstrate the ability to integrate and realize an idea in different types of media by using a highly developed technical and aesthetically relevant processes.

Program Outcomes

- a. Acquire the capacity to use a series of manuals and tools, on both intellectual and technical levels, to make a creative, relevant, animated film.
- b. Develop story lines and structure images professionally through an adequate visual expression used in professional and social media online and in broadcast television.
- c. Learn to analytically critique films in general and animation in particular.
- d. Acquire an artistic capacity to write, create, and execute ideas whether it is destined for commercials or education, or entertainment or information or artistic.

Degree Requirements

Common Core	18
AVS500 - Methodology	3
FLM537 - Screenwriting for Film and Television	3
FLM620 - Theory of Sound in Films	3
FLM630 - Seminar in Film Theory	3
FLM640 - Film and the Other Arts.	3
FLM650 - Film Authors	3
Specialization	12
AUV510 - Theory and Technics of Animation	3
AUV531 - Advanced 2D Animation	3
AUV533 - Advanced 3D Animation	3
AUV620 - 3D Film Production	3
Capstone	6
AVS680A - Directed Individual studies I	6
Electives	6 out of 12
FLM551 - Film Design and Special Effects	3
FLM618 - Cinematography and directing	3
FLM634 - Advanced Screenwriting	3
TLV560 - Digital Editing and Animation	3
Total	42

Master in Interior Architecture (Hybridⁱ)

ⁱ Hybrid: Courses offered in French and/or English

Offered in Main Campus Kaslik and in RUC Zahle

Mission

The mission of the Master in Interior Design is to prepare students to enter the field as skilled designers, creative thinkers, professional leaders and responsible citizens. The Department seeks to cultivate students who acknowledge their responsibilities to the safety and wellbeing of the public and the environment and who can lead a multifaceted professional life. The syllabus integrates knowledge and appreciation of architectural and design theory with ethical, responsible, and entrepreneurial practice.

Program Educational Objectives

1. Graduates will be able to master the creative design of and plan the management of a project.
2. They will be able to support a project with an expertise based on innovation and multidisciplinary.
3. They will be able to work in teams to achieve large scale projects in partnership with specialized professionals and professional firms.
4. Synthesize knowledge and express a form of singularity that will allow the student to develop a free subject through a problematic anchored in the theoretical, social and practical world.

Program Outcomes

- a. Students will be able to create layout and design projects, related to domestic, cultural and professional behavior of the human being.
- b. Students will be able to address the design methodology and the representation of the project through their own perceptions.
- c. Students will be able to analyze research documentation and produce a proper summary to communicate and argue a solution within the framework of the project.
- d. Students will be able to set up a professional project which gives them the opportunity to be in contact with the professional reality, their integration into working life in the future and integration into multidisciplinary teams.
- e. Master and experiment the conceptual and technical aspects in the world of scenography (heritage, urban and industrial design, study and event creation, landscape environment).

Degree Requirements

Specialization	30
ADI520 - Design Modeling in 3D	3
ADI540 - Research Methodology	3
ADI551 - Art, Architecture and Contemporary Design	3
ADI570 - Thematic Interior Design Studio I	4
ADI580- Thematic Interior Design Studio II	4
ADI600 - Final Project Thesis	3
ADI605 - Preliminary Interior Design Studio*	4
ADI620- Heritage Architecture and Identity	2
ADI625- Professional Internship	1
ADI656 - Approaches: Quality/ Creation/ Innovation	3
Capstone	6
ADI608A - Final Interior Design Studio	6
Electives	6 out of 24
ADI650 - Descriptive/Coordination and Follow up of Building Sites	3
ADI654 - Environment Planning and Landscape Design	3
DES621 - Design and Communication	3
DES622 - Design and Craftsmanship	3
DES623 - Industrial Design	3
SCE613 - Clothing and Theatre Costumes	3
SCE620 – Scenography	3
SCE623 - Places and Spaces of Exhibition	3
Total	42

**Graduate courses with minimum passing grade of 80/100*

Course Descriptions

ADI520	Design Modeling in 3D	3 cr.
<p>The course introduces the students to the world of virtual reality and simulation and mainly those of architectural spaces, objects, their geometric components, materials and virtual lighting. Walks and animation in real time allow students to monitor the implementation and impact of the project.</p>		
ADI540	Research Methodology	3 cr.
<p>The objective of this course is to seek to specify research methodologies in order to provide students with the knowledge to develop and analyze a research object, by confronting several disciplinary fields and different approaches related to the nature of specific research Field and subject of study.</p>		
ADI551	Art, Architecture and Contemporary Design	3 cr.
<p>This course aims at developing a reflection and a critique of contemporary art in a social, historical, theoretical and architectural dimension, taking into account societal transformations: digital media, photography, theater, architecture, moving images. The student will pursue a critical approach based on research, readings, discourses, museums visits and works descriptions. The course will not be conceived from an exclusively historical perspective but also as a process of de-compartmentalization of disciplines and a necessary prerequisite for a theoretical deepening of a critical posture with regard to the contemporary era. Through the analysis of contemporary artworks, we will address various artistic movements and practices that have marked the history of contemporary art in the West, but also in the Middle East: video art, body art, Performance, feminist artists, engaged art.</p>		
ADI570	Thematic Interior Design Studio I	4 cr.
<p>This course will address the technical, economic, social, theoretical and aesthetic aspects of the developed projects, exploring a multiplicity of methodological approaches. The treatment of atmospheres and materials, and the choice of furniture, are spatial parameters that will allow us to reflect on the identity and character of a built space in terms of aesthetics and functionality. The two themes to be developed are: Housing and collective housing. Office space.</p>		
ADI580	Thematic Interior Design Studio II	4 cr.
Prerequisites	ADI570 or DES570	
<p>Raising the student's awareness about the heritage approach is necessary for the graduate studies level (Master); he must identify the elements on which he will rely in order to construct a problematic that is relevant to the place and the chosen thematic in a theoretical, cultural, historical and environmental dimension. The follow-up of the project focuses on a specific problem in interior design in the framework of a classified building that is known for its heritage value in different sites in Lebanon. The two themes to be developed are: museography and scenography. Heritage renovation and reconversion (leisure and cultural space).</p>		
ADI600	Final Project Thesis	3 cr.
Prerequisites	ADI540	
<p>The diploma dissertation/thesis is a personal work that is a prerequisite for the final project; it consists of a memorandum drafted for the development of an architectural project. Based on the hypothesis studied and confronted by the student in the Research Methodology course, the student must try to measure variables in the context of an experimental procedure in order to reveal a dynamic approach to an interior design project, called an "architectural conceptualization". This approach requires the argumentation of an adequate procedure to the culmination of an interior design project linked to intersect between theory and practice.</p>		
ADI608A	Final Project Studio	6 cr.
Prerequisites	ADI607 Or ADI605	
<p>The theme and subject of the final project are freely chosen by the student during his diploma dissertation, and are developed in the form of a conceptual phase during the Preliminary Project Studio course. Also, the Final Project Studio consists of developing the conceptual idea into a complete project based on theoretical, functional, technical, methodical and artistic factors. The culture of this long project will also allow the student to finalize and present his final written dissertation.</p>		
ADI620	Heritage Architecture and Identity	2 cr.
<p>The course presents specific architectural case studies of heritage nature in different sites in Lebanon. The constructed building must be the object of an observation, as well as an object of a historical and analytical study, both done by the student during the visits of the place. Raising the student's awareness towards a heritage approach is crucial for the graduate studies, as he must identify the elements on which he will rely in order to construct a problematic that is relevant to the place and the theme chosen in a theoretical, cultural, historical and environmental dimension. The aim of this course is to bring students to valorize the heritage buildings via site visits and a theoretical and practical framework, by addressing the problem of restoration through concrete analysis and case study. Basic research methods such as architectural analysis of buildings and typological and comparative analysis will be implemented. Interdisciplinary approaches will be proposed, including the history of architecture, art history, archeology, etc.).</p>		

ADI625	Professional Internship	1 cr.
Pre-requisites	ADI580	
<p>Since each project is unique, the interior architect must know how to listen to his client in order to understand his personality, his needs and his expectations, and thus be able to transcribe them in a project. The interior architect is held to certain strictness given that he has to meet both the needs of his client and the existing standards and technical constraints. The internship is an essential stage of the training course. It allows the student to become familiar with the professional world and to apply his knowledge and awareness. But also the internship allows to validate, and to specify the project of end of studies of the Master degree. The aim of this course is to understand the diversity of professional practices in architecture and to focus on meetings with craftsmen, a skilled workforce and the various components of a large profession. This second mandatory internship must focus on the technical and scientific aspects of a project in the implementation phase.</p>		
ADI650	Descriptive/Coordination and Follow up of Building Sites	3 cr.
<p>A comprehensive description by trades accompanies tender documents allowing for quicker acquisition of anticipated prices. This covers: tenders, comparative analysis, the creation of a preliminary schedule of work, coordination and monitoring of projects, the organization of meetings (as requested by the client and/or companies), informing clients and creating business reports related to specific sites, followed by delivery of the site to the client and the community. It consists of informing the student about the project management skills and tools and documents available focusing on managing quality, costs and time all within international contract and conditions of contract forms (FIDIC)</p>		
ADI654	Environment Planning and Landscape Design	3 cr.
<p>This course is related to components of landscaping. It is organized around three themes: the concept of the ecosystem, history of gardens and the organization of circulation.</p>		
ADI656	Approaches: Quality/Creation/Innovation	3 cr.
<p>In graduate studies (Master), the student must be confronted with several strategies related to the operation of the company, such as the materials technology, the technological innovations of construction and the ecological implications. The impact of innovation in the world of interior design profoundly influences our contemporary transformations and our new way of living.</p>		
AGP223	Intermediate Computer Graphics	2 cr.
<p>This course teaches students how to use Adobe Photoshop to perform many different image processing techniques. The students will learn how to use several tools for selecting parts of images, and applying several filters and effects in order to create professional looking illustrations compatible with market requirements.</p>		
AGP251	Painting	2 cr.
<p>Introductory workshop for painting and aesthetic perception principles. It is a series of exercises on different painting techniques, mixtures, contrast, color schemes, as well as colors, shades, intensity and harmony, from still life, photos or reproduction of works.</p>		
AGP410	Infographic	2 cr.
<p>In this course, the students will learn to manipulate images on software to be applied in architecture and to implement them in the real world of urban and/or rural spaces.</p>		
AGP503	Online Advertising	3 cr.
<p>The advertising industry has experienced significant transformations in recent years as digital, social media and interactivity have changed the shape of media and advertising. This course will explore the effects and impact of digital media in advertising, how to understand users, and explore different modes of delivery for advertising and methods of audience measurement within an online, mobile and social media environment.</p>		
AGP510	Graphic Design and Advertising Thesis	3 cr.
<p>Writing a thesis is essential for academic development and fulfillment. It is inconceivable that students would graduate without having written a solid, extensive and very critical academic work which would be compliant with international standards. The end result of the course will be a long paper on a topic related to their graduation field which would discuss a new angle for an established topic.</p>		
AGP601	New Media	3 cr.
<p>The course will explore the implications of new media on culture, business and other major industries. The esthetic possibilities for a society invaded by social media, smart phones, video and digital cameras, computer interfaces, search engines, and video games will be analyzed and their convergence/divergence from 'traditional' media. Through discussion, reading, screenings, and creative experiments, we will critically reflect on everyday new media practices, such as surfing, sharing, uploading, emerging technologies, and their historical origins to understand changing relations of the human-computer interaction (HCI).</p>		
ARC222	CAD I (Computer Aided Architectural Design)	2 cr.
Prerequisites	ARC210 Or ARCH210	

Design and develop 2D and 3D architectural drawings using standard CAD software and in accordance with industry standards, used widely in industry.

ARCH322 CAD II (Computer Aided Architectural Design) 2 cr.

Prerequisites ARC222 Or ARCH315

Virtual reality in architecture is a focus for architecture students who wish to improve modelling in the 3rd dimension, in order to increase possibilities and variation in their designs, ranging from orthogonal shapes to complex organic forms and rendering in high quality engines.

ARCH205 Basic Design I 2 cr.

Students will enhance and elaborate their knowledge of applied structure, through this course covering introductory concepts of forms and abstract compositions as applied to organization, proportions, equilibrium, rhythm, and density.

ARCH210 Technical Drawing 2 cr.

Initiate the students to develop architecture drawings, according to international standards and norms.

ARCH215 2-3D Representation Skills 2 cr.

Students will learn and apply geometric representation in 2D and 3D, while comprehending theories and laws of construction from a scientific perspective as applied to the practical international standards and norms.

ARCH220 Vernacular Architecture 4 cr.

Initiate the student to understand the constraints that are the basis of any architecture. This teaching is based on the study of the dwelling since its vernacular origin until nowadays. The Human-Nature-Technology relationships are exposed in order to highlight the logic behind the design of the habitat.

ARCH225 Basic Design II 2 cr.

Prerequisites ARCH205 Or ARC205

Analyze and deduce logically the abstract notion of orders and structures while applying it in 2D and 3D formats with chromatic variations.

ARCH230 Architecture Analysis and Perception 4 cr.

Prerequisites ARC212 Or ARCH220 Or ARC208 Or DAA208

This course will initiate students to understand the built environment, the culture and the awareness towards the architectural space. Research and experimentation will develop their aptitude, including the use of architectural jargon.

ARCH235 Strength of Materials I 3 cr.

Study the physics of static forms and the components of solid objects in order to be applied to the strength resistance of materials. This course will familiarize students with problems in equilibrium of forces, and how the cumulative forces are transmitted to the ground in static constructions. Practical tools and utilities are provided and experimented through real case examples.

ARCH310 History and Culture of Architecture I 3 cr.

Prerequisites DAA241 Or ARI241 Or DAA208

This course aims to introduce the critical thinking of theories of architecture from Antiquity to the Renaissance in an historical chronological order. An illustrated analysis, according to a chronological order, presents the design process, the structural system, and aesthetic aspects of each period through its major achievement.

ARCH315 CAAD 2 cr.

Prerequisites ARCH210 Or ARC210

Introduce and familiarize the students with up-to-date software for producing architecture drawings and to construct 3D digital models.

ARCH320 Structural Design 2 cr.

The aims of this course is to study the various design factors involved in the choice of structural systems, the relation between materials and their different structural typologies.

Through the analysis of real examples, the students will be able to evaluate and validate the correct choice of a structural system for a given architectural project.

ARCH325 Virtual Reality in Architecture 2 cr.

Prerequisites ARCH315 Or (ARC222 And ARC322)

Principles of virtual reality and architectural simulation will be introduced in the course, while emphasizing its geometrical parameters, materials and virtual lighting. Real-time animation allows the students to implement and impact the project within the built architectural environment. Special attention will be given to the conception forms and transformations and their impact on the conception of formal architecture.

ARCH330 Building Technologies 2 cr.

The course aims at identifying different construction materials and familiarizing students with a variety of building systems and integrating different materials to define an architectural composition and the description of an execution report.

ARCH335 Strength of Materials II 3 cr.

Prerequisites	ARCH235 Or ARC220	
	The student will be acquainted with the mechanical characteristics of materials, concepts of constraints and deformations and dimensioning of pieces subject to fundamental changes, such as axial, flexing, shearing or torsion.	
ARCH340	Reinforced Concrete I	3 cr.
Prerequisites	ARCH335 Or ARC221	
	Introductory concepts of materials and their behavior. Simple twist, shear, centered posts, cement - steel adherence.	
ARCH345	Architecture Design Studio I	6 cr.
Prerequisites	(ARC214 Or ARCH230) And (ARC212 Or ARCH220)	
	Platform of comprehension and interpretation, the workshop provides the student learning by experimentation of different variables and variants of an architecture project.	
ARCH350	Architecture Design Studio II	6 cr.
Prerequisites	ARC201 Or ARCH345	
	The student is committed towards the architectural production in order to be aware of the design thinking process, from concept to execution.	
ARCH355	Geographic Information Systems	2 cr.
	The course will familiarize students with the basics of GIS (Geographic Information Systems) and its application to architecture and urbanism, in addition to understanding and comprehending numerical and alphanumeric data.	
ARCH360	Soil Mechanics	2 cr.
	The course helps to better understand the soil and the awareness of the related dangers and damages. It deals with the physical properties and the structure of the soils, the fine elements and their constraints: settlement, consolidation and shearing. Soil works as retaining walls, shallow and deep foundations.	
ARCH365	Safety and Physical Disability Regulations	2 cr.
	Students will be introduced to new laws covering fire security and people with physical disability while observing their integrative norms for the architectural composition. The course will familiarize students with the introduction of outside factors and how to be aware of applying architecture within operational laws.	
ARCH405	Architecture Schematic I	2 cr.
Prerequisites	(ARCH230 Or ARC214) And (ARCH345 Or ARC201)	
	This workshop takes the students through targeted short exercises with the ability to develop conceptual thinking and sketching.	
ARCH410	History and Theory of Architecture II	3 cr.
Prerequisites	ARCH310 Or ARC240	
	This course aims to introduce the critical thinking of theories of architecture starting with the Industrial Revolution in an historical chronological order, in addition to providing knowledge of chronological events, architectural movements and linking them within the historical and political contexts.	
ARCH420	Sanitary and Mechanical Equipments	2 cr.
	This course aims to present to architecture students a theoretical and practical overview of the various mechanical systems (sanitary and HVAC) so they can be reflected in their work facilitating any necessary coordination in the design and implementation projects.	
ARCH425	Electrical and Lighting	2 cr.
	Initiate the students in power supply systems, low voltage systems and lighting within security and protective norms.	
ARCH430	Stereotomy	2 cr.
Prerequisites	ARCH330 Or ARC230 Or ARC231	
	A comprehensive and progressive approach and analysis of traditional and modern building using natural stone, in addition to initiate the students to details, practical knowledge and expertise, material selection, methods of work, and chosen tools.	
ARCH435	Acoustics and Insulation	2 cr.
	Enhance the students' knowledge of fight against undesired elements such as water, heat, noise and cold.	
ARCH440	Reinforced Concrete II	3 cr.
Prerequisites	ARCH340 Or ARC324	
	Based on the prerequisite Reinforced Concrete I this course will tackle and emphasize torsions, tiles, floors and continuous beams.	
ARCH445	Design Studio III	6 cr.
Prerequisites	ARC202 Or ARCH350	
	Architecture project in a social and cultural context.	
ARCH450	Design Studio IV	6 cr.

Prerequisites	ARC301 Or ARCH445	
	Architectural project with urban and rural residential character.	
ARCH455	Architecture Schematic II	2 cr.
Prerequisites	ARC203 Or ARCH405	
	The workshop consists of short exercises at advanced level which enable the students to develop conceptual thinking and sketching.	
ARCH460	Urbanism I	3 cr.
Prerequisites	(ARCH450 Or ARC302 Or ARC361 Or ARC461) And (ARCH410 Or ARC241)	
	Enhance the students' knowledge of the history of cities, pre-industrial cities, and urban modernity in Europe at the beginning of the 20th century, in addition to an introduction to critical ideas of the functionality of the city and postindustrial settings.	
ARCH465	Urbanism II	3 cr.
Prerequisites	ARCH460 Or ARC 441	
	The course will familiarize students with urban planning of territory and zoning, and applying it to urban spaces. Students will be shown real- life situations and will be placed with local authorities, where they will learn how to best work within the real constraints, as well as being exposed to global views of the issue.	
ARCH470	Standards, Codes and Building Laws	2 cr.
Prerequisites	ARC302 Or ARCH450 Or (ARC361 And ARC461)	
	Introduce students to urban zoning laws, construction laws, building quotas and other practical legal matters pertaining to their profession.	
ARCH475	Construction Document	3 cr.
Prerequisites	ARCH450 Or ARC302 Or (ARC361 And ARC461)	
	Initiate students to the concept of the execution drawings, list of materials, and reports according to international norms and codes, so they become familiar with real-time work requirements.	
ARCH480	Building Modeling and Information	2 cr.
Prerequisites	ARCH315 or ARC222	
	Introducing students to computer aided 3D models and BIM software, execution plans, and synchronization, quantitative elements and major factors influencing their design.	
ARCH482	Surveying	2 cr.
	Initiate students to the use of practical topographic instruments as applied in situ with real field knowledge.	
ARCH484	Landscape Architecture	3 cr.
	Introductory principles of landscape management and Design.	
ARCH485	Design Studio V	6 cr.
Prerequisites	ARC302 Or ARCH450 Or (ARC361 And ARC461)	
	Architectural project with a symbolic and public character according to private and/or public sector.	
ARCH486	Architectural Heritage Buildings	3 cr.
	The course aims to acquaint students with their national built heritage in the traditional Lebanese habitat.	
ARCH487	Intercultural Contexts Studies	3 cr.
	This course aims to comprehend from analytic and comparative manner in a different contextual architectural thematic. This includes reading and analysis responding to different issues as per social geographical and cultural issues in rural and urban context.	
ARCH490	Final Design Studio	6 cr.
Prerequisites	ARC401 Or ARCH485	
	At the end of undergraduate studies in architecture, ARCH 490 is a comprehensive synthesis of a four-year curriculum. This course is of major importance, as it constitutes a test of the theoretical and practical knowledge acquired by the students throughout the four years they have spent studying architecture.	
ARCH505	Architecture Research Methodology	3 cr.
	The course seeks to give the students the ability to choose, among the different research methods applied to architecture, to deepen a thematic for their architecture diploma. Regular individual presentations will enhance their verbal communication and their writing skills.	
ARCH510	Theory and Critic of Contemporary Architecture	3 cr.
	The course enhance students to conceptual thinking and covers the critical study of the theories of architecture and international styles.	
ARCH515	Complex Buildings Structural Systems	3 cr.
	This course improves the knowledge of students in the area of complex frames within the realm of the conception and execution of a building.	

Advanced Building structure, such as high rise, long spans and exoskeleton and their impact on design process will be deepened in the course.

ARCH520	Intelligent Buildings	3 cr.
The aim of this course is to introduce students to automation and implementation of intelligent systems within the domain of architecture building and services.		
ARCH530	Architecture Detailing	3 cr.
This course aims to develop the critical and rational thinking of students within the framework of architecture by applying them to details within the built project, mainly different building envelopes, intelligent and environmental skins.		
ARCH535	Working Documents for Project Management	3 cr.
The course introduces students to all legal and technical documents needed, from blueprints to contracts and legal papers, office management and workshop organization, with a focus on financial issues for design and project management.		
ARCH540	Graduation Project Thesis	3 cr.
Prerequisites	ARCH 505	
As a prerequisite to the final-year project and the continuation for the research methodology course, the graduation project thesis is a personal work consisting of a master's thesis written in order to develop the student's point of view for his architectural project. Students will seek to measure variables in keeping with an experimental process in order to expose a dynamic approach to an architectural project, what is referred to as "architectural conceptualization." This approach calls for debating an appropriate process, resulting in an architecture project linked to questions at a crossroads between theory and practice.		
Also, students are offered a leadership seminar which initiates them to the soft skills needed in addition to the hard skills acquired in the curriculum to be able to work collaboratively in their design and construction projects.		
ARCH545	Professional Internship	1 cr.
The purpose of professional internship is to gain experience and knowledge by being involved with the activities of professionals, in architectural firms as well as on site, within all engineering disciplines. Students are initiated to the rules of registration, legal practice and site management through a seminar offered in the Order of Engineers and Architects of Beirut.		
ARCH550	Construction Scheduling and Management	3 cr.
The Objective of the course is to initiate the students to the Different approaches of managing a construction project during the execution phase, of which; time, cost, outcomes and risk. In addition, The students will examine the use of software tools.		
ARCH570	Master Architecture Design Studio I	6 cr.
This course as set within an international and intercultural context aims to help architecture students to become involved in an environment culturally different from the one which they normally encounter.		
ARCH580	Master Architecture Design Studio II	6 cr.
Thematic workshops tackle different aspects of architecture projects, qualifying students to professional thinking and working process. Some of the themes students can explore are city, landscape and territory, built heritage, sustainable architecture, people and society, architecture and new technology.		
ARCH610	City, Landscape and Territory Workshop	3 cr.
The workshop focuses on the notion of the architect as a partner within the social and urban development, in order to create spaces which are harmonious and bring a better quality of living for the inhabitants.		
ARCH615	Architecture and New Technologies Workshop	3 cr.
Architecture and NTIC (New Technologies in Information and Communication) as a combined framework within a workshop that experiments and push visual communication boundaries for students.		
ARCH620	Sustainable Architecture Workshop	3 cr.
Humankind, built spaces and environmental issues are some of the concepts and interactions explored within this course that aims to give a balanced view of the students to their surroundings. Experts in the field are regularly invited to participate in the workshop to enhance the students awareness towards Environmental and Sustainability issues.		
ARCH630	Built Heritage Workshop	3 cr.
This workshop aims to meet a certain need: the adoption of a coherent policy and an effective approach in the field of built heritage. The overall spirit of the workshop is to give a strengthen meaning to identity in the work of students and to reduce any anxiety about cultural uniformity.		
ARCH635	Archeology and Restoration Workshop	3 cr.
Lebanon, due to its history and geographical position, has a variety of strata which reveal, above and below the ground, incomparable riches. Students will be able to reflect, analyze and capitalize on this knowledge.		
ARCH640	Aesthetic Theorizing and Poetics of Architecture	3 cr.

Is architecture a kind of philosophy? How would the architect and the philosopher approach the space of architecture? Philosophy falls within the framework of construction and occupies an essential place in architecture, its purpose being to know, it is related to the logos, the word and the speech, while the purpose of architecture, its being to construct, its philosophy is related to the building. The philosophical analysis is therefore understood as an objective genitive: what philosophy and philosophers tell us about architecture.

ARCH645 Intercultural Architecture 3 cr.

The course aims at widening the students' knowledge and understanding of how to build within parameters specific to the community and culture, including ethical and social values and norms, so that the project will thrive and take shape.

ARCH670 Senior Project I 6 cr.

Prerequisites ARCH580 And ARCH570 And ARCH540

This course synthesizes previous knowledge which has been developed through the students' academic years, sharpening their theoretical and practical knowledge and combining them into a coherent whole.

ARCH680A Senior Project II 6 cr.

Prerequisites ARCH670

This course synthesizes previous knowledge which has been developed through the students' academic years, sharpening their theoretical and practical knowledge and combining them into a coherent whole.

Develop the project on all its facets, theoretical, social and technical remains the extreme goal of student's diploma.

ARG504 Typography in Motion 4 cr.

With the advance of technology, hardware and software have become very powerful tools in the hands of designers, opening doors to higher levels of animations be it 2D or 3D. From opening sequences to film titles, to advertising, to music videos, to internet and different formats of online animations, movement found its way not only into images and shapes but into typography as well, transforming the otherwise printed, flat and static letter forms into a living being that mutates, morphs, float, and explodes.

ARG505 Exhibition Display 3 cr.

In this course the students will learn how to conceive a space exhibition for artists' work, for writers, private collections, etc. They will also learn how to define a workspace to prepare a retrospective exhibition for a civilization, to know how to combine graphics and space, themes and communication, and all the necessary elements.

ARG506 Mobile Application Design 4 cr.

With mobile apps revolutionizing the way we surf the internet and how and where information is received, this course will enable students to acquire the skills to build clean and attractive UI designs. Focusing on the design side of mobile applications, students will go through information that will assist them during the initial process in understanding developmental requirements and specifications.

ARG602 BTL Design 4 cr.

The « Below The Line » has always been an indistinguishable part of the experience of consumption, whether for luxury or mass consumption goods, or at supermarkets, duty free lounges or any other outlets.

ARG605 Art and Modernity 3 cr.

Modernism came about through a series of political, social and historical shifts and inherently portrays them in its designs and visualizations. This course aims at giving the students the tools to decode such links and to be able to analyze them in perspective.

ARG606 Installation Art 3 cr.

The purpose of this course is to teach the students how to explore new ways of artistic three-dimensional exploration through the conception and execution of an art installation based on their own experience of the imaginary.

ARG607 Thematic Illustration 3 cr.

This course is designed to introduce students to the art of illustration. Sharing the tools and techniques of gallery artists and the communicative goals of graphic designers, illustrators work across media to make concepts understandable and powerful in the service of editorial, informational, political or persuasive goals.

ARG610 Museography 3 cr.

Through videos, slides, films and guided visits, the students will have a clear vision and will learn the history of museums, their conception, their evolution and how they can protect and save the human heritage. In a world where heritage, archiving and collective memory is mutating constantly, students learn about the presence of fixed parameters to record signifiers and ways of transmission.

ARG611 Advanced Animation 3 cr.

Students will be initiated into more complex techniques of animation with After Effects as their main tool, in order to create and deliver complete and advanced animation packages within time and budget constraints and according to specific themes and commissions.

ARG612 Silkscreen 3 cr.

A practical printmaking class where students will learn the entire process of silkscreen from stretching the screen to making a book. They will draw on their own creativity to discover new printmaking ideas. They can experiment with their own imagery, whether illustrative, type or photographic. Different techniques of the silkscreen process will be discussed. How students solve problems and deal with selecting the right separations will be an integral part of the course. Their ability to modify, collect and solve will be enhanced. The use of color and connections will also be stressed.

ARG680A **Final Project I** **6 cr.**

Following the thesis, the student has to do a project based on a theme already picked, including all necessary steps, while adding and subtracting some, and coming up with new approaches and technologies, which are best able to convey the concept.

ARS211 **Ceramics I** **2 cr.**

Introduction and history of the various techniques of ceramics. Applying these techniques, from the turning, to coloring and cooking.

ARS213 **Material, Color, Light** **2 cr.**

Through material, color and light, as space generators, this course will take part in the susceptible and abstract notions of spatial creation and the ambiances of everyday interior spaces. The experimental discipline will allow to implement and harmonize the constituent elements of any architectural space, object of design, furniture or surface by the chromatic phenomenon: color, clarity, saturation, contrast.

ARS214 **Mosaics I** **2 cr.**

History of the different techniques of mosaics through the ages. Practical application: geometrical composition of a non-figurative subject, coloring, cutting and putting on the tesserae.

ARS314 **Stained Glass I** **2 cr.**

Historical introduction to the different techniques of stained glass. Practical applications: composition, layout, grading, cutting, leading, welding, and grouting.

ARS316 **Engraving I** **2 cr.**

Introduction and history of different techniques of engraving. Applying these techniques: woodcut, lithography, linoleum, etching, screen printing and others.

ARS430 **Traditional Religious Architecture** **6 cr.**

Prerequisites ARI242 Or DAA342 Or ARCH430 Or ARC333

Overview on the architecture of religious spaces such as churches and monasteries. Introduction to the particularities of places of worship and religious sites in the East and specifically in Lebanon. Introduction to the approaches of the types and models, Tradition/Innovation, Spaces and liturgies, as well as the contributions of construction techniques. Education seeks to trace the historical evolution of areas and outlines the dialectical Traditions/Modernity and Liturgies/Techniques.

ARS431 **Architecture and Planning of Religious Edifices** **3 cr.**

Prerequisites ARI242 Or ARC240 Or DAA342

General introduction and initiation into the inner characteristics of Christian churches (plans, forms, religious objects and materials).

ARS445 **Cultural Properties** **3 cr.**

Prerequisites ARI242 Or ARC240 Or DAA342

General introduction and awareness of the influence of architectural styles in history, and of the various building systems of places of worship (churches and monasteries). Analytical and critical study of Christian religious edifices in Lebanon and the Middle East.

AUV223 **Digital Illustration** **3 cr.**

The students will create, draw and illustrate using techniques and tools from different software. The students will be able to integrate different shapes and forms into a cohesive work of art.

AUV240 **Fundamentals of Interaction Design** **3 cr.**

This course will help students understand how to create digital interfaces and solutions revolved around the end users' behavior.

AUV334 **Special Effects** **3 cr.**

Students will be able to implement and manipulate tools from different software and apply them to moving and still images. Students will manipulate color correction, contrast, create layers, and use green screen techniques.

AUV431 **Introduction to Sound** **3 cr.**

Student will acquire recording techniques and editing. Student will learn to use various microphones effectively to record sound and voice on location and in a controlled environment.

AUV438	Digital Video	3 cr.
Pre-requisites	TLV230 Or TLV351	
The student will acquire technics of non-fiction filmmaking using digital acquisition. Students work individually and in teams to direct, produce, and edit short documentary style films. The course places a strong emphasis on conceptual development, experimentation, and creative innovation.		
AUV451	Sound Design	3 cr.
Pre-requisites	TLV331 Or TLV431	
The students will understand the various means of designing sound for film, using acquired techniques. The students will be able to integrate different sound tracks into a cohesive and well-balanced track.		
AUV510	Theory and Technics of Animation	3 cr.
This course provides on implication to the creation of animation through classical animation techniques. Students will explore the art of creating convincing movement through effective timing, spacing, and drawing. Works of master animators will be screened and analyzed frame-by frame to illustrate the principles covered in class, and students will put their knowledge to work through a series of exercises. The ultimate goal of both this course and its sequel is to introduce methods by which animators “act” and bring characters to life through sequential images.		
AUV531	Advanced 2D Animation	3 cr.
This is a traditional animation course within the context of a small production pipeline. Students will be responsible for interpreting the initial animatic, storyboards, and workbooks, breaking down sound and music onto exposure sheets, and completing rough and cleaned up animations for a final rough composite. This will require each cohort to learn choreography, continuity, and basic scene analysis, all while working within the confines of a team. New dynamics will come into play, particularly in terms of accountability to small and large groups, as well as increase responsibilities with man-hour projections and general scene management.		
AUV533	Advanced 3D Animation	3 cr.
This course will focus on the design and production of highly detailed models for use in feature and broadcast animation. Students will use a best-of-breed approach to define their tool set, with particular emphasis placed on organization and structure. Additional emphasis will be placed on generating layered digital intermediate files for use in a model-composite workflow in a desktop production environment. Students will also explore advanced material creation using a global illumination-capable rendering engine, incorporating advanced texture creation techniques.		
AUV536	Advanced 3D Animation	3 cr.
Pre-requisites	AUV339 Or AUV449	
This course covers in depth three categories of objects, characters, vehicles and environment. Students will learn the process of creating, texturing, rigging and animating a character. They will learn how futuristic cars are built in CG movies and how to make them look so real. And finally they will create eye-catching scenery to shoot a 15 seconds movie featuring all the elements they have created in the course.		
AUV620	3D Film Production	3 cr.
This course will expose students to the principles of 3D environment design: theatrical sets, architectural simulations, and level design will be considered.		
AVC204	Introduction to Contemporary Cinema	3 cr.
The student is introduced to contemporary films and how films reflect and contribute to the values and culture of a society. Students will explore dominant forms by examining Hollywood cinema, classical and post-classical film, European cinema, and also by examining alternative cinema, art cinema, key movements and concepts including genre, spectatorship and authorship.		
AVP203	Introduction to Photography	3 cr.
Equivalent	PHO224	
This course offers an introduction to photography, use and handling of photographic emulsions, to enable students to acquire the principles of photography and adopt the logic of this medium. At the end of this course, students should be able to master the basics of photography, and this includes scientific techniques of image formation and the first visual esthetic laws.		
AVS500	Methodology	3 cr.
This course aims to enable students to present visual and performing arts criticism in correct scholarly form, to introduce them to different methods of carrying out research and to acquaint them with the methodology used in classifying bibliographies and reference works relevant to the subject area.		
AVS680A	Directed Individual Studies I	6 cr.
Students will use this course to complete an independent or team project. This project will help round out a student’s portfolio and will demonstrate an appropriate level of professional challenge. These projects may be a narrative film, documentary, animation, website, or mobile application, or they may be a thesis relevant to the field of specialization.		

Students will form a contract with the faculty concerning the content of their project. Completed projects will assist students in the professional or in the academic field.

CTA605 Methodology in Art Research 3 cr.

The objective of this course is to seek to specify research methodologies in order to provide students with the knowledge to develop and analyze a research object, by confronting several disciplinary fields and different approaches related to the nature of specific research Field and subject of study.

CTA610 Design, Space & Communication 3 cr.

Questioning and evaluating the place of the inhabitant in society as a manufacturer of cultural environments, while engaging him in contemporary spatial and environmental problematics, and seeking to establish a dialogue between citizens and inhabited environments. From a reflexion on the function of art in societal practices, the relation of the subject to his world will interrogate the environment and the object in a sensory, relational and psychological experience.

CTA615 City, Home, Social Practices and Changes 3 cr.

The planet is becoming urbanized. The city and architecture are a social production, covered by technical, theoretical, aesthetic, economic and sociological disciplines. This seminar aims to develop the faculties of architectural and urban observation in their most contemporary evolutions: cities in development, metropolization and rehabilitation issues, reconstruction and requalification. A critical view of the city, of its memory and its identity also builds a theoretical culture of the inhabited environments' metamorphosis.

CTA620 Film and the other Arts 3 cr.

This course defines the links and interrelationships between cinematography and other arts in relation to the different forms of artistic expressions and the many socio-cultural aspects: spaces, bodies, politics, aesthetics, language, time, narrativity. A cinema film is a signing system and visual and sound aspects, movements and articulations. The significant dimension of a cinematographic space will allow to provide an analysis in an audiovisual, written or drawn form.

CTA625 Design: Innovation, Technology & Arts 3 cr.

In regards to the socio-cultural, socio-aesthetic, economic, scientific, industrial and technological changes these days, our socioprofessional environment questions creative and evolving approaches in a prospective position, highlighting a reflection of contemporary design. This critical view will test the theory and practice, different situations of experimentation in the service of the contemporary world, such as the innovation in the environment with regard to interfaces and intercultural contexts.

CTA630 Media, Design & Contemporary Arts 3 cr.

The socio-economic issues and the cultural and political problems of the new international media are becoming a real need for global communication facing the evolution of the social practices and the stakes of contemporary art. In a cultural dynamic, this course seeks through the field of media and communication to acquire and evaluate theoretical knowledge and practical approaches related to the formal and functional evolution of contemporary spaces.

CTA635 Critical Studies and Aesthetics 3 cr.

This course draws its essence from aesthetic theories and the study of various philosophical, sociological and historical reflexions that deal with the function of art, and that are open to criticism and to a theory of contemporaneity. Through this opening, we judge the theoretical influence of a critical thinking relative to the various problematics and the diverse intellectual disciplines, peripheral to the valorization of art.

CTA640 Architecture, Design & Environment 3 cr.

Contemporary societies express new qualitative demands for comfort, identity, method and sociability in a relationship with a high environmental quality combining innovations and concepts. A multitude of approaches and disciplines is studied at different scales with the urban, architectural, economic, bio-physical, technological, ecological, political, industrial and natural context.

CTA645 Photography and Contemporary Arts 3 cr.

On the one hand, this course provides the student with technical tools for photographic practice and, on the other hand, the necessary elements of theoretical reflection. This acquisition enables the student to develop a semiotics of the photographic sign, while analyzing photographic works in contemporary art according to their different conceptual and artistic approaches.

CTA650 Art and Modernity 3 cr.

This course aims at questioning concepts defining modernity, through the ruptures and affiliations that trace the history and result in the innovation in contemporary society. It links the latter to art and to various artistic manifestations expressed by an evolutionary disruption.

CTA655 Identities and Societies 3 cr.

This course introduces and examines the origins of society, its constituent elements and its process of evolution, all three responsible for the configuration of its identity. It addresses the questions of the continuous change of the individual and of societies, the complexity generated by the diversities in their dissimilarities and social and cultural similarities. It

also analyzes the regularly repeated reinterpretation of identities, based on these changes and its repercussions on representations in the arts.

CTA690A	Thesis Dissertation	3 cr.
This program focuses on problematics related to questionings, the fields of study of which are based on various artistic disciplines. The student will have the ability to formalize a thought, to rationalize a practice and to respect the requirements of reflection and methodology, by questioning different conceptual visions and by developing a critical spirit of a chosen theme, written in a dissertation of 80 to 100 pages.		
CVA200	Fundamentals of Typography	3 cr.
This course details the importance of typography in design and its essential significance in the graphic, printing and digital fields. It makes the student more aware of its advantage in communication. It teaches the character anatomy and its use in different contexts to optimize its results aesthetically and practically. It also explains what are the criteria when it comes to choose a font and the importance of its readability in all mediums formats: Books, magazines, posters, websites, logotypes, etc.		
CVA205	Design Foundations	3 cr.
The aim of this course is to introduce the students to the basic principles of Two-Dimensional design and its characteristics. It teaches where, when and how to consciously handle compositional elements, with regard to the aesthetic and design logic. To learn the basic criteria and means of expression that accompanies the methodology (Observation, Analysis, Inspiration, Composition)		
CVA210	Fundamentals of Computer Graphics	3 cr.
Turn out professional-looking graphics for web or print with Adobe Illustrator software. Through practical exercises, become –fluent in the premier program for line art, logos, vector graphics and quick page layout as well as tricks and time efficient techniques to keep work clean and professional.		
CVA215	Advanced Computer Graphics	3 cr.
This course shows how to use Adobe Photoshop to perform many different image-processing techniques. In this course the student will learn how to use several tools for selecting parts of images applying several filters and effects in order to create professional looking illustrations.		
CVA220	Drawing for Animation and Sketching	3 cr.
Students will build a solid foundation in drawing the human figure in motion and will develop a strong draftsmanship of traditional drawing skills. Examination of concepts and techniques for animation with emphasis on developing the drawing skill sets particular to the practice of animation both 2D and 3D.		
CVA225	Introduction to 2D Animation	3 cr.
This course will teach the basics of the After Effects CS application package. The student will learn about the world of 2D motion graphics, compositing and visual effects. Prerequisites: Completion of the Adobe Photoshop Basic Skills 1 and 2 courses, general graphics background and experience with Adobe Illustrator, and/or Premiere helpful.		
CVA230	Introduction to Digital Media	3 cr.
The course aims at introducing the students to the different type of media (text, images, sound, video, etc.) and the technology tools and formats used for manipulation and storage. It will highlight the difference between analog and digital formats, hardware and software, different type of connectivity and I/O devices. Then, every media is studied separately.		
CVA235	Grids	3 cr.
Students will explore projects of greater complexity; learn how to analyze substantial data, appreciate the design functions of relating ideas and develop logical structural systems to organize information for legible and clear communication. Students will be able to transform manuscripts into publications i.e. book design, newspaper, magazine, and instruction manual and for mobile application. They will have to follow a design process to assess typographical text application, expression, hierarchy, sequential design, layout and page systems including production.		
CVA240	Arabic Typography	3 cr.
In this course the students will investigate the basic aspects of Arabic letterforms and typography through a variety of projects. Students are exposed to the historical background technical and aesthetic issues, and communicative abilities of typography as individual forms and as a text.		
CVA245	Storyboard for Film	3 cr.
Storyboards are a series of illustrations displayed in sequence for the purpose of pre-visualizing an animated or live-action film. A storyboard is essentially a large comic of the film or some section of the film produced beforehand to help the directors and cinematographers visualize the scenes and find potential problems before they occur. Storyboard is the process of visual thinking and planning that allows a group of people to brainstorm together, fostering more ideas and generating consensus.		
CVA250	Critical Thinking	3 cr.

Trying to stop the creative stagnation of students, this course, as its name indicates it tries to integrate a polyvalent and flexible platform which answers to the problematic which come up throughout the semester, going through the technological evolution and its impact on the notion of creativity within advertising and graphics. This combination within all its parameters, presents itself under the shape of a workshop where « critical thinking » plays an important role of the motor within communication.

CVA255 Cultural Studies 3 cr.

Cultural Studies is an interdisciplinary field that looks different depending on the context in which it is practiced. This course focuses on the multiples perspectives of culture, including theoretical positions, high and low culture distinction, the rise of mass culture, ideology, racism, the social resistance, etc. through diverse case studies including literature, art, music, theatre, online culture, etc.

CVA260 Illustration Art 3 cr.

The purpose of this course is to initiate the student to the art of illustration on paper or any adequate material. How to pick the theme, how to come up with the concept, and how to proceed with the necessary steps to the final execution: Ink, gouache, watercolor, pastel and acrylics are the techniques to learn.

CVA265 Calligraphy 3 cr.

The student, at the end of the course, will be able to know the Arabic letter (family, construction and composition), and will be able to write with a graphic pen through exercises of calligraphy and tracing. Be able to compose texts and letters. To better master typography depending on conventional methods being applied in infographics fields: The different techniques of composing letters and the harmony of composition. This course allows students to better use the Arabic letter in logo designs, hand written slogans etc...

CVA270 Advanced Typography 3 cr.

In this course the students will learn to design aesthetic projects based only on typography and to express and execute their ideas to solve design problems.

CVA275 Advanced Photoshop 3 cr.

Advance production techniques in Adobe Photoshop. Class explores and implements digital imaging theory and processes to enhance and retouch photographs and create new works of art.

CVA280 Printing Techniques 3 cr.

The "Printing" course consists of teaching the designers the way to create the best possible print production for their designs. It introduces almost all the necessary tools and techniques of the print production and the how-to create a correct pre-press PDF file ready-to-print.

CVA285 Comics 3 cr.

"Comics" is an art onto itself and requires many abilities. In this course, "Comics", the student will learn to express his "pen strokes" and his/her imagination in different other domains: Advertising, Communication, Cinema and animation.

CVA290 History of Graphic Design 3 cr.

This course is a general overview of the history of graphics. It goes back to the first inscriptions in cavers arriving to the internet, all while going through the origin of symbols, different alphabets, printing, logos, typography, layout and new media and even some artistic trends.

CVA295 History of Advertising and Media 3 cr.

This course is designed to explain to the student the advertising's rise to its position of prominence. It starts with the advertising's development as a communication tool, a cultural and economic phenomenon, and as a force that both constructs and reflects society. It retraces worldwide and local advertising campaigns, which have labeled advertising, and the commencement of the digital advertising era.

CVA300 Computer 3D modeling 3 cr.

Students will acquire and implement the fundamentals of 3D animation by using the Maya software.

CVA310 Principles of Advertising 3 cr.

Build an in depth knowledge of advertising via a clear and academic theoretical teaching as to its aspects, the strategies it uses, the psychological approaches that allows it to convince and therefore influence a well-defined target audience, and eventually to zero in on the media supports of the advertising communication used.

CVA315 Marketing and Advertising 3 cr.

The initiation of the students to the basics of marketing allows the students to go on in a methodological and scientific way in order to orient their creativity and commercial communication.

CVA320 Writing for Advertising 3 cr.

The purpose of this course is to put weight on the power of ideation in visual communication: The importance of new creative ideas, spoken language and its application, its relation to the theme at hand, and the potential options between spoken language and slang. Adapting the same message in different languages such as English-French and vice-versa.

CVA325 Freehand Graphics 3 cr.

The course is a graphic project workshop, where the student learns to create a concept, to think of and conceive a graphic project. To execute quickly a presentation which communicates clearly the student's response to the problematic or commission.

CVA425 Branding and Packaging 3 cr.

This course emphasizes the application of graphic design elements to various forms of packaging. Packages are analyzed and positioned from a marketing point of view. Brand marks, visual graphics and color schemes are developed for individual products and extended product lines. This class is geared to those interested in product packaging and graphic design as well as those seeking to create portfolio-quality design work.

CVA340 Graphic and Advertising Design I 3 cr.

This workshop is the first professional approach, which merges the technical know-how and puts it to the service of creativity. It helps creating the conception of logos, posters, in addition of the layout and the cohabitation of images and works on different supports.

CVA350 Graphic and Advertising Design II 3 cr.

The course enables students to transform the verbal content into a graphic languages, through the elaboration of a global graphic communication chain. The styling of geometric forms in the conception of posters in addition to the use of the "mixed media" technique will be part of the proposed program. Visual composition is essential in the creation of the projects, which will be launched throughout the semester. The concept, creativity, coherence and execution will be the criteria of success.

CVA355 TV Idents Design 3 cr.

In this course the student will learn how to think to create and execute a corporate TV idents, in close relation with TV identity. This course is a combination of interaction between corporate identity, animation, editing, music and coloring.

CVA365 Media Strategies 3 cr.

This course is designed to provide students with an understanding of a development of a marketing and communication plan. Planning, selection, and evaluation of all major mass media vehicles and the various decisions and problems that arise in those processes will be discussed and considered. In addition to gaining a broad knowledge of the various media techniques, patterns and the factors that influence the mass media decisions. The students will learn specifically the component of a media plan and the implementation of a media schedule.

CVA370 Radio Spot 3 cr.

This course aims to introduce students to the importance of audio in general and radio in particular as a communication tool for advertising. Designing a spot requires a choice between several concepts, voice-overs, music, editing, and all factors that make a successful radio campaign.

CVA375 Consumer Behavior 3 cr.

The objective of the course is to allow the student to better know the buying motivation and the decision making process as to better guide him in the choice and realization of advertising concepts.

CVA380 Corporate Design 3 cr.

Corporate Design is an exploration into the idea that memorable visual messages with text have the greatest power to inform, educate, and persuade an individual in general and a potential consumer in particular. This course is an attempt to discover why some images are remembered while most are not.

CVA390 History of Digital Media 3 cr.

This course aims at introducing students to the use of digital tools in research, analysis, visualization, and sharing of historical data, documents, and texts. The goal is to provide a, largely open/free, toolbox that may be useful in the students' research activities. Furthermore, we will focus on understanding and analyzing the various shapes digital history takes and the possibilities it provides for new forms of scholarship.

CVA395 History of Contemporary Art 3 cr.

This course presents the notion of contemporary, as related to art, and goes through groups, movements and tendencies that governed contemporary art since 1945 in different countries, going through the after-war years and the transition between modern and contemporary and engulfing the 2000-2010 decade, and historically the 40s-90s years in addition to events which were going in France, Italy, United States and Asia.

CVA440 Advertising Design 3 cr.

Advertising project is an important and distinct area of study within the visual communication industry. The course shares some common modules with visual design but has a strong emphasis on the relationship between the strategic thinking, design, to creative thinking and implementations, and the ability to direct the work of others. Students are encouraged develop key skills sought by employers, such as team working, effective communication and presentation skills, leading to greater confidence in the workplace.

CVA450 Final Year Project 6 cr.

The Final project is a semester-long endeavor in which each student develops Graphic design work that materializes her/his exploration of a topic of interest. The topic is identified by each student through a project proposal submitted

for review and approval by a pool of active instructors in the program. The topic can be triggered by a particular experience, text, artifact, etc. could bridge with tangential cultural practices (cinema, literature, music, theater etc.) and/or related fields of study (media and communications studies, art history and theory, cultural studies, visual culture, etc.). The investigation however, should have design/visual implications that enable it to critically inform and contribute to the student's field of study in graphic design and to expand its margins within the purview of visual representation generally.

CVA470 Advertising Photography 3 cr.

The course focuses on the professional photographic illustration. In order to inform the students to translate an acceptable visual for an advertising project, while using the photographic digital media.

CVA475 Seminar in Design 3 cr.

The course is designed as a discussion of the major issues related to technology trends and change in communication. Students are expected to be able both to relate important information from the readings as well as offer their own interpretations of the ideas and issues discussed in class. Because of the uniqueness of some aspects of this topic, especially advances in global communications, the student will be required to think independently though still with a strong grounding in the relevant literature. To facilitate such discussion each session will be divided into three parts. First, discussion will center on the nature of the trend to be addressed that session. Students will gain an understanding of how that trend works the breadth of its scope, and its effects on international brands. Second, discussion will turn to the assigned literature for that session to examine what students have to offer concerning that topic. Finally, students will discuss the prospects for international change in light of future developments in that trend.

CVA480 Portfolio Design 3 cr.

Preparation of a portfolio comprised of completed design projects: The evaluation and the demonstration of portfolio presentation methods based on the student's specific area of study. This course is designed to help the student gather all previous projects together and prepare a creative design portfolio consisting of the projects developed in Typography, Design Communication and all the essential courses taken. This course will educate students on how to create a living in the visual communication industry. Tips and lectures will be given to the students to make an impression with their work. Students will prepare their portfolio in the most creative way in order to face the industry with confidence.

CVA485 Game Design 3 cr.

Students acquire the fundamentals of game mechanics, game art, and game narratives.

DAA208 Introduction to Space and Object 4 cr.

This course will introduce students to the various fields of architecture of interior installations and design through a series of variables: volume, usage, body, material, scale, dimensions, representation, model and expression. Through a theoretical and practical course and various short and long exercises, the first-year student will explore reality and develop his sensibility to space and object in order to be able to measure, perceive and represent.

DAA209 Volume I 2 cr.

Prerequisites ARI211 Or DAA211

This workshop is a first introduction to the third dimension, the students' first passage from surface to volume (low reliefs), from 2D representation to the architectural model. In it they learn and apply the uses and finality of said model. The objective is to give students the occasion to experiment with, create and explore plasticity. The workshop generally uses recycled elements and found objects and applies the visual and technical tools of the plastic arts.

DIM210 User Centric Design 3 cr.

This course will enable students to properly design any digital interface by following a detailed, fun and modern process based on the end users' behavior, interests and frustrations.

DAA211 Sketching and Drawing I 2 cr.

A workshop teaching drawing. Teaching is based on analytical drawing and emphasizes the development of visual memory and the exploration of the expressive qualities of different tools and supports. Students will experience freehand perspective drawing, human figures, and drawing from nature.

DAA212 Sketching and Drawing II 2 cr.

Prerequisites DAA211 Or ARI211

A workshop teaching drawing. Teaching is based on analytical drawing and emphasizes the development of visual memory and the exploration of the expressive qualities of different tools and supports. Students will experience freehand perspective drawing, human figures, and drawing from nature.

DAA213 Volume II 2 cr.

The workshop explores basic notions of volume and mass, structure and envelop, interior and exterior. It shows through the development of architectural models how form expressed through different materials leads towards differing technological solutions (stratification, knotting, folding, etc.)

DAA215 Architectural Sketching 2 cr.

Prerequisites DAA211 or ARI211

Knowing how to draw an architecture offers a deeper understanding of the subtleties and know-how that characterize buildings whether ancestral or contemporary. Freehand drawing is a personal exploration of space.

Through a drawing, the student will be able to dissect the building from all angles and in several ways (study of shade and light, interior walk, structure...), which will enable him to assess the chosen building in terms of formal elements: scale, aspect, proportion, colors and materials; also in terms of problem-solving reflected in the realization of the project. In this course, students use techniques of freehand drawing while trying to master different rendering techniques: pencils, Bic, pens, markers...

By constructing these drawings (facades, interior perceptions, external perspectives...) the student will enrich his perception of the spatial design process and learn to express himself visually.

DAA216 Plastic Expressions 2 cr.
Prerequisites ARS213

The objective of the workshop is to give students the occasion for personal plastic exploration and experimentation. The workshop generally uses recycled elements and found objects and applies the visual and technical tools of the plastic arts.

DAA241 General History of Art 3 cr.
Prerequisites LFR120

The objective of the course is to give students an understanding of the chronological order of events that constitute the history of art. They will use the methodological tools of the discipline, to learn how to situate, compare and understand the relationships between them through a study of their stylistic characteristics and their socio-historical context.

DAA250 Sketching 3 cr.

Principles of anatomy and studies in the canons of human anatomy. A study of the relationship between human proportions and the natural and built environments.

DAA260 History and Culture of Furniture and Design 2 cr.

Originating from the arts and craft tradition and then associated with the field of design, furniture as an aesthetic proposal shares with one or other of these fields a functional end. Through this course, the student will be able to develop a culture of artistic, aesthetic, technical and architectural knowledge, associated with crafts, decoration, furniture, carpentry, design, trend and interior architecture. Following a chronological fragmentation, he will be able to identify a furniture style in its context of interior architecture, starting from the origins of making as human beings to our days and then place it in its cultural, artistic, social and architectural environment. The aim of this lecture is to offer the student an acquisition of the culture of the workmanship. The content of the course is articulated on the historical and stylistic periods of antiquity until today. Taking into consideration the relational interaction between architecture, interior architecture, furniture, entity, design...

DAA303 Architecture and Design Schematic I 2 cr.
Prerequisites ARCH215 and ARCH230

Learning how to rapidly formalize a project. A series of projects (spaces or objects) aid students in analyzing a situation, defining their intentions using pictograms, texts and diagrams and finally, graphically communicating the project (plans, sectional drawings, sketches) formalized in a design.

DAA304 Architecture and Design Schematic II 2 cr.
Prerequisites DAA303

Through a series of short projects (space design, object design, landscaping, architectural construction, ephemeral installation), students will be confronted with heterogeneous and contradictory data in regards to various themes. They will define their intentions using pictograms, texts and diagrams and finally communicate the project graphically (plans, sections, sketches), by shaping it on a board.

DAA310 Advanced Technical Drawing 2 cr.
Prerequisites ARCH210

The Technical Drawing course, a prerequisite for the Advanced Technical Drawing, is a set of communication techniques that will enable the implementation of strategies and pedagogical approaches, a constructive drawing logic and a know-how, while respecting all the norms and details, helping to develop the student's ability to graphically represent a geometric drawing and to apply geometric principles and requirements. The basic notions of the orthogonal representation of an architectural work are at stake in the technical representation and aesthetic considerations; this is an international graphic language framed by common and universal conventions and usages. The aim is to introduce the students to the necessary tools, precision and technical discipline: the use of drawing instruments, the plane representation in orthogonal projection (plan, section, elevation, axonometry), the techniques of expression and mediation tools.

This course (Advanced Technical Drawing) will allow improving the graphic representations skills where the drawing and the idea turn into a constructed material reality. The student will acquire many skills such as the information structuring,

the construct understanding, the determination and the combination of scales and views, and will be able to tackle the elements of the main and the second work as the building standard products, by questioning their raison d'être: stairs, framing, coating, partitioning, bays, structure.

DAA312 Sketching and Drawing III 2 cr.

Prerequisites ARI211 Or DAA211

Principles of anatomy and studies in the canons of human anatomy. A study of the relationship between human proportions and the natural and built environments.

DAA320 Wood Technologies and Constructions 2 cr.

Prerequisites ARCH230

This course allows students to acquire the foundations of carpentry and cabinet making and to receive an introduction to the different kinds of traditional and industrial types of furniture building, looking at assembly, veneers, and hardware. The course is completed with an initiation into the technical drawing of furniture (size drawing, dimensions and nomenclature).

The aim of the course is to become acquainted with the special issues of designing a wooden construction and to realize the properties and possibilities of wood as a building material in the future built environment.

DAA330 Elements of Construction Projects 2 cr.

Prerequisites ARCH230

Developing the technical know-how crucial for the understanding and conception of building systems and techniques. Gaining expertise in the execution of architectural projects and interior design.

DAA332 Materials, Technologies and Construction Systems 2 cr.

Prerequisites DAA370 and DAA371

A study of materials constituting different built systems, their implementation and their behavior with time.

DAA342 History of Art and Architecture 3 cr.

During this course, the student will be able to understand art and architecture as complex phenomena of an intellectual, physical, social, political and economic nature simultaneously, and identify their meanings through a historical approach. The course begins with the Renaissance (and the interest of humanism, which a great trigger for the mutations that will appear in the course of history) to reach the 21st century and theoretically explain all the great changes of the eras. The connection of art and architecture, as well as the influence of the two fields on each other are crucial. The student of Interior Design will be able to connect the forms of art and become aware of space, light, textures, through detailed examples.

The course starts from the analysis of conceptions and describes the intellectual and material conditions of architectural and artistic production. Thus, the student will be able to develop his critical approach by relying on the buildings and the major works as examples, walk virtually in the interiors, and give his point of view depending on his perceptions.

DAA360 Communication and Graphic Design of the Project 1 cr.

In order to be as close as possible to the professional reality, this course will allow the student to acquire technical knowledge on the design of the layout through graphic design and conceptual reasoning via verbal communication.

Through the diversity of approaches and tools, the student will be able to increase the visibility and coherence of the graphic and editorial content of the project in order to achieve a means of representation suitable to the understanding of his project: introduction to typography for an adapted use of content, use of a layout grid, layout of the geometric drawing, photos layout, images, perspectives, models, videos.

The second part of the course prepares for a know-how through a practice of the techniques of oral and gestural communication. The impact of oral communication and speaking in public and before a jury is crucial. The student must know how to communicate through speech, organize his thoughts, express his ideas and debate his project through language and different expression techniques.

Through an oral, graphic, photographic and spatial approach, the student will be able to acquire a personal vocabulary and a fluency in communication to testify explicitly the shaping essence of the project by the search for a visual concept.

DAA370 Interior Design Studio I 4 cr.

Prerequisites ARCH230 and ARCH210

This workshop develops a reflection on the relationships between human beings and their built environment. Through drawing exercises, analysis of similar projects and the exploration of methods of design, the students develop their aptitudes for conceptualization of architectural ideas, the representation of spaces and forms, and their esthetic judgment on the space they conceive. The student will discover and experience the plastic expression as well as the architectural concept.

The three themes to be developed are: volumes and paths. Simple living space. Modular or ephemeral space.

DAA375 Interior Design Studio II 4 cr.

Prerequisites DAA370 or DAA371

This workshop aims to design environments that take into account the qualities of materials, the spatial communication, the circulation and the functioning, in order to articulate problematics related to the notion of living, to explore new ways of inhabiting the space, while confronting several existing interactions.

The three themes to be developed are: Bifunctional space (living/leisure). Sequential path. Educational space.

DAA405 Introduction to Research Methodology 1 cr.

The objective of this course is to provide students with knowledge that enables them to produce a small-scale research work as a prerequisite for the Master's thesis. The research work on the Bachelor level mainly consists of text and illustration articulation (image, photos, plans...) in order to guide the student to understand, to explain facts and phenomena, to elaborate and to chain different reflections in regards to the theme in question.

The understanding of theoretical reflection is essential: understand the definition of research axis, a hypothesis, argument, corpus and problematic.

The student will encounter research situations that will allow him to reflect on the construction of a theoretical reflection in relation to a practical and functional approach: choose a relevant research axis, personalize a reflection and a reasoning by choosing a specific field of investigation and tools of data collection.

DAA412 Sketching and Drawing IV 2 cr.

Prerequisites ARI211 Or DAA211

A workshop developing drawing, deepening applied technical expressions in architectural representations, by exploring interior views, architectural sites, figures, and utilitarian objects.

DAA415 Architectural Project 3 cr.

Prerequisites DAA375 Or DAA372

'You employ stone, wood and concrete, and with these materials you build houses and palaces. That is construction. Ingenuity is at work. But suddenly you touch my heart, you do me good, I am happy and I say: This is beautiful. That is Architecture. Art enters in.' – Le Corbusier

This course presents a theoretical and practical approach to architecture with regard to its connection to the urban context, and proposes reciprocal relations of a theoretical, poetic, plastic, programmatic and pragmatic nature.

Architectural morphology must arouse interest in the manipulation of the fundamental notions of architectural and inhabited spaces (geometry, structure, scale, measurement, proportion, indoor/outdoor, full/blank).

Projects on a modest scale should suggest simple themes and limited contextual issues. They carry out a conceptual strategy, an ordering of an architectural problematic and an analysis according to several criteria: the relation to the landscape context and the site, taking into account the conceptual approach, the quality of natural light, the connection between structure, spatiality and material, the quality of spatial perception, the discovery of atmospheres and emotion.

DAA431 Textiles 2 cr.

Prerequisites DAA372 or DAA375

This course is an introduction to textile technologies and their application in the fields of architecture, furniture and clothing. The objective is to understand the different technical aspects at the base of textile design (weaving, meshing, felt, printing, dyeing, etc.), the application of every field, and the use of materials (cotton, nylon, silk, etc.).

DAA432 Detail in Interior Design Projects 2 cr.

Prerequisites DAA375 or DAA372

The objective of this workshop is to prepare the future practitioners by introducing them into the logic of construction inherent in interior architectural work. Using applied real cases, the students are initiated into the different arrangements that tie in constructive elements. The projects relate to the three aspects of technical competence, representational drawings and creativity in proposed solutions

DAA433 Technical Equipments and Building Services 3 cr.

Prerequisites DAA375 or DAA372

The course will help the student become familiar with the various equipment techniques and constructive solutions of the building and the quality of the architectural spaces: artificial lighting notion, natural lighting devices, sanitary equipment and plumbing, distribution and drainage systems, factors and management of thermal energy, renewable energy, quality and acoustic treatment, buildings soundproofing, insulation and waterproofing, air conditioning, safety standard, fire...

DAA434 Internship 1 cr.

Prerequisites DAA375 or DAA372

The interior architect and the designer should possess both creative and technical skills. From the beginning of the creative path, the student learns to respond gracefully, prevailing on the existing architecture and layout, creating spaces or objects that awaken emotions while making the uses and services expected by the users. In order to allow the maturation of composite learning matching with the academic training, the internship is an obligatory channel that will enable the student to immerse himself in the professional world and to have a better understanding of the real functioning of the companies or organizations. This professional placement takes part of the pedagogical curriculum and

allows the practice of knowledge in a professional environment. The internship taking part of the first Cycle of the curriculum is a general approach to a broad profession that will help the students' better position themselves and choose what interests them in the years to come.

DAA453 Design Studio I 2 cr.

Prerequisites ARCH230

Design Studio I allows the student to follow a creative practice: drawing the form, studying colors and experimenting materials and light, while initiating him to communicate his project through a text, orally, and through drawings and models. The design of objects integrates the various contemporary practices and confirms the sense of initiative and modes of expression.

Proposed themes: Material and plasticity. Design and ergonomics. Modularity. Aphorism. Shaping emotions. Contrasts.

DAA454 Design Studio II 2 cr.

Prerequisites DAA453 and (DAA260 or DAA340)

Design Studio II allows the student to follow a creative practice: drawing the form, studying colors and experimenting the structure, materials and light, while initiating him to communicate his project through a text, orally, and through drawings and models. The design of objects integrates the various contemporary practices: Ecological approach, field logic, sustainable materials, economic purposes...

Proposed themes: Metamorphosis. Design and crafts. Design and social. Design and mechanism (biomimicry). Eco-Design. Poetics.

DAA455 Design Studio III 2 cr.

Prerequisites DAA454

Design Studio III mainly focuses on the functional object, and on the development of a project in a creative spirit and a technical mastery. The educational objective of the course is to reinforce the student's persevering research process, which allows attaining a clear and tangible synthesis phase, in order to achieve a real functioning prototype.

Two projects will be launched during the semester, one approaching the furniture, and the other approaching the light. The process is based on reflection, abstract design, as well as on manipulation and testing with materials and techniques.

DAA460 Habitable Architectural Atmospheres 2 cr.

Prerequisites DAA342

"The purpose of construction is to make things hold together; of architecture to move us", said Le Corbusier.

There is an interaction between the inhabitant and the objects that surround him; this emotional relation to space engages the existence of the inhabitant as an intrinsic existence to a phenomenology of space. Through the created atmosphere, the language of architecture, like a body, becomes anatomical, therefore carnal and substantial.

This seminar is a moment of reflection on the capacity of architecture, an open space to the creation of concepts, themes and subjects related to the conception of space and object, and equally open to multi-sensoriality : harmony of material, materialization of light, appearance of phenomena such as noise, sound, colors, textures, material, heat, light, odors. Atmospheres are therefore an environmental condition of our dwelling, just like an envelope for the inhabitant, allowing him to find himself. A dwelling that gives rise to the world, a poetics to inhabit it, a phenomenology of a place that stimulates the senses.

This phenomenological observation of architectural identity creates a corporeal and material space that is an integral part of the theoretical and aesthetic conception of Luis Baragan, Mathias Goertz, Tadao Ando, and Peter Zumthor, to whom space is like a musical instrument and the language of architecture is as tactile, acoustic, olfactive, luminous, and colorful.

"When I work on a design I allow myself to be guided by images and moods that I remember and can relate to the kind of architecture I am looking for..." Peter Zumthor.

DAA470 Interior Design Studio III 4 cr.

Prerequisites (DAA375 Or DAA372) And DAA360 And DAA332 And DAA320

The conceptual and functional approach to interior space is introduced by the study of the place as a plastic, technical and cultural phenomenon. The workshop focuses on the development between intention and intervention, representation and reality, which is reflected in an execution file through which the student will question the link between architectural technical constraints and aesthetic intentions.

DAA472 Interior Design Studio IV 6 cr.

Prerequisites (DAA470 and DAA405) or DAA471

Redefining an interior space, requalifying it and adapting it according to a specific use is essential for the Bachelor degree's final project. The student will approach the project following a research and a methodology work on a specific topic, as acquired previously throughout the course 'Introduction to Research Methodology'. It is a question of approaching the project in regards to a functional and aesthetic program as the expression of a purpose and a lived experience that would be translated into specific dimensions and atmospheres. The workshop examines the basic notions of paths, envelope, and identity. Also, it will be necessary to approach the detail in the project.

The two themes to be developed are: Commercial space. Space themed restaurants.

DES621 Design and Communication 3 cr.

This course covers the three related themes of conditions for sustainable development, the interaction of the object and its environment (private, public or urban), and the semantics of forms, in public space.

DES622 Design and Communication 3 cr.

The objective of this course is to explore ways of enhancing the skills of local craftsmen in order to renew craft traditions by establishing a dialogue between traditional practices and current uses.

DES623 Industrial Design 3 cr.

The workshop is related to the local and regional socio economic context, taking into account specific conditions of production, the labor market and the needs of the local society. Teaching emphasizes technology and computer based tools in order to provide creative design instruments and production methods with a positive impact on business, society and the environment. The course takes into account the users' market with its fluctuations, one where the emergence of new meanings and the permanence of traditional values coexist, and the mode of production of local craft industries which have adapted to mass production through a variety of means.

DIM210 User Centric Design 3 cr.

This course will enable students to properly design any digital interface by following a detailed, fun and modern process based on the end users' behavior, interests and frustrations.

DIM220 Fundamentals of Interaction Design 3 cr.

Student will implement the foundations of interactive media including user-interface design concepts, optimization/performance issues, resources and tools. Students combine audio, video, imaging, animation, and other media formats to construct an interactive product using industry-standard software.

DIM225 Character & Object Design for Animation 3 cr.

This course will introduce the student to the refinement of characterization for the purpose of animation. The articulation, personality, expressions of a character will be studied and experimented with in depth, as well as objects.

DIM230 Advanced 2D Animation 3 cr.

Student will acquire skills in the development of personality and emotion in animated characters is explored. Students will produce an animation of a character expressing emotions and also will work with multiple characters to increase the level of complexity.

DIM315 Mobile User Interface 3 cr.

This course will push students to explore the wide dimensions of mobile devices' user interface user experience and design guidelines.

DIM320 Social Media Techniques 3 cr.

This course aims at introducing students to is to discuss the nature of digital history, the importance of having a professional online presence, the fruitful gathering of information online, the structuring of digital bibliographies and archival databases, an introduction to spatial, textual and numerical analysis, as well as data visualization, and the publication and sharing of results and primary documents.

DIM325 User Interface Design 3 cr.

Pre-requisites DIM210

This course will help students to explore the basic guidelines of user interface design, while also learning the new and updated trends and principles of UI.

DIM400 Final Year Project 6 cr.

In this course, digital media design students trained in motion graphics, screenwriting, video editing and video and audio production will engage in diverse and unique multimedia final projects. By using their enhanced artistic competencies as derived from understanding of our visual (natural, personal, social and cultural) space, students will create their products in digital or electronic format. Through the semester students will have to show distinct approaches which activate transformations of their ideas from first sketches to the final application using web design, digital imaging, screen writing and media production.

DIM420 Advanced User Interface Design 3 cr.

This course will give students an in-depth look at the advances techniques of creating heavy and complicated user interfaces.

MAT212 Calculus Applied in Architecture 3 cr.

Prerequisites MAT110

This course is intended for students in the first year of architecture. It includes the calculations and techniques that are an essential background for students training in this subject. : They will understand and learn how to draw the various architectural forms for the development of their projects and also have a strong prerequisite for science subjects such as resistance of materials and reinforced concrete.

PUB504 Advanced Arabic Copywriting 4 cr.

Students will participate in discussions in class, screenings to be arranged. Studies of several critical discourses that have influenced the analysis of film: Walter Benjamin's "work of art in the age of mechanical reproduction"; Althusser's interpellation; Lacan's mirror's stage; Virilio's dromology and logistics of perception; Debord's society of spectacle; Edward Said's orientalism, etc.

PUB505 Advanced French Copywriting 4 cr.

Advanced techniques and applications of French copywriting, specifically in all advertising and communication forms and the best way to insure a catchy, readable and effective way of selling whatever the product or the social cause is.

PUB506 Advanced English Copywriting 4 cr.

Advanced techniques and applications of English copywriting, specifically in all advertising and communication forms and the best way to insure a catchy, readable and effective way of selling whatever the product or the social cause is.

PUB604 Media Strategy 3 cr.

The advertising industry has undergone significant transformations in recent years as interactive and digital media have changed media and advertising. This course will explore the implications for media content, audiences, modes of media consumption and production, modes of delivery for advertising and methods of audience measurement within an online environment. Students will gain practical skills in how to use online environments for advertising, in how to target particular audiences and reach them with a wide variety of ads, and prompt them to act.

PUB605 Commercial and Cultural Environment 3 cr.

In this course, students will explore the commercial and socio-graphics parameters that influence the commercial communication. They will also study the psychological factors that influence the advertising message impact and pertinence.

PUB608 Propaganda and Critical Analysis 3 cr.

Politics are very closely associated with campaigns, or how to best express the convictions of a political entity through messages which vary across countries, allies, enemies or culture and society. Students will be introduced to the concept of decision-making in a world full of rivalries, hostilities, ideas, budgets and wars. The role of propaganda will be scrutinized vis-à-vis its target audiences and how they pass overt and clandestine messages.

PUB680A Final Project I 6 cr.

The Final project is a semester-long endeavor in which each student develops an Advertising Campaign that materializes her/his exploration of a topic of interest.

SCE613 Clothing and Theater Costumes 3 cr.

Stage costumes are defined as sets of clothes and accessories allowing the actor to embody characters on stage. A costume designer is involved in the creation of historical and contemporary costume for theater, opera, dance and film. As an integral element of stagecraft, a designer must possess an understanding of the meaning and the intentions of the piece.

SCE620 Scenography 3 cr.

The purpose of staging is to create a necessary and conducive context to the performance of a theatrical scene, through the shaping of space and time and always in relation to a text.



School of Engineering

Overview

The mission of the School of Engineering at USEK is to provide an inspiring and supportive environment for high quality and effective education, develop students' creative and critical thinking, and graduate lifelong leaders capable of addressing emerging problems in light of the changes and new challenges in engineering careers. We seek to nurture in our students a drive for entrepreneurship and leadership and a commitment to ethical and professional standards, always fostering their humanity so they may work for a better world while focusing on the needs of Lebanon.

The School of Engineering consists of the following departments/programs:

Department of Agricultural and Food Engineering

- Engineering Diploma in Agricultural Engineering
- Bachelor of Science in Engineering Sciences - Food Engineering
- Minor in Food Packaging and Distribution
- Minor in Sustainable Food Security
- Master of Science in Food Engineering
- Master of Science in Enology

Department of Biomedical Engineering

- Bachelor of Engineering in Biomedical Engineering
- Minor in Biomedical Engineering
- Master of Science in Biomedical Engineering

Department of Chemical and Petroleum Engineering

- Bachelor of Engineering in Chemical Engineering
- Minor in Petroleum and Natural Gas Engineering
- Minor in Process Engineering
- Master of Science in Chemical Engineering
- Master of Science in Petroleum Engineering

Department of Civil Engineering

- Bachelor of Engineering in Civil Engineering
- Minor in Building Simulation
- Master of Science in Civil Engineering

Department of Electrical, Telecommunications and Computer Engineering

- Bachelor of Engineering in Computer Engineering
- Bachelor of Engineering in Electrical and Electronics Engineering
- Bachelor of Engineering in Telecommunications Engineering
- Minor in Computer Engineering
- Minor in Electrical Installation
- Master of Science in Communications Engineering
- Master of Science in Computer Engineering
- Master of Science in Electrical and Electronics Engineering

Department of Mechanical Engineering

- Bachelor of Engineering in Mechanical Engineering
- Minor in Material Sciences and Engineering
- Master of Science in Mechanical Engineering

Administration and Full-time Faculty

Dr. Joseph El Assad, Associate Professor, **Dean**

Dr. Tilda Karkour Akiki, Associate Professor, **Associate Dean**

Dr. Afif Abdel Nour, Associate Professor, **Assistant Dean for Relations with Industrial Sector**

Prof. Joseph Zalaket, Professor, **Assistant Dean for Accreditation, Coordinator of the Computer Engineering Programs**

Dr. Nemr El Hajj, Assistant Professor, **Assistant Dean for Grants and Projects**

Professors:

Prof. Joseph Zalaket

Associate Professors:

Dr. Afif Abdel Nour

Dr. Alain Abi Rizk

Dr. Barbar Zeghondy

Dr. Charles Yaacoub

Dr. Joseph El Assad

Dr. Lara Hanna Wakim

Dr. Nabil Nemer

Eng. Pascal Damien

Dr. Sandy Rihana

Dr. Tilda Karkour Akiki

Lecturers:

Eng. Elie Abou Hamad

Mrs. Rita Daccache Abi Assaad

Assistant Professors:

Dr. Adib Akl

Dr. Béchara Nehme

Dr. Désirée EL Azzi

Dr. Emilio Mouannes

Dr. Jad Jelwan

Dr. Joanna Eid

Dr. Marie-Rita Hojeij

Dr. Marc Bou Zeidan

Dr. Nancy Zgheib Tabet

Dr. Nemr El Hajj

Dr. Samar Azzi Achkouti

Dr. Walid Said

Dr. Youssef Rayess

Assistants:

Eng. Rita Harb

Eng. Samer Wakim

Undergraduate Programs

Engineering Diploma in Agricultural Engineering (Hybridⁱ)

Accreditation

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Engineering
Accreditation
Commission

Mission

The Engineering Diploma in Agricultural Engineering supports the mission statement of the Faculty of Agricultural and Food Sciences and the Department of Agricultural Sciences through high quality teaching, learning, research and services that benefit the future agricultural engineers and their community. It produces agricultural engineers with excellent education, strong engineering skills and ethics required to successfully meet the challenging and changing needs and demands of the sustainable agricultural domain. It also enables its students to become creative and innovative engineers, active leaders and dynamic citizens.

Program Educational Objectives

1. Graduates will perform agricultural engineering tasks at an appropriate level of expertise and use collaborative skills and be willing to accept the ethical responsibility for the social and environmental impacts of engineering practices.
2. Formulate and/or design a system, process or program to meet desired needs in order to solve technological problems in the various branches of agricultural sciences.
3. Use their disciplinary knowledge, educational depth, and breadth to deal with changing career opportunities in agricultural and closely related industries.
4. Promote sustainable agriculture through the conservation of natural resources and provide advisory assistance and extension services to local and regional farmers on proper livestock production, processing and crop and animal production and protection, ecology and environment, landscaping and climate change.

Program Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

This program requires 160 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	3

ⁱ Hybrid: Courses offered in French and/or English

General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Sports	1
General Education - Religious Sciences	3
BIO211 - Cell Biology	3
CHM212 - General Chemistry	3
MAT216 - General Mathematics	3
PHY210 - General Physics	3
Common Core	35
BCH215 - Introduction to Biochemistry	3
BCH272 - Introduction to Biochemistry Laboratory	1
BIO228 - General Botany	3
CHM270 - Laboratory of General Chemistry	1
CSC205 - Information Technology and Database Management	3
GAA225 - Molecular Diagnostics in Food Science	2
GAA227 - Food Microbiology	2
GAA275 - Laboratory of Molecular Diagnostics in Food Science	1
GAA277 - Food Microbiological Laboratory	1
GAA334 - Food Composition and Transformation	3
GAA374 - Food Composition and Transformation Laboratory	1
GAAC615 - Seminar	3
GAAC617 - Modeling of Food Systems	3
GAG242 - Agricultural Zoology	3
GAG274 - Agricultural Zoology Laboratory	1
GAG333 - Rural Engineering and Technical Drawing	3
GAG434 - Field Visits II	1
GAG445 - Special Topics in Agriculture and Food Sciences	0
GAG447 - Special Topics in Agriculture and Food Sciences	0
Specialization	75
GAG202 - Introduction to Agricultural Sciences	1
GAG218 - Field Work I S1	1
GAG219 - Field Work I S2	1
GAG222 - Geology + Laboratory	2
GAG260A - Internship I	1
GAG303 - Introduction to Ecology and Environment	3
GAG310 - Botany and Systematics	2
GAG324 - Agrometeorology and GIS	3
GAG325 - Animal Physiology and Anatomy	2
GAG328 - Field Work II S1	1
GAG329 - Field Work II S2	1
GAG340 - Soil Sciences	2
GAG342 - Plant Physiology	2
GAG343 - Irrigation	3
GAG344 - Fertilization	2
GAG360A - Specialized Internship	1
GAG370 - Pedology Laboratory	1
GAG371 - Plant Physiology Laboratory	1
GAG372 - Anatomy and Animal Physiology Laboratory	1
GAG411 - Agricultural Entomology	2
GAG413 - Phytopathology	3

GAG428 - Field Work III S1	1
GAG429 - Field Work III S2	1
GAG442 - Zootechny	3
GAG443 - Arboriculture	3
GAG444 - Crop Production Systems	3
GAG446 - Animal Nutrition	2
GAG472 - Agricultural Entomology Laboratory	1
GAG474 - Animal Nutrition Laboratory	1
GAG505 - Pesticides	2
GAG542 - Hygiene and Veterinary Health	3
GAG545 - Landscape and Plant Engineering	3
GAG546 - Poultry Sciences	3
GAG646 - Statistical Analysis Methods	3
GAG647 - Biodiversity and Natural Resources Management	2
GAG651 - Genetic Engineering and Biotechnology	3
GAG652 - Genetic Engineering and Biotechnology Laboratory	1
GAGC560A - Advanced Specialized Internship	1
GAGC645 - Accounting and Management of Agricultural Businesses	3
Electives	14 out of 31
GAA342 - Food Packaging and Handling	2
GAA434 - Agri-Food Marketing	3
GAAC527 - Machinery and Food Industrial Control	3
GAG420 - Renewable Energy	2
GAG425 - Aquaculture	2
GAG430 - Apiculture	2
GAG448 - Agriculture and Sustainable Development	2
GAG450 - Integrated Water Resource Management	3
GAG453 - Insect Pests and Diseases of Crops in Lebanon	3
GAG465 - Agroforestry	3
GAG554 - Livestock Farming Systems	3
GAG644 - Weed Science and Medicinal Plants	3
Capstone	6
GAG690A - Final Year Project *	6
Total	160

* Course with minimum passing grade requirement of 80/100.

Bachelor of Science in Engineering Sciences - Food Engineering (Hybridⁱ)

Mission

The Bachelor of Science in Engineering Sciences supports the mission statements of both the Department of Agri-Food Sciences and the Faculty of Agricultural and Food Sciences through multidisciplinary teaching, learning and research activities in food science. The mission of the Bachelor degree is to produce socially and ethically responsible graduates who are leaders in dealing successfully with national and global food and health challenges and who will have a positive impact on their communities and the food industries for the betterment of the quality of human life.

Program Educational Objectives

1. Graduates will demonstrate technical competence in the manufacturing process of food.
2. Manage production of safe food products and apply innovative solutions to problems related to agri-food.

ⁱ Hybrid: Courses offered in French and/or English

3. Carry out physical, chemical, microbiological and sensory analyses.
4. Implement quality systems in agri-food businesses.

Program Outcomes

- a. Students will develop knowledge in appropriate concepts, theories and emerging methodologies from the fundamental disciplines.
- b. Design and conduct experiments, as well as analyze and interpret data.
- c. Implement and verify quality and safety systems.
- d. Function in multidisciplinary teams.
- e. Apply management and business theory principles.
- f. Understand professional and ethical responsibility.
- g. Develop communication skills sufficient for entry into professional practice.
- h. Acquire the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

Degree Requirements

This program requires 107 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	3
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Sports	1
General Education - Religious Sciences	3
BIO211 - Cell Biology	3
CHM212 - General Chemistry	3
MAT216 - General Mathematics	3
PHY210 - General Physics	3
Common Core	23
BCH215 - Introduction to Biochemistry	3
BCH272 - Introduction to Biochemistry Laboratory	1
CHM270 - Laboratory of General Chemistry	1
CSC205 - Information Technology and Database Management	3
GAA212 - Introduction to the Food Industry	1
GAA225 - Molecular Diagnostics in Food Science	2
GAA275 - Laboratory of Molecular Diagnostics in Food Science	1
GAA316 - Fluid Thermodynamics and Mechanics	2
GAA327 - Heat and Mass Transfer	3
GAG333 - Rural Engineering and Technical Drawing	3
STA220 - Probability and Applied Statistics	3
Specialization	50
GAA227 - Food Microbiology	2
GAA277 - Food Microbiological Laboratory	1
GAA312 - Physical Chemistry and Sensorial Properties of Foods	3
GAA333 - Food Production Management	3
GAA334 - Food Composition and Transformation	3
GAA337 - Legislation and Standardization	3
GAA338 - Food Quality Management	3
GAA342 - Food Packaging and Handling	2
GAA357 - Molecular Gastronomy	2
GAA372 - Physical Chemistry and Sensorial Properties of Foods Laboratory	1

GAA374 - Food Composition and Transformation Laboratory	1
GAA377 - Molecular Gastronomy Laboratory	1
GAA412 - Unit Operations in Food Engineering	2
GAA420 - Food Processing Technology	2
GAA422 - Unit Operations in Food Engineering II	2
GAA425 - Agri-Food Economy	2
GAA434 - Agri-Food Marketing	3
GAA436 - Food Toxicology	3
GAA444 - Beverages and Enology	2
GAA445 - Special Topics in Agriculture and Food Sciences	2
GAA474 - Beverages and Enology Laboratory	1
GAA475 - Techno-functionality of Ingredients and Additives Laboratory	1
GAA476 - Food Processing Technology Laboratory	1
GAG260A - Internship I	1
GAG360A - Specialized Internship	1
GAG432 - Field Trips S1	1
GAG445 - Special Topics in Agriculture and Food Sciences	0
GAG447 - Special Topics in Agriculture and Food Sciences	0
Electives	5 out of 13
GAA414 - Waste Management in Food Industry	3
GAG420 - Renewable Energy	2
GAG448 - Agriculture and Sustainable Development	2
NTR327 - Community Nutrition	2
NTR435 - Preventive Nutrition and Public Health	2
NUT320 – Food Processing	2
Total	107

Bachelor of Engineering in Biomedical Engineering (English)

Accreditation

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Mission

The mission of the Biomedical Engineering Department is to rigorously prepare students for rewarding careers in the diverse fields of biomedical engineering and the health care industry, or in pursuing continued education in biomedical research or medicine.

Program Educational Objectives

1. Advance the students in their careers through innovation, critical thinking, leadership, life-long learning, proactivity and integrity.
2. Prepare students to succeed in post-graduate studies and industry employment in biomedical engineering or related fields.

Program Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.

4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

This program requires 146 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

All the Level 300&above-Engineering Courses require a minimum passing grade of 70/100. The Final Year Project requires a minimum passing grade of 80/100

A grade of 70/100 increases the need to perform earlier detection on the final cumulative average for every student to help them out obtain a $GPA \geq 75$ and let him register in his FYP and graduate. In addition to that students have to demonstrate a higher passing capacity for pre-requisite and specialization courses.

General Education	22
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Behavioral, Social Sciences and History	3
General Education - Sports	1
General Education - Religious Sciences	3
ECO350 - Engineering Economics	3
GEN303 - Innovation and Entrepreneurship for Engineers	2
GEN301 - Law for Engineers	2
GEN302 - Engineering Ethics	1
GEN410 - Engineering Projects Management	2
Mathematics and Sciences	32
CHM212 - General Chemistry	3
CHM270 - Laboratory of General Chemistry	1
GEN250 - Modern Physics	3
GEN270 - Physics Laboratory	1
GEN350 - Mathematics for Engineers	3
GEN428 - Numerical Analysis	3
MAT207 - Algebra for Engineers 1	3
MAT217 - Calculus for Engineers 1	3
MAT227 - Calculus for Engineers 2	3
MAT307 - Algebra for Engineers 2	3
MAT337 - Calculus for Engineers 3	3
STA307 - Probability and Statistics for Engineers	3
Engineering courses	68
GBM330 - Biology for Biomedical Engineers	3
GBM340 - Physiology for Biomedical Engineers	3
GBM377 - Biology for Biomedical Engineers Laboratory	1
GBM401 - Introduction to Biomedical Engineering	2
GBM416 - Medical Imaging Systems	3
GBM417 - Health Information System	3
GBM440 - Biophysics and Bioelectricity	3
GBM451 - Medical Instrumentation Design and Development	3
GBM462 - Biomedical Signal Analysis	3

GBM471 - Medical Instrumentation Design and Development Lab	1
GBM472 - Biomedical Signal Analysis Lab	1
GBM480 - Internship I	1
GBM507 - Biocompatibility and Biomaterials of Medical Devices	3
GBM581 - Internship II	1
GBM596 - Final Project I	1
GBM597 - Final Project II	3
GEL211 - Electric Circuits	3
GEL271 - Electric Circuits Lab	1
GEL311 - Logic Design	3
GEL312 - Electric Power Systems	3
GEL313 - Electronics	3
GEL314 - Digital Electronics	2
GEL371 - Electronics Lab	1
GEL372 - Digital Electronics Laboratory	1
GEL425 - Linear Control Systems	3
GEL441 - Electrical Instrumentation Design	3
GEL475 - Electrical Instrumentation Design Lab	1
GEN499 - Seminars and Conferences	0
GIN221 - Introduction to Programming	3
GIN231 - Data Structures and Algorithms	3
GRT420 - Signal Theory	3
Technical Electives	14 out of 36
GBM501 - Health and Hospitals Services	1
GBM502 - Biochemistry for Biomedical Engineers	2
GBM503 - Biochemistry for Biomedical Engineers Laboratory	1
GBM505 - Statistics and Clinical Cases	3
GBM509 - Artificial Organs and Rehabilitation Engineering	3
GBM520 - Bioinformatics	3
GBM521 - Bioinformatics Lab	1
GBM530 - Modeling of Physiological Systems	3
GBM531 - Modeling of Physiological Systems Lab	1
GBM532 - Regulation of Medical Devices	1
GBM535 - Optical Medical Imaging	1
GBM536 - Nuclear Medicine and Radiotherapy	2
GBM537 - Design of Medical Equipment	3
GBM538 - Control of Biological and Drug Delivery Systems	3
GBM539 - Control of Biological and Drug Delivery Systems Lab	1
GBM548 - Applied Medical Image Processing	3
GBM549 - Applied Medical Image Processing Lab	1
GBM550 - Hospital and Medical Equipment Planning	3
Approved Faculty Electives - Group 1	4 out of 12
GCH310 - Organic Chemistry	3
GCH371 - Organic Chemistry Laboratory	1
GEL430 - Electric Machines	3
GEL473 - Electric Machines Lab	1
GIN300 - Database Systems	3
GIN371 - Database Laboratory	1
Approved Faculty Electives - Group 2	6 out of 14
GEL340 - Technical Drawing and Computer Aided Design	1

GEL440 - Electrical Installation Design	2
GIN446 - Web Programming	3
GIN528 - Mobile Devices Programming	2
GMC320 - Dynamics	3
GRT320 - Electrostatics and Magnetism	3
Total	146

Bachelor of Engineering in Chemical Engineering (English)

Accreditation

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Mission

The mission of the Chemical Engineering Department is to ensure an educational environment with high standards, in order to prepare our graduates for excellence in chemical engineering and practice for a changing world; to advance standards of engineering professionalism, ethics and leadership and to provide development, security and safety of chemical engineers as well as an opportunity for lifelong learning and a career.

Program Educational Objectives

Within a few years after graduation, Chemical Engineering graduates will:

1. Become leaders and responsible citizens, and demonstrate broad perspectives regarding ethics, professionalism, safety and social issues in chemical engineering and related disciplines.
2. Be able to develop and improve design processes in order to meet Lebanese market/needs requirements in a cost efficient manner and according to quality standards.

Program Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

This program requires 146 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

All the Level 300&above-Engineering Courses require a minimum passing grade of 70/100. The Final Year Project requires a minimum passing grade of 80/100

A grade of 70/100 increases the need to perform earlier detection on the final cumulative average for every student to help them out obtain a $GPA \geq 75$ and let him register in his FYP and graduate. In addition to that students have to demonstrate a higher passing capacity for pre-requisite and specialization courses.

General Education	22
General Education - Civic Engagement	2
General Education - English Communication	3

General Education - Behavioral, Social Sciences and History	3
General Education - Sports	1
General Education - Religious Sciences	3
ECO350 - Engineering Economics	3
GEN303 - Innovation and Entrepreneurship for Engineers	2
GEN301 - Law for Engineers	2
GEN302 - Engineering Ethics	1
GEN410 - Engineering Projects Management	2
Mathematics and Sciences	32
CHM212 - General Chemistry	3
CHM270 - Laboratory of General Chemistry	1
GMC320 - Dynamics	3
GEN270 - Physics Laboratory	1
GEN350 - Mathematics for Engineers	3
GEN428 - Numerical Analysis	3
MAT207 - Algebra for Engineers 1	3
MAT217 - Calculus for Engineers 1	3
MAT227 - Calculus for Engineers 2	3
MAT307 - Algebra for Engineers 2	3
MAT337 - Calculus for Engineers 3	3
STA307 - Probability and Statistics for Engineers	3
Engineering courses	80
GCH310 - Organic Chemistry	3
GCH347 - Materials Sciences	3
GCH355 - Principles of Chemical Engineering	3
GCH371 - Organic Chemistry Laboratory	1
GCH410 - Physical Chemistry	3
GCH412 - Chemical Engineering Thermodynamics	3
GCH415 - Applied Organic Chemistry	3
GCH434 - Mass Transfer Operations	3
GCH435 - Chemical Kinetics and Reactor Design	3
GCH440 - Environment and Security in Chemical Industry	3
GCH450 - Separation Processes	3
GCH451 - Unit Operations of Chemical Engineering	3
GCH465 - Design of Chemical Reactors	3
GCH470 - Process Design and Control	3
GCH471 - Separation and Spectroscopic Techniques Lab	2
GCH472 - Process Engineering Laboratory	1
GCH474 - Process Instrumentation and measurements	3
GCH475 - Process Control Laboratory	1
GCH480 - Internship I	1
GCH525 - Plant Design	3
GCH562 - Process Simulation Lab	1
GCH573 - Advanced Process Engineering Lab	1
GCH581 - Internship II	1
GCH596 - Final Project I	1
GCH597 - Final Project II	3
GEL211 - Electric Circuits	3
GEL271 - Electric Circuits Lab	1
GEL425 - Linear Control Systems	3

GEN499 - Seminars and Conferences	0
GIN221 - Introduction to Programming	3
GMC340 - Thermodynamics	3
GMC430 - Fluid Mechanics	3
GMC435 - Hydraulics	2
GMC451 - Heat Transfer	3
GMC471 - Fluid and Thermal Lab	1
Technical Electives	12 out of 93
GCH455 - Interfacial Phenomena and Colloids	2
GCH541 - Introduction to Petroleum Engineering	2
GCH542 - Upstream and Downstream Petroleum Industry	3
GCH543 - Drilling Engineering	3
GCH544 - Midstream Oil and Gas Fundamentals	3
GCH545 - Advanced Chemical Engineering Thermodynamics	3
GCH546 - Mass Transport	3
GCH547 - Advanced Kinetics and Reactor Design	3
GCH548 - Mathematical Modeling	3
GCH549 - Unit Integration Design and Control	3
GCH550 - Catalytic Processes	2
GCH551 - Applied Electrochemistry and Corrosion	3
GCH552 - Reservoir Characterization	3
GCH554 - Production Technology	3
GCH555 - Reservoir Simulation	3
GCH556 - Field Development Planning	3
GCH558 - Petroleum Geology	2
GCH559 - Formation Evaluation	3
GCH564 - Water and Waste Treatment	3
GCH565 - Food and Pharmaceutical Processes	3
GCH566 - Production and Processing of Metals	3
GCH570 - Petroleum Laboratory	1
GCH571 - Process Integration Lab	3
GCH574 - Properties of Polymers	2
GCH575 - Petroleum Refining Techniques	3
GCH576 - Conversion of Petroleum Products	3
GCH577 - Purification of Petroleum Products	3
GCH578 - Oilfields and Drilling Techniques	2
GCH579 - Analysis of Petroleum Products Lab	1
GMC563 - Fluid Rheology	3
GIN222 - Applied Programming for Engineers	3
GIN231 - Data Structures and Algorithms	3
GCH360 - Tools for Chemical Engineering	1
GCH375 - Synthesis and Control of Chemical Processes	1
GCH430 - Instrumentation and Measurement Lab	1
GEL312 - Electric Power Systems	3
GEL373 - Electric Power Systems Laboratory	1
Total	146

Bachelor of Engineering in Civil Engineering (English)

Offered in Main Campus Kaslik and in RUC Zahle (only 68 credits in RUC Zahle)

Accreditation

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Mission

The mission of the Department of Civil Engineering is to provide quality education to help prepare highly qualified and competitive civil engineers; to develop innovative applications of engineering and scientific research; and to serve the industry, the engineering profession, and the community.

Program Educational Objectives

Within a few years after graduation, Civil Engineering graduates will:

1. Advance in their careers as professional engineers, researchers, educators or entrepreneurs amid technological changes.
2. Demonstrate expertise and leadership in different fields of civil engineering, and use them to contribute to the sustainable development of society.

Program Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

This program requires 146 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

All the Level 300&above-Engineering Courses require a minimum passing grade of 70/100. The Final Year Project requires a minimum passing grade of 80/100

A grade of 70/100 increases the need to perform earlier detection on the final cumulative average for every student to help them out obtain a $GPA \geq 75$ and let him register in his FYP and graduate. In addition to that students have to demonstrate a higher passing capacity for pre-requisite and specialization courses.

General Education	22
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Behavioral, Social Sciences and History	3
General Education - Sports	1
General Education - Religious Sciences	3
ECO350 - Engineering Economics	3
GEN303 - Innovation and Entrepreneurship for Engineers	2
GEN301 - Law for Engineers	2
GEN302 - Engineering Ethics	1
GCV302 - History of Architecture	2

Mathematics and Sciences	32
CHM212 - General Chemistry	3
CHM270 - Laboratory of General Chemistry	1
GEN250 - Modern Physics	3
GEN270 - Physics Laboratory	1
GEN350 - Mathematics for Engineers	3
GEN428 - Numerical Analysis	3
MAT207 - Algebra for Engineers 1	3
MAT217 - Calculus for Engineers 1	3
MAT227 - Calculus for Engineers 2	3
MAT307 - Algebra for Engineers 2	3
MAT337 - Calculus for Engineers 3	3
STA307 - Probability and Statistics for Engineers	3
Engineering courses	72
GCV301 - Surveying	1
GCV401 - Structural Analysis	3
GCV310 - Reinforced Concrete I	3
GCV320 - Technical Drawings	1
GCV405 - Reinforced Concrete II	3
GCV410 - Geology and Geophysics	3
GCV420 - Soil Mechanics	3
GCV430 - Construction Materials	2
GCV440 - Infrastructures and Roads	3
GCV450 - Architectural Project	1
GCV460 - Management and Site Organization	2
GCV461 - General Procedures of Construction	1
GCV462 - Building Legislation	1
GCV463 - Specifications and Bill of Quantities	1
GCV465 - Foundations and Retaining Walls	3
GCV471 - Soil Mechanics Lab	1
GCV472 - Construction Materials Lab	1
GCV480 - Internship I	1
GCV526 - Building Project	1
GCV581 - Internship II	1
GCV596 - Final Project I	1
GCV597 - Final Project II	3
GEL211 - Electric Circuits	3
GEL271 - Electric Circuits Lab	1
GEN450 - Finite Element Method	3
GEN499 - Seminars and Conferences	0
GIN221 - Introduction to Programming	3
GMC310 - Statics	3
GMC320 - Dynamics	3
GMC330 - Dynamics of Rigid Bodies	3
GMC340 - Thermodynamics	3
GMC430 - Fluid Mechanics	3
GMC435 - Hydraulics	2
GMC440 - Strength of Materials	3
GMC472 - Strength of Materials Lab	1
GMC477 - Hydraulics Lab	1

Technical Electives	17 out of 84
GCV500 - Prestressed Concrete	2
GCV501 - Seismic Design	3
GCV502 - Urban Planning	3
GCV505 - Advanced Structural Analysis	3
GCV510 - Sustainable Construction	3
GCV512 - Bridges	3
GCV514 - Pavement Analysis, Design, and Maintenance	3
GCV515 - Underground Structures	2
GCV516 - Special Structures	2
GCV517 - Offshore Structures	2
GCV518 - Hydraulic Structures	2
GCV521 - Steel and Mixed Structures	3
GCV522 - MEP Systems	2
GCV524 - Finishing	2
GCV525 - Maintenance, Rehabilitation and Retrofitting of Buildings	2
GCV531 - Hydrogeology	2
GCV532 - Rock Mechanics	3
GCV533 - Geographic Information Systems	2
GCV534 - Soil Dynamics	3
GCV535 - Slope Stability, Excavation and Shoring	3
GCV536 - Geotechnics of Roads	3
GCV541 - Waste Water Treatment	3
GCV542 - Management and Economy of Water	3
GCV543 - Irrigation Network	3
GCV544 - Urban Hydraulics	3
GCV550 - Highway and Road Design	3
GCV551 - Transportation Systems and Traffic Analysis	3
GCV552 - Statistical Methods for Transportation Data Analysis	2
GCV553 - Traffic Management Systems	3
GCV554 - Highway Construction	2
GCV555 - Highway Safety	3
GMC441 - Mechanics of Continuous Medium	3
Approved Faculty Electives	3 out of 6
GIN222 - Applied Programming for Engineers	3
GIN231 - Data Structures and Algorithms	3
Total	146

Bachelor of Engineering in Electrical and Electronics Engineering (English)

Accreditation

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Mission

The mission of the Electrical and Electronics Engineering Department is to prepare electrical and electronic engineering graduates for productive engineering careers in industry, the governmental sector, sustainable systems or engineering in education by providing them with academic, technical, and interpersonal skills for a continual professional growth.

Program Educational Objectives

Electrical and Electronics Engineering graduates will:

1. Advance in their careers as professional engineers, researchers, educators or entrepreneurs amid technological changes.
2. Demonstrate expertise and leadership in different fields of electrical and electronics engineering, and use them to contribute to the sustainable development of society.

Program Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

This program requires 146 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

All the Level 300&above-Engineering Courses require a minimum passing grade of 70/100. The Final Year Project requires a minimum passing grade of 80/100.

A grade of 70/100 increases the need to perform earlier detection on the final cumulative average for every student to help them out obtain a $GPA \geq 75$ and let him register in his FYP and graduate. In addition to that students have to demonstrate a higher passing capacity for pre-requisite and specialization courses.

General Education	22
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Behavioral, Social Sciences and History	3
General Education - Sports	1
General Education - Religious Sciences	3
ECO350 - Engineering Economics	3
GEN303 - Innovation and Entrepreneurship for Engineers	2
GEN301 - Law for Engineers	2
GEN302 - Engineering Ethics	1
GEN410 - Engineering Projects Management	2
Mathematics and Sciences	32
CHM212 - General Chemistry	3
CHM270 - Laboratory of General Chemistry	1
GEN270 - Physics Laboratory	1
GEN350 – Mathematics for Engineers	3
GEN428 - Numerical Analysis	3
GRT320 - Electrostatics and Magnetism	3
MAT207 - Algebra for Engineers 1	3
MAT217 - Calculus for Engineers 1	3
MAT227 - Calculus for Engineers 2	3
MAT307 - Algebra for Engineers 2	3
MAT337 - Calculus for Engineers 3	3

STA307 - Probability and Statistics for Engineers	3
Engineering courses	75
GEL211 - Electric Circuits	3
GEL271 - Electric Circuits Lab	1
GEL311 - Logic Design	3
GEL312 - Electric Power Systems	3
GEL313 - Electronics	3
GEL314 - Digital Electronics	2
GEL340 - Technical Drawing and Computer Aided Design	1
GEL371 - Electronics Lab	1
GEL372 - Digital Electronics Laboratory	1
GEL373 - Electric Power Systems Laboratory	1
GEL420 - Nonlinear Electronics	3
GEL421 - Power Electronics	3
GEL425 - Linear Control Systems	3
GEL440 - Electrical Installation Design	2
GEL441 - Electrical Instrumentation Design	3
GEL445 - Microprocessors	3
GEL450 - Electric Machines I	3
GEL455 - Electric Machines II	3
GEL470 - Power Electronics Laboratory	1
GEL471 - Electric Machines I Lab	1
GEL472 - Non Linear Electronics Lab	1
GEL474 - Microprocessors Laboratory	1
GEL475 - Electrical Instrumentation Design Lab	1
GEL476 - Electric Machines II Lab	1
GEL477 - Linear Control Systems Lab for Electrical Engineers	1
GEL480 - Internship I	1
GEL521 - Advanced Command Strategies	2
GEL531 - Generation and Transport of Electrical Energy	3
GEL537 - Advanced Electrical Installations Design	2
GEL558 - Microcontrollers	3
GEL575 - Microcontrollers Lab	1
GEL581 - Internship II	1
GEL596 - Final Project I	1
GEL597 - Final Project II	3
GEN499 - Seminars and Conferences	0
GIN221 - Introduction to Programming	3
GIN231 - Data Structures and Algorithms	3
GRT420 - Signal Theory	3
Technical Electives	14 out of 34
GEL533 - Mechatronics	3
GEL536 - Industrial Maintenance	2
GEL538 - Machines Diagnosis Methods	3
GEL539 - Renewable Energy	3
GEL550 - Applied Digital Systems Design Techniques	3
GEL552 - Robotics	3
GEL556 - Advanced Control	3
GEL560 - Industrial Programming	2
GEL572 - Industrial Programming Lab	1

GEL573 - Renewable Energy Lab	1
GEL574 - Advanced Control Lab	1
GRT421 - Digital Signal Processing	3
GRT432 - Analog and Digital Communications	3
GRT470 - Digital Signal Processing Laboratory	1
Approved Faculty Electives	3 out of 15
GEN450 - Finite Element Method	3
GIN314 - Object Oriented Design	3
GMC320 - Dynamics	3
GMC340 - Thermodynamics	3
GRT423 - Waves and Propagation	3
Total	146

Bachelor of Engineering in Computer Engineering (English)

Accreditation

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Mission

The mission of the Computer Engineering Department is to prepare undergraduate and graduate students to pursue successful and productive careers in computer engineering research and industrial practice through a deep understanding of the fundamentals of the field, their application in solving problems and creating products, while emphasizing leadership qualities and commitment to ethical and professional responsibilities; to become accomplished professionals able to meet the continued technological advances in the discipline of Computer Engineering and IT-related areas through lifelong educational pursuits; and to individually contribute in the industrial development which is taking place in Lebanon and the Middle East.

Program Educational Objectives

Computer Engineering graduates will:

1. Advance in their careers as professional engineers, researchers, educators or entrepreneurs amid technological changes.
2. Demonstrate expertise and leadership in different fields of computer engineering, and use them to contribute to the sustainable development of society.

Program Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

This program requires 146 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

All the Level 300&above-Engineering Courses require a minimum passing grade of 70/100. The Final Year Project requires a minimum passing grade of 80/100

A grade of 70/100 increases the need to perform earlier detection on the final cumulative average for every student to help them out obtain a $GPA \geq 75$ and let him register in his FYP and graduate. In addition to that students have to demonstrate a higher passing capacity for pre-requisite and specialization courses.

General Education	22
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Behavioral, Social Sciences and History	3
General Education - Sports	1
General Education - Religious Sciences	3
ECO350 - Engineering Economics	3
GEN303 - Innovation and Entrepreneurship for Engineers	2
GEN301 - Law for Engineers	2
GEN302 - Engineering Ethics	1
GEN410 - Engineering Projects Management	2
Mathematics and Sciences	32
CHM212 - General Chemistry	3
CHM270 - Laboratory of General Chemistry	1
GEN250 - Modern Physics	3
GEN270 - Physics Laboratory	1
GEN350 - Mathematics for Engineers	3
GEN428 - Numerical Analysis	3
MAT207 - Algebra for Engineers 1	3
MAT217 - Calculus for Engineers 1	3
MAT227 - Calculus for Engineers 2	3
MAT307 - Algebra for Engineers 2	3
MAT337 - Calculus for Engineers 3	3
STA307 - Probability and Statistics for Engineers	3
Engineering courses	69
GEL211 - Electric Circuits	3
GEL271 - Electric Circuits Lab	1
GEL311 - Logic Design	3
GEL313 - Electronics	3
GEL314 - Digital Electronics	2
GEL371 - Electronics Lab	1
GEL372 - Digital Electronics Laboratory	1
GEL420 - Nonlinear Electronics	3
GEL445 - Microprocessors	3
GEL472 - Non Linear Electronics Lab	1
GEL474 - Microprocessors Laboratory	1
GEN499 - Seminars and Conferences	0
GIN221 - Introduction to Programming	3
GIN231 - Data Structures and Algorithms	3
GIN300 - Database Systems	3
GIN311 - Elements of Discrete Mathematics	2
GIN314 - Object Oriented Design	3

GIN321 - Algorithmics	3
GIN371 - Database Laboratory	1
GIN400 - Advanced Database Systems	3
GIN401 - Advanced Database Systems Lab	1
GIN421 - Operating Systems	3
GIN425 - Software Engineering Design	3
GIN446 - Web Programming	3
GIN450 - Advanced Computer Architecture	3
GIN480 - Internship I	1
GIN527 - Distributed Systems	3
GIN581 - Internship II	1
GIN596 - Final Project I	1
GIN597 - Final Project II	3
GRT431 - Network Architecture and Protocols	3
GRT473 - Network Architecture and Protocols Lab	1
Technical Electives	17 out of 42
GEL558 - Microcontrollers	3
GEL575 - Microcontrollers Lab	1
GIN431 - Advanced Algorithmics	3
GIN511 - Cryptography and Computer Security	3
GIN520 - Human Machine Interaction	3
GIN522 - Software Verification and Validation	3
GIN524 - Advanced Web Technologies	3
GIN525 - Computer Network Security	3
GIN526 - Planning and Configuration of Computer Networks	3
GIN528 - Mobile Devices Programming	2
GIN532 - Artificial Intelligence	3
GRT531 - Advanced Networks Architectures	3
GRT532 - Advanced Networks Architectures Lab	1
GRT560 - Digital Image Processing	3
GRT573 - Digital Image Processing Lab	1
GRT578 - Advanced Mobile Networks	3
GRT579 - Advanced Mobile Networks Lab	1
Approved Faculty Electives	6 out of 21
GEN450 - Finite Element Method	3
GMC320 - Dynamics	3
GMC340 - Thermodynamics	3
GRT320 - Electrostatics and Magnetism	3
GRT420 - Signal Theory	3
GRT421 - Digital Signal Processing	3
GRT423 - Waves and Propagation	3
Total	146

Bachelor of Engineering in Mechanical Engineering (English)

Offered in Main Campus Kaslik and in RUC Zahle (only 68 credits in RUC Zahle)

Accreditation

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of



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college and university programs in applied science, computing, engineering, and engineering technology.

Mission

The mission of the Mechanical Engineering Department is to educate our students for professional leadership as creative problem-solvers in a diverse society including conducting research for societal advancement, and engaging with alumni, industry, government, and community partners through outreach activities. In order to produce engineers prepared for success across a range of career paths, our academic program integrates training in engineering principles, critical thinking, hands-on projects, open-ended problem solving, and the essential skills of teamwork, communication, and ethics.

Program Educational Objectives

After a few years from graduation, the Mechanical Engineering graduates will:

1. Demonstrate proficiency in the principles and methods in mechanical engineering through analytical and experimental solving problem.
2. Work in multifunctional and multicultural environments and teams to gain and transfer information using high level communication skills.
3. Become leaders and responsible citizens and demonstrate broad perspectives regarding ethics, professionalism, safety and social issues in mechanical engineering and related disciplines.
4. Understand the importance of professional growth and seek lifelong learning and continuous education.

Program Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

This program requires 146 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

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A grade of 70/100 increases the need to perform earlier detection on the final cumulative average for every student to help them out obtain a GPA \geq 75 and let him register in his FYP and graduate. In addition to that students have to demonstrate a higher passing capacity for pre-requisite and specialization courses.

General Education	22
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Behavioral, Social Sciences and History	3
General Education - Sports	1
General Education - Religious Sciences	3
ECO350 - Engineering Economics	3
GEN303 - Innovation and Entrepreneurship for Engineers	2
GEN301 - Law for Engineers	2
GEN302 - Engineering Ethics	1
GEN410 - Engineering Projects Management	2

Mathematics and Sciences	32
CHM212 - General Chemistry	3
CHM270 - Laboratory of General Chemistry	1
GMC320 - Dynamics	3
GEN270 - Physics Laboratory	1
GEN350 - Mathematics for Engineers	3
GEN428 - Numerical Analysis	3
MAT207 - Algebra for Engineers 1	3
MAT217 - Calculus for Engineers 1	3
MAT227 - Calculus for Engineers 2	3
MAT307 - Algebra for Engineers 2	3
MAT337 - Calculus for Engineers 3	3
STA307 - Probability and Statistics for Engineers	3
Engineering courses	81
GEL211 - Electric Circuits	3
GEL271 - Electric Circuits Lab	1
GEL320 - Analog and Digital Electronic Circuits	3
GEL425 - Linear Control Systems	3
GEL430 - Electric Machines	3
GEL473 - Electric Machines Lab	1
GEN499 - Seminars and Conferences	0
GIN221 - Introduction to Programming	3
GMC260 - Mechanical Engineering Graphics	3
GMC310 - Statics	3
GMC330 - Dynamics of Rigid Bodies	3
GMC340 - Thermodynamics	3
GMC420 - Applied Thermodynamics	3
GMC425 - Instrumentation and Measurements for Mechanical Engineers	3
GMC430 - Fluid Mechanics	3
GMC440 - Strength of Materials	3
GMC444 - Stress Analysis and Design	3
GMC445 - Metallurgy	3
GMC450 - Theory of Machines	3
GMC451 - Heat Transfer	3
GMC452 - Mechanical Vibrations	3
GMC454 - Manufacturing Technology	3
GMC461 - HVAC Systems	3
GMC464 - Fluid II	3
GMC470 - Manufacturing and Workshop Lab	1
GMC471 - Fluid and Thermal Lab	1
GMC472 - Strength of Materials Lab	1
GMC475 - Linear Control Systems lab for mechanical Engineers	1
GMC480 - Internship I	1
GMC541 - Machinery Design	3
GMC555 - Thermal System Design	3
GMC581 - Internship II	1
GMC596 - Final Project I	1
GMC597 - Final Project II	3
Technical Electives	11 out of 76
GEL502 - Microprocessor Systems	3

GEL503 - Microprocessor Systems Lab	1
GEL504 - Sensors and Acquisition Systems	2
GEL552 - Robotics	3
GEL556 - Advanced Control	3
GEL574 - Advanced Control Lab	1
GEN450 - Finite Element Method	3
GMC453 - Engine Technology and Related Components	3
GMC462 - Advanced Transport Phenomena	3
GMC466 - Internal Combustion Engines	3
GMC467 - Mechatronics for Mechanical Engineers	3
GMC500 - Mechanical Systems Design Project	3
GMC501 - Turbomachinery	3
GMC502 - Energy Production	3
GMC503 - Advanced Heat transfer	3
GMC505 - Refrigeration	2
GMC507 - Finite Volume Method	2
GMC508 - Computational Fluid Dynamics Lab	1
GMC509 - Advanced Energy Systems Lab	1
GMC510 - Fluid Power Systems	3
GMC511 - Advanced Manufacturing Techniques	2
GMC512 - Advanced Manufacturing Techniques Lab	1
GMC513 - Steel Structures Design	3
GMC514 - Acoustics	3
GMC516 - Machinery Design	2
GMC517 - Computational Solid Mechanics Lab	1
GMC518 - Mechanics of Composite Materials	3
GMC519 - Mechatronic Systems Lab	1
GMC525 - CAD/CAM	3
GMC526 - CAD/CAM Lab	1
GMC536 - Air Conditioning	2
GMC539 - Computational Fluid Dynamics	3
GMC575 - 3D Modeling and Graphics Lab	1
GMC576 - Stability and Control Lab	1
Total	146

Bachelor of Engineering in Telecommunications Engineering (English)

Accreditation

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Mission

The mission of the Department of Telecommunications Engineering is to develop candidates for the job market and for higher education in telecommunications engineering by providing essential engineering skills through a recognized educational program with an emphasis in signal processing and telecommunications technologies.

Program Educational Objectives

Telecommunications Engineering graduates will:

1. Advance in their careers as professional engineers, researchers, educators or entrepreneurs amid technological changes.

2. Demonstrate expertise and leadership in different fields of telecommunications engineering, and use them to contribute to the sustainable development of society.

Program Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

This program requires 146 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

All the Level 300&above-Engineering Courses require a minimum passing grade of 70/100. The Final Year Project requires a minimum passing grade of 80/100

A grade of 70/100 increases the need to perform earlier detection on the final cumulative average for every student to help them out obtain a $GPA \geq 75$ and let him register in his FYP and graduate. In addition to that students have to demonstrate a higher passing capacity for pre-requisite and specialization courses.

General Education	22
General Education - Civic Engagement	2
General Education - English Communication	3
General Education - Behavioral, Social Sciences and History	3
General Education - Sports	1
General Education - Religious Sciences	3
ECO350 - Engineering Economics	3
GEN303 - Innovation and Entrepreneurship for Engineers	2
GEN301 - Law for Engineers	2
GEN302 - Engineering Ethics	1
GEN410 - Engineering Projects Management	2
Mathematics and Sciences	32
CHM212 - General Chemistry	3
CHM270 - Laboratory of General Chemistry	1
GEN250 - Modern Physics	3
GEN270 - Physics Laboratory	1
GEN350 - Mathematics for Engineers	3
GEN428 - Numerical Analysis	3
MAT207 - Algebra for Engineers 1	3
MAT217 - Calculus for Engineers 1	3
MAT227 - Calculus for Engineers 2	3
MAT307 - Algebra for Engineers 2	3
MAT337 - Calculus for Engineers 3	3
STA307 - Probability and Statistics for Engineers	3
Engineering courses	76

GEL211 - Electric Circuits	3
GEL271 - Electric Circuits Lab	1
GEL311 - Logic Design	3
GEL312 - Electric Power Systems	3
GEL313 - Electronics	3
GEL314 - Digital Electronics	2
GEL371 - Electronics Lab	1
GEL372 - Digital Electronics Laboratory	1
GEL420 - Nonlinear Electronics	3
GEL445 - Microprocessors	3
GEL472 - Non Linear Electronics Lab	1
GEL474 - Microprocessors Laboratory	1
GEN499 - Seminars and Conferences	0
GIN221 - Introduction to Programming	3
GIN231 - Data Structures and Algorithms	3
GIN300 - Database Systems	3
GIN371 - Database Laboratory	1
GIN446 - Web Programming	3
GRT320 - Electrostatics and Magnetism	3
GRT410 - Signals and Systems	3
GRT421 - Digital Signal Processing	3
GRT423 - Waves and Propagation	3
GRT431 - Network Architecture and Protocols	3
GRT432 - Analog and Digital Communications	3
GRT470 - Digital Signal Processing Laboratory	1
GRT473 - Network Architecture and Protocols Lab	1
GRT480 - Internship I	1
GRT543 - Telephony	3
GRT545 - Mobile Communications	3
GRT560 - Digital Image Processing	3
GRT570 - Communications Laboratory	1
GRT572 - Mobile Communications Lab	1
GRT573 - Digital Image Processing Laboratory	1
GRT581 - Internship II	1
GRT596 - Final Project I	1
GRT597 - Final Project II	3
Technical Electives	16 out of 38
GEL558 - Microcontrollers	3
GEL575 - Microcontrollers Lab	1
GIN450 - Advanced Computer Architecture	3
GIN473 - Applied Programming Lab	1
GIN527 - Distributed Systems	3
GIN528 - Mobile Devices Programming	2
GRT531 - Advanced Networks Architectures	3
GRT532 - Advanced Networks Architectures Lab	1
GRT541 - Optical Communications	2
GRT542 - Network Modeling	2
GRT546 - Telecommunications Regulations	1
GRT549 - Security of Fixed and Mobile Networks	3
GRT554 - Antennas, Radars and GPS	3

GRT563 - Video Compression	2
GRT564 - Advanced Communication Systems	3
GRT565 - Information Theory and Coding	3
GRT566 - Advanced Transmission Systems Lab	1
GRT571 - Networks Modeling Laboratory	1
Total	146

Academic Minors

Minor in Biomedical Engineering (English)

Mission

A minor in biomedical engineering is offered for all engineering students (electrical, computer, mechanical, chemical and civil engineering) at USEK. This minor will help students to expand their knowledge in the field of biomedical engineering and to apply their skills in the restraint environment of the medical field.

Program Educational Objectives

Students of this program will be better prepared to successfully pursue:

1. Focused study leading to research or professional practice in biomedical engineering.
2. Careers in biomedical engineering industries or related technical and professional fields.

Program Outcomes

- a. Apply biomedical knowledge and skills in their professional career.
- b. Be familiar with complex systems in healthcare environments.
- c. Able to design and troubleshoot medical devices.

Minor Requirements

18 credits are necessary to fulfill requirements of the biomedical engineering minor: 3 credits from Group I courses, either 6 credits from Group II courses and 3 credits from Group IV or 3 credits from Group II and 6 credits from Group IV, 6 credits from Group III courses.

Group I	
GBM330 - Biology for Biomedical Engineers	3
GBM340 - Physiology for Biomedical Engineers	3
GBM502 - Biochemistry for Biomedical Engineers	2
GBM503 - Biochemistry Lab for Biomedical Engineers	1
GBM440 - Biophysics and Bioelectricity	3
GBM507 - Biocompatibility and Biomaterials of Medical Devices	3
GBM536 - Nuclear Medicine and Radiotherapy	2
Group II	
GBM401 - Introduction to Biomedical Engineering	2
GBM416 - Medical Imaging Systems	3
GBM501 - Health and Hospitals Services	1
GBM532 - Regulation of Medical Devices	1
Group III	
GBM451 - Medical Instrumentation Design and Development	3
GBM471 - Medical Instrumentation Design and Development Lab	1
GBM462 - Biomedical Signal Analysis	3
GBM472 - Biomedical Signal Analysis Lab	1
GBM537 - Design of Medical Equipment	3
GBM548 - Applied Medical Image Processing	3
GBM549 - Applied Medical Image Processing Lab	1
GBM417 - Health Information Systems	3
GBM520 - Bioinformatics	3
GBM530 - Bioinformatics Lab	3

Group IV	
GBM509 - Artificial Organs and Rehabilitation Engineering	3
GBM538 - Control of Biological and Drug Delivery Systems	3
GBM539 - Control of Biological and Drug Delivery Systems Lab	1
GBM610 - Biomechanics of Solids	3
GBM611 - Fluid Biomechanics	3
GBM612 - Modeling Techniques in Biomechanics	3
GBM613 - Modeling Techniques in Biomechanics Lab	1
Total	18

Minor in Building Simulation (English)

Mission

The mission of building simulation is to prepare students for a lifelong professional career, by providing personal development and engineering skills to analyze and design effective building management systems for complex buildings, based on a deep and intuitive understanding of physical and mechanical behavior. Furthermore, the program offers a good overview of the field and promotes the ability to co-operate on teams, to communicate in an international environment and to lead project work.

Program Educational Objectives

1. To produce building services engineers capable of designing low energy building solutions that provide comfortable, productive indoor environments for the building occupants.
2. To produce building services engineers, with integrated building design knowledge, who understand the science, engineering, management relevant issues associated with buildings and their systems, through knowledge of: environmental issues; global warming; sustainability and the impact of buildings upon these and the environment in general.
3. To develop a strong approach to problem solving including resolution of conflicting goals through a series of design project modules and the generation, gathering and application of research knowledge.

Program Outcomes

- a. A comprehensive understanding of building thermal performance and systems to control the internal environment of occupied spaces.
- b. A complete knowledge of those factors affecting human thermal comfort and air quality and in-depth understanding of how these influence the design of a building and its engineering systems to serve the occupants.
- c. An understanding of architectural form in relation to space and energy usage.
- d. An ability to apply, and to critically appraise the results of, computing methods for the solution of problems.

Minor Requirements

GMC430 - Fluid Mechanics	3
GMC451 - Heat Transfer	3
GMC461 - HVAC Systems	3
GMC465 - Fluid Mechanics II	2
GMC508 - Computational Fluid Dynamics Lab	1
GMC536 - Air Conditioning	2
GMC539 - Computational Fluid Dynamics	3
Total	17

Minor in Computer Engineering (English)

Mission

The minor in computer engineering is a program which aims to introduce students to fundamental hardware concepts such as logic design, digital electronics and microprocessors as well as software concepts such as algorithmic, web programming, and database systems. Students will also learn how hardware and software

interact, for example in operating systems. With a minor in computer engineering, students will receive preparation for entry into the computer industry and they will become able to apply efficient computing techniques in their primary field of study.

Program Educational Objectives

The computer engineering minor will:

1. Provide an opportunity for students for entry into the computer industry.
2. Prepare students to become more effective at applying computing in their primary field of study.

Program Outcomes

- a. An understanding of the computer hardware architecture.
- b. An ability to use computer hardware and software to solve engineering problems.
- c. An ability to design and implement software modules to meet desired needs.

Minor Requirements

Group I	
GEL311 - Logic Design	3
GEL314 - Digital Electronics	2
GEL372 - Digital Electronics Laboratory	1
GEL445 - Microprocessors	3
GIN300 - Database Systems	3
GIN321 - Algorithmics	3
GIN371 - Database Laboratory	1
GIN446 - Web Programming	3
Group II	
GIN314 - Object Oriented Design	3
GIN321 - Algorithmics	3
GIN421 - Operating Systems	3
GIN425 - Software Engineering Design	3
Electives - Group II	6 or 7
GIN300 - Database Systems	3
GIN371 - Database Laboratory	1
GIN400 - Advanced Database Systems	3
GIN446 - Web Programming	3
GIN450 - Advanced Computer Architecture	3
GIN527 - Distributed Systems	3
Total	18 or 19

Minor in Electrical Installation (English)

Mission

The mission of the minor in electrical installation is to prepare graduates with an integrative understanding of electrical installation issues in a safe and supervised environment.

Program Educational Objectives

1. Develop creative solutions to problems and conceive innovative approaches in the development and design of complex electrical installation plans.
2. Adapt the solution between the client's needs, the cost, environmental issues, and ethical responsibility.

Program Outcomes

- a. Design and implement lighting, power, earthing, and lightning protection systems in buildings.
- b. Design the electric plans corresponding to phone, data, fire, intrusion, videophone, video monitoring, access control, distribution TV, sound, and home automation systems.

Minor Requirements

GEL312 - Electric Power Systems	3
GEL373 - Electric Power Systems Laboratory	1

GEL430 - Electric Machines	3
GEL440 - Electrical Installation Design	2
GEL473 - Electric Machines Lab	1
GEL531 - Generation and Transport of Electrical Energy	3
GEL537 - Advanced Electrical Installations Design	2
Electives	
GCV320 - Technical Drawings	1
GEL340 - Technical Drawing and Computer Aided Design	1
GMC360 - Mechanical Engineering Drawings	2
Total	16

Minor in Food Packaging and Distribution (Hybridⁱ)

Mission

The mission of the minor in food packaging and distribution is to deliver responsible graduates who are conscious and professional in dealing successfully with challenges related to this topic and who will have a positive impact on their communities and the food industries for the betterment of the quality of human life. This will be achieved by providing multidisciplinary teaching, learning and research activities on the importance of packaging and distribution of food commodities, the different types of packaging and their adequacy for specific types of food, food distribution techniques and conditions, the food supply chain, and food and packaging waste management.

Program Educational Objectives

Students will be able to:

1. Assess the quality and efficiency of packaging and distribution conditions used by different food industries.
2. Support food industries in improving their food quality and shelf-life by implementing sustainable alternatives to conventional food packages and distribution methods.
3. Understand how the decisions they take as consumers, workers, stakeholders, citizens and policy makers affect human welfare.

Program Outcomes

- a. Knowledge in appropriate concepts, theories and emerging methodologies related to food packaging and distribution.
- b. An artistic method in packaging design with functional traits, in terms of bioactive and biodegradable materials.
- c. Decision-making capacity in the food supply chain with theories related to goods distribution and purchasing.
- d. A broad education necessary to understand the effect of food waste and packaging on human health and the result of sustainable alternatives on the economy, society and the environment.

Minor Requirements

ARG400 - Packaging Design	2
CHM420 - Macromolecules, Polymers and Materials	3
GAA337 - Legislation and Standardization	3
GAA342 - Food Packaging and Handling	2
GAA414 - Waste Management in Food Industry	3
TRA310 - Transport and Logistics	3
Total	16

Minor in Material Sciences and Engineering (English)

Mission

ⁱ Hybrid: Courses offered in French and/or English

The mission of the material sciences and engineering minor is to observe how engineers discover holistic and effective solutions to unsustainable practices. The program provides a concrete background for students to become innovative future leaders in established manufacturing firms and new entrepreneurial ventures, and gives our graduates a blend of theory and practice by preparing them for this most demanding field.

Program Educational Objectives

1. Providing students with a profound (both detailed and broad) education in the domain of sustainable product creation.
2. Preparing students for an international design, manufacturing or research career.
3. Enabling students to present and defend scientific results.

Program Outcomes

- a. Students will be capable of planning, designing and manufacturing products in a sustainable fashion in order to meet market demand.
- b. Students will be trained to apply all techniques, skills and modern engineering tools, which are required for engineering practice.
- c. Students will have a comprehensive understanding of engineering techniques and state-of-the-art methods.
- d. Students will have an ability to apply, and to critically appraise the results of, computing methods for the solution of problems.

Minor Requirements

GMC310 - Statics	3
GMC360 - Mechanical Engineering Drawings	2
GMC440 - Strength of Materials	3
GMC445 - Metallurgy	3
GMC455 - Manufacturing Techniques	2
GMC470 - Manufacturing and Workshop Lab	1
GMC511 - Advanced Manufacturing Techniques	2
GMC512 - Advanced Manufacturing Techniques Lab	1
Total	17

Minor in Petroleum and Natural Gas Engineering (English)

Mission

A minor in petroleum and natural gas engineering is accessible to undergraduate majors in various fields of engineering. The mission of the petroleum and natural gas engineering minor is to enhance the academic credentials of an engineering student in the field of exploration, development and production of oil and gas.

Program Educational Objectives

The petroleum engineering minor will:

1. Provide an opportunity for students to enter careers in areas of national need such as the petroleum industry.
2. Prepare students for eventual postgraduate studies in petroleum engineering.

Program Outcomes

- a. Students will acquire essential knowledge in petroleum and natural gas extraction, particularly in processes as they relate to drilling, characterization and production.
- b. Students will be introduced to petroleum engineering tools for analysis and computation.

Minor Requirements

GCH541 - Introduction to Petroleum Engineering	2
GCH543 - Drilling Engineering	3
GCH552 - Reservoir Characterization	3
GCH579 - Analysis of Petroleum Products Lab	1
GCV410 - Geology and Geophysics	3

GMC430 - Fluid Mechanics	3
Total	15

Minor in Process Engineering (English)

Mission

The minor in process engineering is open to all engineering students in majors other than chemical engineering. The mission of this minor is to provide a solid foundation in chemical engineering principles.

Program Educational Objectives

The process engineering minor will:

1. Provide an understanding of basic chemical engineering principles, concepts, and methodologies and how they are applied to the design and performance of industrial processes.
2. Offer an opportunity for students to find jobs in manufacturing, pharmaceuticals, healthcare, design and construction, pulp and paper, petrochemicals, food processing, specialty chemicals, microelectronics, electronic and advanced materials, and polymers.

Program Outcomes

- a. Students will be able to define the principles of chemical engineering.
- b. Students will be able to analyze and emphasize the chemical process using computational and chemical engineering tools.

Minor Requirements

GCH350 - Introduction to Chemical Engineering	2
GCH365 - Unit Operation	3
GCH410 - Physical Chemistry	3
GCH412 - Chemical Engineering Thermodynamics	3
GMC430 - Fluid Mechanics	3
GMC451 - Heat Transfer	3
Total	17

Minor in Sustainable Food Security (Hybridⁱ)

Mission

The mission of the minor in sustainable food security is to deliver responsible graduates who are conscious and professional in dealing successfully with challenges related to this topic and who will have a positive impact on their communities and the food industries for the betterment of the quality of human life.

This will be achieved by providing multidisciplinary teaching, learning and research activities on the importance of macro- and micro- nutrients, as well as the microbiological and chemical content of different types of foods.

Program Educational Objectives

Students will be able to:

1. Understand the importance of an appropriate and balanced diet, of strategies to control the proliferation of pathogenic microorganisms, and of laws and regulations related to food security.
2. Assess the nutritional quality of different communities' diets and the microbial and chemical quality of different types of foods.
3. Implement nutritional diets appropriate to different groups of people, and implement standards, hygiene and manufacturing practices crucial to support individuals and food service entities in providing safe foods.

Program Outcomes

- a. Develop knowledge in nutritional concepts and design healthy diets suitable for different types of people, with emphasis on providing safe food free of contamination.

ⁱ Hybrid: Courses offered in French and/or English

- b. An ability to function on multidisciplinary teams and communicate information related to human nutrition, food production, quality control, standards and regulations.
- c. Design practices and flows related to the production of hygienic and safe food.
- d. Knowledge of the basics of human rights in terms of access to safe food, and methods to achieve access to food in a sustainable manner.

Minor Requirements

GAA337 - Legislation and Standardization	3
GAA338 - Food Quality Management	3
GAA414 - Waste Management in Food Industry	3
GAA436 - Food Toxicology	3
GAG448 - Agriculture and Sustainable Development	2
NTR331 - Community Nutrition	3
PSY370 - Counseling and Ethics	3
Total	20

Graduate Programs

Master of Science in Biomedical Engineering (English)

Mission

The Master of Science in Biomedical Engineering program aims to prepare students for advanced study and research in biomedical engineering. The mission of the program is to sculpt engineering with skills of designing, creating, analyzing innovative solutions and knowledge for improving healthcare lifestyle, devices, structures and facilities in Lebanon, the Middle East, and beyond. To achieve our educational mission, we reinforce our students with problem-solving and communication skills, we fortify their ability to think and analyze critically, we strengthen their creative and experimentation skills and we support them to discover the innovative scientific and engineering solutions.

Program Educational Objectives

1. Advance the students in their careers through innovation, critical thinking, leadership, lifelong learning, proactivity and integrity.
2. Prepare students to succeed in post-graduate studies and industry employment in biomedical engineering or related fields.

Program Outcomes

- a. Ability to shape careers by critical thinking, leadership and managerial skills combined with innovation and proactivity.
- b. Ability to tackle challenges in postgraduate or in industry employment in several biomedical fields.

Degree Requirements

Common Core	12
GEN516 - Scientific English	2
GBM600 - Special Topic in Chemical Engineering	3
GBM605 - Statistics and Clinical Cases	3
GBM633 - Biomedical Signal Analysis	3
GBM634 - Biomedical Signal Analysis Lab	1
Specialization Courses – Approved electives	12 out of 33
GBM512 - Biochemistry for Biomedical Engineers	2
GBM513 - Biochemistry for Biomedical Engineer Lab	1
GBM517 - Biocompatibility and Biomaterials of Medical Devices	3
GBM518 - Applied Medical Image Processing	3
GBM519 - Applied Medical Image Processing Lab	1
GBM529 - Artificial Organs and Rehabilitation Engineering	3
GBM620 - Bioinformatics	3
GBM612 - Modeling of Physiological Systems	1
GBM613 - Modeling of Physiological Systems Lab	3
GBM621 - Bioinformatics Lab	1
GBM632 - Regulation of Medical Devices	1
GBM636 - Nuclear Medicine and Radiotherapy	3
GBM637 - Design of Medical Equipment	2
GBM638 - Control of Biological and Drug Delivery Systems	3
GBM639 - Control of Biological and Drug Delivery Systems Lab	1
GBM650 - Hospital and Medical Equipment Planning	3
Capstone	6
GBM691 - Thesis I	1
GBM692 - Thesis II	5
Total	30

Master of Science in Chemical Engineering (English)

Mission

The Master of Science in Chemical Engineering program aims to prepare students for advanced study and research in chemical engineering. The main goal of the program is to provide a solid background of research fundamentals that will help chemical engineers to serve their society through research, education or other advanced activities.

Program Educational Objectives

1. Expand students' knowledge and skills in chemical engineering.
2. Prepare students to succeed in a doctoral program in chemical engineering or related fields.

Program Outcomes

- a. Ability to apply advanced level knowledge and skills in chemical engineering and related engineering areas.
- b. Ability to ethically conduct applied research and engineering design with professional written and oral communication skills.

Degree Requirements

Common Core	2
GEN516 - Scientific English	2
GCH600 - Special Topic in Chemical Engineering	3
GMC520 - Advanced Transport Phenomena	3
Approved electives – (Petroleum OR Industrial Processes)	16
Approved electives - Petroleum	16 out of 31
GCH535 - Petroleum Refining Techniques	3
GCH540 - Conversion of Petroleum Products	3
GCH620 - Plant Design	3
GCH625 - Process Design and Control	3
GCH640 - Purification of Petroleum Products	3
GCH652 - Reservoir Characterization	3
GCH653 - Drilling Engineering	3
GCH654 - Production Technology	3
GCH655 - Reservoir Simulation	3
GCH656 - Field Development Planning	3
GCH673 - Analysis of Petroleum Products Lab	1
Approved electives - Industrial Processes	16 out of 30
GCH530 - Properties of Polymers	2
GCH632 - Water and Waste Treatment	3
GCH642 - Food and Pharmaceutical Processes	3
GCH643 - Production and Processing of Metals	3
GCH676 - Advanced Chemical Engineering Thermodynamics	3
GCH677 - Mass Transport	3
GCH678 - Advanced Kinetics and Reactor Design	3
GCH679 - Mathematical Modeling	3
GCH680 - Unit Integration Design and Control	3
GCH681 - Process Integration Lab	1
GMC544 - Fluid Rheology	3
Capstone	6
GCH691 - Thesis I	1
GCH692 - Thesis II	5
Total	30

Master of Science in Civil Engineering (English)

Mission

The Master of Science in Civil Engineering program aims to prepare students for advanced study and research in civil engineering. The main goal of the program is to offer civil engineers a solid background of research fundamentals that helps them to serve their society through research, education or other advanced activities.

Program Educational Objectives

1. Expand students' knowledge and skills in civil engineering.
2. Prepare students to succeed in a doctoral program in civil engineering or related fields.

Program Outcomes

- a. Ability to apply advanced level knowledge and skills in civil engineering and related engineering areas.
- b. Ability to ethically conduct applied research and engineering design with professional written and oral communication skills.

Degree Requirements

Common Core	2
GEN516 - Scientific English	2
Specialization Courses	22
Specialization Courses – Public Work	
Mandatory Courses	8
GEN550 - Finite Element Method	3
CVE600 - Seismic Design	3
CVE601 - Management and Site Organization	2
Approved electives	14 out of 18
CVE602 - Urban planning	3
CVE603 - Bridges	3
CVE604 - Pavement Analysis, Design, and Maintenance	3
CVE605 - Special Structures	2
CVE606 - Offshore Structures	2
CVE607 - Highway and Road Design	3
CVE608 - Highway Construction	2
Specialization Courses – Structures and Buildings	
Mandatory Courses	8
GEN550 - Finite Element Method	3
CVE600 - Seismic Design	3
CVE601 - Management and Site Organization	2
Approved electives	14 out of 18
CVE610 - Prestressed Concrete	2
CVE611 - Advanced Structural Analysis	3
CVE612 - Sustainable Construction	3
CVE613 - Steel and Mixed Structures	3
CVE614 - MEP Systems	2
CVE615 - Finishing	2
CVE616 - Maintenance, Rehabilitation and Retrofitting of Buildings	2
CVE617 - Building project	1
Specialization Courses – Geotechnics	
Mandatory Courses	8
GEN550 - Finite Element Method	3
CVE600 - Seismic Design	3
CVE601 - Management and Site Organization	2
Approved electives	14 out of 18

CVE620 - Underground Structures	2
CVE621 - Hydrogeology	2
CVE622 - Rock Mechanics	3
CVE623 - Geographic Information Systems	2
CVE624 - Soil Dynamics	3
CVE625 - Slope Stability, Excavation and Shoring	3
CVE626 - Geotechnics of Roads	3
Specialization Courses – Hydraulics	
Mandatory Courses	8
GEN550 - Finite Element Method	3
CVE600 - Seismic Design	3
CVE601 - Management and Site Organization	2
Approved electives	14 out of 18
CVE605 - Special Structures	2
CVE621 - Hydrogeology	2
CVE630 - Hydraulic Structures	2
CVE631 - Waste Water Treatment	3
CVE632 - Management and Economy of Water	3
CVE633 - Irrigation Network	3
CVE634 - Urban Hydraulics	3
Specialization Courses – Transportation	
CVE602 - Urban Planning	3
CVE604 - Pavement Analysis, Design, and Maintenance	3
CVE607 - Highway and Road Design	3
CVE608 - Highway Construction	2
CVE640 - Transportation Systems and Traffic Analysis	3
CVE641 - Statistical Methods for Transportation Data Analysis	2
CVE642 - Traffic Management Systems	3
CVE643 - Highway Safety	3
Capstone	6
CVE691 - Thesis I	1
CVE692 - Thesis II	5
Total	30

Master of Science in Communication Engineering (English)

Double Degree with Université de Bordeaux

Mission

The mission of the Master of Science in Communications Engineering program is to expand students' knowledge and skills and prepare them to succeed in doctoral programs in communications engineering or related fields.

Program Educational Objectives

Within a few years from graduation, graduates will:

1. Advance in their careers as highly skilled professional engineers, researchers, educators or entrepreneurs amid technological changes.
2. Demonstrate expertise and leadership in different fields of communications engineering and contribute to the development of the telecommunications sector.

Program Outcomes

- a. Ability to apply advanced level knowledge and skills in signal processing, telecommunications, and related engineering areas.



- b. Ability to ethically conduct applied research and engineering design with professional written and oral communication skills.

Degree Requirements

Common Core	13
GEN516 - Scientific English	2
GRT600 - Special Topic in Telecommunications	3
GRT555 - Mobile Communications	3
GRT575 - Mobile Communications Lab	1
GRT631 - Digital Image Processing	3
GRT671 - Digital Image Processing Lab	1
Specialization Courses – Approved electives	11 out of 27
GRT548 - Security of Fixed and Mobile Networks	3
GRT551 - Optical Communications	2
GRT552 - Network Modeling	2
GRT553 - Telephony	3
GRT557 - Information Theory and Coding	3
GRT576 - Network Modeling Lab	1
GRT632 - Antennas, Radars and GPS	3
GRT633 - Advanced Communication Systems	3
GRT634 - Video Compression	2
GRT635 - Advanced Networks Architectures	3
GRT672 - Advanced Transmission Systems Lab	1
GRT673 - Advanced Networks Architectures Lab	1
Capstone	6
GRT691 - Thesis I	1
GRT692 - Thesis II	5
Total	30

Master of Science in Computer Engineering (English)

Mission

The Master of Science in Computer Engineering program aims to prepare students for advanced study and research in computer engineering. It provides a strong foundation that is needed to design, develop and use computer systems. The main goal of the program is to offer computer engineers a solid background of research fundamentals that helps them to serve their society through research, education or other advanced activities.

Program Educational Objectives

1. Expand students' knowledge and skills in computer engineering.
2. Prepare students to succeed in a doctoral program in computer engineering or related fields.

Program Outcomes

- a. Ability to apply advanced level knowledge and skills in computer engineering and related engineering areas.
- b. Ability to ethically conduct applied research and engineering design with professional written and oral communication skills.

Degree Requirements

Common Core	12
GEN516 - Scientific English	2
GIN540 - Advanced Database Systems	3
GIN541 - Advanced Database Systems Lab	1
GIN600 - Special Topic in Computer Engineering	3
GIN624 - Distributed Systems	3

Specialization Courses – Approved electives	12 out of 28
GEL559 - Microcontrollers	3
GEL577 - Microcontrollers Lab	1
GIN510 - Advanced Computer Architecture	3
GIN550 - Cryptography and Computer Security	3
GIN612 - Software Verification and Validation	3
GIN622 - Computer Network Security	3
GIN623 - Planning and Configuration of Computer Networks	3
GIN625 - Mobile Devices Programming	2
GIN632 - Artificial Intelligence	3
GRT635 - Advanced Networks Architectures	3
GRT673 - Advanced Networks Architectures Lab	1
Capstone	6
GIN691 - Thesis I	1
GIN692 - Thesis II	5
Total	30

Master of Science in Electrical and Electronics Engineering (English)

Mission

The mission of the Master of Science in Electrical and Electronics Engineering is to prepare professionals for advanced careers in private and public sectors and/or doctoral studies related to electrical and electronics engineering.

Program Educational Objectives

1. Develop creative solutions to problems and conceive innovative approaches in developing and designing complex electrical and electronic circuits, devices and systems.
2. Prepare students to succeed in a doctoral program in electrical and electronics engineering or related fields.

Program Outcomes

- a. Ability to apply advanced level knowledge and skills in electrical and electronics engineering and related engineering areas.
- b. Ability to ethically conduct applied research and engineering design with professional written and oral communication skills.

Degree Requirements

Common Core	2
GEN516 - Scientific English	2
Specialization	10
GEL600 - Special Topic in Electrical and Electronics Engineering	3
GEL620 - Advanced Control	3
GEL631 - Generation and Transport of Electrical Energy	3
GEL671 - Advanced Control lab	1
Approved electives	12
GEL553 - Robotics	3
GEL559 - Microcontrollers	3
GEL577 - Microcontrollers Lab	1
GEL621 - Advanced Command Strategies	2
GEL622 - Industrial Programming	2
GEL632 - Renewable Energy	3
GEL633 - Mechatronics	3
GEL636 - Industrial Maintenance	2
GEL638 - Machines Diagnosis Methods	3

GEL672 - Industrial Programming Lab	1
GEL673 - Renewable Energy Lab	1
Capstone	6
GEL691 - Thesis I	1
GEL692 - Thesis II	5
Total	30

Master of Science in Enology (Hybridⁱ)

Mission

The Master of Science in Enology supports the mission statement of both the Department of Agri-Food Sciences and the Faculty of Agricultural and Food Sciences through multidisciplinary teaching, learning and research activities in Enology. The mission of the Master degree is to produce socially and ethically responsible graduates who are leaders in dealing successfully with national and global enology challenges and who will have a positive impact on their communities and the wine industries for the betterment of the quality of human life.

Program Educational Objectives

Graduates will:

1. Implement viticultural and enological practices and techniques in terms of production.
2. Develop self-learning, practical proficiency and team work in enology and contribute effectively in multidisciplinary exploratory and production teams.
3. Define production strategies and technical itineraries related to wine marketing.
4. Conduct experimental and research projects in vine and wine sectors.

Program Outcomes

Students will:

- a. Develop strategic choices in terms of viticulture and enological practices.
- b. Design and conduct experiments, as well as analyze and interpret data.
- c. Identify, formulate, and solve problems in industry.
- d. Communicate effectively.
- e. Acquire a knowledge of contemporary issues.

Degree Requirements

Common Core	7
GAA615 - Seminar	3
GAG560A - Advanced Specialized Internship	1
STA515 - Statistical Analysis Methods	3
Specialization	21
ENO505 - Wine and Terroirs	3
ENO511 - Viticultural Practices	3
ENO523 - Microbiology and Fermentation	3
ENO525 - Wine Tasting and Sensory Evaluation	3
ENO527 - Chemical Composition of Musts and Wines	3
ENO611 - Winemaking Technologies	3
ENO621 - Wine Global Market and International Law	3
Elective	3
ENO501 - Arak, Sparkling Wine and Spirits Processing	3
Capstone	6
ENO690A - Master Thesis	6
Total	37

ⁱ Hybrid: Courses offered in French and/or English

Master of Science in Food Engineering (Hybridⁱ)

Mission

The Master of Science in Food Engineering supports the mission statements of both the Department of Agri-Food Sciences and the Faculty of Agricultural and Food Sciences through multidisciplinary teaching, learning and research activities in food science. The mission of the Bachelor degree is to produce socially and ethically responsible graduates who are leaders in dealing successfully with national and global food and health challenges and who will have a positive impact on their communities and the food industries for the betterment of the quality of human life.

Program Educational Objectives

Graduates will:

1. Invest the scientific and engineering skills acquired throughout their studies to meet the emerging challenges in the food industry.
2. Develop self-learning, practical proficiency and team work in food processing techniques and contribute effectively in multidisciplinary exploratory and production teams.
3. Produce safe food of high quality and nutritional values according to the latest national and international standards.
4. Innovate and design new products through the development of new processing techniques while considering their environmental effects and recycle food wastes.

Program Outcomes

Students will:

- a. Apply knowledge of mathematics, science, and engineering.
- b. Design and conduct experiments, as well as analyze and interpret data.
- c. Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- d. Identify, formulate, and solve engineering problems.
- e. Communicate effectively.
- f. Acquire the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- g. Recognize the need for, and an ability to engage in life-long learning.
- h. Acquire a knowledge of contemporary issues.
- i. Use the techniques, skills, and modern engineering tools necessary for engineering practice.

Degree Requirements

Common Core	9
GAA615 - Seminar	3
GAA617 - Modeling in Food Systems	3
STA515 - Statistical Analysis Methods	3
Specialization	23
GAA511 - Food Structure and Formulation	3
GAA513 - Microbiological and Enzymatic Engineering	3
GAA520 - Workshops in Food Engineering	1
GAA523 - Food Innovation and Development	3
GAA527 - Machinery and Food Industrial Control	3
GAA529 - Advanced Food Engineering	3
GAA619 - Quality Assurance and Consumer Health	3
GAG560A - Advanced Specialized Internship	1
GAG645 - Accounting and Management of Agricultural Businesses	3

ⁱ Hybrid: Courses offered in French and/or English

Electives	6
TAG632 - Quality Systems in Agri-food	3
ENO511 - Viticultural Practices	3
ENO523 - Microbiology and Fermentation	3
ENO525 - Wine Tasting and Sensory Evaluation	3
ENO527 - Chemical Composition of Musts and Wines	3
ENO611 - Winemaking Technologies	3
ENO621 - Wine Global Market and International Law	3
Capstone	6
GAA690A - Final Thesis	6
Total	44

Master of Science in Mechanical Engineering (English)

Mission

The Master of Science in Mechanical Engineering program provides a graduate program leading to a professional mechanical engineering degree with a concentration in solid mechanics, thermal mechanics and mechatronics. The Department of Mechanical Engineering has active research interests in the following areas: composites and structured materials, computational fluid dynamics and heat transfer, advanced manufacturing, machinery design, control theory, design of thermal systems, knowledge-based engineering systems, noise control and vibration, robotics and automation, nano/micro system modeling, design and fabrication and sustainable energy.

Program Educational Objectives

The objectives of the Master's Program in Mechanical Engineering are to teach students strategies, methods and techniques to:

1. Practice mechanical engineering in support of the design of engineered systems through the application of the fundamental knowledge, skills, and tools of mechanical engineering.
2. Enhance their skills through formal education and training, independent inquiry, and professional development.
3. Successfully pursue graduate degrees at the Ph. D. level.

Program Outcomes

- a. Determine a span of knowledge and fundamental application of mechanical engineering and related engineering areas.
- b. Demonstrate a depth of knowledge in a chosen focus area of mechanical engineering or related areas, and an ability to work independently to complete a thesis.

Degree Requirements

Common Core	2
GEN516 - Scientific English	2
Specialization Courses	22
Specialization Courses – Mechatronics	
Mandatory Courses	12
GEL620 - Advanced Control	3
GEL642 - Microprocessor Systems	3
GEL671 - Advanced Control Lab	1
GEL677 - Microprocessor Systems Lab	1
GMC660 - Mechatronic Systems	3
GMC674 - Mechatronic Systems Lab	1
Approved electives	10 out of 20
GEL530 - Electric Machines	3
GEL553 - Robotics	3
GEL570 - Electric Machines Lab	1

GMC640 - Hydraulic and Pneumatic Power	2
GMC661 - Orbital Mechanics	3
GMC662 - Biomechanics of Human Movement	3
GMC665 - Smart Materials	3
GMC675 - 3D Modeling and Graphics Lab	1
GMC676 - Stability and Control Lab	1
GMC540 - Internal Combustion Engines	3
GMC640 - Hydraulic and Pneumatic Power	3
Specialization Courses – Energy and Thermal Fluid	
Mandatory Courses	12
GMC607 - Renewable Energy Systems	3
GMC608 - Renewable Energy Systems Lab	1
GMC639 - Computational Fluid Dynamics	3
GMC655 - Thermal Mechanical Design	3
GMC670 - Advanced Energy Systems Lab	1
GMC671 - Computational Fluid Dynamics Lab	1
Approved electives	10 out of 15
GMC543 - Energy Production	3
GMC550 - Turbomachinery	3
GMC609 - Micro and Nanoscale Fluid Mechanics	3
GMC617 - Statistical Thermodynamics	3
GMC635 - Refrigeration	2
GMC675 - 3D Modeling and Graphics Lab	1
GMC535 - Air Conditioning	2
GMC540 - Internal Combustion Engines	3
GMC640 - Hydraulic and Pneumatic Power	3
GMC616 - Design for pressure vessels, piping and pipeline	3
GMC632 - Adv Mechanics of Transfers	2
GMC630 - Acoustics	3
Specialization Courses – Solid Mechanics	
Mandatory Courses	12
GEN550 - Finite Element Method	3
GMC545 - Advanced Manufacturing Techniques	2
GMC612 - Advanced Manufacturing Techniques Lab	1
GMC625 - CAD/CAM	3
GMC626 - CAD/CAM Lab	1
GMC673 - Computational Solid Mechanics Lab	1
GMC675 - 3D Modeling and Graphics Lab	1
Approved electives	10 out of 21
GMC542 - Machinery Design	3
GMC546 - Continuum Mechanics	3
GMC616 - Design for Pressure Vessels, Piping and Pipeline	3
GMC622 - Steel Structures Design	3
GMC630 - Acoustics	3
GMC653 - Mechanics of Fracture and Fatigue	3
GMC663 - Advanced Strength of Materials and Applied Elasticity	3
GMC540 - Internal Combustion Engines	3
GMC640 - Hydraulic and Pneumatic Power	2
GMC642 - Composite Materials	2
Capstone	6

GMC691 - Thesis I	1
GMC692 - Thesis II	5
Total	30

Master of Science in Petroleum Engineering (English)

Mission

The Master of Science in Petroleum Engineering aims at expanding, strengthening and integrating knowledge and understanding of the upstream sector of the petroleum industry. The program educates engineers for the petroleum industry based on earth and physical sciences, computer-based methods, design, economics and engineering aspects of oil and natural gas extraction. The mission of the program is also to prepare students to succeed in a doctoral program in the extraction and field processing of petroleum and natural gas and to satisfy industry demand for Lebanese petroleum engineers with special education in the oil and gas industries.

Program Educational Objectives

1. Expand students' knowledge and skills in petroleum engineering.
2. Prepare students to succeed in a doctoral program in petroleum engineering or related fields.

Program Outcomes

- a. Ability to predict reservoir behavior and to maintain and improve oil and gas production.
- b. Ability to ethically conduct applied research and engineering design with professional written and oral communication skills.

Degree Requirements

Specialization	24
GCH631 - Introduction to Petroleum Engineering	2
GCH653 - Drilling Engineering	3
GCH654 - Production Technology	3
GCH655 - Reservoir Simulation	3
GCH657 - Well Testing	2
GCH658 - Petroleum Geology	2
GCH659 - Formation Evaluation	3
GCH660 - Reservoir Engineering	3
GCH661 - Petroleum Law and Economics	2
GCH670 - Petroleum Laboratory	1
Capstone	6
GCH691 - Thesis I	1
GCH692 - Thesis II	5
Total	30


Information Assurance and Cyber Security Certificate

The online Information Assurance and Cyber Security certificate, offered by the Norwich University's College of Graduate and Continuing Studies (NUCGCS) to students enrolled within the BE in Computer Engineering, BS in Computer Science and BS in Information Technology programs at USEK, aims to provide students with the essential tools needed to identify cyber threats; devise appropriate defense strategies; plan and conduct security assessments; and understand the ethical, legal, and regulatory environment as it relates to operating in cyberspace.

The Information Assurance and Cyber Security certificate is comprised of four courses, delivered through Norwich University Online, a virtual and highly interactive learning platform, encompassing twelve credit hours (12). Upon completion of these four courses, students are granted the Minor in cybersecurity and



NORWICH
UNIVERSITY
Online



Cyber Defense conferred by USEK, in addition to the Certificate in Information Assurance and Cyber Security conferred by Norwich University.

IA340- Intro to Information Assurance (3 credit hours)

This course provides an overview of design considerations involved with the security of site design. The course will also provide an understanding of the Levels of Trust and system accreditation/certification processes. Life cycle management of software, hardware, and physical plant, from planning through destruction will be examined and reinforced using case studies. Additionally understanding of the variety of security systems involving computers and networks and an ability to evaluate vulnerabilities will be discussed.

IA342- Management of Information Assurance (3 credit hours)

This course focuses on management of the information assurance process. Topics include human factors in reducing security breaches, security incident detection and response, remediation, management's role in information assurance, and other considerations in framing and implementing information assurance policies. The final section reviews current topics of particular interest and activity in the field of information assurance.

CYBR410- Systems Assurance (3 credit hours)

This course focuses on the design considerations involved with the security of site design. The course will also provide an understanding of the Levels of Trust and system accreditation/certificate processes. Life cycle management of software, hardware, and physical plant, from planning through destruction will be examined and reinforced using case studies. Additionally, understanding of the variety of security systems involving computers and networks and an ability to evaluate vulnerabilities will be discussed.

CS407 Politics of Cyberspace (3 credit hours)

This course explores the interrelations of modern computing and communications technology with politics, power, news, privacy, crime, and creativity. The course assumes only a rudimentary familiarity with the basic concepts and terminology of modern Internet usage and computing and is not a technology-focused course.

Course descriptions

BCH215 - BCM215	Introduction to Biochemistry	3 cr.
Pre-requisites	CHM212 Or CHE212 Or CHM210 Or CHE210	
This course consists of a study of the structure of carbohydrates, simple and complex lipids, and amino acids and proteins. It also introduces enzyme kinetics and examines the metabolism of carbohydrates, lipids and proteins.		
BCH272	Introduction to Biochemistry Laboratory	1 cr.
Pre-requisites	BCH215 Or BCM215 Or BCH315 Or BCM315	
These laboratory sessions, which accompany BCH215, apply methods of purification, recrystallization, and esterification. They provide students with hands-on experience in the laboratory preparation of a buffer, determination of its pKa and capacity, and tea's caffeine extraction. Topics covered include: qualitative and/or quantitative studies of carbohydrates, lipids, amino acids and proteins, determination of the kinetic parameters of the invertase, and the effect of temperature and pH variation on its activity.		
BIO211 - BLG211	Cell Biology	3 cr.
In this course students will study the structures and functions of prokaryotic and eukaryotic cells. We will focus on eukaryotic cells by examining different areas of cell biology including: plasma membrane and organelles structures and functions, cellular communication, the cell cycle and its regulation, as well as synthesis and function of macromolecules such as DNA, RNA, and proteins.		
BIO222 - BLG222	Animal Histology	3 cr.
Pre-requisites	BLG211 Or BIO211	
Animal histology describes animal tissues and relating their structure to function. The lectures present details of the basic tissues (epithelium, connective tissue, muscle, and nerve) emphasizing human histology.		
BIO228	General Botany	3 cr.
The course has two parts: plant histology and biology. Histology is the study of meristems, parenchyma and plant tissues, their origins, their characteristics, and roles. Plant biology looks at the lower and higher plants, their characteristics and their classifications.		
CHM210 - CHE210	General Chemistry	3 cr.
This course presents a general introduction to chemistry. It highlights the structure of the atom (various models and properties of the elements in the periodic table), various chemical bonds (Lewis structure, VSEPR rules), thermochemistry (thermodynamics and chemical equilibrium), kinetic chemistry (reactions rate orders, Arrhenius law), solutions chemistry (acids and bases and various acid-base equilibrium), complexation, liquid solid equilibrium and solubility product, redox titration and electrochemical cells.		
CHM212	General Chemistry	3 cr.
The purpose of this course is to present a general outline on chemistry. Through this course chemistry is introduced in its various aspects: the structure of the atom, the various models, and the properties of the elements in the periodic table; various chemical bonds, the Lewis structure, VSEPR rules; thermochemistry, thermodynamics and chemical equilibrium; kinetic chemistry, reactions rate orders, the Arrhenius law; solutions chemistry, acids and bases and various acid-base equilibrium; complexation, liquid solid equilibrium and solubility product; and Oxydoreduction titration and electrochemical cells.		
CHM270	Laboratory of General Chemistry	1 cr.
Pre-requisites	CHM212 Or CHE212 Or CHM210 Or CHE210	
The general chemistry laboratory aims to develop different skills for the practical application of theoretical knowledge of general chemistry. Techniques to be learned: preparation and dilution of solutions, experimental verification of the Nernst equation, realization of different types of acid-base and redox titration by volumetric, calorimetric, pH-metric or potentiometric monitoring, and the study of solubility and precipitation reactions and characterization of ions present in a given matrix. The goal of the lab course is to ensure that students are capable of understanding the chemical concepts and to carry out experiments safely and carefully in the laboratory, to obtain data accurately and to manipulate the data correctly.		
CSC205	Information Technology and Database Management	3 cr.
This course introduces the role of information systems in business organizations with a focus on their application. It also emphasizes the fundamentals of database development and provides hands-on experience in designing and developing databases to meet organizational goals through instruction in database management and design. The scope of instruction will include database concepts, data modeling, relational and database development.		
ECO350	Engineering Economics	3 cr.
This course presents the theory and application of the fundamentals of Engineering Economy and the methodology of economic decision analysis. Students will be required to learn the theoretical foundations of various principles of economic analysis and how they can be applied to solve problems encountered in industry and business.		

ENG510	Advanced Academic English	2 cr.
<p>This graduate level course gives students the opportunity to enhance their writing abilities and develop their critical thinking. It attempts to help students achieve greater competency in reading, writing, reflection, and discussion emphasizing the responsibilities of written inquiry and structured reasoning. Students are expected to investigate questions that are at issue for themselves and their audience and for which they do not already have answers. In other words, this course should help students write about what they have learned through their research rather than simply write an argument supporting one side of an issue or another.</p>		
ENO501	Arak, Sparkling Wine and Spirits Processing	3 cr.
<p>This course covers the production of sparkling wines and the main types of spirits including Arak, Vodka, Whisky, Gin, Rum, Brandy and Tequila. It includes detailed information on regions of production, methods of production, commercial considerations and legal and business issues.</p>		
ENO505	Wine and Terroirs	3 cr.
<p>The aim of this course is to consolidate the students' knowledge about the Lebanese and the worldwide terroirs. In this course, presentations will be made about the terroir characteristic (soil, climate, grape variety), the relationship between wine and terroir, the specific oenological practices, as well as the appellations of each wine region. The regions covered in this course are: Lebanon (as one appellation), the appellations of Bordeaux, Bourgogne, Rhône Valley, Languedoc Roussillon, South-west of France, Champagne, Douro valley (Portugal), La Rioja (Spain) and Nappa Valley (USA).</p>		
ENO511	Viticultural Practices	3 cr.
<p>This course covers the current practices for establishing a vineyard and maintaining its vigor and productivity. Topics covered include soil analysis, varietal selection, rooting cuttings, grafting and planting. The course also details the cultural practices in viticulture such as irrigation, fertilization, leaf removal, plowing, pruning, trellising, and phytosanitary treatments.</p>		
ENO523	Microbiology and Fermentation	3 cr.
<p>This course details the microbial ecosystem from grapes to wines, the biology and growth of yeasts and bacteria. It covers alcoholic and malolactic fermentation processes as well as the conditions for better progress of these fermentations. This course also addresses the spoilage microorganisms, in addition to the selected productive microorganisms. It discusses the techniques and means for monitoring microbial stability: sulphuring, thermal destruction and filtration. The optimal conditions for wine packaging, conservation and storage will be discussed. Lab sessions will complete this course.</p>		
ENO525	Wine Tasting and Sensory Evaluation	3 cr.
<p>This course identifies and describes basic tastes, aromas and flavors in wines using reference standards as well as a variety of types and styles of commercial wine. Through lectures and guided tastings and discussions, students will evaluate the sensory properties of wine using methods explained in class. In addition, students will come away with an objective and analytical approach to sensory evaluation. They will also gain an appreciation of the importance of sensory evaluation to a successful winemaking business.</p>		
ENO527	Chemical Composition of Musts and Wines	3 cr.
<p>This course describes the different chemical compounds present in musts and wine. It deals with the influence of different natural and technical conditions on the base material, and the evolution reactions affecting the final product. Laboratory sessions will be conducted to provide students with a hands-on experience in the analysis of wine.</p>		
ENO611	Winemaking Technologies	3 cr.
<p>This course covers the practical aspects imposed in the processing of red wines (traditional and technological), white wines (dry and soft) and rosé wines (bleeding and press). This course details the preparation of juice / must, maceration steps, briefly the alcoholic and malolactic fermentation, aging in barrels, clarification, assemblies and the storage of finished product. The course also includes visits to wineries in Lebanon.</p>		
ENO621	Wine Global Market and International Law	3 cr.
<p>This course provides students with insights into the nature, structure, functional mechanisms, and the complexities of the world's wine market, with emphasis on markets that are of strategic importance. Also, it examines key drivers in the world wine market and their impact on wine export dynamics and characteristics. In addition, the course highlights wine consumer behavioral aspects and successful marketing strategies employed in the wine consuming markets.</p>		
ENO690A	Master Thesis	6 cr.
Pre-requisites	STA 515 and ENO 511 and ENO 523 and ENO 525 and ENO527 and ENO 611 and GAA 615	
<p>The Master thesis is a contribution work to applied or fundamental research that includes the research and findings of the students about a selected topic in enology. It defines the problem and working hypotheses, the general approach, methods and techniques employed. It also includes the statistical analysis, results and discussions, recommendations for future research and a bibliography. The thesis should be prepared according to the guidelines provided by the department and presented to an examining committee for defense.</p>		

GAA212	Introduction to the Food Industry	1 cr.
<p>This course provides an introduction to the food sector from both historical and modern perspectives. It highlights the important role of food scientists in bringing a product from farm to fork. This course also offers a summary of the different areas of study (food processing, food safety, food analysis, food product development, food management and food engineering) and career opportunities within this industry, with a special focus on Lebanon and the Middle East.</p>		
GAA225	Molecular Diagnostics in Food Science	2 cr.
Co-requisites	GAA275	
Pre-requisites	BIO211	
<p>This course deals with the structure and properties of nucleic acids, the basic principles involved in the transmission and the repair of genetic material, as well as gene expression and its regulation. It also discusses the most common techniques of molecular biology applied to research or exploration of genetic material.</p>		
GAA227 - AGT227	Microbiological Quality	3 cr.
Co-requisites	GAA277	
Pre-requisites	BIO211	
<p>This course is a study of the fundamentals of food microbiology, including its history, classifications, spores and their importance, and the most common and serious pathogenic food microorganisms. Fermentation, spoilage and control methodology are also discussed.</p>		
GAA275	Laboratory of Molecular Diagnostics in Food Science	1 cr.
Co-requisites	GAA225	
Pre-requisites	BIO211	
<p>These laboratory sessions, which accompany GAA 225, enable students to extract, quantify and qualify DNA in a bacterial culture using electrophoresis. PCR using specific and non-specific primers, in addition to RAPD and SDS-PAGE protein extraction techniques, are performed. Methods of data interpretation and basic principles of bioinformatics are explained as well.</p>		
GAA277 - AGT271	Food Microbiological Laboratory	1 cr.
Co-requisites	GAA227	
Pre-requisites	BIO211	
<p>These laboratory sessions, which accompany GAA 227, provide students with a technical experience of the preparation of liquid and solid culture media (differential, enriched, specific and selective). They deal with inoculation, incubation and enumeration of microorganisms found in liquid and solid food products. Staining procedures and biochemical tests such as ELISA and AGID are also performed.</p>		
GAA312	Physical Chemistry and Sensorial Properties of Foods	3 cr.
Co-requisites	GAA372	
Pre-requisites	CHM 212	
<p>This course deals with the concepts and principles of physico-chemical experiments and analysis, in addition to the analytical techniques and instruments used in this type of analysis. It includes all the theoretical and practical information related to the implementation of sensory sessions and tests, and the collection and interpretation of sensory information, including statistical treatments. This course also emphasizes the industrial approach to follow in order to design a new food product and the sensory analysis involved in this step.</p>		
GAA316	Fluid Thermodynamics and Mechanics	2 cr.
Pre-requisites	PHY210	
<p>This course covers the laws of thermodynamics and explains the exchange of mechanical (work) and thermal (heat) energy between the external environment and the food system. It deals with concepts such as the conservation of energy in processes, the direction of spontaneous change, the limited efficiency in converting heat into useful power, and tradeoffs between equilibrium thermodynamics and kinetics when designing processes. Equations of state are also explained to model fluids and calculate their thermodynamic properties.</p>		
GAA327	Heat and Mass Transfer	3 cr.
Pre-requisites	GAA316	
<p>This course studies heat transfer by conduction (flat, cylindrical and spherical walls), convection (with and without phase change), by radiation and by molecular diffusion in foods and their processing systems. It deals with the turbulent system, mass transfer coefficients, the theory of two films and transfer at the interface. The course also emphasizes chemical kinetics (reaction speed and order) and the Arrhenius equation, with an interpretation of kinetic data.</p>		
GAA333	Food Production Management	3 cr.
<p>This course helps students to understand strategic issues related to the management of a food chain, and to consider the elements of management that make up this chain. It also aims to train responsible staff for the production units as</p>		

well as decision-makers in terms of cost, time, quantity and quality. The course provides students with an ability to lead a team and a capacity for analysis and synthesis.

GAA334 - AGT334 Food Composition and Transformation 3 cr.

Co-requisites GAA374

Pre-requisites CHM212

This course describes food as a complex system defined by an aqueous phase, a three dimensional matrix of a protein, fat and/or carbohydrate nature, in addition to dispersed elements. It deals with foods obtained from the primary processing of agricultural products, and their composition. The principles of extraction and characterization of some food biomolecules resulting from these products are developed, as well as the chemical and/or enzymatic methods used in order to develop new food products.

GAA337 Legislation and Standardization 3 cr.

This course provides in detail knowledge of national and international legislation, the integration of concepts of hygiene and food safety in production procedures, and the standards applied to each food product. It is concerned with traceability and specifically highlights the role of traceability in food safety. The course deals with the importance and development of food related legislation, standards and the Codex Alimentarius among others.

GAA338 Food Quality Management 3 cr.

This course introduces the importance of quality management for an organization and the necessity for orientation towards total quality. It deals with the main tools of quality assurance which are used both at the product design and operational levels of the firm, such as HACCP (Hazard Analysis Critical Control Points) and ISO series (International Standard Organization).

The course also covers preliminary strategies, risks, internal control and the responsibilities of auditors.

GAA339 - AGT339 Hygiene and Quality Control of Food 3 cr.

Pre-requisites AGT227

This course aims to discuss the current issues of food safety and quality in the food chain. The theoretical approach will enable students to acquire a deep understanding of the steps that would lead to the establishment of a quality system in food industries. These steps aim at ensuring that production conforms to a certain set of standards and through this they contribute to the fulfillment of consumers' safety requirements.

GAA342 Food Packaging and Handling 2 cr.

This course covers three parts: materials, systems and their applications. The first part describes the properties, manufacture and function of metal, glass, paper and plastic packaging. The second part covers food packaging systems and equipment, including cleaning, forming, filling and assembly of packaging materials. The final part of the course focuses on the food packaging applications including aseptic packaging, food/packing interactions, sealing integrity, active packaging, studies on shelf life and packets handling.

GAA357 Molecular Gastronomy 2 cr.

Co-requisites AGT377

This course deals with introductory concepts in the culinary arts (formulation, food habits of consumers), and is a midway between gastronomy and food science. It enables students to understand the physico-chemical principles of culinary processes and the main interactions with ingredients, in order to acquire analytical thinking on culinary innovation.

GAA372 Physical Chemistry and Sensorial Properties of Foods Laboratory 1 cr.

Co-requisites GAA 312

Pre-requisites CHM212

These laboratory sessions, which accompany GAA 312, give students a hands-on experience of the laboratory tests performed to assay the vitamins and minerals in selected food products. Determination of lipids, carbohydrates and ethanol using chromatography is carried out as well. Furthermore, sensory analysis sessions are organized and statistical analysis of sensory data is performed.

GAA374 Food Composition and Transformation Laboratory 1 cr.

Co-requisites GAA 334

Pre-requisites CHM212

These laboratory sessions, which accompany GAA 334, enable students to evaluate the composition of various food products through different techniques used in the laboratories. Experiments include moisture and water activity, carbohydrate and protein analysis, fat analysis and characterization, rheology, and nitrite determination.

GAA377 Molecular Gastronomy Laboratory 1 cr.

Co-requisites GAA 357

These laboratory sessions, which accompany GAA 357, give students the opportunity to understand the functional properties of ingredients and the mechanical changes taking place in them. Stability of emulsions, particle shaping using substances such as sodium alginate and proteolytic enzymes are covered as well. At the end of the course, the

students are expected to present an innovative culinary project.

GAA412 Unit Operations in Food Engineering 2 cr.

This course introduces the concept of process engineering applied to food engineering. The first part deals with the control of unit operations and processes. The second part covers the unit operations in the food industry taking place at room temperature, such as preparation of the raw material, size adjustment, membrane separation techniques and concentration, and mixing and biological processes.

GAA414 Waste Management in Food Industry 3 cr.

This course deals with the waste produced by the food industry. It is designed to provide an overview of the various sample collection, analytical, and data analysis techniques related to detection and control of waste. Topics covered include: technical and regulatory aspects of the handling and control of different waste types, effluent treatment, and management of hazardous and nonhazardous wastes in different categories of the food processing industry.

GAA420 Food Processing Technology 2 cr.

This course highlights different aspects of the processing of food commodities, of plant and animal origin. It deals with extraction and refining of different edible oils, fruits, vegetables, meat and dairy processing, and the technology of bread making. The course also covers the general procedures used in food preservation, auxiliary raw materials, specific processing technologies and packaging materials.

GAA422 Unit Operations in Food Engineering II 2 cr.

Pre-requisites GAA412

This course covers the unit operations in the food industry taking place at variable temperature. It includes thermal processes by adding heat (bleaching, sterilization, cooking, extrusion cooking, pasteurization, drying, evaporation, distillation, and spray-drying) and thermal processes by subtracting heat (cooling, freezing, freeze-drying, and crystallization). The last part of the course will present examples of production lines of some foods which include the different processes involved in product development.

GAA425 Agri-Food Economy 2 cr.

This course examines tools of the economics discipline applied in agricultural and food sectors. It details the roles and functions of economic factors and their interaction. Topics covered include: theory of consumer behavior, market demand, economics of input and product substitution, market equilibrium and product price, government intervention in agriculture, impacts of macroeconomic policy and trade actions and feasibility studies.

GAA434 Agri-Food Marketing 3 cr.

This course provides an experimental-based approach to theoretical and practical applications of food and agricultural marketing. It also deals with the analysis of the agricultural market, supply, demand, modeling and prices of products. Topics covered include: the evolution of marketing, the significance and use of marketing research, marketing segmentation, product and/or service positioning, case studies, distribution, pricing and a variety of structures, and policies and strategies for agri-food products marketing communication and promotion.

GAA436 Food Toxicology 3 cr.

This course provides a general review of toxicology related to food and the human food chain. Fundamental concepts are covered, including dose-response relationships, absorption of toxicants, distribution and storage of toxicants, biotransformation and elimination of toxicants, target organ toxicity, teratogenesis, mutagenesis, carcinogenesis, food allergy, and risk assessment. The course also examines the chemicals of interest to food, such as food additives, natural products, mycotoxins, and pesticides.

GAA444 Beverages and Enology 2 cr.

Co-requisites GAA474

This course describes the production methods of both alcoholic and non-alcoholic beverages with respect to formulations, processes and equipment. It highlights the basics of juice processing including quality assurance and control, extraction, pigments and pigment preservation, a regulatory overview, research standards and regulations. The course also emphasizes the enzymes used in juice production, the degradative chemistry of juice, advanced processing technologies, and the pros and cons of antioxidants. It finally covers the different enology aspects from selecting grapes to bottling the finished product, wine aging, preservatives, and storage and laboratory tests.

GAA445 Special Topics in Agriculture and Food Sciences 2 cr.

Co-requisites GAA475

Pre-requisites GAA334

This course is designed to provide students with key concepts, current issues, research and new trends that are pertinent to professionals working in agricultural sectors, food industries, academia, government and NGOs. This seminar course is given by invited national and international speakers.

GAA474 Beverages and Enology Laboratory 1 cr.

Co-requisites GAA444

These laboratory sessions, which accompany GAA 444, enable students to measure the different quality attributes of

drinking water, juice drinks and alcoholic beverages. It allows them to actually produce a beverage out of raw materials using conventional and emerging processing technologies. A field trip to a winery or brewing facility is organized as well.

GAA475 **Techno-functionality of Ingredients and Additives Laboratory** **1 cr.**

Co-requisites GAA445

These laboratory sessions, which accompany GAA 443, provide students with the technical aspects related to the use of emulsifying agents and stabilizers in foams. In addition, extractions and characterization of food colors and aromatic compounds are carried out. Testing several types of additives in order to find the optimal formulation is covered as well.

GAA476 **Food Processing Technology Laboratory** **1 cr.**

Co-requisites GAA416

These laboratory sessions, which accompany GAA 416, introduce students to the equipment used in food processing and allow them to gain a hands-on experience in the manufacturing of major food commodities of plant and animal origin. In the pilot plant, students prepare canned food products, fruit jams, bread, yogurt and different types of cheese.

GAA511 **Food Structure and Formulation** **3 cr.**

This course highlights the major food ingredients and their physico-chemical roles in foods. The food formulation is discussed in terms of developing a commercial product that is characterized by its added value and that meets pre-determined specifications. Also, the concepts of food texture, including the physiological processes of texture perception, the importance of the mechanical properties and structure of foods, in addition to the different methods of sensory analysis, are included.

GAA513 **Microbiological and Enzymatic Engineering** **3 cr.**

This course will include a description of the latest techniques for the detection of microorganisms. Another aspect of this course will be a detailed examination of engineering fermentation processes, with a component on the selection of ferments. The theoretical part will be associated with functional examples of the production of ferments in the laboratory on a pilot scale with the optimization of physico-chemical parameters in flask and fermenter. The last part will include methods of cultivation of microorganisms, biosynthesis and purification of molecules of industrial interest, bioconversion and biodegradation, and strategies of genetic engineering for the production of proteins of interest and the construction of GMOs.

GAA520 **Workshops in Food Engineering** **1 cr.**

This course is designed for food engineering students in order to initiate group discussions on current topics in their areas of study. Also, it includes critical analysis and evaluation of selected published scientific articles, in addition to presentations given by guest speakers from the public and private sectors on the emerging issues and challenges facing today's food industry. The course also includes mock job interviews and helpful tips to write a professional curriculum vitae.

GAA523 **Food Innovation and Development** **3 cr.**

This course deals with the aspects needed by any modern agri-food business to remain competitive by developing new products. It introduces the students to the successive stages of innovation with a focus on the link that should be strengthened between science, technology and business sectors. The course also highlights the legal and social aspects, in addition to the market study and business plan, needed to establish new firms. Also, it covers some technical details for development of new products.

GAA527 **Machinery and Food Industrial Control** **3 cr.**

This course develops the concepts of industrial automation and control of food industrial process. The first part of the course, industrial automation, covers modeling of industrial processes through physical principles and identifying these processes using time and frequency domain techniques. The second part, process modeling and control, involves Programmable Logic Controllers (PLC) with an explanation of their hardware and software and special attention to Ladder Programming.

GAA529 **Advanced Food Engineering** **3 cr.**

This course highlights the advanced topics and concepts in agri-food engineering. Topics include: thermal properties, heat and mass transfer in food systems, packaging and distribution of food products, traditional and advanced thermal and non-thermal processing (UHT, ohmic heating, microwave, infrared, and radio frequency radiation, high hydrostatic pressure, pulsed electric field, shock-waves, etc.), supercritical fluid extraction, extrusion, rheology and kinetics of food transformations, and membrane processes.

GAA615 **Seminar** **3 cr.**

Pre-requisites STA515 And (GAA511 or TAG601)

This seminar course helps students to develop the analytical skills required to evaluate scientific work. It teaches students to organize, design, and deliver formal presentations, to formulate research questions and an hypothesis, to

use appropriate research design and methods and to write a literature review and a thesis proposal in agricultural, nutritional and food sciences disciplines.

GAA617	Modeling in Food Systems	3 cr.
This course examines the mathematical modeling of industrial food engineering processes. It deals with methods of reducing the number of experiments, optimizing, and improving process automation and capabilities control. Topics covered include roles and applications of modeling, building models, and formulation of differential equations for modeling.		
GAA619	Quality Assurance and Consumer Health	3 cr.
This course highlights the importance of quality assurance on the health of consumers in the face of increasing demands for food quality and fast changing regulations. It emphasizes the fact that food quality assurance is not an option but rather an imperative. Also, it provides agri-food engineers with knowledge and skills for developing a coherent and comprehensive food management system (SOPs, GMPs, HACCP, ISO22000) that reflects their organization's professional standards, ethics, philosophy and values.		
GAA690A	Final Thesis	6 cr.
Pre-requisites	STA515 And GAA615 And GAA511 And GAA513 And GAA520 And GAA523 And GAA611	
The final thesis is an original endeavor in applied or fundamental research. It serves to synthesize, integrate and apply knowledge from earlier relevant courses in the program and to tackle significant genuine topics in agricultural engineering. The thesis demonstrates knowledge of the field and makes an innovative contribution to new theories and practices. It is designed and completed under the direction of a thesis supervisor according to Faculty guidelines and presented to an examining panel for defense.		
GAAC527	Machinery and Food Industrial Control	3 cr.
This course develops the concepts of industrial automation and control of food industrial process. The first part of the course, industrial automation, covers modeling of industrial processes through physical principles and identifying these processes using time and frequency domain techniques. The second part, process modeling and control, involves Programmable Logic Controllers (PLC) with an explanation of their hardware and software and special attention to Ladder Programming.		
GAAC615	Seminar	3 cr.
Pre-requisites	STA515 Or GAG646	
This course covers the modeling of food engineering processes used in the industry in order to reduce the number of experiments, and optimize and improve the automation and control capabilities. It includes topics such as: the roles and applications of modeling in agricultural and food processes based on conservation principles of momentum, heat and mass; a systematic approach to model building; and formulation of a differential equation for modeling, applied to various agricultural and food engineering problems.		
GAAC617	Modeling of Food Systems	3 cr.
This course covers the mathematical modeling of food engineering processes used in the industry in order to reduce the number of experiments, and optimize and improve the automation and control capabilities. It includes topics such as: the roles and applications of modeling in agricultural and food processes based on conservation principles of momentum, heat and mass; a systematic approach to model building; and formulation of a differential equation for modeling, applied to various agricultural and food engineering problems.		
GAG202	Introduction to Agricultural Sciences	1 cr.
This course introduces students to a broad spectrum of topics exploring agriculture and illustrating applied principles of biological systems and how they relate to agriculture. Topics presented include plant science, animal science, biotechnology, soil science, food security, natural resource management, and sustainable agriculture. It also describes the different Lebanese agricultural governmental and non-governmental organizations.		
GAG218	Field Work I S1	1 cr.
This course introduces students to the basics of fieldwork techniques such as greenhouses and preparation of agricultural land. It covers topics such as potting, transplanting, fertilization, pruning, grafting, and plant propagation. It also includes technical farm visits.		
GAG219	Field Work I S2	1 cr.
This course covers topics such as pruning, grafting, different insect pests and diseases, proper pesticide applications, fertilization, plant propagation nurseries, field crops and ornamental plants. It also includes technical applications in bovine and poultry farms.		
GAG222	Geology + Laboratory	2 cr.
This course explores basic geological concepts, principles and processes that shape the planet and the environment. It covers topics such as the history of life on earth, the solar system, the earth's structure, composition and evolution; and the nature of the processes that resulted in its formation and its present state.		
GAG242	Agricultural Zoology	3 cr.

Co-requisites	GAG274	
<p>This course is designed to introduce students to the study of zoology at the organismal and organ function levels. The lecture section will review the general principles of modern zoological theory and provide the students with an introduction to recent advances in zoology in the areas of systematics, evolution, reproduction, development, animal diversity, and animal ecology. The laboratory section is designed to allow students to become familiar with the form and function of major animal phyla through observation of living animals, study of prepared slides, examination of model specimens and museum mounts and dissection of preserved specimens.</p>		
GAG260A-B	Internship I	1 cr.
<p>This introductory internship is an individualized program whereby students are apprenticed to proper officials to gain practical experience in agricultural and/or food facilities. It provides opportunities to apply skills, concepts and theories in a practical context.</p>		
GAG274	Agricultural Zoology Laboratory	1 cr.
Co-requisites	GAG242	
<p>These laboratory sessions, which accompany GAG 242, include an examination of cellular organelles, types of tissues, unicellular protozoa, sponges and multicellular animals. It provides students with hands-on experience in dissection of invertebrates and mammalian vertebrates.</p>		
GAG310	Botany and Systematics	2 cr.
Pre-requisites	BIO228	
<p>This course introduces students to the basic structural, reproductive and evolutionary patterns seen in the plant kingdom. It focuses on plant systematics with emphasis on the phylogenetic, evolutionary history, diversity and structure of plants. Topics covered include a survey of botanical life forms, taxonomy, structure, development and function. The course also highlights the classification and identification of plants by the use of dichotomous keys.</p>		
GAG303	Introduction to Ecology and Environment	3 cr.
<p>This course develops an understanding of the principles of ecology, the life supporting and resource generating structures and functions of the ecosystems. It explores the role of atmosphere, hydrosphere and lithosphere in sustaining life. The course also analyses reasons and effects of current and future environmental problems as well as different aspects of sustainable development.</p>		
GAG324	Agrometeorology and GIS	3 cr.
<p>This course explores the theoretical and practical aspects of agricultural meteorology and geographic information systems (GIS). It provides basic knowledge in agrometeorology related to the agricultural operational applications. It also exploits the climatic data in various agricultural activities in terms of designing and mapping products based on spatial analysis tools, particularly the GIS.</p>		
GAG325	Animal Physiology and Anatomy	2 cr.
Co-requisites	GAG372	
Pre-requisites	GAG242	
<p>This course describes the functioning of living organisms and their adaptation mechanisms. It covers the digestive system, its motricity and secretion, the digestion and absorption particularly in monogastric and polygastric mammals, the excretory system and the maintenance of osmolarity and composition of water and ions. The course also focuses on different phases of reproduction, with a particular emphasis on mammalian spermatogenesis and oogenesis, fertilization, pregnancy, lactation, puberty and menopause.</p>		
GAG328	Field Work II S1	1 cr.
Pre-requisites	GAG218 or GAG219	
<p>This course aims to develop innovative principles and practices in the areas of crop and animal production and protection. It covers crop rotation, fruit trees, seedbed preparation, installing of irrigation systems and greenhouses, turf grass and farm management, proper pesticide applications, apiculture and organic farming systems.</p>		
GAG329	Field Work II S2	1 cr.
Pre-requisites	(GAG218 Or GAG219)	
<p>This course covers topics such as fertilization, insect pests and diseases, pruning and management of fruit and forest trees and vines. It also includes technical applications in seasonal plant nurseries, cut flower nurseries, mushroom cultivation and milk processing farms.</p>		
GAG333	Rural Engineering and Technical Drawing	3 cr.
Pre-requisites	CSC205 Or CSC204	
<p>This course discusses the different fundamentals of architecture and drawing instruments. It integrates them into nature and explores the elements of rural construction. This course also deals with farm, silage forage, housing, water supply and reservoir designs, as well as drawing instruments, scales, lettering with orthographic projections and AutoCAD.</p>		
GAG340	Soil Sciences	2 cr.

Co-requisites GAG370
Pre-requisites GAG222

This course illustrates processes controlling the distribution and formation of soils. It also examines their chemical, physical, and biological properties covering chemical composition and morphological properties, interaction between solid, liquid, and gaseous components, and relationships between plant, soil, and water. It also focuses on soil properties in managing the quality and fertility of agricultural terrains.

GAG342 Plant Physiology 2 cr.

Co-requisites GAG371
Pre-requisites BIO228

This course provides the basic plant physiological principles and the interactions with their environment. It is designed to survey contemporary aspects of plant physiology with emphasis on recent research progress in related fields. Topics covered include water transport, mineral and organic nutrition, phytohormones, development and stress physiology.

GAG343 Irrigation 3 cr.

Pre-requisites GAG340

This course discusses principles and innovations in irrigation management. It provides a mastery of aspects determining the water balance of cultivated fields and the calculations of crop water requirements. Topics covered include soil-water relations, evapotranspiration, chemigation and technical aspects of pumps, pipes, drips, sprinklers and irrigation systems scheduling and feasibility.

GAG344 Fertilization 2 cr.

Pre-requisites GAG340 or

This course presents the principles of nutrient management as related to soil, growth media, plant requirements and fertilizer management systems. It discusses the use, manufacture, properties and fate of common organic and chemical fertilizers. The course also describes the methods of application and their effects on soil reactions.

GAG360A-B Specialized Internship 1 cr.

This specialized internship involves off-campus work providing training opportunities for the practicum experiences with specific hands-on training and know-how in almost every discipline of agricultural and food sectors. It allows students to apply skills, concepts and theories in a practical context.

GAG370 Pedology Laboratory 1 cr.

Co-requisites GAG340

These laboratory sessions, which accompany GAG 340, provide hands-on practical experience with the main techniques used in physical, chemical, and morphological characterizations of soils. This laboratory also explains the calculations performed utilizing the data collected from soil testing procedures.

GAG371 Plant Physiology Laboratory 1 cr.

Co-requisites GAG342

Pre-requisites BIO228

These laboratory sessions, which accompany GAG 342, contribute to the understanding of how plants function. It provides students with hands-on experience in basic physiological principles related to nutrient deficiencies, membrane permeability and composition, water/nutrient absorption and translocation, transpiration, photosynthesis and physiological functions of growth regulators.

GAG372 Anatomy and Animal Physiology Laboratory 1 cr.

Co-requisites GAG325

These laboratory sessions, which accompany GAG 325, provide hands-on practical experience in identification, characterization and counts of blood and sperm cells. This laboratory also examines the structure of the skeleton, glands, female and male reproductive organs.

GAG411 Agricultural Entomology 2 cr.

Co-requisites GAG472

Pre-requisites GAG242

This course focuses on the study of the biology of insects. It deals with morphology, physiology, phylogeny, behavior, ecology, and population dynamics of insects. The course also highlights the importance of insects as agricultural pests and their chemical, integrated, biological and cultural methods of control. Complementary laboratory sessions given in addition to lectures include an examination of the different orders, families of insects as well as a preparation of an insect collection. It provides students with insect dissection skills and examination of the digestive, reproductive, nervous and circulatory systems.

GAG413 Phytopathology 3 cr.

Pre-requisites BIO228

This course is divided into two main parts. The first part consists of presenting plant pathology, bacteriology, virology and nematology as well as their importance and utility. It includes topics on disease origins and classifications, disease

development, spread and epidemiology, the relationship between disease progress and yield reduction, classification, reproduction and dissemination of fungi, bacteria, mollicutes, viruses and nematodes. It also presents mechanisms of plant invasion by pathogens and those of plant resistance. The second part is subdivided into five themes. The first one is an introduction to pesticides and the four other themes look at fungicides, insecticides, herbicides and biopesticides. Active ingredients will be presented according to chemical family, mode of action and targeted plant pests.

GAG420 Renewable Energy 2 cr.

This course provides fundamentals of energy systems and renewable energy resources related to social, economic and environmental issues. It emphasizes alternative energy sources and their technology and application. The course explores society's present needs and future energy demands. Topics covered include conventional energy sources and systems (fossil fuels and nuclear energy) as well as alternative and renewable energy sources (biomass, hydro, geothermal, wind, solar and tidal powers).

GAG421 Aquaculture and Apiculture 2 cr.

This course deals with the fundamental principles of aquaculture and the activities associated with their culture, harvesting, processing and husbandry. It also deals with beekeeping principles and honey production, diseases, pest management and pollination ecology. Topics covered include beekeeping and aquatic animal history, biology, chemistry, nutrition, safety and management.

GAG428 Field Work III S1 1 cr.

Pre-requisites GAG329 or GAG328

This course covers topics such as fertilization, insect pests and diseases, pruning and management of tomato, cucumber, potato, egg plants, pepper, banana, strawberry, and citrus production. It also includes technical applications in goat and swine farms.

GAG429 Field Work III S2 1 cr.

Pre-requisites (GAG328 Or GAG329)

This course covers topics such as fertilization, insect pests and diseases, integrated pest management, pruning and crop management of cucumber, melon, tomato, strawberry, eggplants, and cut flowers. It also includes feasibility studies, experimental designs, calculation and installation of irrigation systems, and new technologies in tomato grafting.

GAG432 Field Trips S1 1 cr.

This course involves visiting agricultural, animal and food manufacturing facilities. It provides an enriching experience and an opportunity for students to explore agricultural, animal and food sector operations. The course improves students' professional capabilities and communication skills. A special linkage is created between students and stakeholders, enhancing a significant professional discussion.

GAG434 Field Visits II 1 cr.

Pre-requisites GAG360B

This course involves visiting agricultural, animal and food manufacturing facilities. It provides an enriching experience and an opportunity for students to explore agricultural, animal and food sector operations. The course improves students' professional capabilities and communication skills. A special linkage is created between students and stakeholders, enhancing a significant professional discussion.

GAG442 Animal Science 3 cr.

Pre-requisites GAG242

The course identifies the scientific art of maintaining and improving animals under domestication including breeding, genetics, nutrition, and housing. It covers the production of animal meat, the general conditions of fattening, and livestock farming systems. The course also deals with animal genetics and various methods of reproduction.

GAG443 Arboriculture 3 cr.

Pre-requisites GAG344

This course describes the principles and practices of fruit trees. It deals with tree selection and planting to fit climatic, space and edaphic conditions as well as diagnosing abnormalities. The course also covers modern commercial fruit science, mineral nutrition, flower and fruit development, pollination, dormancy and winter injury, cultural responses and pest management practices.

GAG444 Crop Production Systems 3 cr.

Pre-requisites GAG342

This course examines the development, implementation, management, production, marketing and enterprise operations across a range of agricultural plant industries. It emphasizes the sustainability of plant and animal production to meet human needs. This course is also oriented towards the production of quality forage for herds in farms.

GAG445 Special Topics in Agriculture and Food Sciences 0 cr.

This course is designed to provide students with key concepts, current issues, research and new trends that are

common methods used to diagnose, treat and control these diseases. Complementary laboratory sessions provide practical experience in identification of animal clinical and sub-clinical lesions due to major pathologies. They provide hands-on experience in differential diagnoses, disease investigation and management via autopsy and necropsy of diseased animals.

GAG545 Landscape and Plant Engineering 3 cr.

Pre-requisites GAG342

This course develops broad horticultural and floricultural foundations for landscape design. It focuses on seasonal and perennial plants, shrubs and trees as well as aspects of plant management. This course covers the production and maintenance of ornamental plants, creation of fences, windbreaks and other structures from a landscaping perspective. It also includes turf grass science and management, climatic adaptation and soil physics.

GAG546 Poultry Sciences 3 cr.

Pre-requisites GAG325

This course integrates the principles of aviculture and poultry production. It focuses on poultry physiology, anatomy and genetics, as well as the hatchery and the establishment and management of farms. Topics covered include broilers, breeders and layers production from economical, management, nutritional, health and biosecurity standpoints.

GAG554 Livestock Farming Systems 3 cr.

Pre-requisites GAG325 and GAG442

This course teaches the principles of animal husbandry techniques. It includes behavior, restraint, basic feeding principles, animal handling, and principles of humane care, housing and management. Topics covered also include species and breed identification applied to bovine, ovine, caprine, swine, and horses.

GAG560A-B Advanced Specialized Internship 1 cr.

This advanced internship is an individualized program whereby students acquire hands-on training experience and know-how in specific agricultural and food sectors. It provides students with knowledge of career opportunities and helps them to gain advanced experience and understanding of agriculture's role in today's society. This internship also provides opportunities to apply skills, concepts and theories in a practical context.

GAG644 Weed Science and Medicinal Plants 3 cr.

Pre-requisites GAG310 And GAG342

This course discusses the biology and ecology of weed and medicinal plants. It introduces the principles of weed science including its identification, management techniques and methodologies. Special attention is given to plants used for the treatment of human diseases with a review of toxic plants. The course also deals with Lebanese floral species identification and preparation of Herbarium specimens.

GAG645 Accounting and Management of Agricultural Businesses 3 cr.

This course describes the business and economics of the agriculture and food industries including the agricultural producer, consumer and food systems. It examines the management principles encountered in the day-to-day operation of an agricultural enterprise and their influence on the decision-making process. Topics also covered include preparation of feasibility studies, balance sheets, tracking systems, consumption and marketing of agricultural products, policies designed to achieve efficiency and welfare goals in agriculture.

GAG646 Statistical Analysis Methods 3 cr.

Pre-requisites MAT216

This course enhances students' knowledge in the field of applied statistics and methodological aspects. It presents the main techniques of statistical tests used (descriptive statistics and differential explanatory methods and data analysis). Topics covered include approaches for data manipulation, quantitative analysis (descriptive statistics, hypothesis testing, linear models, time series, and spatial data analysis), analysis of Variance (ANOVA test), comparisons of samples, simple and multiple regression, the statistical methods (CRD, RBD, Latin squares), multivariate statistics (PCA, CA and discriminant analysis), and different statistical software (SPSS, Statistica, R).

GAG647 Biodiversity and Natural Resources Management 2 cr.

Pre-requisites GAG305 or GAG303

This course covers the biological diversity of living organisms, the reasons behind the loss of biodiversity, the ecological importance of human disturbance and the methods applied in the field of conservation biology. It presents different levels of variability (inter- and intra-specific diversity) in terrestrial and aquatic ecosystems. This course also emphasizes the need for sustainable management of natural resources in terms of ecosystem goods and services. Lebanese biodiversity is examined in detail along with possible applicable management practices.

GAG651 Genetic Engineering and Biotechnology 3 cr.

Co-requisites GAG652

Pre-requisites GAG342

This course covers the principles and applications of genetic engineering and biotechnology in agricultural related

fields. It describes the latest technologies applied to plant biotechnology, plant and mutation breeding, genetic resources, gene cloning and transfer.

GAG652 Genetic Engineering and Biotechnology Laboratory 1 cr.

Co-requisites GAG651

These laboratory sessions, which accompany GAG 651, provide hands-on practical experience in the tissue culture of plants. They also deal with the main techniques for the preparation of plant growth media and all necessary solutions and dilutions under sterile conditions.

GAG690A Final Year Project 6 cr.

Pre-requisites GAGC560B

The final year project is an original endeavor in agricultural engineering research. It serves to synthesize, integrate and apply knowledge from earlier relevant courses in the program and to tackle significant genuine topics in agricultural engineering. The final year project demonstrates knowledge of the field and makes an innovative contribution to new theories and practices. It is designed and completed under the direction of a thesis supervisor according to Faculty guidelines and presented to an examining panel for defense.

GAGC560A Advanced Specialized Internship 1 cr.

Pre-requisites GAG360B

This advanced internship is an individualized program whereby students acquire hands-on training experience and know-how in specific agricultural and food sectors. It provides students with knowledge of career opportunities and helps them to gain advanced experience and understanding of agriculture's role in today's society. This internship also provides opportunities to apply skills, concepts and theories in a practical context.

GAGC645 Accounting and Management of Agricultural Businesses 3 cr.

Pre-requisites CSC205 or CSC204

This course describes the business and economics of the agriculture and food industries including the agricultural producer, consumer and food systems. It examines the management principles encountered in the day-to-day operation of an agricultural enterprise and their influence on the decision-making process. Topics also covered include preparation of feasibility studies, balance sheets, tracking systems, consumption and marketing of agricultural products, policies designed to achieve efficiency and welfare goals in agriculture.

GBM330 Biology for Biomedical Engineers 3 cr.

Co-requisites GBM377

This course aims to introduce concepts of molecular biology, cell biology, biochemistry, and genetic engineering to biomedical engineering students. The topics include an introduction to the cell, organelles and cytoskeleton, DNA, membrane structure and transport, cell communication, cell cycle control, cell death, citric acid cycle, ATP production and electron transport/oxidative phosphorylation. In addition, the course will discuss the basis of the development of certain important diseases such as cancer, diabetes and mechanisms of therapeutic intervention.

GBM340 Physiology for Biomedical Engineers 3 cr.

Pre-requisites GBM330 And GBM377

This course sets the basic concepts for future interfacing between engineering and physiology. It is designed to provide Biomedical Engineering graduate students with the fundamental physiological principles, processes and regulatory mechanisms of the major organ functions in the body. Throughout the course the students will learn about the contribution of both the body's organs and systems to maintaining the internal environment relatively constant, i.e., homeostasis, which is necessary for all cells and organs to function normally. Particular emphasis is given to the nervous, musculoskeletal, cardiovascular, respiratory, digestive, excretory, and endocrine systems.

GBM377 Biology for Biomedical Engineers Laboratory 1 cr.

Co-requisites GBM330

This course provides students with the correct use of the optical microscope, in order to understand the way the cells of the human body work separately and together, and to familiarize the students with the basic concepts of cellular structure. It is also a way to practice observation with details of many kinds of tissues of the human body.

GBM401 Introduction to Biomedical Engineering 2 cr.

Pre-requisites GBM340

Working specifically within the framework of biomedical engineering applications, this course provides the fundamentals of biomedical engineering. The students will learn about a general approach of the different disciplines in biomedical engineering, such as biomechanics and rehabilitation engineering, biomedical imaging, neuronal engineering, and health planning, and design in medical devices. Important resources including the BMES student society and career-building will be presented.

GBM416 Medical Imaging Systems 3 cr.

Pre-requisites GBM440

This course describes the main and advanced techniques in medical imaging. It will cover various techniques for

acquiring medical images: Ultrasound imaging, Magnetic Resonance Imaging, conventional radiology and CT scanner.

GBM417 Health Information Systems 3 cr.

Pre-requisites GBM416

This course provides students with the basics of health information systems. They will assess the basics of standards and protocols used in health information systems. They will learn the methods of archiving and data communications of digital medical images of the PACS. They will become familiar with the new challenges of telemedicine and e-health systems. Based on these they will develop projects concerning medical data archiving and management used in hospital, clinics, and medical technical maintenance industries.

GBM440 Biophysics and Bioelectricity 3 cr.

Pre-requisites GBM340

This course covers a number of topics in physics, including principles of light and radiation, acoustic waves, electricity and magnetism, in order for students to understand the physiological performances of a living cell and its interactions with the environment. The aim is to introduce students to these essential physiological processes that occur every day in our life by focusing on new developments and technologies related to this field.

GBM451 Medical Instrumentation Design and Development 3 cr.

Pre-requisites GEL441 And GBM440

Co-requisites GBM471

This course provides students with knowledge of the electrophysiological methods including ECG, EEG, EMG, defibrillator and cardiac pacemaker. It covers the different measurement techniques for respiration and circulation, the methods for intensive monitoring, and imaging techniques, emphasizing ultrasound. Supporting instrumentation, such as the incubator, respirator, anesthesia machine and dialysis machine, will also be covered.

GBM462 Biomedical Signal Analysis 3 cr.

Pre-requisites GRT420 And GBM451

Co-requisites GBM472

This course covers a number of topics in acquisition and processing of biomedical signals. It introduces the basics of digital signal processing then develops the different methodologies used in cardiological signal processing, neuronal signal processing, ultrasound signal processing, molecular and bio signal processing from the theory to the clinical diagnosis.

GBM471 Medical Instrumentation Design and Development Lab 1 cr.

Pre-requisites GEL475 And GBM451

This laboratory provides students with the basics of medical instrumentation. They will have hands-on experience with biosensors, bio filters, and bio amplifiers, and they will explore the design of medical devices such as ECG, blood pressure monitoring and others. The students will be able to acquire and measure a medical signal, using a microcontroller (example: Arduino uno, Atmega) and design the algorithm behind the sensing and the actuating parts.

GBM472 Biomedical Signal Analysis Lab 1 cr.

Pre-requisites GRT420 And GBM471

Co-requisites GBM462

This lab covers a number of topics in the acquisition and processing of biomedical signals. The students will learn the required knowledge to acquire and process different biomedical data. It covers the different methodologies used in cardiological signal processing, neuronal signal processing, ultrasound signal processing, molecular and bio signal processing from the theory to the clinical diagnosis.

GBM480 Internship I 1 cr.

Pre-requisites GBM440

In order to register for this course, the students first spend a minimum of two months experience in the industry, in a hospital or in a company, and live a real working experience in the field of practice that they have chosen. Afterwards, the students have to present their "job" and what they learned from it in a well-structured and well-written scientific report.

GBM501 Health and Hospitals Services 1 cr.

Pre-requisites GBM401

This course introduces the students to health systems in the world and gives them insight of different economic, social and ethical aspects. The course covers principles of management and hospital management in particular.

GBM502 Biochemistry for Biomedical Engineers 2 cr.

Pre-requisites CHM212

Co-requisites GBM503

This course is devoted to the study of the relationship between structure, interaction and function of fundamental cell macromolecules (proteins, sugars, lipids, nucleic acids). It will also present the usual biochemical techniques useful to

the engineer from the purification of these macromolecules to detection and quantification (application, optimization, and limitations). Mechanisms and enzymatic kinetics (industrial applications of enzymes) as well as the major metabolic pathways (catabolism, anabolism and energy storage) will be discussed. It also explores protein engineering (proteins, chimeras, and induced kinetic/thermodynamic changes) and DNA engineering (cloning, PCR, RT - PCR).

GBM503 Biochemistry for Biomedical Engineers Laboratory 1 cr.

Pre-requisites CHM270 and GBM502

This laboratory provides students with the basic biochemistry methods used to extract, detect or quantify the macromolecules of the cell. Students will use spectrophotometry, liquid chromatography, gas chromatography, and thin layer chromatography. DNA extraction, its amplification by PCR and qualification by horizontal electrophoresis will also be conducted as well as genetic transformation.

GBM505 Statistics and Clinical Cases 3 cr.

Pre-requisites STA307 and GBM401

The course provides students with the statistics skills that are applied to clinical and medical data. Topics include descriptive statistics, theoretical and statistical distributions, statistical estimation methods and hypothesis testing, parametric and non-parametric tests, analysis of variance (ANOVA) and covariance (ANCOVA). Statistical data, models and analysis will be applied to real data sets. The SPSS computer program will be used to perform analysis. Clinical case studies and real case studies will be implemented during this course

GBM507 Biocompatibility and Biomaterials of Medical Devices 3 cr.

Pre-requisites GBM401 And GBM440

This course includes 23 lectures augmented with slides, and is completed with four workshop sessions where the students are required to deliver a written report. At total of three evaluation sessions are scheduled, plus a test at the eighth week, and one final exam.

GBM509 Artificial Organs and Rehabilitation Engineering 3 cr.

Pre-requisites GBM507

This course covers the basics of artificial organs, their functionality and how they could help in the This course covers the basics of artificial organs, their functionality and how they could help in rehabilitation. Rehabilitation engineering and use of artificial organs concerns the application of engineering analysis and design expertise to overcome organ failure and disabilities and improve quality of life. Students will learn about heart assist devices, liver artificial support, hybrid organs, bio-membranes – artificial kidneys, and selected aspects of tissue engineering (regenerative medicine – is it a future of artificial organs?). A range of disabilities and assistive technologies will be investigated. The relationship between engineering innovation, the engineering design process, the human-technology interface, and the physical medicine and rehabilitation medical community will be explored.

GBM512 Biochemistry for Biomedical Engineers 2 cr.

Co-requisites GBM513

This course is devoted to the study of the relationship between structure, interaction and function of fundamental cell macromolecules (proteins, sugars, lipids, nucleic acids). It will also present the usual biochemical techniques useful to the engineer from the purification of these macromolecules to detection and quantification (application, optimization, and limitations). Mechanisms and enzymatic kinetics (industrial applications of enzymes) as well as the major metabolic pathways (catabolism, anabolism and energy storage) will be discussed. The course also covers protein engineering (protein chimeras and induced kinetic/thermodynamic changes) and DNA engineering (cloning, PCR, RT - PCR).

GBM513 Biochemistry for Biomedical Engineers Lab 1 cr.

Co-requisites GBM512

This laboratory provides students with the basic biochemistry methods used to extract, detect or quantify the macromolecules of the cell. Students will use spectrophotometer, liquid chromatography, gas chromatography, and thin layer chromatography. DNA extraction, its amplification by PCR and qualification by horizontal electrophoresis will also be conducted as well as genetic transformation.

GBM517 Biocompatibility and Biomaterials of Medical Devices 3 cr.

This course gives the students an overview of biomaterial sciences. It covers different biomaterials used in the medical domain. It describes the structures and the proper properties of biomaterials and their biocompatibility properties emphasizing the different clinical usage in the human organism

GBM518 Applied Medical Image Processing 3 cr.

Co-requisites GBM519

The course will give students a good understanding and design principles for several effective techniques used for medical image processing. The course covers the main sources of medical imaging data (CT, MRI, PET, and ultrasound). Students will learn the fundamentals behind image processing and analysis methods and algorithms with an emphasis

on biomedical applications. They will learn medical image reconstruction and multi modalities medical image registration.

GBM519	Applied Medical Image Processing Lab	1 cr.
Co-requisites	GBM518	

The laboratory will give students a good understanding and design principles for several effective techniques used for medical image processing. The course covers the main sources of medical imaging data (CT, MRI, PET, and ultrasound). Students will learn the fundamentals behind image processing and analysis methods and algorithms with an emphasis on biomedical applications. They will learn medical image reconstruction and multi modalities medical image registration.

GBM520	Bioinformatics	3 cr.
Pre-requisites	GBM417 And GIN231	
Co-requisites	GBM521	

This course provides students with an introduction to genomics, the information flow in biology, exploring DNA sequence data, the experimental approach to genome sequence data, and genome information resources. It then goes on to describe: functional proteomics (protein sequence and structural data, protein information resources and secondary databases); computation genomics (internet basics, biological data analysis and application, sequence and databases, NCBI model, file format, Perl programming, bioperl, introduction and an overview of the human genome project); sequence alignment and database search (protein primary sequence analysis, DNA sequence analysis, pair wise sequence alignment, FASTA algorithm, BLAST, multiple sequence alignment, DATA base searching using BLAST and FASTA); and structural databases (small molecules databases, protein information resources, protein databank, genbank, swissport, and enterz).

GBM521	Bioinformatics Lab	1 cr.
Co-requisites	GBM520	

The purpose of this lab is to introduce students to use of computers to solve biological problems. The following will be included: use of the LINUX operating system; use of the PERL programming language for bioinformatics analysis; and use of bioinformatics programs on a desktop computer (local, BLAST, REPEATMASKER, CLUSTALW).

GBM529	Artificial Organs and Rehabilitation Engineering	3 cr.
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This course covers the basics of artificial organs, their functionality and how they could help in the rehabilitation of patients. Rehabilitation engineering and artificial organs are the application of engineering analysis and design expertise to overcome organ failure and disabilities and improve quality of life.

GBM530	Modeling of Physiological Systems	3 cr.
Pre-requisites	GBM340 And GEL425	
Co-requisites	GBM531	

This course provides the students with the basics of physiological models and basic biofeedback in medicine. It introduces them to the importance of cardiac modeling and respiratory modeling. The students will be able to understand and analyze respiratory anomalies in modeling and simulation and design. They will be aware of the artificial pancreas, anesthesia machine and the different control loops found in the medical devices.

GBM531	Modeling of Physiological Systems Lab	1 cr.
Co-requisites	GBM530	

This laboratory describes the modeling and the control of biological, biomedical and drug delivery systems used in biomedical, chemical and pharmaceutical engineering. This course covers a set of models, pharmacy-kinetics, and a set of simulations and dynamic behaviors of typical plants, and feedback controller designs. This laboratory is delivered in Matlab, Mathematica, LabVIEW and other software.

GBM532	Regulation of Medical Devices	1 cr.
Pre-requisites	GBM401	

Medical devices, essential for patient care, are currently one of the fastest growing industries in the world. However, the dramatic increase in faulty medical devices that were able to enter the market over recent decades has caused Medical Devices Policy to become increasingly important. Governments and international organizations started putting in place regulations for the safe and appropriate design, use and disposal of these products. The aim of this course is to provide an overview of international medical device regulations. Country-specific regulatory requirements for the USA, EU, and Canada etc. are mentioned and students will learn the general requirements for Risk Management (ISO 14971), Quality Management (ISO 13485) and the CE marking of products.

GBM535	Optical Medical Imaging	1 cr.
Pre-requisites	GEL441 AND GBM451 AND GBM416	

The objective of this course is to provide students with a fundamental overview in classical and modern optics, as well as principles and functions of different Biomedical Optical Devices, and to emphasize the state-of-the-art topics related

to the application of lasers and endoscopy in medicine.

GBM536	Nuclear Medicine and Radiotherapy	3 cr.
Pre-requisites	GBM440	

This course covers the basics of Nuclear Medicine Imaging, Gamma Camera principles including modern digital designs, SPECT, coincidence imaging principles, PET instrumentation, radionuclide and X-ray CT transmission scanning techniques.

GBM537	Design of Medical Equipment	3 cr.
Pre-requisites	GBM416 And GBM451 And GEL312	

This course is designed to educate students about medical devices design and concentrates on the diagnostic modalities fundamentals in addition to hardware design. It is divided into two parts: the aim of the first part is to provide an overview of the design life cycle of medical equipment and to present the essential procedures and methodologies required by medical engineers and designers to develop and release new efficient products to the market; and the aim of the second part is to describe the typical system requirements for the design of medical devices and to be able to understand each system's functionality.

GBM538	Control of Biological and Drug Delivery Systems	3 cr.
Pre-requisites	GBM340 And GEL425	
Co-requisites	GBM539	

This course describes the modeling and the control of biological, biomedical and drug delivery systems used in biomedical and pharmaceutical engineering. The control of biological and drug-delivery systems is critical to providing a long and healthy life to millions of people worldwide. In living systems, maintenance of homeostasis is credited to several mechanisms (positive and negative feedback loops). This course covers the basics of mathematical modeling and controls of biological, chemical and pharmaceutical systems, in order that the students will be able at the end to design control-release devices, to control drug delivery rate, to design feedback controllers such as infusion control in vasoactive drugs, in gaze control systems, in insulin infusion and others.

GBM539	Control of Biological and Drug Delivery Systems Lab	1 cr.
Co-requisites	GBM538	

This laboratory describes the modeling and the control of biological, biomedical and drug delivery systems used in biomedical, chemical and pharmaceutical engineering. This course covers a set of models, pharmacy-kinetics, and a set of simulations and dynamic behaviors of typical plants, and feedback controller designs. This laboratory is delivered in Matlab, Mathematica, LabVIEW and other software.

GBM548	Applied Medical Image Processing	3 cr.
Pre-requisites	(GRT420 Or GRT410) And GBM462	
Co-requisites	GBM549	

The course will give students a good understanding of the design principles for several effective techniques used for medical image processing. The course covers the main sources of medical imaging data (CT, MRI, PET, and ultrasound). Students will learn the fundamentals behind image processing and analysis methods and algorithms with an emphasis on biomedical applications. They will learn medical image reconstruction and multi modalities medical image registration.

GBM549	Applied Medical Image Processing Lab	1 cr.
Pre-requisites	GBM472	

The laboratory will give students a good understanding of the design principles for several effective techniques used for medical image processing. The course covers the main sources of medical imaging data (CT, MRI, PET, and ultrasound). Students will learn the fundamentals behind image processing and analysis methods and algorithms with an emphasis on biomedical applications. They will learn medical image reconstruction and multi modalities medical image registration.

GBM550	Hospital and Medical Equipment Planning	3 cr.
Pre-requisites	GEL340 and GBM451	

The course covers the basics of hospital and medical equipment planning. The different topics include: reading and designing maps, electro-mechanical legends, mapping and planning of the different hospital departments (Emergency, Operating Department, Intensive Care Unit, Medical Laboratory, Radiology, Anesthetic). Applied projects will be discussed and designed in an interactive classroom environment.

GBM581	Internship II	1 cr.
Pre-requisites	GBM596	

In order to register for this course, the students first spend a minimum of two months experience in the industry, a company, or a hospital and live a real experience in the field of practice that they have chosen. Afterwards, the students must present their "job" and what they learned from it in a well-structured and well-written scientific report.

GBM596	Final Project I	1 cr.
<p>This course pushes the students to demonstrate preparedness to start their careers as professional engineers by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic will give the students the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program and apply them to the investigation of an approved research topic and then to produce a report of a professional standard.</p>		
GBM597	Final Project II	3 cr.
Pre-requisites	GBM596	
<p>This course pushes the students to demonstrate preparedness to start their careers as professional engineers by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic and applied developed product or study will give the student the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program and apply them to the investigation of an approved research topic and then to produce a report of a professional standard. This course requires the students to exhibit/develop a proactive approach to manage, orient and present a project.</p>		
GBM600	Special Topic in Biomedical Engineering	3 cr.
GBM605	Statistics and Clinical Cases	3 cr.
<p>The course provides students with the statistics skills that are applied to clinical and medical data. Topics include descriptive statistics, theoretical and statistical distributions, statistical estimation methods and hypothesis testing, parametric and non-parametric tests, analysis of variance (ANOVA) and covariance (ANCOVA). Statistical data, models and analysis will be applied on real data sets. The SPSS computer program will be used to perform analysis. Clinical case studies and real case studies will be implemented during this course</p>		
GBM612	Modeling of Physiological Systems	1 cr.
Co-requisites	GBM613	
<p>This course provides the students with the basics of physiological models and basic biofeedback in medicine. It introduces them to the importance of cardiac modeling and respiratory modeling. The students will be able to understand and analyze respiratory anomalies in modeling and simulation and design. They will be aware of the artificial pancreas, anesthesia machine and the different control loops found in medical devices.</p>		
GBM613	Modeling of Physiological Systems Lab	3 cr.
Co-requisites	GBM612	
<p>The students will be able to design, simulate, implement and control physiological models and medical devices in the laboratory sessions and deliver projects (cardiac, respiratory, functional electrical stimulation, robotic hand and others).</p>		
GBM620	Bioinformatics	3 cr.
Co-requisites	GBM621	
<p>This course provides students with an introduction to genomics, the information flow in biology, exploring DNA sequence data, the experimental approach to genome sequence data, and genome information resources. It then goes on to describe: functional proteomics (protein sequence and structural data, protein information resources and secondary databases); computation genomics (internet basics, biological data analysis and application, sequence and databases, NCBI model, file format, Perl programming, bioperl, introduction and an overview of the human genome project); sequence alignment and database search (protein primary sequence analysis, DNA sequence analysis, pair wise sequence alignment, FASTA algorithm, BLAST, multiple sequence alignment, DATA base searching using BLAST and FASTA); and structural databases (small molecules databases, protein information resources, protein databank, genbank, swissport, and enterz).</p>		
GBM621	Bioinformatics Lab	1 cr.
Co-requisites	GBM620	
<p>The purpose of this lab is to introduce students to use of computers to solve biological problems. The following will be included: use of the LINUX operating system; use of the PERL programming language for bioinformatics analysis; and use of bioinformatics programs on a desktop computer (local, BLAST, REPEATMASKER, CLUSTALW).</p>		
GBM632	Regulation of Medical Devices	1 cr.
<p>Medical devices, essential for patient care, are currently one of the fastest growing industries in the world. However, the dramatic increase in faulty medical devices that were able to enter the market over the last decades has caused Medical Devices Policy to become increasingly important. Governments and international organizations started putting in place regulations for the safe and appropriate design, use and disposal of these products. The aim of this course is to provide an overview of international medical device regulations. Country-specific regulatory requirements for the USA, EU, and Canada etc. are mentioned and students will learn the general requirements for Risk Management</p>		

(ISO 14971), Quality Management (ISO 13485) and the CE marking of products.

GBM633	Biomedical Signal Analysis	3 cr.
Co-requisites	GBM634	
<p>This course covers a number of topics in acquisition and processing of biomedical signals. It explains the basics of digital signal processing then develops the different methodologies used in cardiological signal processing, in neuronal signal processing, in ultrasound signal processing, and in molecular and bio signal processing, from the theory to the clinical diagnosis.</p>		
GBM634	Biomedical Signal Analysis Lab	1 cr.
Co-requisites	GBM633	
<p>This lab covers a number of topics in acquisition and processing of biomedical signals. The students study the required knowledge to acquire and process different biomedical data. It covers the different methodologies used in cardiological signal processing, in neuronal signal processing, in ultrasound signal processing, and in molecular and bio signal processing, from the theory to the clinical diagnosis.</p>		
GBM636	Nuclear Medicine and Radiotherapy	3 cr.
<p>This course covers the basics of Nuclear Medicine Imaging, Gamma Camera principles including modern digital designs, SPECT, coincidence imaging principles, PET instrumentation, radionuclide and X-ray CT transmission scanning techniques.</p>		
GBM637	Design of Medical Equipment	2 cr.
<p>This course is designed to educate students about medical devices design and concentrates on the diagnostic modalities fundamentals in addition to hardware design. It is divided into two parts: the aim of the first part is to provide an overview of the design life cycle of medical equipment and to present the essential procedures and methodologies required by medical engineers and designers to develop and release new efficient products to the market; and the aim of the second part is to describe the typical system requirements for the design of medical devices and to be able to understand each system's functionality.</p>		
GBM638	Control of Biological and Drug Delivery Systems	3 cr.
Co-requisites	GBM639	
<p>This course describes the modeling and the control of biological, biomedical and drug delivery systems used in biomedical and pharmaceutical engineering. The control of biological and drug-delivery systems is critical to providing a long and healthy life to millions of people worldwide. In living systems, maintenance of homeostasis is credited to several mechanisms (positive and negative feedback loops). This course covers the basics of mathematical modeling and control of biological, chemical and pharmaceutical systems, in order that the students will be able at the end to design control-release devices, to control drug delivery rate, to design feedback controllers such as infusion control in vasoactive drugs, in gaze control systems, in insulin infusion and others.</p>		
GBM639	Control of Biological and Drug Delivery Systems Lab	1 cr.
Co-requisites	GBM638	
<p>This laboratory describes the modeling and the control of biological, biomedical and drug delivery systems used in biomedical, chemical and pharmaceutical engineering. This course covers a set of models, pharmacy-kinetics, and a set of simulations and dynamic behaviors of typical plants, and feedback controller designs. This laboratory will be delivered in Matlab, Mathematica, LabVIEW, E-Health Kits and other software.</p>		
GBM650	Hospital and Medical Equipment Planning	3 cr.
<p>The course covers the basics of hospital and medical equipment planning. The different topics include: reading and designing maps, electro-mechanical legends, mapping and planning of the different hospital departments (Emergency, Operating Department, Intensive Care Unit, Medical Laboratory, Radiology, Anesthetic). Applied projects will be discussed and designed in an interactive classroom environment.</p>		
GBM691	Thesis I	1 cr.
GBM692	Thesis II	5 cr.
Pre-requisites	GBM691	
GCH310	Organic Chemistry	3 cr.
Pre-requisites	CHM212 Or CHE212	
Co-requisites	GCH371	
<p>The aim of the course is to give students a basic knowledge of the nomenclature, the molecular structures and the reaction mechanisms of organic chemistry, as well as methods of organic synthesis. The following topics are covered: the structure of organic molecules, the geometry of organic molecules, stereoisomerism, the electronic structure of molecules, reactions and their mechanisms, nomenclature, alkanes, alkenes, alkynes, aromatic hydrocarbons,</p>		

derivatives halogens, aldehydes, ketones and carboxylic acids.

GCH347	Materials Sciences	3 cr.
Pre-requisites	CHM212 Or CHE212	

This course introduces fundamental concepts in materials science. The main purpose of this course is to provide a good understanding of materials science and engineering. Topics covered include: an introduction to materials science, atomic structure and interatomic bonding, crystalline structure, crystal defects, diffusion, phase diagrams, mechanical properties of metals, ceramics, polymers and composite materials, corrosion and degradation of materials.

GCH355	Principles of Chemical Engineering	3 cr.
Pre-requisites	(CHM212 Or CHE212) and MAT217	

This course deals with the following topics : it starts with flow sheet symbols and drawings, followed by the mass and energy balances for steady-state reacting and non-reacting systems; composition variables and mass and energy flow rates; material balances in non-reacting systems and in systems with one or more chemical reactions; degree of freedom analysis for non-reacting and reacting systems; enthalpy of chemical reaction, heats of formation, heat capacities, dew points and bubble points; and numerous examples with process flow sheets to illustrate each topic. The students will learn to draw a flow sheet and construct it to solve chemical balance equations around multi-unit systems, and then extend this to other units.

GCH360	Tools for Chemical Engineering	1 cr.
Co-requisites	GCH350	

Engineering graphics, also known as drafting, is the act and discipline of composing plans that visually communicate how something functions or has to be constructed. Drafting is the visual language of industry and engineering. This course is an introduction to students of the basic standard for drawing technique, including sizing and folded drawing. The drawing technique emphasizes how to draw an object graphically, and projection point from surface and arch lines, and projection drawing from different points of view. It also helps student to draw and design using AUTOCAD.

GCH371	Organic Chemistry Laboratory	1 cr.
Pre-requisites	CHM270	
Co-requisites	GCH310	

This course provides students with the principal techniques in organic chemistry. The experiments concern many examples of reactions, having a particular relevance to industrial organic chemistry.

GCH375	Synthesis and Control of Chemical Processes	1 cr.
Pre-requisites	GCH435 And (GCH355 Or GCH350)	
Co-requisites	GCH465 And GEL425	

In this lab students will learn about process control using computer simulation. They will develop mathematical models of chemical processes by writing unsteady state mass and energy balances, and examine transient response of closed loop sampled data systems. Analysis and design of sampled data controllers, digital PI and PID controllers are also covered.

GCH410	Physical Chemistry	3 cr.
Pre-requisites	CHM212 And MAT217	

This course covers the following topics: real gas (intermolecular interactions, molecular collisions, the critical temperature, the real gas state's equation, gases liquefaction); the first principle of thermodynamics (definition of enthalpy, enthalpy of formation, enthalpy of chemical transformations); the second principle of thermodynamics (entropy, spontaneous transformation, the Gibbs energy, the equilibrium reactions); the equilibrium phase change (phase diagrams, properties of non-electrolytes, phase diagrams of mixtures); fundamental links between electrochemistry and thermodynamics redox reaction, and electrochemical affinity electrode potential.

GCH412	Chemical Engineering Thermodynamics	3 cr.
Pre-requisites	(GCH355 Or GCH350) and GMC340 and MAT227	

This course deals with the following topics: The fluid mixtures, fugacity and activity coefficients, the theory and applications of solution thermodynamics, chemical reaction equilibrium and multi-reaction equilibrium, phase equilibria including an extended treatment of vapor/liquid equilibrium, and adsorption and osmotic equilibria, the thermodynamics analysis of real processes.

GCH415	Applied Organic Chemistry	3 cr.
Pre-requisites	GCH310	

This course looks at the organic chemistry industry. Topics covered include: major sources of raw materials (coal, oil and petrochemistry); classification of oils; fractional distillation of petroleum; the olefins; oxidized derivatives of ethylene; benzene hydrocarbons; production and processing; synthetic polymers; and the detergents.

GCH430	Instrumentation and Measurement Lab	1 cr.
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Pre-requisites GEL211 And GEL425

The aim of this lab is to provide information about the types of sensors used in chemical engineering. The sensors will be used in the chain acquisition-instrumentation. An introduction of LABVIEW is also presented.

GCH434 Mass Transfer Operations 3 cr.

Pre-requisites GMC451

The objective of this course is to provide a means to teach undergraduate chemical engineering students the basic principles of mass transfer and to apply these principles to the design of equipment used in separation processes. This course will cover the fundamental principles of mass transfer in the steady-state, unsteady state and convective mass transfer. The course will also presents an advanced perspective of the mass transfer phenomena and its application in separation unit.

GCH435 Chemical Kinetics and Reactor Design 3 cr.

Pre-requisites GCH410 And (GCH350 Or GCH355) And GMC451

Chemical reaction engineering is a combination of chemical kinetics and design and analysis of reactors to apply and optimize the desired reaction. A thorough understanding of the numerical aspects of chemical kinetics is fundamental to designing and selecting the appropriate chemical reactor for the studied system. This course presents first the kinetics of homogeneous and heterogeneous systems, then kinetic rate expressions are developed and integrated for simple reactions, and multiple reaction systems. Adsorption isotherms may be introduced to develop kinetic rate expressions for heterogeneous catalytic systems. The course then proceeds with chemical reactor design of ideal, isothermal and non-isothermal reactors. The basic steady-state design principles and equations of different ideal reactors models (discontinuous, Continued Stirred Tank Reactor CSTR and plug flow) are covered. Selectivity is introduced to increase the yield of the desired product. The course discusses reactor safety through non-steady-state reactors. Throughout this course, the principles are illustrated using examples taken from organic chemistry, industrial, and/or catalytic reactions in the liquid phase and gaseous phase.

GCH440 Environment and Security in Chemical Industry 3 cr.

Pre-requisites GCH355 Or GCH350

This aim of this course is to provide to students conceptual and practical tools to preserve the quality of the environment and avoid accidents in the industry. Topics covered include risks and environmental indicators of air pollution, water and soil quality criteria and standards, methods and procedures for characterizing environments. Also examined are risk analysis, evaluation procedures, fault tree analysis, risk reduction and preventive remedies levels, corrective and curative.

GCH450 Separation Processes 3 cr.

Pre-requisites (GCH410 and GCH412) And GMC451

The main topics discussed in this course represent the core unit operations in the engineering fields. Beginning with the distillation process (atmospheric and vacuum distillations, rectification), the graphic method of McCabe Thiele is thoroughly discussed and applied with material balance equations. In the Liquid-Liquid Extraction process (binary and ternary mixtures and diagrams), McCabe Thiele methods are used to estimate the total number of theoretical successive extractions. The course then looks at filtration: the different types of filtrations and the mechanisms occurring and the parameters to control to achieve it. There is a detailed examination of deep bed filtration and cake filtration. Decantation operations will also be introduced.

GCH451 Unit Operations of Chemical Engineering 3 cr.

Pre-requisites (GCH434 Or GMC462) and GCH450

The students taking this course have already learned the basic principles of mass transfer in the course "Mass Transfer for Chemical Engineers" as a prerequisite of this course. They have also acquired the basics of heat transfer from the course "Heat Transfer" during their studies at the chemical Engineering department. This course is a complementary to separation processes, and presents an advanced application of heat and mass transfer in the main unit operations in the Process Engineering. The main topics discussed in this course are related to the main principles of unit operations in the Engineering fields: Fixed and Fluidized beds, Crystallization, Liquid-Liquid extraction, Evaporation (cooling towers and condensers), Drying, Fluid-solid separation, osmosis and reverse osmosis (Membrane separation). Other processes such as, Absorption, Adsorption, chromatography and ion exchange (agitated vessels) will be presented.

GCH455 Interfacial Phenomena and Colloids 2 cr.

Pre-requisites GCH435

This course examines the factors underlying interfacial phenomena and focuses on the thermodynamics of surfaces, structural aspects, and electrical phenomena. Some applications are discussed in the domains of emulsion, detergency, foams, fluidization, sedimentation, nucleation, wetting, adhesion, flotation, and electrophoresis.

GCH465 Design of Chemical Reactors 3 cr.

Pre-requisites GCH435 and GCH450

This course deals with the interpretation of the evolution of different systems (with one reactor or multiple reactors), the ideal reactor designs and the possible shifts from ideal behaviors, the effect of transport phenomena in reactive systems, the definition of steady state and stability analysis. Another part will deal with reactor optimization, analysis of heterogeneous reactors and an introduction on industrial reactive system simulation and modeling.

GCH470 Process Design and Control 3 cr.

Pre-requisites GEL425 And GCH450 And GCH435

A course covering the concepts of feedback control systems in the chemical and process industry. The course involves dynamic modeling, design and analysis of dynamic control systems.

GCH471 Separation and Spectroscopic Techniques Lab 2 cr.

Pre-requisites GCH310

This module provides an overview of the current methods of analysis in diverse sectors such as the chemical and food industries, medical analysis laboratories, and environmental sciences. The idea is to connect the practical aspects of each studied method to its basic scientific concepts. Students will learn good laboratory practice through this module as well as the various separation methods (different chromatographic techniques) and spectroscopic techniques (IR, UV, NMR, fluorescence, atomic absorption and emission).

GCH472 Process Engineering Laboratory 1 cr.

Pre-requisites GCH450 and GCH435

This laboratory offers to the students the opportunity to use all the essential knowledge to design, explore and optimize many basic operations. During this laboratory, the students will study the effect of corrosion on metals and desalting water by ion exchange columns. The students will use chemical reactors (tubular, continuous and discontinuous), and will learn how to control temperature, pressure and flows (manually and using digital programs). Another part of this lab deals with a deep bed filtration apparatus to study the pressure drop.

GCH474 Process Instrumentation and measurements 3 cr.

Pre-requisites GCH470

The aim of this course is to provide information about the standard feedback control algorithms, all components of the feedback control loop, control system instrumentation and process safety. All types of sensors used in chemical engineering are introduced. The sensors will be used in the chain acquisition-instrumentation. An introduction of LABVIEW is also presented.

GCH475 Process Control Laboratory 1 cr.

Pre-requisites GCH470

In this lab students will learn about process control using computer simulation. They will develop mathematical models of chemical processes by writing unsteady state mass and energy balances, and examine transient response of closed loop sampled data systems. Analysis and design of sampled data controllers, digital PI and PID controllers are also covered.

GCH480 Internship I 1 cr.

Pre-requisites GCH450 and GCH435

In order to register for this course, the students first spend a minimum of two months experience in the industry or a company and live a real life experience in the field of practice that they have chosen. Afterwards, the students present their "job" and what they learned from it in a well-structured and well-written scientific report.

GCH525 Plant Design 3 cr.

Pre-requisites GCH465

This is the chemical engineering capstone design course, where we put together all that students have learned previously into a coherent project(s). This unit requires the students to undertake a major design task utilizing the knowledge gained throughout the chemical engineering course.

GCH530 Properties of Polymers 2 cr.

Synthetic polymers have become an integral part of our lives and can be found in many every day and advanced materials: rubber tires, bullet-proof vests, paints, fibers, contact lenses, drug delivery vehicles and many others. This course investigates these natural and man-made materials. Students will explore how these materials are synthesized, evaluated, and their commercial applications. They will also review important properties that these materials possess, including their molecular, physical, chemical, thermal, mechanical, and electrical properties. Students will be introduced to the methods of preparation of advanced polymer structures, such as block, star and brush copolymers, semi-conducting and biodegradable polymers. Finally, the forming techniques for plastics (compression molding, injection molding) and the different parameters leading to the degradation of polymers will also be covered.

GCH535 Petroleum Refining Techniques 3 cr.

The objective of the course is to give students a working knowledge in the field of oil refining and gas. It will develop the following themes: oil exploration; oilfields; crude oil - production and global reserves; petroleum; analysis methods

for gaseous, liquid and solid derivatives of oil; standards for testing petroleum products; and fractional distillation.

GCH540 Conversion of Petroleum Products 3 cr.

The objective of the course is to inform students about the chemistry and converting technology of petroleum fractions in order to obtain commercial petroleum products. The main technological units studied are: thermal cracking, catalytic cracking, catalytic reforming, alkylation, isomerization, obtaining sulfur, obtaining hydrogen and the synthesis of MTBE.

GCH541 Introduction to Petroleum Engineering 2 cr.

Pre-requisites GCH415

This course will give an overview of the oil and gas value chain starting from the exploration stage till the marketing stage. An introductory level of knowledge will be gained by students on subjects such as petroleum geology, formation evaluation, drilling engineering, reservoir engineering, production engineering and surface facilities engineering.

GCH542 Upstream and Downstream Petroleum Industry 3 cr.

Pre-requisites GCH541 or GCH578

This course will cover various petroleum engineering disciplines within the upstream phase of the oil and gas industry. An intermediate level of knowledge will be gained by students on subjects such as petroleum geology, formation evaluation, well testing, reservoir simulation, well performance and production management. Students will go through practical exercises of what they learnt in theory on respective modules of Ecrin Software developed by KAPPA Engineering.

GCH543 Drilling Engineering 3 cr.

This course presents the basics of drilling operations. Students will learn to visualize what is taking place down hole. They will go through all drilling steps and techniques and will understand how upstream services interact with the overall drilling process.

GCH544 Midstream Oil and Gas Fundamentals 3 cr.

Pre-requisites GMC430 and GMC435

This course discuss the storage, transportation and management of oil and gas and urban gas. The course mainly includes oil and gas field gathering and transportation, long distance transportation pipeline, storage, loading and unloading and urban transportation and distribution systems, etc.

GCH545 Advanced Chemical Engineering Thermodynamics 3 cr.

Efficient separation operations and many other chemical processes depend on a thorough understanding of the properties of gaseous and liquid mixtures. This course will interpret, correlate, and predict thermodynamic properties used in mixture-related phase-equilibrium calculations. Basic statistical mechanical principles and intermolecular forces will be discussed, and applied to the correlation and prediction of thermodynamic properties and phase equilibria. Statistical thermodynamics will be shown to work with classical thermodynamics, molecular physics, and physical chemistry to solve real-world problems.

GCH546 Mass Transport 3 cr.

Students will learn about the mathematical description of mass transport processes, including analytical solutions for steady state, transient, and multi-dimensional diffusion.

This course explores a wide range of mass transfer behavior for binary and multicomponent systems that are encountered in chemical engineering. Special attention will be given to developing mathematical solutions to common steady and transient mass transfer problems, with an emphasis on understanding the physical implications of such systems. Fick's law, flux definitions, constitutive equations, and conservation equations will be developed. Steady and transient mass transfer by diffusion will be analyzed in detail along with convective mass transfer, mass transport in flowing media, and free convection. Models will also be developed for mass transfer with simultaneous homogeneous or heterogeneous reaction and simultaneous heat and mass transfer. Attention is also given to the development of boundary layer theory and correlations for mass transfer by forced convection. Special topics may include: membrane separation processes, drug delivery and controlled release, and adsorption separations.

GCH547 Advanced Kinetics and Reactor Design 3 cr.

This course is a study of chemical kinetics and mechanisms in complex homogeneous and heterogeneous reaction systems, and the design and analysis of chemical reactors for such systems.

The course covers the science and engineering of reactive chemical systems. Ideal reactors are modeled. The theory of chemical reactions in the gas phase from fundamental physical chemical principles is introduced. Reacting systems are identified and analyzed at the level of elementary steps, including single, chain and catalytic reactions. Mathematical models for heterogeneous reactions, including associated mass transfer limitations, are also developed.

GCH548 Mathematical Modeling 3 cr.

Students will examine the formulation and solution of mathematical models of a range of chemical processes with an emphasis on differential balances and incorporation of uncertainty.

This course introduces a range of analytical and numerical methods for the solution of mathematical equations encountered in chemical engineering. Topics are motivated by and presented in the context of physical phenomena encountered in chemical engineering industrial and research problems. The accuracy and computational complexity of each approach, along with their potential modes of failure, are highlighted. Attention is also given to interpretation and handling of uncertainty in the context of different problems. MATLAB is used in the course as a vehicle for teaching basic programming technique and the use of commercial numerical packages.

GCH549 Unit Integration Design and Control 3 cr.

Reactive distillation is an excellent example of process innovation and intensification. In this course we introduce reactive distillation process design and control, starting with the steady-state design of an ideal quaternary system, steady-state design of real chemical systems, and control of ideal systems. Students will also learn about hybrid and non-conventional systems. By the end of the course students should be able to design and control at least one reactive distillation process.

GCH550 Catalytic Processes 2 cr.

Pre-requisites GCH435

Catalysis improves the speed and selectivity of chemical reactions, and allows the production of reactions under optimized conditions (room temperature, atmospheric pressure). The aim of the course is to give students a basic knowledge of the catalysis technology: homogeneous catalysis, heterogeneous catalysis, enzyme catalysis (biocatalysis), and photocatalysis. The different steps to synthesize a catalyst, different catalytic processes, such as the typical refinery processes of cracking, alkylation, reforming, hydrotreating, and petrochemical processes such as epoxidation, ammonia synthesis, and prevention of pollution such as vehicle emissions (SCR of NO_x and NO_x trap) will be discussed in detail.

GCH551 Applied Electrochemistry and Corrosion 3 cr.

Pre-requisites GCH347

This course aims to introduce the fundamentals of electrochemistry for understanding electrochemical processes involving charge transfer and their applications, looking at accumulators and corrosion.

GCH552 Reservoir Characterization 3 cr.

This course will cover various petroleum engineering disciplines within the upstream phase of the oil and gas industry. An intermediate level of knowledge will be gained by students on subjects such as petroleum geology, formation evaluation, well testing, reservoir simulation, well performance and production management. Students will go through practical exercises of what they learnt in theory on respective modules of Ecrin Software developed by KAPPA Engineering.

GCH554 Production Technology 3 cr.

This course covers three topics: reservoir production concepts (drive mechanisms, material balance equation, production technology); well performance; and production analysis (production analysis theory, practical exercises on the Topaze Module of Ecrin Software).

GCH555 Reservoir Simulation 3 cr.

This course covers the topic of reservoir simulation. It teaches students how to build a static and dynamic reservoir model. Bases of reservoir engineering are reviewed and students will be taught how to set up a conceptual model, create various types of grids, input petrophysical parameters and run a numerical model

GCH556 Field Development Planning 3 cr.

This course covers the subject of field development planning. It teaches the fundamentals of writing a development plan. It combines both knowledge of subsurface and surface aspects in order to design a development plan up to taking a decision on optimal exploitation and development scenarios.

GCH558 Petroleum Geology 2 cr.

Pre-requisites GCH347

This course aims at providing students with general knowledge in Geology and will emphasis on earth processes pertaining to and affecting the petroleum systems. The course shall cover also reserves estimation, classification and geological modeling.

GCH559 Formation Evaluation 3 cr.

Pre-requisites GCH541 and GCH558

This course provides students with working knowledge in the field of well logging and formation evaluation. Students will learn and understand logging methodologies and the principles and physics of tools used in acquiring various types of logs. The course will also cover fundamental techniques of well log processing, analysis and petrophysical evaluations.

GCH562 Process Simulation Lab 1 cr.

Pre-requisites GCH465 or GCH360

This laboratory offers to the students the opportunity to use the ProSim program, a computer-based process simulator, to study different industrial processes. These include: the dehydration of natural gas, LPG recovery, bioethanol production plant, naphthalene separation, heterogeneous extractive distillation, biofuel production plant, production of ethanol and production of cyclohexane.

GCH564 **Water and Waste Treatment** **3 cr.**

Pre-requisites GMC430 and GMC435

The course covers principles of treatment of domestic and industrial water, waste water and sludge. It also includes: unit operations in water and waste water treatment (physical, chemical and biological unit operations for water treatment and pollution control problems); industrial waste water treatment (characteristics, methods of in-plant control, application of various biological, chemical, and physical processes in practical water pollution control systems); drinking water (treatment and public health issues); fundamentals and applications of drinking water treatment processes, interactions among treatment processes, source water quality, and public health issues.

GCH565 **Food and Pharmaceutical Processes** **3 cr.**

Pre-requisites GCH450

Students will learn about food and pharmaceutical processes, specifically: food and medication analysis and quality control; food safety and new product development; regulations, quality assurance, production; and evaluation of both food and pharmaceuticals processes.

GCH566 **Production and Processing of Metals** **3 cr.**

Pre-requisites GCH347 And (GCH410 or GCH412)

In this course, students will be introduced to metallurgy unit operations (pyrometallurgical and hydrometallurgical facilities), the description of unit operations (Mass and Energy Balance, thermodynamics, kinetics), the steel industry (blast furnace, conversion processes, alternative processes), the metallurgy of non-ferrous metals (copper, zinc, lead, reagent metals: aluminum, titanium), and metal recycling.

GCH570 **Petroleum Laboratory** **1 cr.**

Pre-requisites GCH558

This course encompasses laboratory experiments for testing and identifying minerals and rocks in hand samples and under the microscope. The course involves also testing of the petrophysical properties of the rocks such as porosity, absolute and relative permeability, fluid saturations and viscosities.

GCH571 **Process Integration Lab** **3 cr.**

This course will cover the advanced level of process integration and pinch problem theory. It will introduce the newest technologies applied in that field. Students will use first principles, and simulators (such as heat) in order to design a process integration network for both chemical and petrochemical selected processes.

GCH573 **Advanced Process Engineering Lab** **1 cr.**

Pre-requisites GCH 450 And GCH 434

This laboratory offers to the students the opportunity to use advanced knowledge of some operation units and their use in applications in the chemical engineering field. It deals with: gas-liquid absorption, ultrafiltration, multi-function distillation, vacuum ebullimeter, distillation; batch and continuous column; absorption with and without chemical reaction; water cooler; and reverse osmosis. Experiments will also deal with the applications of some operation units in food processing (e.g. driers, tray, rotary, spray).

GCH574 **Properties of Polymers** **2 cr.**

Pre-requisites GCH415 And GCH347

Synthetic polymers have become an integral part of our lives and can be found in many every day and advanced materials: rubber tires, bullet-proof vests, paints, fibers, contact lenses, drug delivery vehicles and many others. This is a course that investigates these natural and man-made materials. We explore how these materials are synthesized, evaluated, and what their commercial applications are. We also review important properties that these materials possess, including their molecular, physical, chemical, thermal, mechanical, and electrical properties. Students will be introduced to the methods of preparation of advanced polymer structures, such as block, star and brush copolymers, semi-conducting and biodegradable polymers. Finally, the forming techniques for plastics (compression molding, injection molding) and the different parameters leading to the degradation of polymers will also be covered. At the end of this course, students will know all the details concerning polymer structures, the characteristics, application and processing of polymers, the structure and synthesis of new polymer materials used in different research areas, the different forming techniques for plastics, and all the factors responsible for the degradation of polymers.

GCH575 **Petroleum Refining Techniques** **3 cr.**

Pre-requisites GCH415

The objective of the course is to give students a working knowledge in the field of oil refining and gas. It will develop

the following themes: oil exploration; oilfields; crude oil - production and global reserves; petroleum; analysis methods for gaseous, liquid and solid derivatives of oil; standards for testing petroleum products; and fractional distillation.

GCH576 Conversion of Petroleum Products 3 cr.

Pre-requisites GCH415

The objective of the course is to inform students about the chemistry and converting technology of petroleum fractions in order to obtain commercial petroleum products. The main technological units studied are: thermal cracking, catalytic cracking, catalytic reforming, alkylation, isomerization, obtaining sulfur, obtaining hydrogen and the synthesis of MTBE.

GCH577 Purification of Petroleum Products 3 cr.

Pre-requisites GCH415

This course covers the following: desalting of crude oil; purification of gases, solvents, and fuels; purification of lubricating oils; precipitation of asphalt vacuum residue by propane; extraction of aromatic hydrocarbons from lubricating cuts by extractive solvents; dewaxing; finishing treatments applied to lubricating oils and paraffin; preparation of bitumen; classification of refineries; and production and distribution utilities in petroleum refineries.

GCH578 Oilfields and Drilling Techniques 2 cr.

Pre-requisites GCH415

This course covers the fundamentals of oil and gas, volumetric parameters of reservoirs, material balances, Darcy's law and the continuity equation, the current lines, models and testing of wells, reservoir properties, rocks and homogeneous and multiphase fluid flow, relative permeability, and compressibility. This course also presents the methods and equipment of drilling techniques. It examines exploration methods: geological and geophysical (gravity, magnetic, electrical and telluric) and seismic; the eruption of the wells and the pressure drops, drilling fluids, penetration, rotary drilling techniques; getting well production, transportation of crude oil, ecological and economic aspects of drilling damage.

GCH579 Analysis of Petroleum Products Lab 1 cr.

Pre-requisites GCH415

This laboratory introduces various methods of analysis by using sophisticated instruments and analytical equipment to determine various physical properties of crude, natural gas, petroleum products and petro-chemicals. Through this module students will learn the theoretical principles and experimental procedures for quantitative estimation.

GCH581 Internship II 1 cr.

Pre-requisites GCH596

In order to register for this course, the students first spend a minimum of two months experience in the industry or a company and live a real life experience in the field of practice that they have chosen. Afterwards, the students present their "job" and what they learned from it in a well-structured and well-written scientific report.

GCH596 Final Project I 1 cr.

This course pushes the students to demonstrate preparedness to start their careers as professional engineers by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic will give the students the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program and apply them to the investigation of an approved research topic and then to produce a report of a professional standard.

GCH597 Final Project II 3 cr.

Pre-requisites GCH596

This course pushes the students to demonstrate preparedness to start their careers as professional engineers by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic and applied developed product or study will give the students the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program and apply them to the investigation of an approved research topic and then to produce a report of a professional standard. This course requires students to exhibit/develop a proactive approach to manage, orient and present a project.

GCH600 Special Topic in Chemical Engineering 3 cr.

GCH620 Plant Design 3 cr.

This is the chemical engineering capstone design course, where we put together all that students have learned previously into a coherent project(s). This unit requires the students to undertake a major design task utilizing the knowledge gained throughout the chemical engineering course.

GCH625 Process Design and Control 3 cr.

A course covering the concepts of feedback control systems in the chemical and process industry. The course involves dynamic modeling, design and analysis of dynamic control systems.

GCH631	Introduction to Petroleum Engineering	2 cr.
This course will introduce the topic of Petroleum Engineering while addressing a number of its sub disciplines mainly petroleum geosciences. Students will also learn about the complete oilfield life cycle and will understand the main health, safety and environmental impacts and concerns associated with the oil & gas activities.		
GCH632	Water and Waste Treatment	3 cr.
This course covers the following topics: physico-chemical water treatment, such as micro straining, flocculation, sedimentation, filtration, disinfection, precipitation, removal of iron and manganese, adsorption, stabilization, thickening and sludge dewatering; waste treatment systems, such as characterization and quantification, reduction and recycling, manufacturing-derived waste, composting, incineration, combustion and pyrolysis, types of incinerators, waste and air emissions, landfill, energy recovery and pollution control.		
GCH640	Purification of Petroleum Products	3 cr.
Pre-requisites	GCH540	
This course covers: desalting of crude oil; purification of gases, solvents, and fuels; purification of lubricating oils; precipitation of asphalt vacuum residue by propane; extraction of aromatic hydrocarbons from lubricating cuts by extractive solvents; dewaxing; finishing treatments applied to lubricating oils and paraffin; preparation of bitumen; classification refineries; and production and distribution utilities in petroleum refineries.		
GCH642	Food and Pharmaceutical Processes	3 cr.
The objective of this course is for students to understand the role played by chemical engineers in these branches of industry, become familiar with all unit operations used by the food and pharmaceutical industries, and to develop the ability to integrate all scientific and technical knowledge among the food and pharmaceutical engineering processes. Topics covered by this course are: drying processes, axis conditioning and humidification, extraction, crystallization, filtration, evaporation and distillation, cooling, stirring, mixing, extrusion cooking, mechanical operations (milling, screening, etc.), membrane and chromatographic separations, biological processes, handling and storage of granules and powders.		
GCH643	Production and Processing of Metals	3 cr.
This course covers the following topics: unit operations of metallurgy (pyrometallurgical and hydrometallurgical plants), description of unit operations (material and energy balances, thermodynamic description, kinetic description), steel (high furnace processes, processes converters, alternative methods), metallurgy of non-ferrous metals (copper, zinc, lead, reactive metals: aluminum, titanium), metal recycling.		
GCH652	Reservoir Characterization	3 cr.
This course will cover various petroleum engineering disciplines within the upstream phase of the oil and gas industry. An intermediate level of knowledge will be gained by students on subjects such as petroleum geology, formation evaluation, well testing, reservoir simulation, well performance and production management. Students will go through practical exercises of what they learnt in theory on respective modules of Ecrin Software developed by KAPPA Engineering.		
GCH653	Drilling Engineering	3 cr.
This course presents the basics of drilling operations. Students will learn to visualize what is taking place down hole. They will go through all drilling steps and techniques and will understand how upstream services interact with the overall drilling process.		
GCH654	Production Technology	3 cr.
Pre-requisites	GCH659 and GCH660 and GCH657	
This course covers three topics: reservoir production concepts (drive mechanisms, material balance equation, production technology); well performance; and production analysis (production analysis theory, practical exercises on the Topaze Module of Ecrin Software).		
GCH655	Reservoir Simulation	3 cr.
Pre-requisites	GCH659 and GCH660 and GCH657	
This course covers the topic of reservoir simulation. It teaches students how to build a static and dynamic reservoir model. Bases of reservoir engineering are reviewed and students will be taught how to set up a conceptual model, create various types of grids, input petrophysical parameters and run a numerical model.		
GCH656	Field Development Planning	3 cr.
This course covers the subject of field development planning. It teaches the fundamentals of writing a development plan. It combines both knowledge of subsurface and surface aspects in order to design a development plan up to taking a decision on optimal exploitation and development scenarios.		
GCH657	Well Testing	2 cr.
Pre-requisites	GCH631 and GCH658	
The course also covers the application of well test (Pressure Transient Analysis) theory to the solution of real well testing problems from design through interpretation for oil, gas and water injection wells. Students will apply and		

practice their knowledge of the topic using the Sapphire Pressure transient Analysis module of Kappa Workstation Software.

GCH658	Petroleum Geology	2 cr.
This course aims at providing students with general knowledge in Geology and will emphasis on earth processes pertaining to and affecting the petroleum systems. The course shall cover also reserves estimation, classification and geological modeling.		
GCH659	Formation Evaluation	3 cr.
Pre-requisites	GCH631 and GCH658	
This course provides students with working knowledge in the field of well logging and formation evaluation. Students will learn and understand logging methodologies and the principles and physics of tools used in acquiring various types of logs. The course will also cover fundamental techniques of well log processing, analysis and petrophysical evaluations.		
GCH660	Reservoir Engineering	3 cr.
Pre-requisites	GCH631 and GCH658	
This course will cover the basics of reservoir engineering by tackling the principle rock and fluid characteristics. Determination of reserves and the optimization of hydrocarbon recovery under primary, secondary, and tertiary schemes will be covered.		
GCH670	Petroleum Laboratory	1 cr.
This course encompasses laboratory experiments for testing and identifying minerals and rocks in hand samples and under the microscope. The course involves also testing of the petrophysical properties of the rocks such as porosity, absolute and relative permeability, fluid saturations and viscosities.		
GCH661	Petroleum Law and Economics	2 cr.
Pre-requisites	GCH631	
This course provides students with working knowledge in the field of well logging and formation evaluation. Students will learn and understand logging methodologies and the principles and physics of tools used in acquiring various types of logs. The course will also cover fundamental techniques of well log processing, analysis and petrophysical evaluations.		
GCH673	Analysis of Petroleum Products Lab	1 cr.
Pre-requisites	GCH535 Or GCH540 Or GCH640	
This laboratory introduces various methods of analysis by using sophisticated instruments and analytical equipment to determine various physical properties of crude, natural gas, petroleum products and petro-chemicals. Through this module students will learn the theoretical principles and experimental procedures for quantitative estimation.		
GCH676	Advanced Chemical Engineering Thermodynamics	3 cr.
Efficient separation operations and many other chemical processes depend on a thorough understanding of the properties of gaseous and liquid mixtures. This course will interpret, correlate, and predict thermodynamic properties used in mixture-related phase-equilibrium calculations. Basic statistical mechanical principles and intermolecular forces will be discussed, and applied to the correlation and prediction of thermodynamic properties and phase equilibria. Statistical thermodynamics will be shown to work with classical thermodynamics, molecular physics, and physical chemistry to solve real-world problems.		
GCH677	Mass Transport	3 cr.
Students will examine the mathematical description of mass transport processes, including analytical solutions for steady state, transient, and multi-dimensional diffusion.		
This course explores a wide range of mass transfer behavior for binary and multicomponent systems that are encountered in chemical engineering. Special attention will be given to developing mathematical solutions to common steady and transient mass transfer problems, with an emphasis on understanding the physical implications of such systems. Fick's law, flux definitions, constitutive equations, and conservation equations will be developed. Steady and transient mass transfer by diffusion will be analyzed in detail along with convective mass transfer, mass transport in flowing media, and free convection. Models will also be developed for mass transfer with simultaneous homogeneous or heterogeneous reaction and simultaneous heat and mass transfer. Attention is also given to the development of boundary layer theory and correlations for mass transfer by forced convection. Special topics may include: membrane separation processes, drug delivery and controlled release, and adsorption separations.		
GCH678	Advanced Kinetics and Reactor Design	3 cr.
This course is a study of chemical kinetics and mechanisms in complex homogeneous and heterogeneous reaction systems, and the design and analysis of chemical reactors for such systems.		
The course covers the science and engineering of reactive chemical systems. Ideal reactors are modeled. The theory of chemical reactions in the gas phase from fundamental physical chemical principles is introduced. Reacting systems are identified and analyzed at the level of elementary steps, including single, chain and catalytic reactions. Mathematical		

models for heterogeneous reactions, including associated mass transfer limitations, are also developed.

GCH679	Mathematical Modeling	3 cr.
<p>Students will study the formulation and solution of mathematical models of a range of chemical processes with an emphasis on differential balances and incorporation of uncertainty. This course introduces a range of analytical and numerical methods for the solution of mathematical equations encountered in chemical engineering. Topics are motivated by and presented in the context of physical phenomena encountered in chemical engineering industrial and research problems. The accuracy and computational complexity of each approach, along with their potential modes of failure, are highlighted. Attention is also given to interpretation and handling of uncertainty in the context of different problems. MATLAB is used in the course as a vehicle for teaching basic programming technique and the use of commercial numerical packages.</p>		
GCH680	Unit Integration Design and Control	3 cr.
<p>Reactive distillation is an excellent example of process innovation and intensification. In this course we introduce reactive distillation process design and control, starting with the steady-state design of an ideal quaternary system, steady-state design of real chemical systems, and control of ideal systems. Students will also learn about hybrid and non-conventional systems. By the end of the course students should be able to design and control at least one reactive distillation process.</p>		
GCH681	Process Integration Lab	1 cr.
<p>This course will cover the advanced level of process integration and pinch problem theory. It will introduce the newest technologies applied in that field. Students will use first principles, and simulators (such as heat) in order to design a process integration network for both chemical and petrochemical selected processes.</p>		
GCH691	Thesis I	1 cr.
GCH692	Thesis II	5 cr.
Pre-requisites	GCH691	
GCV301	Surveying	1 cr.
Pre-requisites	MAT337 And GCV320	
<p>Surveying may be defined as the art of making measurements of the relative positions of natural and manmade features on the earth's surface and the presentation of this information either graphically or numerically. On completion of this course the surveying students will be able to demonstrate competency in the following areas: explain the meaning of a number of common terms used in surveying and mapping; utilize horizontal and vertical references; prepare and apply the use of survey field notes; use the theory of measurements, linear measurements, angles, topographic surveys; construct alignment sheets for construction design; construct a topographic map utilizing horizontal and vertical values.</p>		
GCV302	History of Architecture	2 cr.
<p>Based mainly on the architectural timeline, the course focuses on the construction periods, their key events, their most important buildings, technical inventions, socio-historical contexts, and symbolic meanings. It locates the most important milestones in the discipline and gives the students a comprehensive global view of architecture evolution, its technical and esthetical correlation as well as its connection with other disciplines.</p>		
GCV310	Reinforced Concrete I	3 cr.
Pre-requisites	GCV401	
<p>Students completing this course will be able to explain and apply the principles of reinforced concrete; assign and assess proper dead, live and other structural loads; have the capability to design and analyze reinforced concrete beams, slabs, columns, and footings for flexure, shear and axial loads using ACI standard (ACI 318); use and understand the functionality of the design and analyze reinforced concrete elements using design software; coordinate, elaborate and work in a team during the group course project; and finally the students will be able to write a group project report and present parts of the results in front of the class.</p>		
GCV320	Technical Drawings	1 cr.
<p>The objective of these practical workshops is to initiate the students in the use of AutoCAD software. In the early stages they will learn about the fundamental operations that are sufficient to achieve technical drawings in 2D. The students thereafter become more proficient in using AutoCAD for the objective of realizing projects in civil engineering. We insist on the tools and the available modules (management of project, insertion of block of components, realization of report) permitting a fast realization of projects and plans of electric facilities.</p>		
GCV401	Structural Analysis	3 cr.
Pre-requisites	GMC440	
<p>Upon completion of this course the students will be able to: identify the types of structures (beams, frames, arches,</p>		

trusses) and describe their behavior; determine, according to the codes, different design loads to be considered in the design of structures; calculate the support reactions and internal forces and draw diagrams of these efforts for statically indeterminate structures; calculate the rotations and displacements suffered by the structures; factor in loads and load combinations; and design according to the National Building Codes. The course also examines the calculation of complex truss arches and frames; calculation of deflections by the Energy methods and virtual work method; influence lines; and calculation of indeterminate structures (beams, trusses and frames) using the three moments (Clapeyron) method.

GCV405 Reinforced Concrete II 3 cr.

Pre-requisites GCV310 and GCV465

This course covers the analysis and design of the bond, development lengths, and splices; slender columns, and biaxially bent columns; wall footings, concentrically and eccentrically loaded single column footings, and combined footings; staircases; bearing walls; cantilever retaining walls; one way and two way slab design; an introduction to seismic resistance and shear wall design.

GCV410 Geology and Geophysics 3 cr.

Pre-requisites GMC440

This course introduces the students to the earth as a dynamic planet, and provides basic knowledge of the various processes shaping the earth's surface and interior. Students will thus have specific knowledge of the theories and principles governing the natural systems. It will also enable them to understand how humans affect their natural environment and vice versa. This course also introduces the concepts of geophysical investigations, mapping and satellite image interpretation.

GCV420 Soil Mechanics 3 cr.

Pre-requisites GMC440

This course aims to introduce the students to the fundamentals of soil mechanics parameters which will be useful for the design of geotechnical components. It includes all basic requirements needed by the students in order to classify soil type, to define the related parameters, the soil resistance and to evaluate the soil behavior when it may be subjected to external stresses.

GCV430 Construction Materials 2 cr.

Pre-requisites GMC440

This course will familiarize students with the basic construction materials used in the building construction process such as aggregates, cement, concrete, steel, wood and ceramics. The fundamental principles of the behavior, physical and engineering properties of various common civil engineering materials will be introduced. Students learn about material and product manufacturing techniques and how they relate to mechanical and non-mechanical properties of the various materials. Resulting from this course, students will gain a comparative knowledge of material properties and possible applications in construction.

GCV440 Infrastructures and Roads 3 cr.

Pre-requisites GCV430 And GCV320

This course covers: transportation functions; transportation systems, including land, air, and marine modes; transportation system elements, including traveled way, vehicle, controls, and terminals; techniques of transportation system planning, design, and operation.

GCV450 Architectural Project 1 cr.

Pre-requisites GCV302 And GCV320

It is essential for civil engineers to acquire the basic skills to conduct architecture projects (concept, development, and drawings). This course prepares students to properly understand, read and develop architectural plans, helping them coordinate on projects with architects in the future.

GCV460 Management and Site Organization 2 cr.

Pre-requisites GCV405

This course considers the responsibilities for planning, organizing, monitoring, controlling and administering groups of staff, e.g. site manager.

GCV461 General Procedures of Construction 1 cr.

Pre-requisites GCV450

This course will introduce students to onsite construction operations, with a focus on construction methods, equipment, and safety considerations. It will also train students to consider alternative solutions, which includes selection of the most suitable equipment and methods for the operations at hand. Case examples are introduced to familiarize students with good construction practice. Topics include site preparation and earthwork, wood frame, masonry, concrete formwork, shoring and underpinning work excavation at depth, and design, assembly and dismantling of temporary construction works. The course also aims at introducing students to soft skills, including

teamwork and communication skills.

GCV462 Building Legislation 1 cr.

Pre-requisites GCV450

This course defines the regulations and the relevant requirements to be achieved and provided in order to get the construction permit from the Lebanese authorities (Urbanism Agency) based on the construction law and the OEA law.

GCV463 Specifications and Bill of Quantities 1 cr.

Pre-requisites GCV450

A course on the structure of construction documents and their interrelationships, bidding requirements, general and particular contract conditions, administrative and procedural requirements for construction, technical specifications, breakdown structure and BOQ, construction cost estimation processes, and unit rates determination and pricing.

GCV465 Foundations and Retaining Walls 3 cr.

Pre-requisites GCV401 And GCV420

This course aims to cover site investigations; evaluation of data from field and laboratory tests; estimation of stresses in soil masses; and proceeding with applications of principles of soil mechanics in the determination of bearing capacity and settlement of spread footings, mats, single piles, and pile groups. In parallel, this course aims to show the basic principles for the determination of the lateral stresses to be adopted in the calculation of the retaining systems and proceeding with some applications to calculate the stability of the retaining walls. This course includes all basic requirements needed by the students in order to be capable of designing the different types of foundation and retaining systems.

GCV471 Soil Mechanics Lab 1 cr.

Pre-requisites GCV420

This course aims to introduce the students to the fundamentals of laboratory testing of soil. It includes laboratory teaching to familiarize students with standard soil testing techniques which are considered as a must for the determination of soil parameters needed to design the geotechnical components.

GCV472 Construction Materials Lab 1 cr.

Pre-requisites GCV430

This course aims to introduce the students to the fundamentals of laboratory testing of construction materials. They will make measurements of behavior of various materials used in civil engineering among many tests, provide physical observations, introduce experimental procedures and common measurement equipment, and gain exposure to a variety of established material testing techniques. A dual approach characterizes these experiments: discovery/control of equipment and measurement/interpretation.

GCV480 Internship I 1 cr.

Pre-requisites GCV401

The objective of this course is to introduce the students to the real work of the engineer on the site project and to the real work in the consultant engineering offices.

GCV500 Prestressed Concrete 2 cr.

Co-requisites GCV310

This course describes the design methods and the material characteristics of the prestressed elements, prestress losses, working strength design procedures, composite construction, ultimate flexural strength and behavior, shear design, continuous prestressed concrete members, and a case study/project.

GCV501 Seismic Design 3 cr.

Pre-requisites GEN450 And GCV310

This course examines: the nature of earthquake ground motion; seismic hazard evaluation in engineering practice; response analysis of structures and effect of soil conditions on structural response and behavior under earthquake ground motion; design of structures under earthquake loading. There is also an introduction to the UBC, IBC and PS standards.

GCV502 Urban Planning 3 cr.

Pre-requisites GCV440

This course presents concepts, methods, and techniques that are used for urban planning and treats the urban area as a system for the purpose of planning infrastructure (e.g., transportation, water supply, waste water disposal).

GCV505 Advanced Structural Analysis 3 cr.

Pre-requisites GCV401

This course covers: the analysis of statically indeterminate structures by flexibility (force) and stiffness methods; an introduction to the direct stiffness method, Cross method; influence lines for indeterminate structures; computer structural analysis applications; project building modeling and assessment; And an introduction to the non-linear

analysis, P-Δ analysis.

GCV510	Sustainable Construction	3 cr.
Pre-requisites	GCV430 And GCV450	
<p>The aim of this course is to provide an introduction to the principles of green building, including water, energy, resource efficiency, and waste reduction. It also looks at how to implement greenhouse gas emission management principles, such as emission reduction goals, accounting techniques and standards, and comprehensive emissions reduction plans and evaluation of the building performance according to LEED standards. The students will be able to analyze energy audits, conservation measures, codes and standards, and daylight simulation/modeling tools for various building types.</p>		
GCV512	Bridges	3 cr.
Co-requisites	GCV310	
<p>This course discusses: types of bridges; influence lines; loads and their distribution on bridges; serviceability of bridges; methods of design of bridge deck, superstructure, and substructure. Standards and norms (i.e AASHTO) are also included.</p>		
GCV514	Pavement Analysis, Design, and Maintenance	3 cr.
Pre-requisites	GCV440	
<p>Students will be introduced to: traffic analysis, environmental conditions, soil and drainage; material characterization and mix design; structural design; maintenance and rehabilitation; pavement monitoring; and pavement management systems.</p>		
GCV515	Underground Structures	2 cr.
Pre-requisites	GEN450 And GCV310	
<p>This course covers: an introduction to tunneling with its geological aspects; tunneling methods in soft and rock ground; drilling and blasting; ground treatment in tunneling; design and supports; rock reinforcement, concrete and shotcrete linings.</p>		
GCV516	Special Structures	2 cr.
Pre-requisites	GEN450 And GCV310	
<p>Special structures are true three-dimensional representations of our equilibrium equations and affirmations of our analytical techniques, design standards and construction practice. They include many types of structures, such as space frames or grids, cable and strut and tensegrity, self-erecting and deployable, cable net, tension membrane, lightweight geodesic domes, folded plates, and thin shells.</p>		
GCV517	Offshore Structures	2 cr.
Pre-requisites	GEN450 And GCV310	
<p>Students will learn about the design of offshore platforms (introduction, fixed and floating platforms); case studies and general features, elements of hydrodynamics and wave theory, fluid structure interaction, steel, concrete and hybrid platforms; design criteria; environmental loading (wind, wave and current loads after installation); stability during towing; foundations (site investigations, piled foundation, foundations for gravity structures); behavior under dynamic loading; static and dynamic analysis of platforms and components; dynamic response in deterministic and in deterministic environment; codes of practice, analysis of fixed platform and semisubmersible related topics.</p>		
GCV518	Hydraulic Structures	2 cr.
Pre-requisites	GEN450 And GCV310	
<p>This course covers closed conduit flow, water distribution systems, transient analysis, open channel flow, flood control, culvert hydraulics, and design of various hydraulic structures.</p>		
GCV521	Steel and Mixed Structures	3 cr.
Pre-requisites	GCV310	
<p>This course examines loads on structures, philosophies of design (LRFD versus ASD), behavior, analysis, and design (according to AISC) of tension members, bolted connections, welded connections, compression members, and beams. An introduction to composite section and mixed structure design is also given.</p>		
GCV522	MEP Systems	2 cr.
Pre-requisites	GMC340 And GEL211 And GCV450	
<p>This course will allow students to learn about Mechanical, Electrical, Plumbing, and Fire (MEP) systems in buildings. A special coordination and planning system is needed to minimize delays and interferences. This course will enable students to understand these systems and also to schedule, estimate and coordinate them within the general construction process.</p>		
GCV524	Finishing	2 cr.
Pre-requisites	GCV430 And GCV320	

Finishes and materials introduces the building materials and finishes used in interior and exterior applications in the context of their environmental impact, their implications for human health and safety, and their potential contribution to the design of architectural elements. This course teaches students to explore the diversity of interior building and finishing materials, and provides the technical vocabulary and scientific concepts associated with procedures used for their fabrication, testing and evaluation.

GCV525 Maintenance, Rehabilitation and Retrofitting of Buildings 2 cr.

Pre-requisites GCV310

This is a course that explores the assessment of materials and structural deficiency using field test or analytical methods, repair and strengthening materials, strengthening and repair techniques, strengthening of structural members in flexure, shear and axial load, and upgrading of gravity load designed buildings for earthquake load resistance.

GCV526 Building Project 1 cr.

Pre-requisites GCV463 and GCV462 and GCV310

This course provides the common rules to be applied in order to achieve a successful building project. Coordination between different disciplines will be attempted.

GCV531 Hydrogeology 2 cr.

Pre-requisites GCV410

This course will provide a basic understanding of the physical and chemical aspects of hydrogeology. The emphasis will be on low temperature groundwater and groundwater surface water systems. This course includes a module on hydrogeology of geothermal systems, volcanoes, etc. This course will address the occurrence, movement, and reaction of water within the earth's subsurface. We will emphasize the evaluation of flow directions and rates, calculation of hydraulic properties, and processes controlling the composition of ground water.

GCV532 Rock Mechanics 3 cr.

Pre-requisites GEN450 And GCV420

This course provides general analytical tools and experimental methods that are used in rock mechanics. Theoretical topics covered in the lectures include fundamental concepts of stresses and strains, the linear elastic constitutive model of rocks, failure modes and models of rocks, fracture mechanisms and models of rocks, inelastic behavior of rocks, and seismic waves.

GCV533 Geographic Information Systems 2 cr.

Pre-requisites GCV301 And GCV310 And GCV320

This is an introductory course on Geographic Information Systems (GIS) and their applications in the planning and engineering fields, alternatives in computer based graphics, data concepts and tools, network data management and planning applications, and implementation issues. This course satisfies the departmental requirements in all graduate engineering programs.

GCV534 Soil Dynamics 3 cr.

Pre-requisites GCV501

Students will study: the geotechnical considerations of earthquake engineering and foundation vibrations; seismic surveying; ground motion during earthquakes; determination of soil properties for ground response analysis; dynamic properties of soils; soil structure interaction effects; soil liquefaction; dynamic analysis of earth dams; settlements resulting from earthquakes; lateral earth pressures during earthquakes; and foundation vibrations.

GCV535 Slope Stability, Excavation and Shoring 3 cr.

Pre-requisites GCV465

Students will learn about the design and construction of earth and rockfill dams, seepage problems, flow nets, seepage control, soil compaction and stabilization, computer analysis of slope stability, factor of safety, and measures taken to limit and accommodate settlements.

GCV536 Geotechnics of Roads 3 cr.

Pre-requisites GCV465

This course covers advanced techniques in geomechanics, looking at subsurface exploration and soil investigation for the roads, as well as ground improvement techniques under the roads.

GCV541 Waste Water Treatment 3 cr.

Pre-requisites GMC435

A course that examines the quality and treatment methods of water and waste water, and testing for physical, chemical, and biological parameters.

GCV542 Management and Economy of Water 3 cr.

Pre-requisites GMC435

This course provides an introduction to water resource management challenges and the many complex factors that

contribute to them. Some topics that will be discussed are water supply concerns given population growth and increasing demand, uncertainty in light of climate change, water quality issues stemming from point and nonpoint sources of pollution and from a lack of sanitation, and the geopolitics surrounding bulk water exports and sharing trans-boundary waters. Approaches for addressing water-related issues will be explored, including conceptual frameworks like Integrated Water Resource Management (IWRM) and the human right to water, and management tools like pricing and privatization.

GCV543	Irrigation Network	3 cr.
Pre-requisites	GMC435	
This course will introduce students to: source materials for irrigation projecting, hydrological, climatic, geological and hydrogeological; preparation of irrigation constructions, standardization, construction documentation; investment goals; preparation documentation, projecting task; documentation of real type of constructions; projecting of soil unit; proposal of irrigation detail, proposal of water distribution, its flow capacity and dimension of pipe network; application of linear programming for optimization of pipe network; reviewing of irrigation equipment characteristics from the viewpoint of suitability for plants and soil; and drawing documentation of an operational project, its realization.		
GCV544	Urban Hydraulics	3 cr.
Pre-requisites	GMC435	
The aim of the course is to study the hydrology and drainage requirements of urban areas. Throughout the course, we introduce the effects of urbanization on the hydrological cycle, and develop basic methods of hydrological analysis including rainfall runoff models and flood frequency analysis. We review the basics of rainfall analysis and hydraulics, and apply this to storm, foul and combined sewer design. We explore sewer flow and quality models, storm water management and the increasing influence of sustainability principles.		
GCV550	Highway and Road Design	3 cr.
Pre-requisites	GCV440	
This course examines: the contemporary road design approach; the speed parameter; design consistency; 3-D design controls; esthetic road design criteria; energy and environmental impacts of highway design; design for heavy vehicles and powered two wheelers; at grade unsignalized intersections; roundabouts; interchanges; standards and practices in Lebanon.		
GCV551	Transportation Systems and Traffic Analysis	3 cr.
Pre-requisites	GCV440	
Students will learn about: transportation planning; the four step method; discrete choice models in transportation systems analysis ; intermodal transport; freight and logistics; project evaluation and cost-benefit analysis; traffic flow characteristics; traffic flow models; highway capacity and level of service.		
GCV552	Statistical Methods for Transportation Data Analysis	2 cr.
Pre-requisites	STA307 And GCV440	
The course explains: data management and data editing; descriptive and exploratory statistics; probability models and statistical inference; multivariate statistics; and statistical learning methods.		
GCV553	Traffic Management Systems	3 cr.
Pre-requisites	GCV440	
The course contents are: an introduction to Intelligent Transportation Systems; traffic surveillance methods; automatic vehicle identification systems; advanced traveler information systems; active traffic management; traffic flow-metering; incident management; GIS technologies and applications; and traffic flow simulation.		
GCV554	Highway Construction	2 cr.
Pre-requisites	GCV440	
Students will be introduced to: project management; health and security at work; construction of tunnels and underground structures; construction of bridges; construction of road structures, pavements, hydraulic structures, and retaining walls; automation in construction; standards and practices in Lebanon.		
GCV555	Highway Safety	3 cr.
Pre-requisites	GCV440	
The course covers these essential topics: safety issues in the Mediterranean area; the role of the driver-vehicle-road-environment system in highway safety; crash data; safety performance functions; the empirical Bayes method; crash modification factors; safety performance based highway design; network screening; diagnosis; selection of countermeasures; economic appraisal and prioritization; road safety impact assessment; road safety audits; road safety inspections; and network safety management based on road safety inspections.		
GCV581	Internship II	1 cr.
Pre-requisites	GCV596	

The objective of this course is to carry out professional training and experience in a civil engineering environment, either in a consultant office or on a construction site.

GCV596	Final Project I	1 cr.
A major project in engineering analysis, design, development or research carried out by individual or groups of students and a faculty research supervisor. The objective is to provide an opportunity to develop initiative, self-reliance, creative ability and engineering judgment. A project proposal, an interim report, and an oral presentation are required.		
GCV597	Final Project II	3 cr.
Pre-requisites	GCV596	
This course provides the students with the opportunity to learn how to apply engineering design principles in a major group design project. While working on the projects, the students will learn how to effectively plan, schedule, search for data and information, communicate and cooperate in a team environment.		
CVE600	Seismic Design	3 cr.
This course examines the nature of earthquake ground motion; seismic hazard evaluation in engineering practice; response analysis of structures and effect of soil conditions on structural response and behavior under earthquake ground motion; design of structures under earthquake loading; and an introduction to the UBC, IBC and PS standards		
CVE601	Management and Site Organization	2 cr.
This course considers the responsibilities for planning, organizing, monitoring, controlling and administering groups of staff, e.g. site manager.		
CVE602	Urban Planning	3 cr.
This course presents concepts, methods, and techniques that are used for urban planning and treats the urban area as a system for the purpose of planning infrastructure (e.g., transportation, water supply, waste water disposal).		
CVE603	Bridges	3 cr.
This course discusses: types of bridges; influence lines; loads and their distribution on bridges; serviceability of bridges; and methods of design of bridge deck, superstructure, and substructure. Standards and norms (i.e. AASHTO) are also included.		
CVE604	Pavement Analysis, Design, and Maintenance	3 cr.
Students will be introduced to: traffic analysis, environmental conditions, soil and drainage; material characterization and mix design; structural design; maintenance and rehabilitation; pavement monitoring; and pavement management systems.		
CVE605	Special Structures	2 cr.
Special structures are true three-dimensional representations of our equilibrium equations and affirmations of our analytical techniques, design standards and construction practices. They include many types of structures, such as: space frames or grids; cable-and-strut and tensegrity, self-erecting and deployable; cable net; tension membrane; lightweight geodesic domes; folded plates; and thin shells.		
CVE606	Offshore Structures	2 cr.
Students will learn about: the design of offshore platforms (introduction, fixed and floating platforms); case studies and general features (elements of hydrodynamics and wave theory) - fluid structure interaction; steel, concrete and hybrid platforms; design criteria; environmental loading (wind, wave and current loads after installation); stability during towing; foundations (site investigations); piled foundations; foundations for gravity structures; behavior under dynamic loading; static and dynamic analysis of platforms and components; dynamic response in deterministic and indeterminate environment; codes of practice; and analysis of fixed platform and semisubmersible related topics.		
CVE607	Highway and Road Design	3 cr.
This course examines: the contemporary road design approach; the speed parameter; design consistency; 3-D design controls; esthetic road design criteria; energy and environmental impacts of highway design; design for heavy vehicles and powered two wheelers; at-grade unsignalized intersections; roundabouts; interchanges; and standards and practices in Lebanon.		
CVE608	Highway Construction	2 cr.
Students will be introduced to: project management; health and safety at work; construction of tunnels and underground structures; construction of bridges; construction of road structure, pavements, hydraulic structures, and retaining walls; automation in construction; and standards and practices in Lebanon.		
CVE610	Prestressed Concrete	2 cr.
This course describes the design methods and the material characteristics of the prestressed elements; prestress losses; working strength design procedures; composite construction; ultimate flexural strength and behavior; shear design; and continuous prestressed concrete members. There will also be a case study/project.		
CVE611	Advanced Structural Analysis	3 cr.
This course covers the analysis of statically indeterminate structures by flexibility (force) and stiffness methods; an		

introduction to the direct stiffness method, Cross method; influence lines for indeterminate structures; computer structural analysis applications; project building modeling and assessment; and an introduction to the non-linear analysis, P- Δ analysis.

CVE612 Sustainable Construction 3 cr.

The aim of this course is to provide an introduction to the principles of green building, including water, energy, resource efficiency, and waste reduction. It also looks at how to implement greenhouse gas emission management principles, such as emission reduction goals, accounting techniques and standards, and comprehensive emissions reduction plans and evaluation of the building performance according to LEED standards. The students will be able to analyze energy audits, conservation measures, codes and standards, and daylight simulation/modeling tools for various building types.

CVE613 Steel and Mixed Structures 3 cr.

This course examines: loads on structures; philosophies of design (LRFD versus ASD); behavior, analysis, and design (according to AISC) of tension members; bolted connections; welded connections; compression members; and beams. An introduction to composite section and mixed structure design is also given.

CVE614 MEP Systems 2 cr.

This course will allow students to learn about Mechanical, Electrical, Plumbing, and Fire (MEP) systems in buildings. It is required for special coordination and planning to minimize delays and interferences. This course will enable students to understand these systems and also to schedule, estimate and coordinate them within the general construction process.

CVE615 Finishing 2 cr.

Finishing and materials introduces the building materials and finishes used in interior and exterior applications in the context of their environmental impact, their implications for human health and safety, and their potential contribution to the design of architectural elements. This course teaches students to explore the diversity of interior building and finish materials, and provide the technical vocabulary and scientific concepts associated with procedures used for their fabrication, testing and evaluation.

CVE616 Maintenance, Rehabilitation and Retrofitting of Buildings 2 cr.

This is a course on assessment of materials and structural deficiency using field test or analytical methods; repair and strengthening materials; strengthening and repair techniques; strengthening of structural members in flexure, shear and axial load; and upgrading of gravity load-designed buildings for earthquake load resistance.

CVE617 Building Project 1 cr.

This course provides the common rules to be applied in order to achieve a successful building project. Coordination between different disciplines will be attempted.

CVE620 Underground Structures 2 cr.

This course covers: an introduction to tunneling with its geological aspects; tunneling methods in soft and rock ground; drilling and blasting; ground treatment in tunneling; design and supports; rock reinforcement, concrete and shotcrete linings.

CVE621 Hydrogeology 2 cr.

This course will provide a basic understanding of the physical and chemical aspects of hydrogeology. The emphasis will be on low temperature groundwater and groundwater-surface water systems. This course includes information on hydrogeology of geothermal systems and volcanoes. This course will address the occurrence, movement, and reactions of water within the earth's subsurface. We will emphasize the evaluation of flow directions and rates, calculation of hydraulic properties, and processes controlling the composition of ground water.

CVE622 Rock Mechanics 3 cr.

This course provides general analytical tools and experimental methods that are used in rock mechanics. Theoretical topics covered in the lectures include: fundamental concepts of stresses and strains, linear elastic constitutive model of rocks, failure modes and models of rocks, fracture mechanisms and models of rocks, inelastic behavior of rocks, and seismic waves.

CVE623 Geographic Information Systems 2 cr.

This is an introductory course on Geographic Information Systems (GIS) and their applications in the planning and engineering fields, alternatives in computer-based graphics, data concepts and tools, network data management and planning applications, and implementation issues. This course satisfies the departmental requirements in all graduate engineering programs.

CVE624 Soil Dynamics 3 cr.

Students will study: the geotechnical considerations of earthquake engineering and foundation vibrations; seismic surveying; ground motion during earthquakes; determination of soil properties for ground response analysis; dynamic properties of soils; soil structure interaction effects; soil liquefaction; dynamic analysis of earth dams; settlements resulting from earthquakes; lateral earth pressures during earthquakes; and foundation vibrations.

CVE625	Slope Stability, Excavation and Shoring	3 cr.
Students will learn about: the design and construction of earth and rockfill dams; seepage problems, flow nets, seepage control, soil compaction and stabilization; computer analysis of slope stability, factor of safety; and measures taken to limit and accommodate settlements.		
CVE626	Geotechnics of Roads	3 cr.
This course covers advanced techniques in geomechanics, subsurface exploration and soil investigation for roads, and ground improvement techniques under roads.		
CVE630	Hydraulic Structures	2 cr.
This course covers closed conduit flow, water distribution systems, transient analysis, open channel flow, flood control, culvert hydraulics, and design of various hydraulic structures.		
CVE631	Waste Water Treatment	3 cr.
A course that examines the quality and treatment methods of water and wastewater, and testing for physical, chemical, and biological parameters.		
CVE632	Management and Economy of Water	3 cr.
This course provides an introduction to water resource management challenges and the many complex factors that contribute to them. Some topics that will be discussed are: water supply concerns given population growth and increasing demand, uncertainty in light of climate change, water quality issues stemming from point and nonpoint sources of pollution and from a lack of sanitation, and the geopolitics surrounding bulk water exports and sharing trans-boundary waters.		
Approaches for addressing water-related issues will be explored, including conceptual frameworks like Integrated Water Resource Management (IWRM) and the human right to water, and management tools like pricing and privatization.		
CVE633	Irrigation Networks	3 cr.
This course will introduce students to: source materials for irrigation projects (hydrological, climatic, geological and hydro-geological); preparation of irrigation constructions (standardization, construction documentation); investment goal; preparation documentation, projecting task; documentation of real type of constructions; projecting of soil unit; proposal of irrigation detail (proposal of water distribution, its flow capacity and dimension of pipe network); application of linear programming for optimization of pipe network; reviewing of irrigation equipment characteristics from viewpoint of suitability for plants and soil; and drawing documentation of operational project, its realization.		
CVE634	Urban Hydraulics	3 cr.
The aim of the course is to study the hydrology and drainage requirements of urban areas. Throughout the course, we introduce the effects of urbanization on the hydrological cycle; develop basic methods of hydrological analysis including rainfall-runoff models and flood frequency analysis. We review the basics of rainfall analysis and hydraulics, and apply this to storm, foul and combined sewer design. We explore sewer flow and quality models, storm water management and the increasing influence of sustainability principles.		
CVE640	Transportation Systems and Traffic Analysis	3 cr.
Students will learn about: transportation planning; the four step method; discrete choice models in transportation systems analysis; intermodal transport; freight and logistics; project evaluation and cost-benefit analysis; traffic flow characteristics; traffic flow models; highway capacity and level of service.		
CVE641	Statistical Methods for Transportation Data Analysis	2 cr.
The course explains: data management and data editing; descriptive and exploratory statistics; probability models and statistical inference; multivariate statistics; and statistical learning methods.		
CVE642	Traffic Management Systems	3 cr.
The course contents are: an introduction to Intelligent Transportation Systems; traffic surveillance methods; automatic vehicle identification systems; advanced traveler information systems; active traffic management; traffic flow-metering; incident management; GIS technologies and applications; and traffic flow simulation.		
CVE643	Highway Safety	3 cr.
The course covers these essential topics: safety issues in the Mediterranean area; the role of the driver-vehicle-road-environment system in highway safety; crash data; safety performance functions; the empirical Bayes method; crash modification factors; safety performance based highway design; network screening; diagnosis; selection of countermeasures; economic appraisal and prioritization; road safety impact assessment; road safety audits; road safety inspections; and network safety management based on road safety inspections.		
CVE691	Thesis I	1 cr.
CVE692	Thesis II	5 cr.
Pre-requisites	CVE691	

GEL211	Electric Circuits	3 cr.
Co-requisites	GEL271 And MAT227	
<p>This course presents the basics of electric circuits' analysis: introduction to theory, circuit variables and elements (dependent and independent voltage and current sources, resistors, inductors, capacitors); basic analysis and design of resistive circuits and different analysis techniques (Node-Voltage analysis, Mesh-Current analysis, source transformations, Thevenin's and Norton's equivalent, maximum power transfer, and Superposition methods); an introduction to capacitance, inductance, and mutual inductance; current-voltage relation; RC, RL and RLC circuits analysis (natural and step responses). Topics also include ideal operational amplifiers circuit simplification, steady-state and transient analysis, phasors, frequency response, Kirchhoff's laws and Thevenin's and Norton's equivalent represented in the frequency domain, Laplace transform and an introduction to Transfer functions.</p>		
GEL271	Electric Circuits Lab	1 cr.
Co-requisites	GEL211	
<p>This course presents the basics of electric circuits' analysis: introduction to theory, circuit variables and elements (dependent and independent voltage and current sources, resistors, inductors, capacitors); basic analysis and design of resistive circuits and different analysis techniques (Node-Voltage analysis, Mesh-Current analysis, source transformations, Thevenins and Nortons equivalent, maximum power transfer, and Superposition methods); an introduction to capacitance, inductance, and mutual inductance; current-voltage relation; RC, RL and RLC circuits analysis (natural and step responses). Topics also include ideal operational amplifiers circuit simplification, steady-state and transient analysis, phasors, frequency response, Kirchhoffs laws and Thevenins and Nortons equivalent represented in the frequency domain, Laplace transform and an introduction to Transfer functions.</p>		
GEL311	Logic Design	3 cr.
Pre-requisites	GIN221	
<p>This course introduces first the different binary representations and the conversion methods to go from one representation to the other. Then, the signed and unsigned numbers as well as the floating numbers are proposed. The standard representation as well as the canonical form of the expressions are then proposed. The second part presents the electric components and gates needed to implement such expressions. The third part shows the simplification methods used to get simplified expressions and the main reasons to do them. Note that some design examples will be discussed in this course to enable the students to analyze the design and implementation phases from an engineering point of view. Added to that, two software packages will be used during the learning phase: the VHDL code that helps to program for the needed circuits and systems, and LogicCircuit to implement a particular circuit and to compare the obtained results with the alternatives.</p>		
GEL312	Electric Power Systems	3 cr.
Pre-requisites	GEL211	
<p>This course introduces the concepts of sinusoidal steady-state analysis. Then, a frequency analysis of RLC resonant circuits is performed. For balanced three-phase electric circuit analysis, current, voltage, and power, as well as power factor compensation, are calculated. The Per-Unit System and harmonics in Three-Phase Systems are also explained. Then, special cases of unbalanced three-phase electric circuits are studied with the method of symmetrical components. Finally, an overview of magnetic theory is presented and the single-phase transformer explained.</p>		
GEL313	Electronics	3 cr.
Pre-requisites	GEL211	
Co-requisites	GEL371	
<p>This course begins with an introduction of the physics of semiconductors and of the p-type and n-type semiconductors. Then, we introduce the PN junction, the diode, the Zener diode, their equivalent electrical models and their applications (rectifying circuits, limiting and clamping circuits, voltage regulators, etc.). The second part of this course examines the bipolar transistors in both NPN and PNP configurations. We define the different functioning modes (blocked, linear and saturated) and then we study the DC aspect of these transistors considering different biasing circuits. Afterwards, we do an AC analysis of the BJT amplifier circuits studying the small signal models, the current gain, the voltage gain, the input and output impedances. We finally study all three amplification configurations in common base, common emitter and common collector as well as in multi-stage amplifiers. The last part of this course addresses the subject of MOSFET transistors (the p-channel and the n-channel, depletion-type and enrichment-type), defining different functioning modes and their corresponding models in DC and in small signals.</p>		
GEL314	Digital Electronics	2 cr.
Pre-requisites	GEL311	
Co-requisites	GEL372	
<p>Students will study: the design and implementation of sequential systems (Moore and Mealy machine); Finite State Machine (FSM); digital integrated circuits; an introduction to programmable logic elements (ROM, PAL and PLA); an</p>		

introduction to the different types of memory (RAM, ROM); and the analog to digital and digital to analog conversion method and its applications.

GEL340	Technical Drawing and Computer Aided Design	1 cr.
Pre-requisites	GEL211	

The objective of the practical work of this course is to initiate students to technical drawing and to the use of AutoCAD software. It is a first-time course about learning fundamentals sufficient enough to achieve reading and composing technical drawings in 2D and 3D. Students are initiated to perform free hand sketching, multiviews, section views, and building architecture drawing. In addition, students are introduced to advanced CAD software like AutoCAD Electrical and Revit.

GEL371	Electronics Lab	1 cr.
Pre-requisites	GEL271	
Co-requisites	GEL313	

First, we remind the students of the measuring devices and we introduce Multisim software. Then, students study the characteristics of different types of diodes and circuits. The characteristics of the bipolar junction transistor and the phototransistor are elaborated as well as the characteristics of the FET and MOSFET. Different configurations of transistor-based circuits are also analyzed. The work is simulated with Multisim and an electronic project ends the course.

GEL372	Digital Electronics Laboratory	1 cr.
Co-requisites	GEL314	

This laboratory consists of first an introduction to logic gates, and function implementation using logic gates and logic circuits, second an introduction to VHDL language, as well as using it for function implementation, and third function implementation using the Xilinx card.

GEL373	Electric Power Systems Laboratory	1 cr.
Pre-requisites	GEL312	

The course introduces first PSim software, then the RLC resonant circuits. Single-phase circuits are implemented: currents, voltages, powers, power factors are measured and simulated. Boucherot Theorem and power factor compensation are applied. Balanced three-phase circuits are then analyzed and simulated along with the Two-Wattmeter method and Delta-To-Wye transformation. Unbalanced three-phase circuits are also studied, measured and simulated with PSIM software. Determination of the elements of the equivalent circuit model of a single-phase transformer is also applied.

GEL410	Applied Electronics	2 cr.
Pre-requisites	GEL211	

This course covers the following topics: diodes; Zener diodes; bipolar transistors (BJT); amplifiers; sampling of analog signals; combinational logic circuits (OR, AND, NOT, XOR, Boolean algebra, Karnaugh diagrams); decoders; encoders; multiplexers; demultiplexers; comparators; adders; subtractors; arithmetic logic units; and converters ADC/DAC.

GEL420	Nonlinear Electronics	3 cr.
Pre-requisites	GEL313	
Co-requisites	GEL472	

Students will learn about: operational amplifiers (ideal and real models, linear operation (op-amp) and nonlinear operation (comparator, circuit Hysteresis, etc.)); function generators (square wave and triangular wave generator); sinusoidal oscillator circuits (LC and RC) and Phase Locked Loop (PLL) circuits; and filters design (low-pass, high-pass, band pass and stop band) .

GEL421	Power Electronics	3 cr.
Pre-requisites	GEL312 And GEL420	
Co-requisites	GEL470	

Many devices require the use of electrical energy in various forms, hence the need for electrical power converters. After a short introduction to power electronics, basic electronic components are explained (diodes, transistors, thyristors). A recall of periodic non-sinusoidal signals and mathematical approach of circuits is performed. Different types of converters are studied: converters AC/DC (rectifiers), DC/AC (inverter), AC/AC (AC voltage controller), and DC/DC (choppers). Studies of the desired outputs of these circuits as well as undesired components such as harmonics and ripple are made.

GEL425	Linear Control Systems	3 cr.
Pre-requisites	GEN428	

This course is designed to provide the student with the fundamental principles of the control of dynamic systems. It covers the following topics: linear system modelling (electrical systems, mechanical systems, electro-mechanical

systems); transfer function and state space modelling; time response of first order and second order linear systems and error calculation; frequency response, Bode and Nichols diagrams, Nyquist diagram; system stability technics (Routh, Nyquist, placement of poles and zeros of the closed loop); root locus analysis; system behavior in frequency domain (phase and gain margins, robustness); correction of linear systems, P, PI, PD and PID corrections; and lead and lag correctors. Note that most of these topics are to be implemented on Matlab.

GEL430 Electric Machines 3 cr.

Pre-requisites GEL320 or GEL 410 or GEL312

Co-requisites GEL473

This course covers the following: structure and function; magnetic circuit of a DC machine; DC generators (classification and characteristics); DC motors (classification and characteristics); synchronous machines (construction and principle of operation); synchronous generator characteristics; synchronous motor characteristics; asynchronous motor (construction, principle of operation and characteristics).

GEL440 Electrical Installation Design 2 cr.

Pre-requisites GEL340 And GEL312

This course is an initiation to electric design. The students will be introduced to the basic electric systems installed in a building: lighting, power, earthing, lightning protection. By the end of the course, the students will be able to implement these systems in a typical apartment and/or office area.

GEL441 Electrical Instrumentation Design 3 cr.

Pre-requisites GEL314 And GEL313

Co-requisites GEL475

The aim of this course is to provide working engineers with the necessary skills and knowledge relevant to the process control and instrumentation industry. The students will be able to understand a whole acquisition system, and be able to design a process industry control from the sensor to the actuator.

GEL445 Microprocessors 3 cr.

Pre-requisites GEL314

This course introduces basic computer architecture and assembly language programming. The Intel 8088 and 8086 microprocessors are considered as a practical example. After describing the software architecture of the microprocessor, the instruction set (assembly language), addressing modes and machine language are then presented. Input/output types and interfaces are then discussed. Interrupts are explained in the last part.

GEL450 Electric Machines I 3 cr.

Pre-requisites GEL312 And GRT320

Co-requisites GEL471

The students will be introduced to: structure and function; magnetic circuit of a DC machine; DC generators (classification and characteristics); DC motors (classification, operating characteristics, torque, mechanical, braking characteristics); single and three phase transformer (construction and principle of operation, non-load mode, coupling index, short-circuit mode, load operation, parallel operation of transformers).

GEL455 Electric Machines II 3 cr.

Pre-requisites GEL450

Co-requisites GEL476

This course covers: synchronous machines (construction and principle of operation); synchronous generator characteristics; synchronous motor characteristics; asynchronous motor (construction, principle of operation and characteristics); stepper motor (construction, principle of operation and characteristics).

GEL470 Power Electronics Laboratory 1 cr.

Co-requisites GEL421

Many devices require the use of electrical energy in various forms, hence the need for electrical power converters. Different types of converters are studied: converters AC/DC (rectifiers), DC/AC (inverter), AC/AC (AC voltage controller), and DC/DC (choppers). Tests and simulations related to the desired outputs of these circuits as well as undesired components such as harmonics and ripple are made.

GEL471 Electric Machines I Lab 1 cr.

Pre-requisites GEL373

Co-requisites GEL450

The aim of the practical work is the implementation of the various theoretical concepts learned in the course. Simulation problems and practical examples will be studied.

GEL472 Non Linear Electronics Lab 1 cr.

Co-requisites GEL420

We introduce first the linear and non-linear operational amplifiers and we calculate the offset voltage and offset current. Then we implement different types of op amp circuits and we thoroughly study low pass, high pass, band pass and stop pass active filters of different orders. Many other applications are implemented like log and anti-log circuits, comparators, Schmitt trigger, stable and unstable multivibrators, oscillators and the Phase-Locked Loop (PLL).

GEL473 Electric Machines Lab 1 cr.

Pre-requisites GEL430 and GEL373

The aim of the practical work is the implementation of the various theoretical concepts learned in the course (DC generators and motors, synchronous generators, synchronous and asynchronous motors). Simulation problems and practical examples will be studied.

GEL474 Microprocessors Laboratory 1 cr.

Pre-requisites GEL445

The aim of the practical work is the implementation of the instruction set of a microprocessor, loops, arithmetic and logical operations and input-output ports.

GEL475 Electrical Instrumentation Design Lab 1 cr.

Co-requisites GEL441

This laboratory introduces the properties of different sensors. Students will learn to use a computer as a measuring instrument for physical quantities such as light, temperature and others. Students will first learn to use LabView as a graphical programming tool. Then, the data acquisition board is introduced. Once familiar with LabView and the acquisition board, students will develop multiple acquisition and monitoring applications in order to measure different physical quantities.

GEL476 Electric Machines II Lab 1 cr.

Pre-requisites GEL471

Co-requisites GEL455

The aim of the practical work is the implementation of the various theoretical concepts learned in the course. Simulation problems and practical examples will be studied.

GEL477 Linear Control Lab for Electrical Engineers 1 cr.

Pre-requisites GEL425

The main objective of this lab is to experiment different topics given in the linear control system course. A main attention is given to the modelling of electrical systems and electromechanical systems. Matlab, Simulink, and specific hardware are used for implementation. Also, some new topics are introduced as the PID tuning. This lab consists too of an introduction to mechatronics systems.

GEL480 Internship I 1 cr.

Pre-requisites GEL440

In order to register for this course, the students first spend a minimum of two months experience in the industry or a company and live a real experience in the field of practice that they have chosen. Afterwards, the students present their "job" and what they learned from it in a well-structured and well-written scientific report.

GEL502 Microprocessor Systems 3 cr.

Pre-requisites (GEL410 Or GEL320) And GMC467

Co-requisites GEL503

This course introduces basic computer architecture and assembly language programming. The Intel 8088 and 8086 microprocessors are considered as a practical example. Software architecture of the microprocessor, the instruction set (assembly language), addressing modes and machine language are then presented. Input/output types and interfaces are then discussed. Interrupts are explained. Moreover, we introduce the microcontroller families: Motorola, Intel, Microchip. We study the internal resources and programming of Microchip PIC microcontrollers, as well as developing multiple practical applications.

GEL503 Microprocessor Systems Lab 1 cr.

Co-requisites GEL502

The main objective of this course is to apply different microcontroller topics and peripherals, introduced using the assembly language, physically. To do so, the EasyPic6 board is used along with the MikroBasic program to write down the program. A simulator and a conversion to assembly language are found within this program.

GEL504 Sensors and Acquisition Systems 2 cr.

Pre-requisites GEL410

The aim of this course is to provide working engineers with the necessary skills and knowledge relevant to the process control and instrumentation industry. The students will be able to understand a whole acquisition system, and be able to design a process industry control from the sensor to the actuator.

GEL521 Advanced Command Strategies 2 cr.

Pre-requisites GEL425 Or (GEN428 And GIN321)

In this course we will be studying Neural Network Multi-Layer-Perceptron Network (MLP) and Radial-Basis-Function (RBF) in detail as well as learning algorithms. After, we will describe some of the control methods using neural networks. Then comes the fuzzy logic (principles and fuzzy logic control) and the integration of fuzzy methods in neural networks. Then we study the Kalman and the Wiener-Hopf filters.

GEL530 Electric Machines 3 cr.

Co-requisites GEL570

This course covers the following: structure and function; magnetic circuit of a DC machine; DC generators (classification and characteristics); DC motors (classification and characteristics); synchronous machines (construction and principle of operation); synchronous generator characteristics; synchronous motor characteristics; asynchronous motor (construction, principle of operation and characteristics).

GEL531 Generation and Transport of Electrical Energy 3 cr.

Pre-requisites GEL455

This course is designed to provide the students with the fundamental principles of electric energy production and distribution. Energy production is examined first. Several types of power stations are presented and compared. Then energy transmission is studied. Finally, particular attention is paid to the study of alternators and transformers (modelling and construction), that are the main electrical components involved in the process of energy production and transmission.

GEL533 Mechatronics 3 cr.

Pre-requisites GEL441 and GEL455

Mechatronics is a design philosophy involving a complete integration of mechanical engineering, electronics, control theory and computer engineering in order to design a product. It is based on an interdisciplinary approach involving many disciplines concurrently and allowing flexibility and adaptability by replacing some mechanical functions by electronic processing. After introducing basic elements of a mechatronic system, the course presents methods of modelling, analyzing and controlling engineering systems based on modern technologies and allowing the students to follow an interdisciplinary approach starting from the earliest stages of the design.

GEL536 Industrial Maintenance 2 cr.

Pre-requisites GEL455

In recent years, industrial maintenance has seen many significant advances, due to a number of factors, such as sophisticated equipment, and severity norms on safety and security equipment. This course is designed to provide the students with the fundamental principles of industrial maintenance, and it covers the following topics: maintenance function, system failures, corrective and preventive maintenance, dependence, cost reliability, organization and control.

GEL537 Advanced Electrical Installation Design 2 cr.

Pre-requisites GEL440

This course is in continuity with the previous course GEL440 Electrical Installations. It covers the following systems: phone systems, data, fire systems, intrusion, videophone, video monitoring, access control, distribution TV systems, sound systems, and home automation systems.

GEL538 Machines Diagnosis Methods 3 cr.

Pre-requisites GEL455 And GEL421 And GRT420

This course is designed to present the methods of electrical machines diagnosis in industry, and it covers the following topics: faults of rotating machines and their diagnostics; modelling the faults of stator, rotor and winding in the electrical machine; close loop diagnosis of an asynchronous machine; observer based fault diagnosis; thermal supervision of rotating machines (asynchronous machine); and diagnosis using neural network methods. Each method will be described and presented with an application.

GEL539 Renewable Energy 3 cr.

Pre-requisites GEL455

Co-requisites GEL573

The course introduces the different sources of renewable energy: solar energy, wind energy, water energy, biomass energy. It also provides the fundamental concepts of power grid and microgrid integration using green energy sources. For each application, exercises and design problems are given throughout the course. Students' oral presentations also play a major role in understanding contemporary issues and the impact of engineering solutions in a global, economic, environmental, and societal context.

GEL550 Applied Digital Systems Design Techniques 3 cr.

Pre-requisites GEL314

This class presents a systematic approach to designing and implementing chip level digital systems design. The class

focuses on the practical aspect of digital logic design and is heavy on simulation and CAD tools. A range of tools will be used in this class to give students skills that are most popular in the world of chip level design. The skills acquired at the end of this class include high level hardware design languages, digital simulation tools, synthesizers, power analysis and chip planning tools.

The conclusion of this class will be a chip development project from specification through implementation, to simulation, to demonstration. Teams will work in groups of four people to execute and demonstrate their project, at the end of which period, they will have a professional presentation to an open audience of faculty, fellow students, and interested companies.

GEL552	Robotics	3 cr.
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Pre-requisites	GEL425
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By the end of this course the students must be able to imagine and describe the motion of any robot. They will learn the skills to be able to analyze the velocities, singularities and force transmissions involved.

GEL553	Robotics	3 cr.
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By the end of this course the students must be able to imagine and describe the motion of any robot. They will learn the skills to be able to analyze the velocities, singularities and force transmissions involved.

GEL556	Advanced Control	3 cr.
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Pre-requisites	GEL425
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Co-requisites	GEL574
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The purpose of this course is providing an in-depth study of the numerical control of sampled systems, including a detailed study of non-linear systems.

GEL558	Microcontrollers	3 cr.
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Pre-requisites	GEL445
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Co-requisites	GEL575
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The purpose of this course is to provide an introduction to microcontroller families: Motorola, Intel, Microchip. We will be studying the internal resources and programming of Microchip PIC microcontrollers, as well as developing multiple practical applications.

GEL559	Microcontrollers	3 cr.
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Co-requisites	GEL577
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The purpose of this course is to provide an introduction to microcontroller families: Motorola, Intel, Microchip. We will be studying the internal resources and programming of Microchip PIC microcontrollers, as well as developing multiple practical applications.

GEL560	Industrial Programming	2 cr.
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Pre-requisites	GEL558
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Co-requisites	GEL572
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In this course, we will study PLCs in detail as well as how to use them and their programming methods. A detailed study of Grafset, Ladder and Programmable Controllers will be presented. Then we familiarize students with the fieldbus CAN, I2C, MODBUS and Ethernet Industrial.

GEL570	Electric Machines Lab	1 cr.
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Co-requisites	GEL530
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The aim of the practical work is the implementation of the various theoretical concepts learned in the course. Simulation problems and practical examples will be studied.

GEL572	Industrial Programming Lab	1 cr.
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Co-requisites	GEL560
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This lab covers: IEC 61131-3 programming using Beckhoff's TwinCAT (System Manager, PLC control and ADS); the development of Human Machine interfaces; and the application to power measurement, stepper motors and servomotors.

GEL573	Renewable Energy Lab	1 cr.
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Co-requisites	GEL539
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In this laboratory, students will learn the sizing, the installation, the characteristics, and the optimum design of each renewable energy source and system. We will focus on photovoltaic panels, solar water heaters, wind turbines, and fuel cells.

GEL574	Advanced Control Lab	1 cr.
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Pre-requisites	GEL556 and GEL477
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The main objective of this lab is to apply different topics learned in the basic control system course and the advanced one using Matlab and Simulink. Also, some new topics are introduced such as the identification, the calculation of the

PID controller, the idea of fractional calculus applied to the generalized PID controller and much more.

GEL575	Microcontrollers Lab	1 cr.
Pre-requisites	GEL474	
Co-requisites	GEL558	

The main objective of this course is to apply different microcontroller topics and peripherals, introduced using the assembly language, physically. To do so, the EasyPic6 board is used along with the MikroBasic program to write down the program. A simulator and a conversion to assembly language are found within this program.

GEL577	Microcontrollers Lab	1 cr.
Co-requisites	GEL559	

The main objective of this course is to apply different microcontroller topics and peripherals, introduced using the assembly language, physically. To do so, the EasyPic6 board is used along with the MikroBasic program to write down the program. A simulator and a conversion to assembly language are found within this program.

GEL581	Internship II	1 cr.
Pre-requisites	GEL596	

In order to register for this course, the students first spend a minimum of two months experience in the industry or a company and live a real practical experience in the field of practice that they have chosen. Afterwards, the students present their "job" and what they learned from it in a well-structured and well-written scientific report.

GEL596	Final Project I	1 cr.
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This course pushes the students to demonstrate readiness to start their careers as professional engineers by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic will give the students the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program and apply them to investigate an approved research topic and then produce a report of professional standard.

GEL597	Final Project II	3 cr.
Pre-requisites	GEL596	

This course pushes the students to demonstrate readiness to start their careers as professional engineers by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic and applied developed product or study will give the students the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program and apply them to investigate an approved research topic and then produce a report of professional standard. This course requires the students to exhibit/develop a proactive approach to manage, orient and present a project.

GEL600	Special Topic in Electrical and Electronics Engineering	3 cr.
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GEL620	Advanced Control	3 cr.
Pre-requisites	GRT561 Or GEL510	
Co-requisites	GEL671	

The purpose of this course is to provide an in-depth study of the numerical control of sampled systems, including a detailed study of nonlinear systems with Microcontroller Based Applications.

GEL621	Advanced Command Strategies	2 cr.
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In this course we will be studying neural networks using the Multi-Layer-Perceptron Network (MLP) and Radial-Basis-Function (RBF) in detail, as well as Learning Algorithm. After, we will describe some of the control methods using neural networks. Then comes the fuzzy logic (principles and fuzzy logic control) and the integration of fuzzy methods in neural networks. Then we study the Kalman and the WienerHopf filters.

GEL622	Industrial Programming	2 cr.
Pre-requisites	GEL559	
Co-requisites	GEL672	

In this course, we will study PLCs in detail as well as how to use them and their programming methods. A detailed study of Grafset, Ladder and Programmable Controllers will be presented. After we familiarize students with the fieldbus CAN, I2C, MODBUS and Ethernet Industrial.

GEL631	Generation and Transport of Electrical Energy	3 cr.
Pre-requisites	GEL554	

This course is designed to provide students with the fundamental principles of electric energy production and distribution. Several types of power stations are presented and compared. The process of energy transmission is studied next. Finally, a particular attention is paid to the alternators and transformers (modelling and construction), that are the main electrical components involved in the process of energy production and transmission.

GEL632	Renewable Energy	3 cr.
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Pre-requisites GEL554
Co-requisites GEL673

The course introduces the different sources of renewable energy: solar energy, wind energy, water energy, biomass energy. It also provides the fundamental concepts of power grid and microgrid integration using green energy sources. For each application, exercises and design problems are given throughout the course. Students' oral presentations play a major role in understanding contemporary issues and the impact of engineering solutions in a global, economic, environmental, and societal context.

GEL633 **Mechatronics** **3 cr.**

Pre-requisites GEL554

Mechatronics is a design philosophy involving a complete integration of mechanical engineering, electronics, control theory and computer engineering in order to design a product. It is based on an interdisciplinary approach involving many disciplines concurrently and allowing flexibility and adaptability by replacing some mechanical functions by electronic processing. After introducing basic elements of a mechatronic system, the course presents methods of modelling, analyzing and controlling engineering systems based on modern technologies and allowing the students to follow an interdisciplinary approach starting from the earliest stages of the design.

GEL636 **Industrial Maintenance** **2 cr.**

In recent years, industrial maintenance has seen many significant advances. This is due to many factors, including sophisticated equipment and severity norms on safety and security equipment. This course is designed to provide students with the fundamental principles of industrial maintenance, and it covers the following topics: maintenance function, system failures, corrective and preventive maintenance, dependently, cost reliability, organization and control.)

GEL638 **Machines Diagnosis Methods** **3 cr.**

Pre-requisites GEL554 And GRT561

This course is designed to present the methods of electrical machines diagnosis in the industries. It covers the following topics: faults of rotating machines and their diagnostics; modelling the faults of stator, rotor and winding in the electrical machine; closed loop diagnosis of asynchronous machine; observer based fault diagnosis; thermal supervision of rotating machines (asynchronous machine); and diagnosis using neural network methods. Each method will be described and presented with an application.

GEL642 **Microprocessor Systems** **3 cr.**

Co-requisites GEL677

The purpose of this course is to provide an introduction to microcontroller families: Motorola, Intel, Microchip. We will be studying the internal resources and programming of Microchip PIC microcontrollers, as well as developing multiple practical applications.

GEL671 **Advanced Control Lab** **1 cr.**

Co-requisites GEL620

The main objective of this lab is to apply different topics learned in the basic control system course and the advanced one using Matlab and Simulink. Also, some new topics are introduced, such as the identification, the calculation of the PID controller, the idea of fractional calculus applied to the generalized PID controller and much more.

GEL672 **Industrial Programming Lab** **1 cr.**

Co-requisites GEL622

Students will learn about IEC 611313 programming using Beckhoff's TwinCAT (System Manager, PLC control and ADS); development of human machine interfaces using InduSoft; and the application to power measurement, stepper motors and servomotors.

GEL673 **Renewable Energy Lab** **1 cr.**

Co-requisites GEL632

In this laboratory, students will learn the sizing, the installation, the characteristics, and the optimum design of each renewable energy source and system. We will focus on photovoltaic panels, solar water heaters, wind turbines, and fuel cells.

GEL677 **Microprocessor Systems Lab** **3 cr.**

Co-requisites GEL642

The main objective of this course is to apply different microcontroller topics and peripherals, introduced using the assembly language, physically. To do so, the EasyPic6 board is used along with the MikroBasic program to write down the program. A simulator and a conversion to assembly language are found within this program.

GEL691 **Thesis I** **1 cr.**

GEL692 **Thesis II** **5 cr.**

Pre-requisites GEL691

GEN250	Modern Physics	3 cr.
Pre-requisites	MAT227	
Co-requisites	GEN270	
<p>The course covers principles and concepts of relativity, quantum mechanics and their applications. The following topics will be covered along with their applications: the failure of classical physics; the special theory of relativity; the particle properties of electromagnetic radiation; the wave properties of particles; the Schr and omul; dinger equation; the Rutherford-Bohr model of the atom and the hydrogen atom in wave mechanics.</p>		
GEN270	Physics Laboratory	1 cr.
<p>Tell me, I'll forget. Show me, I may remember. But, involve me, and I'll understand. Chinese proverb. The laws of physics are based on experimental and observational facts. Laboratory work is therefore an important part of a course in general physics, helping students develop skills in fundamental scientific measurements and increasing understanding of the physical concepts. It is valuable for students to experience the difficulties of making quantitative measurements in the real world and to learn how to record and process experimental data.</p>		
GEN300	Scientific English	2 cr.
Pre-requisites	ENG240	
<p>This course is designed to give students the opportunity to enhance their writing abilities and develop their critical thinking. It is also designed to provide rigorous training in advanced reading, critiquing, synthesizing and researching. It attempts to help students achieve greater competency in reading, writing, reflection, and discussion, emphasizing the responsibilities of written inquiry and structured reasoning. Students are expected to investigate questions that are at issue for themselves and their audience and for which they do not already have answers. In other words, this course should help students write about what they have learned through their research rather than simply write an argument supporting one side of an issue or another. In addition, students deliver one oral power point presentation based on their writings.</p>		
GEN301	Law for Engineers	2 cr.
<p>This course is designed to provide students with fundamental knowledge of legal principles and terminology, to understand the basic foundations and theories of law, and to explain the legal concepts and terminology in substantive areas of law (i.e., Contract Law, Liability Law, Labor Law, Commercial Law, etc.) It is also designed to help prepare engineering students for careers in fields which are impacted by the law and to demonstrate an understanding of the interaction between the fields of law and the application of laws and legal strategy in engineering. This course will also help engineering students to understand their rights and responsibilities as a contractor (application of Contract Law), an employee (application of Labor Law) and as a partner (application of Commercial Law).</p>		
GEN302	Engineering Ethics	1 cr.
<p>This course studies the theories of rational justification, of the moral judgments and the relationship between the concept of liberty, and the concept of responsibility, while covering the basic principles of deontology of an engineer's profession.</p>		
GEN303	Innovation and Entrepreneurship for Engineers	2 cr.
<p>At the end of this course, students should be able to:</p> <ol style="list-style-type: none"> 1) Develop an entrepreneurial mindset and learn how to identify opportunities 2) Have a better understanding of the business value propositions offered through technology and innovation 3) Apply their technical knowledge to create prototypes and MVPs 4) Build a business model canvas for their entrepreneurial projects 5) Improve their communication and public speaking skills through pitching 		
GEN350	Mathematics for Engineers	3 cr.
Pre-requisites	MAT227 And MAT307 And MAT337	
<p>The main objective of this course is to complete the knowledge of mathematics for the student engineer. It mainly covers the following themes: functions of a complex variable; analytical functions; Cauchy-Riemann conditions; harmonic functions; Cauchy integrals formulae; Taylor series; singular points; inverse Laplace transformation; special functions (Gamma and Beta functions); Bessel function; orthogonal functions (Tchebychev, Legendre, Hermite, Laguerre); and discrete-time Markov Chains.</p>		
GEN410	Engineering Projects Management	2 cr.
Pre-requisites	GEN350 or GCH400	
<p>This course covers the basics of project management where students learn what project management involves and how to approach it successfully and why a plan is so important to the success of a project and how to implement risk management successfully in each phase of the project. We define all tools and techniques for planning and controlling. We cover the major subject areas of the topic of quality of project management and provide valuable information. This</p>		

course is essential for future engineers working in industrial environments needing to gain a recognized qualification within project management. This course prepares students to apply proven methodologies to projects within their individual fields.

GEN428 Numerical Analysis 3 cr.

Pre-requisites MAT227 And MAT307 And GIN221

The purpose of this course is to provide numerical concepts and methods needed by students to solve different engineering problems. Topics covered include: resolution of non-linear equations; numerical integration; data approximation and interpolation and numerical resolution of differential equations. Many numerical methods are implemented and tested using Matlab software.

GEN450 Finite Element Method 3 cr.

Pre-requisites GEN428

The objective of this course is to analyze real world structural mechanics problems using the finite element method. The mathematical roots of FEA will be covered extensively in this course, on which nearly all structural analysis software is built. The course will provide for the specific challenges of engineers across all mechanical disciplines (aerospace, manufacturing, mechanical and mechatronic). Also, this course provides deep insight into the operation of finite element analysis software by training the students to implement a detailed FE study including planning, modelling, meshing, solving, evaluating results and validating against real world data.

GEN499 Seminars and Conferences 0 cr.

Each semester, the Faculty of Engineering organizes several seminars and conferences in which leading figures in the professional and academic world target future engineers with a speech presenting scientific, technical, and/or industrial topics, etc. and showing them the various aspects of the engineering profession.

GEN516 Scientific English 2 cr.

The English 516 is designed for students working on their thesis. It gives them the opportunity to enhance their writing abilities and develop their critical thinking. It is designed to provide rigorous training in advanced reading, critiquing, synthesizing and researching. It attempts to help students achieve greater competency in reading, writing, reflection, and discussion emphasizing the responsibilities of written inquiry and structured reasoning. Students are expected to investigate questions that are at issue for themselves and their audience and for which they do not already have answers. In other words, this course should help students write about what they have learned through their research rather than simply write an argument supporting one side of an issue or another. In addition, students deliver one oral powerpoint presentation based on their writings.

GEN550 Finite Element Method 3 cr.

This course introduces the finite element method and presents the need for comprehensive evaluation and checking when interpreting results. It covers basic theory; modelling, meshing and analyzing component models for stresses, deflections, temperatures and vibrations under operating conditions and loads; treatment of boundary conditions and restraints; and examples of good practice for safe and effective application in using ANSYS software.

GIN221 Introduction to Programming 3 cr.

This introductory course in programming enables engineering students to learn the methods of rigorous software development solutions in the object-oriented paradigm. The course is supplemented by laboratory sessions for the application of programming concepts studied in the Eclipse integrated development environment.

GIN222 Applied Programming for Engineers 3 cr.

Pre-requisites GIN221

This course emphasizes problem solving, algorithms, and an introduction to object-oriented programming. By the end of this course, students will be able to: break down computational problems into a series of easily managed steps; process data and perform input and output operations on it; implement, test, and debug a designed solution to a problem in Java, Matlab or the C language; and demonstrate a good understanding of libraries and use them for program development.

GIN231 Data Structures and Algorithms 3 cr.

Pre-requisites GIN221

The first part of this course introduces some concepts of object-oriented programming as well as recursion as a programming technique. In the second part, the following data structures are studied: static arrays, dynamic arrays, linked lists, stacks, queues and trees. In addition, an introduction to computational complexity is introduced in this course which allows for making a reasonable comparison between the different implementations of the above data structures.

GIN300 Database Systems 3 cr.

Pre-requisites GIN 231

Co-requisites GIN371

Students will study: the architecture and functions of a DBMS; database design (conceptual model, logical and physical models); the Entity-Relationship model; relational model and integrity constraints; relational algebra; SQL language (Data Definition Language (DDL) and Data Manipulation Language (DML)); functional dependencies, normalization and normal forms; and an introduction to PL/SQL language (triggers, stored procedures and functions). The concepts studied in this course will be applied in dedicated laboratory sessions (GIN371).

GIN311 **Elements of Discrete Mathematics** **2 cr.**

Pre-requisites MAT207 And GIN221

This course presents different topics in discrete mathematics useful in engineering. It includes: numerical sets and divisibility, concepts in number theory, proof methods, recurrence relations, discrete functions, big O and Theta concepts, algorithms analysis, prop, and predicates logic, elements of graph theory, introduction to language theory, regular languages, finite automaton, types of grammars, and Chomsky classification.

GIN314 **Object Oriented Design** **3 cr.**

Pre-requisites GIN231

This course covers: the fundamental concepts of object-oriented programming (classes, objects, abstraction, encapsulation, inheritance, polymorphism, dynamic links, inter-classes relations, inter-objects communication); object-oriented modeling and design using UML (Unified Modeling Language); design patterns (their intent, applicability (including benefits and drawbacks), structure and implementation); advanced object-oriented programming needed in implementation of certain patterns (in Java (dynamic class loading, static blocks, interfaces, inner class tricks) and in C++ (abstract base classes, virtual functions, private and public multiple inheritance mixtures)); use of OCL (Object Constraint Language); and use of UML modeling tools (AgroUML, Visio, etc.).

GIN321 **Algorithmics** **3 cr.**

Pre-requisites GIN231

Students will study: asymptotic notation, time and space complexities; solving recurrences; trees (traversing methods, balanced trees (AVL and red-black trees), heaps); advanced sorting algorithms, methods of linear sort; hashing (open and closed hashing); graphs (traversal in depth-first and breadth-first, finding of spanning trees and shortest paths); Huffman coding.

GIN371 **Database Laboratory** **1 cr.**

Co-requisites GIN300

This laboratory covers the SQL language: Data Definition Language (DDL) and Data Manipulation Language (DML). Oracle PL/SQL is used to code, test, and implement stored procedures, functions, triggers, and packages. Relational database projects will be built using PL/SQL. A brief overview of other DMBS (MS SQL Server, MS Access, MySQL) is also given.

GIN400 **Advanced Database Systems** **3 cr.**

Pre-requisites GIN300 And GIN321

Co-requisites GIN401

The objective of this course is to study the advanced paradigms of database management systems. The content of this course consists of four main parts: the first part introduces advanced concepts of DBMS such as query optimization, concurrency control and recovery; the second part presents the distributed DBMS, detailing the architecture of these systems in order to identify their different types such as client/server DBMS, distributed DBMS, federated DBMS and multi-DBMS, and finally focuses on the fragmentation and data allocation in distributed databases; the third part presents the analytical databases, specifically data warehouses, explaining the difference between online analytical processing (OLAP) and online transactional processing (OLTP), the ETL process (extraction, transformation and loading) of these warehouses and their logical and physical modeling; the fourth part introduces OODBMS and ORDBMS, their creation and manipulation using respectively the OQL and SQL3 languages.

GIN401 **Advanced Database Systems Lab** **1 cr.**

Co-requisites GIN400

This laboratory will study more advanced features of databases in design, administration, security and multi-user application. Topics include database scripting, database transaction, database security, database maintenance, data warehouses and distributed databases.

GIN421 **Operating Systems** **3 cr.**

Pre-requisites GIN321

The course covers the fundamental concepts of operating systems, emphasizing single-machine systems. These concepts include processes, threads, process synchronization, CPU scheduling, memory management, file and I/O management, and user program execution. Popular operating systems (e.g., UNIX, LINUX, and Windows) are used to illustrate implementation of these concepts.

GIN425 **Software Engineering Design** **3 cr.**

Pre-requisites GIN314

This course is a presentation of software engineering principles, methodologies and metrics. The topics of software engineering process and quality are presented in an integrative approach, stressing software improvements through measurements of software products and processes. The Unified Modeling Language (UML) is used throughout the course. Topics covered are software development process, domain analysis, object-oriented programming, software reuse, client-server framework, design patterns, user interfaces, dynamic modeling, software architecture, software testing, software quality, risk analysis and cost estimation.

GIN431 **Advanced Algorithmics** **3 cr.**

Pre-requisites GIN321

This course introduces different families of algorithms that help students to design, analyze, and implement pertinent solutions for classical problems. It includes methods related to number theory, dynamic programming, linear sorting, backtracking, matrix multiplication, string search, and probabilistic algorithms. In addition, this course introduces basic results in calculability: Turing-Church thesis, undecidability, halting problem, P and NP classes, NP-complete and NP-hard problems.

GIN446 **Web Programming** **3 cr.**

Pre-requisites GIN300

This course aims to cover key concepts, technologies and skills in server-side and client-side Web programming, including HTML5, CSS, JavaScript, .Net, PHP and MySQL, session management, as well as XML, DTD and DOM. After the completion of this course, students will be able to develop a Web system using a particular Web programming language with dynamic and interactive contents. Students will learn the Web programming concepts and techniques via lectures, lab sessions and development projects. There will be an oral presentation of all term assignments and a final project demonstration. Students will be judged and graded on preparation and presentation skills as well as content and also on effective writing style and grammatical correctness. Course content changes frequently to incorporate new Internet technologies.

GIN450 **Advanced Computer Architecture** **3 cr.**

Pre-requisites GEL445

This course first reviews general computer architecture and presents the concept of cache memory and pipelining in single processor systems. Multiprocessing systems are then discussed, starting with a global overview to tackle the next advanced topics of interconnection networks, shared memory and cache coherence, abstract models and algorithms for multiprocessor systems, the parallel virtual machine and message passing.

GIN473 **Applied Programming Lab** **1 cr.**

Pre-requisites GIN231

This laboratory allows engineering students to create applications that address real problems. It complements their knowledge with intensive sessions covering event-driven and object-oriented programming. It covers topics such as Rapid Application Development (RAD), Create-Read-Update-Delete (CRUD) development and Graphical User Interface (GUI). The technologies covered are Visual Basic.net, Windows platform, and the development environment is MS Visual Studio.

GIN480 **Internship I** **1 cr.**

Pre-requisites GIN446

In order to register for this course, the students first spend a minimum of two months experience in the industry or a company and live a real practical experience in the field of practice that they have chosen. Afterwards, the students present their "job" and what they learned from it in a well-structured and well-written scientific report.

GIN510 **Advanced Computer Architecture** **3 cr.**

This course first reviews general computer architecture and presents the concept of cache memory and pipelining in single processor systems. Multiprocessing systems are then discussed, starting with a global overview to tackle the next advanced topics: interconnection networks, shared memory and cache coherence, abstract models and algorithms for multiprocessor systems, the parallel virtual machine and message passing.

GIN511 **Cryptography and Computer Security** **3 cr.**

Pre-requisites GRT431

The objectives of this course are to provide cryptographic and information security topics and algorithms, such as symmetric key and public key encryptions, block and stream ciphers, message authentication, program and OS security as well as network and Web security.

GIN520 **Human Machine Interaction** **3 cr.**

Pre-requisites GIN425

This course provides students with an introduction to the Human Machine Interface, and the hardware, software and operating environments in use in various fields. The students will then study the psychopathology of everyday things –

complexity of modern devices; human-centered design; fundamental principles of interaction; psychology of everyday actions- how people do things; the seven stages of action and three levels of processing; human error; goal directed design; implementation models and mental models; beginners, experts and intermediates – designing for different experience levels; understanding users; modeling users – personas and goals; the Graphical User Interface (GUI) (general design principles); benefits; popularity of graphics; concept of direct manipulation; advantages and disadvantages; characteristics of GUI; characteristics of Web UI; design guidelines (perception, Gestalt principles, visual structure, reading is unnatural, color, vision, memory, six behavioral patterns, recognition and recall, learning, factors affecting learning, time); interaction styles; menus; windows; device based controls, screen based controls; communication (text messages, feedback and guidance, graphics, icons and images, colors).

GIN522 Software Verification and Validation 3 cr.

Pre-requisites GIN425

This course offers a survey of and training in software testing, verification and validation techniques used in the industry today, as both large and smaller software systems. Students will become acquainted with the trending software testing/verification tools, approaches, and practices.

GIN524 Advanced Web Technologies 3 cr.

Pre-requisites GIN446

This course covers the following: dynamic web applications (client-side and server-side scripting and databases); study of Web related e-commerce technologies; e-commerce workflow and transactions; advanced web technologies (AJAX, semantic web, data mining, RWD, MVC); Service-oriented Architecture (SOA) and cloud computing; Web services and APIs - implementation and management of e-commerce technologies; website management issues (cybersecurity); mobile commerce; e-commerce marketing models; search engine optimization and social networking; cloud computing deployment models for e-commerce; e-commerce interoperability processes as part of a business system; merchant services and payment process integration.

GIN525 Computer Network Security 3 cr.

Pre-requisites GRT431

The purpose of this course is to introduce the principles of security in fixed and mobile networks. The course starts with an introduction to information security concepts, security services and security mechanisms. In the second part, we discuss the concepts of symmetric and asymmetric cryptography, the hash function and the signature and key sharing procedures and we apply these concepts to secure the data communication using the SSL and the IPSec protocols. In the third part, we discuss security in wireless networks, intrusions and filtering mechanisms through the use of firewalls. Finally, we discuss security management and risk management concepts.

GIN526 Planning and Configuration of Computer Networks 3 cr.

Pre-requisites GRT431

This course covers: the design process of computer networks; requirements and specifications; the main problems; modeling of the network design; design and topological expansion; location of equipment; computer networks at multiple levels; design of computer networks and traffic with standards of performance, reliability and quality of service; allocation of resources in computer networks; case studies; protocols and operation of switches and routers; design of networks, including the choice of technologies, protocols and equipment; configuration of switches and routers (wired and wireless); structured cabling; network operating systems; telephony and voice over IP; network management (management performance, configurations and faults in networks); and virtualization.

GIN527 Distributed Systems 3 cr.

Pre-requisites GRT431

The objective of this course is to explain the principles of distributed systems and their different hardware and software architectures. The concepts discussed are: C/S and P2P architectures, inter-process communication, distributed file system, sockets programming, calling procedures and methods remotely (RPC and RMI), CORBA architecture, time synchronization in distributed systems, logical time, coordination algorithms, mutual exclusion, cloud computing, grid computing, clusters, and an introduction to parallel programming.

GIN528 Mobile Devices Programming 2 cr.

Pre-requisites GIN446 Or GIN473

This course focuses on research and projects in the area of programming mobile devices with an emphasis on the Android platform. The main themes of the course revolve around the design of applications for mobile devices with unique challenges: user interface, mobile-specific technologies, and the importance of performance. Android SDK has its own interesting aspects to learn: the multi-touch model, accelerometer, and other important API receive significant attention. Students will learn the concepts of development applicable to any type of mobile environment: iOS, BlackBerry, Symbian, Windows Phone.

GIN532 Artificial Intelligence 3 cr.

Pre-requisites STA307 And GIN321

This course covers the techniques used to design intelligent computer systems using the recent artificial intelligence (AI) techniques. Topics include intelligent agents, problem solving by searching, informed search and exploration, constraint satisfaction problems, knowledge representation and reasoning, planning, uncertain knowledge and reasoning and Machine Learning. The course also discusses advanced AI applications such as natural language processing, computer games, and robotics.

GIN540 **Advanced Database Systems** **3 cr.**

Co-requisites GIN541

The objective of this course is to study the advanced paradigms of database management systems. The content of this course consists of four main parts. The first part introduces advanced concepts of DBMS such as query optimization, concurrency control and recovery. The second part presents the distributed DBMS. It details the architecture of these systems in order to identify their different types such as client/server DBMS, distributed DBMS, federated DBMS and multi-DBMS. It finally focuses on the fragmentation and data allocation in distributed databases. The third part presents the analytical databases, specifically data warehouses. It explains the difference between the online analytical processing (OLAP) and online transactional processing (OLTP), the ETL process (extraction, transformation and loading) of these warehouses and their logical and physical modeling. The fourth part introduces OODBMS and ORDBMS, their creation and manipulation using respectively the OQL and SQL3 languages.

GIN541 **Advanced Database Systems Lab** **1 cr.**

Co-requisites GIN540

This laboratory will study more advanced features of databases in design, administration, security and multi-user application. Topics cover database scripting, database transactions, database security, database maintenance, data warehouse and distributed databases.

GIN550 **Cryptography and Computer Security** **3 cr.**

The objectives of this course are to provide cryptographic and information security topics and algorithms, such as symmetric key and public key encryptions, block and stream ciphers, message authentication, program and OS security as well as network and Web security.

GIN581 **Internship II** **1 cr.**

Pre-requisites GIN596

In order to register for this course, the students first spend a minimum of two months experience in the industry or a company and live a real practical experience in the field of practice that they have chosen. Afterwards, the students present their "job" and what they learned from it in a well-structured and well-written scientific report.

GIN596 **Final Project I** **1 cr.**

This course pushes the students to demonstrate readiness to start their careers as professional engineers by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic will give the students the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program and apply them to investigate an approved research topic and then produce a report of professional standard.

GIN597 **Final Project II** **3 cr.**

Pre-requisites GIN596

This course pushes the students to demonstrate readiness to start their careers as professional engineers by undertaking an investigation of a research topic relevant to the profession and by appraising its practical experience. The research topic and applied developed product or study will give the students the opportunity to marshal the relevant knowledge and skills from various courses and laboratories of the program and apply them to investigate an approved research topic and then produce a report of professional standard. This course requires students to exhibit/develop a proactive approach to manage, orient and present a project.

GIN600 **Special Topic in Computer Engineering** **3 cr.**

This course covers one or more contemporary topic(s) in Computer Engineering and related areas. It expands the regular curriculum of the MS in Computer Engineering program with specialized skills and knowledge in modern subjects in the field.

This course can be replaced by an approved master-level engineering course that is not granted from the BE.

GIN612 **Software Verification and Validation** **3 cr.**

This course covers the following topics: validation of a software product by testing its complete integration; preconditions, post-conditions and invariants; use of models in software development; test and verification of software; audit programs by symbolic execution; predicate logic of first-order; Hoare logic; and development of correct programs built from templates.

GIN622 **Computer Network Security** **3 cr.**

Pre-requisites GIN550

The purpose of this course is to introduce the principles of security in fixed and mobile networks. The course starts with an introduction to information security concepts, security services and security mechanisms. In the second part, we discuss the concepts of symmetric and asymmetric cryptography, the hash function and the signature and key sharing procedures and we apply these concepts to secure the data communication using the SSL and the IPSec protocols. In the third part, we discuss security in wireless networks, intrusions and filtering mechanisms through the use of firewalls. Finally, we discuss security management and risk management concepts.

GIN623 Planning and Configuration of Computer Networks 3 cr.

Pre-requisites GIN622

Students will study: computer network planning process; requirements and specifications; modeling of the main network planning problems; topological design and expansion; location of equipment; computer networks at several levels; design of computer networks and routing traffic with performance, reliability and quality of service QOS; resource allocation in computer networks; case studies; protocols and operation of switches and routers; network design including the choice of technologies, protocols and equipment; configuration of switches and routers (wired and wireless); structured cabling; network operating systems; telephony and VoIP; network management (performance management, configuration and faults in networks); and virtualization.

GIN624 Distributed Systems 3

Pre-requisites GIN550

The objective of this course is to explain the principles of distributed systems and their different hardware and software architectures. The concepts discussed are: C/S and P2P architectures, inter-process communication, distributed file systems, sockets programming, calling procedures and methods remotely (RPC and RMI, CORBA architecture), time synchronization in distributed systems, logical time, coordination algorithms, mutual exclusion, cloud computing, grid computing, clusters, and an introduction to parallel programming.

GIN625 Mobile Devices Programming 2 cr.

Students will learn about programming mobile devices with an emphasis on the environment and the Android platform. This course focuses on research and projects. The main themes of the course revolve around the design of applications for mobile devices with unique challenges (user interface, mobile-specific technologies), and the importance of performance. The Android SDK has its own interesting aspects to learn. The multi-touch model, accelerometer, and other important API receive significant attention. Students will learn the concepts of development applicable to any type of mobile environment: iOS, BlackBerry, Symbian, Windows Phone.

GIN632 Artificial Intelligence 3 cr.

This course covers the techniques used to design intelligent computer systems using the recent artificial intelligence (AI) techniques. Topics include intelligent agents, problem solving by searching, informed search and exploration, constraint satisfaction problems, knowledge representation and reasoning, planning, uncertain knowledge and reasoning and Machine Learning. The course also discusses advanced AI applications such as natural language processing, computer games, and robotics.

GIN691 Thesis I 1 cr.

GIN692 Thesis II 5 cr.

Pre-requisites GIN691

GMC260 Mechanical Engineering Graphics 3 cr.

This course covers the basic knowledge of engineering drawing techniques and the basic concepts in product design. It introduces standard engineering drawing methods, including orthographic and pictorial projections, dimensioning and tolerance, limits and fits. Features, functionality and representation method for screws, fasteners, cam and gear will also be covered. This course also introduce the 3D CAD modeling information using standard engineering drawing methods and include: engineering drawing techniques; orthographic and pictorial projections; dimensioning and tolerance; limits and fits; screw fasteners; cam; gears.

GMC310 Statics 3 cr.

Pre-requisites MAT217

The course covers fundamental concepts of mechanics relating to forces acting on rigid bodies. It includes problems involving actions and reactions on structures and machines in two and three dimensions, shear and moment diagrams, centroids, center of mass/gravity, moments of inertia, friction, dry friction and friction forces on screws. There is also an introduction to the principle of virtual work.

GMC320 Dynamics 3 cr.

Co-requisites MAT227

This course presents the fundamentals of engineering dynamics. It covers the following topics: kinematics of a particle (absolute and relative motion, description of motion in various systems of coordinates); kinetics of a particle; force and acceleration (Newton's second law of motion); work and energy (principle of conservation of energy); impulse and momentum (conservation of linear momentum).

GMC330 Dynamics of Rigid Bodies 3 cr.

Pre-requisites MAT307 And GMC310 And GMC320

Dynamics of rigid bodies is a sub-branch of the general field of study known as engineering mechanics. It is very closely related to—and often combined with—the study of statics, which you encountered in GMC 310, with the study of the Mechanics Engineering Dynamics GMC 320 where we have covered the dynamics of particles. In this subject, we will thus study accelerated motion of rigid bodies. We will then take a step towards the more realistic engineering problems by considering the size, shape, and orientation of objects as they accelerate. We term this type of motion “Rigid Body Motion.” We begin, with the kinematics of rigid bodies, looking first at the rotational motion of objects. We will then introduce the possibility that objects can move (and accelerate) by translating and rotating at the same time. Furthermore, GMC 330 covers many of the three-dimensional kinematics and kinetics of rigid body principles. Finally, an introduction to vibrational motion, or what happens when objects oscillate about a neutral state, will be covered.

GMC340 Thermodynamics 3 cr.

Pre-requisites CHM212 Or CHE212

This course is designed to provide a fundamental understanding of the transformation of thermal energy and the behavior of its physical quantities. Such transformation is the conversion of heat into work. Engineers are generally interested in studying systems and how they interact with their surroundings. Its use becomes indispensable in our society.

GMC420 Applied Thermodynamics 3 cr.

Pre-requisites GMC340

This course is the second part of Thermodynamics. It prepares the students to analyze and design preliminary thermodynamic plants by applying and examining the following concepts: the generation of electric power using steam and gas power plants; refrigeration and air conditioning and heat pumps; cogeneration facilities; gas turbines and their use in the aerospace industry; gas mixtures and psychrometrics; reacting mixtures and combustion.

GMC425 Instrumentation and Measurements for Mechanical Engineers 3 cr.

Pre-requisites GMC471 And GMC472 And (GEL410 Or GEL320)

A course on the general concepts of measurement systems; classification of sensors and sensors types; interfacing concepts; data acquisition, manipulation, transmission, and recording; introduction to LABVIEW; applications; and a team project on design, and implementation of a measuring device.

GMC430 Fluid Mechanics 3 cr.

Pre-requisites GMC340

Co-requisites MAT337

This course provides a concise and clear presentation of fundamental topics in fluid mechanics, which deals with energy transportation by a fluid. These topics concern the development and application of control volume and differential form analysis and applications of fluid flows. Topics include fundamental concepts, basic equations in integral form for a control volume, introduction to differential analysis of fluid motion, potential flow, incompressible flow, and internal and external viscous flows including boundary layer concepts.

GMC435 Hydraulics 2 cr.

Pre-requisites GMC430

This course deals with basic concepts of hydraulics, namely, the continuity, energy and momentum equations. This includes hydrostatics, internal viscous with application of Bernoulli equation and losses. Further, it covers physical modeling (dimensionless analysis and similarities), hydraulic pumps, and turbines.

GMC440 Strength of Materials 3 cr.

Pre-requisites MAT227 And GMC310

Co-requisites GMC472

This course presents the theory and application of the fundamentals of mechanics of materials: stress and strain; tension, compression, and shear; Hooke's law, Mohr's circle, combined stresses, strain-energy; beams, columns, shafts, and continuous beams; deflections, shear and moment diagrams; thin-walled structures, buckling and columns and energy methods (Castiglianos).

GMC441 Mechanics of Continuous Medium 3 cr.

Pre-requisites GMC330

Continuum mechanics carries out the principles that apply to both solid and fluid mechanics. This subject provides

advanced treatment of the fundamental, unifying concepts of the mechanics of continua in order to simplify further study in specialized fields such as aerodynamics, mechanics of viscous fluids, elasticity, plasticity, and continuum damage mechanics. The topics covered in this course are divided into two parts. The first part will cover advanced solid mechanics (in 25 lectures): stress and strains in 3-D, Cauchy formula, principal stress, hydrostatic stress, deviatoric stress, stress transformations, Mohr circle, octahedral shear stress, strain energy densities, theories of failure, beam on elastic foundations, bending of curved beams, and the theory of elasticity. The second part will cover advanced topics in fluid dynamics (in 10 lectures): fundamental principles of conservation, Reynolds transport theorem, conservation of mass, conservation of linear momentum (Navier-Stokes equation); conservation of energy; the general scalar transport equation; classification of partial differential equations and physical behavior, and approximate solutions of differential equations.

GMC444	Stress Analysis and Design	3 cr.
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Pre-requisites	GMC445
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This course covers the robust analysis techniques to predict and validate design performance and life. We will start by reviewing critical material properties in design, such as stress, strength, and the coefficient of thermal expansion. We then transition into static failure theories such as von Mises theory, which can be utilized to prevent failure in static loading applications such as the beams in bridges. Thin and thick-walled pressure vessels, shrink fit, contact stresses, Energy Methods, and other special topics. Types of loading on machine elements and allowable stresses. Concept of yielding and fracture. Different theories of failure. Construction of yield surfaces for failure theories. Optimize a design comparing different failure theories. Stress concentration, safety factors, steady and repeated loading. Fatigue and endurance strength, shaft design & analysis.

GMC445	Metallurgy	3 cr.
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Pre-requisites	(CHM212 Or CHE212) And GMC440 and (GMC360 or GMC260)
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The objective of this course is to give students basic knowledge about the available materials (ferrous and non-ferrous), the principles of material selection, and how to find suitable materials for their design projects based on the mechanical properties, and the choice of appropriate heat treatment procedure. Also covered will be the knowledge of welding procedures, focusing on the most common welding procedures for construction and maintenance.

GMC450	Theory of Machines	3 cr.
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Pre-requisites	GMC440
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Mechanical engineers come across many machines. Therefore, the knowledge of various mechanisms, power transmission, linkages and dynamical forces are offered in this subject. The study of kinematics is concerned with understanding relationships between the geometry and the motions of the parts of a machine. The overall objective of this course is to learn how to analyze the motions of mechanisms, and design mechanisms to give desired motions. This course includes relative motion analysis, design of gears, gear trains, cams and linkages, graphical and analytical analysis of position, velocity and acceleration, clutches, brakes and dynamometers. Students will be able to understand the concepts of displacement, velocity and acceleration of a simple mechanism, drawing the profile of cams and its analysis, gear kinematics with gear train calculations, theory of friction, clutches, brakes and dynamometers.

GMC451	Heat Transfer	3 cr.
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Pre-requisites	GMC430
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The objective of this course is to extend the knowledge of thermodynamics and fluid analysis by considering the rates of the heat transfer modes, namely, conduction, convection, and radiation and their applications. Thus, the course will cover steady and transient heat conduction, extended surfaces, external and internal forced convection of laminar and turbulent flows, natural convection, heat exchanger principles, thermal radiation, view factors and radiation exchange between diffuse and gray surfaces. Further, numerical simulations in one and two-dimensional problems will be developed.

GMC452	Mechanical Vibrations	3 cr.
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Pre-requisites	GMC330
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This course covers the following topics: basic definitions; single degree of freedom systems (equations of motion, undamped and damped vibrations, free and forced vibrations, response of systems to external excitations, vibration isolation); two degrees of freedom systems (equations of motion, coordinate transformation, principal coordinates, vibration modes, torsional vibration); and an introduction to multi-degrees of freedom systems.

GMC453	Engine Technology and Related Components	3 cr.
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Pre-requisites	GMC451
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This course covers the introduction, theory of operation, and basic diagnostic procedures required to restore engine performance to vehicles equipped with complex engine control systems. Topics include an overview of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices. Moreover, this course covers study of the electronic engine control systems, the diagnostic process used to

locate engine performance concerns, and procedures used to restore normal operation.

GMC454 Manufacturing Technology 3 cr.

Pre-requisites GMC445

Co-requisites GMC470

This course introduces the organizational and functional requirements for effective production. Tolerance charts and work piece control are used to plan the manufacturing sequence, select the preferred manufacturing equipment and the operational sequence. The course deals with production tooling requirements and tooling cost estimates. Design of tooling for turret lathes, automatic screw machines, multiple spindle lathes, and production milling machines is treated.

GMC461 HVAC Systems 3 cr.

Pre-requisites GMC451

This course is intended to introduce the sanitary, plumbing and heating systems applied in the construction field. For the heating aspect, it prepares the students to become familiar with the preliminary rules and standards for analyzing, calculating and designing a complete hot water heating system with all its components, ranging from the mechanical room equipment to the distribution piping networks and ending with the heat emitters. For the sanitary and plumbing systems it aims to provide the know-how to design and calculate the cold, hot, hot water return, waste, sewage and storm systems with all necessary equipment as pumps, cold storage tanks, hot water heaters, valves, pipe sizing and layouts.

GMC462 Advanced Transport Phenomena 3 cr.

Pre-requisites GMC451

The course provides a theoretical and practical basis for understanding and quantifying mass, momentum and energy transport motivated by examples and applications relevant to environmental engineering problems. Both molecular and macroscopic principles will be discussed highlighting unifying principles underlying transport processes and properties. Students will develop proficiency in problem formulation, making simplifying assumptions, and using a range of analytical and numerical solution methods. Coupled transport processes will be explored primarily through self-study as part of class project requirements.

GMC464 Fluid II 3 cr.

Pre-requisites GMC430

This course covers the potential flow and boundary layer analysis; lift and drag; flow separation; the use of computational techniques to solve boundary layer problems; viscous internal channel flow and lubrication theory; one-dimensional compressible flow in nozzles and ducts; normal shock waves and channel flow with friction or heat transfer; fluid machinery including pumps and hydraulic turbines.

GMC466 Internal Combustion Engines 3 cr.

Pre-requisites GMC451 or GMC453

The design of the internal combustion engine is highly empirical science. This course is intended to demonstrate the application of engineering sciences applied to internal combustion engines, both spark-ignition and compression-ignition. Such applications include stoichiometry and thermochemistry of air-fuel mixtures, predictions of chemical equilibrium, heat transfer, fluid flow, and friction, lubrication processes relevant to ICE design, performance, efficiency, emissions, fuel requirements, air-pollution, fuel cost, and others.

GMC467 Mechatronics for Mechanical Engineers 3 cr.

Pre-requisites GEL430 or GMC475 or GMC425

Co-requisites GMC519

This course is an introduction to designing mechatronic systems, which require integration of the mechanical and electrical engineering disciplines within a unified framework. Topics covered in the course include: Low-level interfacing of software with hardware; use of high-level graphical programming tools to implement real-time computation tasks; digital logic; analog interfacing and power amplifiers; measurement and sensing; electromagnetic and optical transducers; control of mechatronic systems.

GMC470 Manufacturing and Workshop Lab 1 cr.

Pre-requisites GMC455 Or GMC454

Students will apply the techniques of traditional machining (lathing, sharpening, drilling, milling and rectifying), looking at the choice of the appropriate materials for cutting tools, the sharpening of the lathing cutting tools and how to prepare the technical sheet of machining. They will also apply some techniques and positions for MMA welding.

GMC471 Fluid and Thermal Lab 1 cr.

Pre-requisites GMC435 And GMC451

The objective of this laboratory is to show the students different experiments in thermal sciences. The students will investigate the laws and theories of thermodynamics, fluid mechanics, and heat transfer using diverse methods of

measurements including limitations and boundaries of each theory.

GMC472 Strength of Materials Lab 1 cr.

Co-requisites GMC440

This course starts with a brief introduction about the safety procedures of the lab. Reliability of measurements and statistical analysis for experimental data is provided to the students. They will also study: verification of theoretical models through testing; trusses, tension test (stress-strain diagram, determination of yield strength, ultimate strength, modulus of elasticity, percentage elongation and percentage reduction in areas); buckling test; hardness tests; impact tests; parabolic arc; and suspension bridges.

GMC475 Linear Control Systems lab For mechanical Engineers 1 cr.

Pre-requisites GEL425

This course is to emphasize the use programming and software tools of a dynamical system; design models to understand its performance; evaluate various strategies for its operation. Apply proper working methods of modeling mechanical systems, so that can be applied to solve problems in the field of mechanical engineering but also in general engineering covering techniques of analysis of linear control system, such as root locus method, stability considerations, and phase-gain-frequency diagrams, and design using compensating networks and optimization. Students are also expected to have knowledge of State Variables in Automatic Control covering applications of vector-matrix equations related to control systems, stability, controllability and observability.

GMC477 Hydraulics Lab 1 cr.

Co-requisites GMC435

The objective of this laboratory is to show the students different experiments in fluids and hydraulics sciences. The students will investigate the laws and theories of thermodynamics, fluid mechanics, and hydraulics using diverse methods of measurements including limitations and boundaries of each theory.

GMC480 Internship I 1 cr.

Pre-requisites GMC461 Or GMC445

This training enables the students to face new challenging engineering practice in the real world. Further, this training permits the students to discover how to meet desired needs within realistic constraints such as economic, environmental, social, ethical, manufacturability, and sustainability. The students will communicate effectively and have an understanding of professional and ethical responsibility, and the impact of engineering solutions. The students will, at the end of their training session, submit a report for evaluation.

GMC500 Mechanical Systems Design Project 3 cr.

Pre-requisites GMC460 Or GMC444

In this course, students will develop a novel mechanical system by the group work based on the design which was planned in the previous course "Creative Design of Mechanical Systems". Through brainstorming ideas, developing a machine, cyclically assessing and optimizing its performance, students will acquire skills to create, design and produce the machines and also learn about the group work, management, discussion and presentation. For this purpose, students will discuss in the group to establish the concept of mechanical system, will design and draft the system, will fabricate and purchase the parts if necessary and will manage the budget and schedule, supported by periodical reviews of the instructors. This course facilitates students ability to tackle unknown or unsolved problems and to successfully perform bachelor thesis researches.

GMC501 Turbomachinery 3 cr.

Pre-requisites GMC451 And (GMC465 Or GMC464)

This course is aimed at introducing the students to the basic principles of modern turbomachinery. Emphasis will be placed on steam and gas turbine applications and design. Therefore, applications of the principle of the fluid mechanics, thermodynamics and aerodynamics to design and analysis of turbines, pumps and compressors will be covered.

GMC502 Energy Production 3 cr.

Pre-requisites GMC420 And GMC451

Students will learn about the generation of electric power using fossil and wind energy sources, power plant thermal cycle analysis, cogeneration and combined cycles, wind energy and capacity, economics, operations, and design of electric power stations.

GMC503 Advanced Heat transfer 3 cr.

Pre-requisites GMC451

The course is intended to instruct the student in the three modes of heat transfer (conduction, convection and radiation) and develop the problem solving skills in energy-related mechanical engineering areas and understand the role of heat transfer in everyday life. Combined conduction, convection and radiation heat transfer, Heat transfer with phase transformation, film type condensation of vapours over vertical surfaces and inclined tubes, melt solidification,

Heat exchangers, Analysis of heat transfer equipment efficiency, Pinch analysis, Selection and design of equipment with phase transformation, Numerical method for convective heat transfer Simultaneous solution of velocity and temperature fields, solutions on complex geometry, Transport analogies.

GMC505 Refrigeration 2 cr.

Pre-requisites GMC451

The course covers the following: a review of thermodynamics principles; fundamentals of heat and mass transfer; theoretical and actual vapor compression cycles; food storage conditions; main components (compressor, condenser, evaporator, expansion valves); refrigerants; cooling load calculation for refrigeration.

GMC507 Finite Volume Method 2 cr.

Pre-requisites GMC465

Co-requisites GMC508

This course is a straightforward introduction to the practical details involved in computational activity for numerical heat transfer and fluid flow analysis. Intended as an introduction to the field, the course emphasizes physical significance rather than mathematical manipulation, and carries a description of the numerical method to the point where students can begin to write and test computer programs using Matlab. Beginning with consideration of heat conduction, the course discusses the interaction of convection and conduction leading to analysis of the procedure for fluid flow calculation.

GMC508 Computational Fluid Dynamics Lab 1 cr.

Co-requisites GMC507 Or GMC539

This course aims to introduce students to the following industrial software used in computational fluid dynamics: GAMBIT (mesh generation), FLUENT (calculation) and Tecplot (results post-processing). Different exercises covering the different branches of fluid mechanics (incompressible, compressible, turbulence, two phase, 2D and 3D, unsteady) and heat transfer are treated numerically.

GMC509 Advanced Energy Systems Lab 1 cr.

Pre-requisites GMC 471 And (GMC 466 Or GMC 453) And GMC 420

The course covers domestic water heating systems, domestic boilers, simple compression refrigeration cycle, test stand for single cylinder engines, oil and fuel internal combustion engines, gas turbine, hydraulic and pneumatic systems.

GMC510 Fluid Power Systems 3 cr.

Pre-requisites GMC471 And (GMC465 Or GMC464)

This course presents basic concepts and operation of fluid power, demonstrating knowledge in maintenance, safety, and troubleshooting. Students will perform fluid power operation in the use of hydraulic power systems, symbols and schematic interpretation, industrial hydraulics, pressure control valves, directional control valves, check valves, flow control valves, actuators, pumps, oil conditioners and measuring instruments.

GMC511 Advanced Manufacturing Techniques 2 cr.

Pre-requisites GMC455 And GMC470

Co-requisites GMC512

The objective of this course is to expand on the preliminary industrial development and show the students how to design, and work on the planning, scheduling, and control of manufacturing systems with emphasis on information flow and decision-making within the field of manufacturing. Additionally, the course is designed to present to students a number of interpersonal skills and competencies necessary for a sustained career in manufacturing such as system simulation, simulation models of manufacturing systems and system performance under different production planning and control policies.

GMC512 Advanced Manufacturing Techniques Lab 1 cr.

Co-requisites GMC511

The objective of this course is to provide an integrated treatment of the analysis and applications of advanced manufacturing techniques. The theory of GMC 511 is reviewed to control machines numerically. Algorithms are developed to program NC machines. The lab work includes operation of machines to demonstrate the programming skills using the LabView software.

GMC513 Steel Structures Design 3 cr.

Pre-requisites GMC 460 Or GMC 444

The objective of this course is to introduce the students to the design philosophy, structural analysis and basis of codes of practice (i.e. ASME and BS). They will examine the design of steel components, local buckling, cross-section classification, design of tension members, compression members, beams and beam-columns. Also covered will be the design of steel connections, general consideration of bolts and welds, analysis and design of connections. At the end of this course students will have sufficient knowledge about the behavior of steel structures and how to design structural

steel members and connections.

GMC514	Acoustics	3 cr.
Pre-requisites	GMC330 And GMC452	
<p>The objective of this course is to introduce the students to acoustics and noise. It constitutes a self-contained and practically useful body of knowledge in the field of acoustics. Important matters such as the measurement of sound and the effect of noise on people are considered. This course covers advanced topics too, such as: the three dimensional wave equation; solutions to the three dimensional wave equation; the monopole sound source; sound power; acoustic levels; energy density on a room; reverberation time; Statistical Absorption coefficient; steady state room acoustics; transmission loss; effective intensity in a diffuse field; composite transmission loss; noise levels outside enclosures; and transmission loss characteristics.</p>		
GMC516	Machinery Design	2 cr.
Pre-requisites	GMC450	
<p>This is an advanced course on modeling, design, integration and best practice for use of machine elements such as bearings, springs, gears, cams and mechanisms. Modeling and analysis of these elements is based upon extensive application of physics, mathematics and core mechanical engineering principles (solid mechanics, fluid mechanics, manufacturing, estimation, computer simulation, etc.).</p>		
GMC517	Computational Solid Mechanics Lab	1 cr.
Pre-requisites	GEN450	
<p>The course is designed for students in order to improve their understanding and training needed to solve problems using computational methods to better understand the fundamental principles on which computer simulations are based. Students will learn to develop and implement their own material constitutive models for deformation and failure using commercially available finite element codes more effectively. Experimental validation will be also discussed in this course.</p>		
GMC518	Mechanics of Composite Materials	3 cr.
Pre-requisites	GMC440	
<p>Students will learn about the generation of electric power using fossil and wind energy sources, power plant thermal cycle analysis, cogeneration and combined cycles, wind energy and capacity, economics, operations, and design of electric power stations.</p>		
GMC519	Mechatronic Systems Lab	1 cr.
Pre-requisites	GEL503	
<p>Mechatronics is a design philosophy involving a complete integration of mechanical engineering, electronics, control theory and computer engineering in order to design a product. It is based on an interdisciplinary approach involving many disciplines concurrently and allowing flexibility and adaptability by replacing some mechanical functions by electronic processing. The lab is a concrete proof of the importance of the interdisciplinary approach by applying instrumentation concepts and mechanical control using a PLC with its human to machine interface.</p>		
GMC520	Advanced Transport Phenomena	3 cr.
<p>The course provides a theoretical and practical basis for understanding and quantifying mass, momentum and energy transport motivated by examples and applications relevant to environmental engineering problems. Both molecular and macroscopic principles will be discussed, highlighting the unifying principles underlying transport processes and properties. Students will develop proficiency in problem formulation, making simplifying assumptions, and using a range of analytical and numerical solution methods. Coupled transport processes will be explored primarily through self-study as part of class project requirements.</p>		
GMC525	CAD/CAM	3 cr.
Pre-requisites	(GMC360 Or GMC260) And (GMC460 or GMC444)	
<p>An introductory course that demonstrates the integration of Computer-Aided-Design (CAD) and Computer-Aided-Manufacturing (CAM). This is a study of modern prototyping and machining methods, teaching the use of specific software for converting 2D and 3D CAD drawing geometry directly into toolpath information used to drive numerically controlled turning and milling machines.</p>		
GMC526	CAD/CAM Lab	1 cr.
Co-requisites	GMC525	
<p>3D geometric modeling, STL file generation – reverse engineering, computer aided part programming, multi-axial machining in CNC machining.</p>		
GMC536	Air Conditioning	2 cr.
Pre-requisites	GMC451	
<p>This course is intended to introduce the air conditioning systems applied in the construction field. The first part covers the calculation procedure and methodology for determining the air conditioning load necessary for the studied</p>		

application; the second part introduces and discusses the humid air evolution on the psychrometric chart to finally select the required and suitable air conditioning unit.

GMC539	Computational Fluid Dynamics	3 cr.
Pre-requisites	GMC465 or GMC464	
Co-requisites	GMC508	
<p>This course is a straightforward introduction to the practical details involved in computational activity for numerical heat transfer and fluid flow analysis. Intended as an introduction to the field, the course emphasizes physical significance rather than mathematical manipulation, and carries a description of the numerical method to the point where students can begin to write and test computer programs using Matlab. Beginning with consideration of heat conduction, the course discusses the interaction of convection and conduction leading to analysis of the procedure for fluid flow calculation.</p>		
GMC541	Machinery Design	3 cr.
Pre-requisites	GMC460 Or GMC444	
<p>This is an advanced course on modeling, design, integration and best practices for use of machine elements such as bearings, springs, gears, cams and mechanisms. Modeling and analysis of these elements is based upon extensive application of physics, mathematics and core mechanical engineering principles (solid mechanics, fluid mechanics, manufacturing, estimation, computer simulation, etc.).</p>		
GMC542	Machinery Design	3 cr.
<p>This is an advanced course on modeling, design, integration and best practices for use of machine elements such as bearings, springs, gears, cams and mechanisms. Modeling and analysis of these elements is based upon extensive application of physics, mathematics and core mechanical engineering principles (solid mechanics, fluid mechanics, manufacturing, estimation, computer simulation, etc.).</p>		
GMC543	Energy Production	3 cr.
<p>This course covers: the generation of electric power using fossil and wind energy sources; power plant thermal cycle analysis; cogeneration and combined cycles; wind energy and capacity; economics, operations, and design of electric power stations.</p>		
GMC544	Fluid Rheology	3 cr.
<p>The objective of this course is to introduce the fundamentals of fluid-structure interaction (FSI) by a sequence of gradually complex problems. In the process, basics of fluid mechanics, wave hydrodynamics, floating system dynamics, and vibrations are also covered. Topics covered include linear wave theory, linear and nonlinear oscillators, potential flow methods, wave force prediction methods, vortex-induced vibration and seakeeping.</p>		
GMC545	Advanced Manufacturing Techniques	2 cr.
Pre-requisites	GMC612	
<p>The objective of this course is to expand on the preliminary industrial development and expose the student to design, planning, scheduling, and control of manufacturing systems with emphasis on information flow and decision-making within the field of manufacturing. Additionally, the course is designed to introduce students to a number of interpersonal skills and competencies necessary for a sustained career in manufacturing such as system simulation, simulation models of manufacturing systems and system performance under different production planning and control policies.</p>		
GMC546	Continuum Mechanics	3 cr.
<p>Continuum mechanics carries out the principles that are mutual to both solid and fluid mechanics. This course provides advanced treatment of the fundamental, unifying concepts of the mechanics of continua in order to simplify further study in specialized fields such as aerodynamics, mechanics of viscous fluids, elasticity, plasticity, and continuum damage mechanics. The topics covered are divided into two parts. The first part will cover the advanced solid mechanics (in 25 lectures): stress and strains in 3-D – Cauchy formula, Principal Stress, hydrostatic stress, deviatoric stress, stress transformations, Mohr circle, octahedral shear stress, strain energy densities, theories of failure, beam on elastic foundations, bending of curved beams, and the theory of elasticity. The second part will cover the advanced topics in fluid dynamics (in 10 lectures): fundamental principles of conservation, Reynolds transport theorem, conservation of mass, conservation of linear momentum (Navier-Stokes equation), conservation of energy, general scalar transport equation, classification of partial differential equations and physical behavior, and approximate solutions of differential equations.</p>		
GMC550	Turbomachinery	3 cr.
<p>This course is aimed to introduce students to the basic principles of modern turbomachinery. Emphasis will be placed on steam and gas turbine applications and design. Therefore, applications of the principles of fluid mechanics, thermodynamics and aerodynamics to design and analysis of turbines, pumps and compressors will be covered.</p>		
GMC555	Thermal System Design	3 cr.
Pre-requisites	GMC451 and GEN428	

This course is designed to develop the heat transfer and fluid dynamics fundamentals into an integrated thermodynamic scheme, and give the students an opportunity to design a mechanical engineering thermal system by solving complex problems associated with energy engineering economy, manufacturing, sustainable design and optimization of energy efficiency for thermal and fluid systems encountered in mechanical engineering work.

GMC563 Fluid Rheology 3 cr.

Pre-requisites GCH430

The objective of this course is to introduce the fundamentals of fluid-structure interaction (FSI) by a sequence of gradually complex problems. In the process, basics of fluid mechanics, wave hydrodynamics, floating system dynamics, and vibrations are also covered. Topics covered include linear wave theory, linear and nonlinear oscillators, potential flow methods, wave force prediction methods, vortex-induced vibration and seakeeping.

GMC575 3D Modeling and Graphics Lab 1 cr.

Pre-requisites GMC360 or GMC260

Students will learn about product development and design processes and methods, including product specifications, concept development, engineering drawings, design for prototyping, and manufacturing. This course also covers the fundamentals of 3D modeling, basic manufacturing processes, engineering design, proof of concept, rapid prototyping, assembly model, assembly drawing, manufacturing process planning, electromechanical assembly, and testing and troubleshooting electromechanical systems.

GMC576 Stability and Control Lab 1 cr.

Pre-requisites GMC330 and GEL425

This course teaches the students the principles of robot dynamics through different computer simulation and experimental applications, and highlights the problems of controlling a robot motion. Static and dynamic stability and response characteristics are defined. Motion qualities of a robot, and disturbances affecting its motion, are to be tested and analyzed in the lab with stability and related sensor systems.

GMC581 Internship II 1 cr.

Pre-requisites GMC596

This is a training course done in industry. It enables the students to discover the working world to meet desired needs within realistic constraints such as economic, environmental, social, ethical, manufacturability, and sustainability. The students will communicate effectively and have understanding of professional and ethical responsibility, and the impact of engineering solutions. The students will, at the end of their training session, submit a report to be evaluated by a departmental committee.

GMC596 Final Project I 1 cr.

This course encourages the students to demonstrate preparedness to start their careers as professional engineers. This is done by investigating a research topic relevant to the profession and, further, by assessing its practical experience. The research topic will give students the opportunity to apply knowledge and skills from various courses and laboratories throughout the investigation of an approved research topic.

GMC597 Final Project II 3 cr.

Pre-requisites GMC596

This course encourages the students to demonstrate preparedness to start their careers as professional engineers. This is done by investigating a research topic relevant to the profession and, further, by assessing its practical experience. The research topic will give students the opportunity to apply knowledge and skills from various courses and laboratories throughout the investigation of an approved research topic.

GMC607 Renewable Energy Systems 3 cr.

Co-requisites GMC608

This course deals with topics in renewable energy system technology from a mechanical engineering point of view. The full spectrum of alternative and renewable energy is introduced and analyzed, including methods of integrating these solutions in society in order to fulfill requirements for energy services in a sustainable way. The principles, possibilities, and limits of alternative and renewable energy are covered.

GMC608 Renewable Energy Systems Lab 1 cr.

Co-requisites GMC607

This course is designed to give the students hands-on experience with carrying out energy audit measurements. Application will be based on residential and commercial buildings. Topics included are: energy audit instrumentation and measurement devices; indoor air quality; and the saving potential associated with several energy conservation measures as applied to buildings.

GMC609 Micro and Nanoscale Fluid Mechanics 3 cr.

Students will study the fundamentals of micro-scale flows and microfabrication. The course also includes design of microfluidic components and a few applications of microfluidic systems. The fundamentals of fluid flows at micro-scale

including intermolecular forces, low Re flows, slip theory, capillary flows and electrokinetics are discussed. The principles of microfabrication with silicon and polymer substrates are illustrated. Theory and design of various microfluidic components including micro pumps, micromixers, micro valves are also covered.

GMC612 **Advanced Manufacturing Techniques Lab** **1 cr.**

Co-requisites GMC545

The objective of this course is to provide an integrated treatment of the analysis and applications of advanced manufacturing techniques. The theory of GMC 511 is reviewed to control machines numerically. Algorithms are developed to program NC machines. The lab work includes operation of machines to demonstrate programming skills using the LabView software.

GMC616 **Design for Pressure Vessels, Piping and Pipelines** **3 cr.**

In this course, students will study: methods for determining stresses; terminology and ligament efficiency; stresses in a circular ring, cylinder; dilation of pressure vessels; membrane stress; analysis of vessels; cylindrical, spherical and, conical heads; thermal stresses; discontinuity stresses in pressure vessels; design of tall cylindrical self-supporting process columns; supports for short vertical vessels; stress concentration at a variable thickness transition section in a cylindrical vessel, about a circular hole, elliptical openings; Theory of Reinforcement; pressure vessel design; piping loads; primary, secondary, sustained loads, occasional loads, static and dynamic loads; piping stresses (primary, secondary); stresses acting in a pipe due to internal pressure; stresses acting in a pipe due to pipe weight.

GMC617 **Statistical Thermodynamics** **3 cr.**

This course covers the following topics: Boltzmann statistics; ensembles; classical statistical thermodynamics; partition functions; virial expansions; Debye-Hückel theory for electrolytes; grid-based models for liquids; the Bragg-William approximation; molecular dynamics; Monte Carlo simulations; Brownian dynamics; Lagrangian and Hamiltonian functions; Extended Lagrangian methods; simulations in different ensembles; force fields for molecules, liquids and solids; many-body and polarization models; superpositio and free energy; and simulations in the bulk of surfaces, polymers and colloids.

GMC622 **Steel Structure** **3 cr.**

The objective of this course is to introduce the students to the design philosophy, structural analysis and basis of codes of practice (i.e. IS, EN, AS and BS). They will examine the design of steel components, local buckling, cross-section classification, design of tension members, compression members, beams and beam-columns. Also covered will be the design of steel connections, general consideration of bolts and welds, analysis and design of connections. At the end of this course students will have sufficient knowledge about the behavior of steel structures and how to design structural steel members and connections.

GMC625 **CAD/CAM** **3 cr.**

Co-requisites

GMC626

An introductory course that demonstrates the integration of Computer-Aided-Design (CAD) and Computer-Aided-Manufacturing (CAM). This is a study of modern prototyping and machining methods, teaching the use of specific software for converting 2D and 3D CAD drawing geometry directly into toolpath information used to drive numerically controlled turning and milling machines.

GMC626 **CAD/CAM Lab** **1 cr.**

Co-requisites

GMC625

3D geometric modeling, STL file generation – reverse engineering, computer aided part programming, multi-axial machining in CNC machining.

GMC630 **Acoustics** **3 cr.**

The objective of this course is to introduce the students to acoustics and noise. It constitutes a self-contained and practically useful body of knowledge in the field of acoustics. Important matters such as the measurement of sound and the effect of noise on people are considered. This course covers advanced topics too, such as: the three dimensional wave equation; solutions to the three dimensional wave equation; the monopole sound source; sound power; acoustic levels; energy density in a room; reverberation time; Statistical Absorption coefficient; steady state room acoustics; transmission loss; effective intensity in a diffuse field; composite transmission loss; noise levels outside enclosures; and the transmission loss characteristic.

GMC635 **Refrigeration** **2 cr.**

This course provides a review of thermodynamics principles. It then looks at: the fundamentals of heat and mass transfer; theoretical and actual vapor compression cycles; food storage conditions; main components (compressor, condenser, evaporator, expansion valves); refrigerants; and cooling load calculation for refrigeration.

GMC639 **Computational Fluid Dynamics** **3 cr.**

Co-requisites

GMC671

This course is a straightforward introduction to the practical details involved in computational activity for numerical

heat transfer and fluid flow analysis. Intended as an introduction to the field, the course emphasizes physical significance rather than mathematical manipulation, and carries a description of the numerical method to the point where students can begin to write and test computer programs using Matlab. Beginning with consideration of heat conduction, the course discusses the interaction of convection and conduction leading to analysis of the procedure for fluid flow calculation.

GMC640 Hydraulic and Pneumatic Power 2 cr.

Co-requisites GMC625

This course examines the systems and the basic components that make up these systems, both hydraulic and pneumatic. Emphasis is placed on understanding the language and graphical symbols associated with fluid power and the performance characteristics of system components.

GMC653 Mechanics of Fracture and Fatigue 3 cr.

Students will learn about the principles of fracture mechanics, methods and practice used to safeguard structures against fracture and fatigue failures, and damage tolerance analysis of structures that are pertinent in the design of advanced structures such as aerospace and automobile structural components.

GMC655 Thermal Mechanical Design 3 cr.

In this course, creative decisions and design in thermodynamics and heat transfer integrated concepts, laws, and methodologies from thermal sciences are used to analyze, model, and design energy systems and to predict system performance for fixed designs. Students will study: the analysis, modeling, and design of representative subsystems; analysis and modeling of thermal and fluid systems; evaluation of system performance; consideration of system economics; capital and operating cost estimation; and system design optimization.

GMC660 Mechatronic Systems 3 cr.

Co-requisites GMC674

This course covers the areas of technology on which successful mechatronic system designs are based: physical modeling, from design model to truth model, and mathematical modeling of dynamic multidisciplinary physical systems; analysis of mathematical models through analysis and computer simulation; Magnetic Levitation System, Balancing Robot/Segway Human Transporter; Inverted Pendulum Systems (Translational, Rotary, Planetary Gear); Coulomb friction, gear backlash, unmodeled resonances; Hydraulically Balanced Beam System; and mechatronic industrial case studies.

GMC661 Orbital Mechanics 3 cr.

Students will study the two-body problem, earth-satellite operations, reentry dynamics, space environments, interplanetary trajectories, numerical simulations, and work on a design project.

GMC662 Biomechanics of Human Movement 3 cr.

This course covers the following topics: skeletal anatomy and mechanics; muscle anatomy and mechanics; theory and application of electromyography; motion and force measuring equipment and techniques; and inverse dynamics modeling of the human body.

GMC663 Advanced Strength of Materials and Applied Elasticity 3 cr.

The course covers the following topics: analysis of stress, strain and material properties, problems in elasticity, failure criteria, bending of beams, torsion of prismatic bars, numerical methods, application of energy methods, and plastic behavior of materials.

GMC665 Smart Materials 3 cr.

Students will learn about the structure and physical properties of smart materials used in electrical engineering. Properties of materials and structures will be discussed in the broader external conditions of use with the presentation of selected technologies. The following topics will also be explored: areas of application of intelligent systems; nanostructures, gels, coatings, LB films, electrochromic sol-gel coatings, PH indicators, indicating chemical materials, hybrid and composite systems; metallic and nonmetallic materials with shape memory principles and applications; active and passive vibration damping, such as sensors for airbags, acoustic transducers, precision pointing devices, miniature ultrasonic motors, injectors; degradation mechanisms in different types of materials and durability tests.

GMC670 Advanced Energy Systems Lab 1 cr.

This lab covers the advanced topics in air conditioning, refrigeration and heating technology. It prepares graduate engineers to install and maintain climate control systems, to work with mechanical, electrical and electronic components that deal with heating and cooling equipment. After completing this lab, students will be able to find work with contractors, utility companies, office buildings, plants and more.

GMC671 Computational Fluid Dynamics Lab 1 cr.

Co-requisites GMC639

This course aims to introduce students to the following industrial software used in computational fluid dynamics: GAMBIT (mesh generation), FLUENT (calculation) and Tecplot (results post-processing). Different exercises covering the

different branches of fluid mechanics (incompressible, compressible, turbulence, two phase, 2D and 3D, unsteady) and heat transfer are explored numerically.

GMC673	Computational Solid Mechanics Lab	1 cr.
The course is designed for students in order to improve their understanding and training needed to solve problems using computational methods to better understand the fundamental principles on which computer simulations are based. Students will learn to develop and implement their own material constitutive models for deformation and failure using commercially available finite element codes more effectively. Experimental validation will be also discussed in this course.		
GMC674	Mechatronic Systems Lab	1 cr.
Co-requisites	GMC660	
Mechatronics is a design philosophy involving a complete integration of mechanical engineering, electronics, control theory and computer engineering in order to design a product. It is based on an interdisciplinary approach involving many disciplines concurrently and allowing flexibility and adaptability by replacing some mechanical functions by electronic processing. The lab is a concrete proof of the importance of the interdisciplinary approach by applying instrumentation concepts and mechanical control using a PLC with its human to machine interface.		
GMC675	3D Modeling and Graphics Lab	1 cr.
This lab will cover product development and design processes and methods, including product specifications, concept development, engineering drawings, design for prototyping, and manufacturing. Students will also experience the fundamentals of 3D modeling, basic manufacturing processes, engineering design, proof of concept, rapid prototyping, assembly modeling, assembly drawing, manufacturing process planning, electromechanical assembly, and the testing and troubleshooting of electromechanical systems.		
GMC676	Stability and Control Lab	1 cr.
This course teaches the students the principles of robot dynamics through different computer simulation and experimental applications, and highlights the problems of controlling a robot motion. Static and dynamic stability and response characteristics are defined. Motion qualities of a robot, and disturbances affecting its motion, are to be tested and analyzed in the lab with stability and related sensor systems.		
GRT320	Electrostatics and Magnetism	3 cr.
Pre-requisites	MAT337	
Students will learn about frictional electricity, charges and their conservation, Coulomb's law, static electric fields, Gauss's law, divergence, Poisson's and Laplace's equations, capacitance calculations, electric currents, resistance calculations, Ohm's law, static magnetic fields, Biot-Savart law, Faraday's law, electromagnetic induction, inductance calculations, and Maxwell's equations.		
GRT410	Signals and Systems	3 cr.
Pre-requisites	GEN350	
This course considers continuous and discrete-time signals and systems. System modeling and analysis in time and frequency domains are studied. Covered topics include LTI systems and convolution, Fourier series, Fourier transform (continuous, DTFT, DFT, FFT), analog to digital conversion, the sampling theorem, Z-transform, correlations and spectral densities.		
GRT420	Signal Theory	3 cr.
Pre-requisites	GEN350 And STA307	
This course aims at analyzing continuous deterministic signals and LTIS systems. Students are first introduced to the Fourier series. Fourier transform, correlations and spectral densities are studied next. Random signals, random processes, filtering of stationary stochastic processes and Hilbert transform are introduced as well.		
GRT421	Digital Signal Processing	3 cr.
Pre-requisites	GRT420 And GEN428	
This course considers discrete-time signals and systems and digital filters. Covered topics include signals and systems in the time and frequency domains, ideal and real analog filters, frequency-selective filters, FIR filters, IIR filters, adaptive filters, multirate digital signal processing, filter banks and discrete wavelet transform.		
GRT423	Waves and Propagation	3 cr.
Pre-requisites	GRT320	
This course covers fundamental concepts of electromagnetic waves, Maxwell's equations, propagation of plane waves in lossless and lossy media, Poynting vector, waves incident on conducting and dielectric boundaries, theory and application of transmission lines, matching, Smith Chart, and theory of hollow waveguides with application to rectangular waveguides.		
GRT431	Network Architecture and Protocols	3 cr.
Pre-requisites	GEL311 And GIN231	

The purpose of this course is to give a strong and clear basis regarding technical characteristics of networks and their functioning. Reference models of the network architectures OSI and TCP/IP will be described. Then, we will detail the different levels of this architecture. In brief, we will look at transmission basics, protocols for link control and media access control, network equipment, Ethernet and IP networks, routing, transport protocols and application protocols for the Internet.

GRT432 Analog and Digital Communications 3 cr.

Pre-requisites GRT421

This course starts by an overview of stochastic processes. Analog (amplitude and angle) modulation/demodulation techniques (AM-DSBSC, AM-DSBTC, SSB, VSB, FM, PM) are then introduced, and the effect of noise on analog modulations is then studied. Signal digitization (PCM) and line coding are then considered. Digital modulations (ASK, PSK, FSK, M-ary modulations, etc.), matched filtering, and system performance evaluation in the presence of noise are then studied.

GRT470 Digital Signal Processing Laboratory 1 cr.

Co-requisites GRT421

The aim of this practical work is the implementation of the various theoretical concepts learned in the course: Z-Transform, Discrete Fourier Transform (DFT), Discrete Time Fourier Transform (DTFT), Fast Fourier Transform (FFT), filtering methods, etc.

GRT473 Network Architecture and Protocols Lab 1 cr.

Co-requisites GRT431

The purpose of this lab is to apply the information given in the course using different approaches: configuration of network equipment and network installation, network supervising and troubleshooting using different tools, then performance evaluation. For that, we will mainly use network specialized simulators like CISCO Packet Tracer and the Wireshark software used for packets capture and protocol analysis. In brief, we will look at some protocols from application layer (HTTP, DNS), TCP protocol, ARP protocol, Ethernet network, static and dynamic routing protocols and VLAN.

GRT480 Internship I 1 cr.

Pre-requisites GRT410 And GRT431

After spending one to two months in a company, living the real-world professional experience outside the academic environment of the university, the students enroll in this course and submit a report containing all they have learnt, the difficulties faced, and the correlation with the courses studied.

GRT531 Advanced Networks Architectures 3 cr.

Pre-requisites GRT431

This course covers the following topics: internal routing protocols (RIP, OSPF, EIGRP); external routing protocol (BGP4), evolution; architecture of IP multicast and group management protocol (IGMP) and multicast routing protocols (DVMRP, PIM-SM, PIM-DM); IP networks multi-service, IP and Quality of Service (QoS); DiffServ and differentiated quality of service, architecture; IntServ, architecture and protocols; voice and telephony over IP; Optical IP/MPLS and GMPLS (architecture, main concepts, traffic engineering); METRO Ethernet; VPN services evolution; VPN architectures (layer 2 and layer 3); mobility in IP networks (internet and private); mobility mechanisms in IPv4 networks; IPv6 basic mechanisms; Mobile IPv6; Hierarchical Mobile IP (HMIP); handover mechanisms based on IPv6; overlay networks (caches, CDN and peer-to-peer).

GRT532 Advanced Networks Architectures Lab 1 cr.

Co-requisites GRT531

This lab will give students practical experience in advanced routing techniques, IP Multicast, IP and Quality of Service, voice and telephony over IP, VPN, mobility mechanism in IP networks, basic IPv6 mechanisms, and peer-to-peer networks.

GRT540 Digital Communications 3 cr.

Pre-requisites GRT440 And GRT421

Co-requisites GRT570

This course starts with an overview of stochastic processes. Signal digitization (PCM) and line coding are then considered. Digital modulations (ASK, PSK, FSK, M-ary modulations, etc.), matched filtering, and system performance evaluation are then studied. Advanced topics (e.g. spread spectrum) are then introduced.

GRT541 Optical Communications 2 cr.

Pre-requisites GRT540 or GRT432

In this course, optical communication systems are first introduced. Optical fibers are studied next (step-index, graded-index, multimode, single-mode) as well as signal propagation and degradation. Optical sources (LASER, LED) and receivers (PIN, APD) are then discussed, with the probabilistic theory behind receiver operation. Finally, the design of a

complete optical communication system is considered, taking into account attenuation, error probability, SNR, power constraints, etc.

GRT542	Network Modeling	2 cr.
Pre-requisites	GRT431	
This course examines network modeling of information transfer, telephone networks, land mobile systems and satellites. There is also simulation of different layers of systems and exchange protocols.		

GRT543	Telephony	3 cr.
Pre-requisites	GRT540	
Students will study establishment of calls, traffic study and design of telephony systems, switching systems, signaling, CS7, ISDN networks, PDH and SDH hierarchies, intelligent networks, and voice over IP.		

GRT545	Mobile Communications	3 cr.
Pre-requisites	GRT540 or GRT432	
This course provides an introduction to mobile communications, wireless transmission, medium access control, cellular radio systems, ATM architecture, Wireless LANs, mobile IP, and mobile TCP.		

GRT546	Telecommunications Regulations	1 cr.
Pre-requisites	GRT540	
The aim of this course is to introduce telecom engineer students to the evolution of telecom markets, the drivers of telecom regulations, and the impact on the telecom sector at a national level. The course will provide the students with an opportunity to understand the market drivers for the telecom sector, the key stakeholders, the investors' prospective, and be able to benchmark and compare different models.		

GRT548	Security of Fixed and Mobile Networks	3 cr.
The purpose of this course is to introduce the principles of security in fixed and mobile networks. The course starts with an introduction to information security concepts, security services and security mechanisms. In the second part, we discuss the concepts of symmetric and asymmetric cryptography, the hash function and the signature and key sharing procedures and we apply these concepts to secure the data communication using the SSL and the IPsec protocols. In the third part, we discuss security in wireless networks, intrusions and filtering mechanisms through the use of firewalls. Finally, we discuss security management and risk management concepts.		

GRT549	Security of Fixed and Mobile Networks	3 cr.
Pre-requisites	GRT431	
The purpose of this course is to introduce the principles of security in fixed and mobile networks. The course starts with an introduction to information security concepts, security services and security mechanisms. In the second part, we discuss the concepts of symmetric and asymmetric cryptography, the hash function, the digital signature and the key sharing procedures and we apply these concepts to secure the data communication using SSL and the IPsec protocols. In the third part, we discuss the security in wireless networks, intrusions and filtering mechanisms through the use of firewalls, and the security of GSM, 3G, and Ad Hoc networks. Finally, we discuss security management and risk management concepts.		

GRT551	Optical Communications	2 cr.
In this course, optical communication systems are introduced. Optical fibers are studied next (step-index, graded-index, multimode, single-mode) as well as signal propagation and degradation. Optical sources (LASER, LED) and receivers (PIN, APD) are then discussed, with the probabilistic theory behind receiver operation. Finally, the design of a complete optical communication system is considered, taking into account factors such as attenuation, error probability, SNR, and power constraints.		

GRT552	Network Modeling	2 cr.
Co-requisites	GRT576	
This course looks at network modeling of information transfer, telephone networks, land mobile systems and satellites, and the simulation of different layers of systems and exchange protocols.		

GRT553	Telephony	3 cr.
Students will learn about the establishment of calls, traffic study and design of telephony systems, switching systems, signalling (CS7), ISDN networks, PDH and SDH hierarchies, intelligent networks, and voice over IP.		

GRT554	Antennas, Radars and GPS	3 cr.
Pre-requisites	GRT423	
This course covers antenna, Radar and GPS principles. It starts with the parameters of antennas used for antenna analysis. These parameters include radiation power density, radiation intensity, directivity, efficiency, gain, bandwidth, polarization, impedance etc. Antenna arrays will be also presented. The course then tackles radar topics and principles including radar transmitter and receiver, radar equation, radar cross section of simple and complicated targets, blind range, ambiguity range in pulse radar, probability of detection, probability of false alarm etc. Doppler effect, pulse-		

Doppler radar and linear frequency modulation radar will then be detailed. Finally, satellite and GPS principles will be presented.

GRT555	Mobile Communications	3 cr.
Co-requisites	GRT575	

This course covers the following topics: an introduction to mobile communications; wireless transmission, medium access control, cellular radio systems; ATM architecture; Wireless LANs; Mobile IP; and Mobile TCP.

GRT557	Information Theory and Coding	3 cr.
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This course starts with an overview of information theory: discrete and continuous sources, source coding and channel coding theorems, channel matrix, channel capacity, Kraft inequality, lossless coding. Then, we study linear block codes and cyclic codes. Convolutional codes are then considered, including trellis diagrams, Viterbi decoding, etc. Turbo-codes are also studied (concatenation, interleaving, iterative decoding algorithms). We end with an introduction to LDPC codes.

GRT560	Digital Image Processing	3 cr.
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Pre-requisites	GRT421
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Co-requisites	GRT573
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This course consists of an introduction to digital image processing as well as video compression. The first part covers image acquisition, sampling, and quantization, gray scale image transforms, histogram processing, spatial filtering, 2D Fourier transform, filtering in the frequency domain, image degradations, enhancement techniques, and mathematical morphology. The second part introduces video coding: spatial and temporal sampling, motion estimation and compensation, transforms (KLT, DCT, and wavelets), differential coding and predictive coding (intra and inter frames).

GRT563	Video Compression	2 cr.
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Pre-requisites	GRT560
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This course introduces video coding concepts with emphasis on the H.264 standard. Advanced topics such as distributed video coding, multiview coding, and unequal error protection are also discussed.

GRT564	Advanced Communication Systems	3 cr.
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Pre-requisites	GRT540
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This course aims at introducing advanced topics in communication to telecommunications engineering students. Students are first introduced to detection theory. Synchronization and equalization techniques are studied next. Fading channels are introduced, with emphasis on practical channel models and applications in the wireless world. The topics covered next are multicarrier systems, diversity techniques and MIMO systems.

GRT565	Information Theory and Coding	3 cr.
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Pre-requisites	GRT540
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This course starts with an overview of information theory: discrete and continuous sources, source coding and channel coding theorems, channel matrix, channel capacity, Kraft inequality, lossless coding. Then, we study linear block codes and cyclic codes. Convolutional codes are then considered, including trellis diagrams and Viterbi decoding. Turbo-codes are also studied (concatenation, interleaving, iterative decoding algorithms). We end by an introduction to LDPC codes.

GRT566	Advanced Transmission Systems Lab	1 cr.
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Pre-requisites	GRT554 And GRT543 And GRT541
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This lab provides practice work for: antenna theory, fiber optics and telephony communications; antenna gain, polarization, impedance; fiber optic characteristics, laser diode, PIN; telephone systems, signaling, transmitter-receiver, TDM, PCM.

GRT570	Communications Laboratory	1 cr.
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Co-requisites	GRT540
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Students will experience practice work for analogue communications (AM and FM modulations, SSB, noise) and digital communications (ASK, PSK and FSK modulations, matched filtering).

GRT571	Networks Modeling Laboratory	1 cr.
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Co-requisites	GRT542
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The aim of the practical work is the implementation of the various theoretical concepts of networks modeling and processing. Problems and practical examples are examined using the ns simulator and the Matlab software.

GRT572	Mobile Communications Lab	1 cr.
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Co-requisites	GRT545
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The purpose of this lab is to provide an introduction to mobile communications, starting with an introduction to the simulator ns-2. Then we study wireless transmissions, medium access protocols, cellular networks, WLAN, mobile IP, TCP in wireless environments, and some other mobile applications.

GRT573	Digital Image Processing Lab	1 cr.
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Co-requisites	GRT560
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This lab consists of application of the concepts learned in the digital image processing and video compression course. The first part consists of an introduction to the image processing toolbox in MATLAB. Afterwards, image processing techniques will be studied, and spatial and frequency domain filtering, image restoration, as well as color image processing. Finally, a video signal will be studied.

GRT575 Mobile Communications Lab 1 cr.

Co-requisites GRT555

The purpose of this lab is to provide an introduction to mobile communications, starting with an introduction to the simulator ns-2. Then we study wireless transmissions, medium access protocols, cellular networks, WLAN, mobile IP, TCP in wireless environments, and some other mobile applications.

GRT576 Network Modeling Lab 1 cr.

Co-requisites GRT552

The aim of the practical work is the implementation of the various theoretical concepts of networks modeling and processing. Problems and practical examples are examined using the ns simulator and the Matlab software

GRT578 Advanced Mobile Networks 3 cr.

Pre-requisites GRT431

This course is an introduction to mobile communications, wireless transmission, medium access control, cellular radio systems, ATM architecture, Wireless LANs, mobile IP, and mobile TCP.

GRT579 Advanced Mobile Networks Lab 1 cr.

Co-requisites GRT578

The purpose of this lab is to provide an introduction to mobile communications, starting with an introduction to the simulator ns-2. Then we study wireless transmissions, medium access protocols, cellular networks, WLAN, mobile IP, TCP in wireless environments, and some other mobile applications.

GRT581 Internship II 1 cr.

Pre-requisites GRT596

After spending one to two months in a company, living the real-world professional experience outside the academic environment of the university, the students enroll in this course and submit a report containing all that has been learnt, the difficulties faced, and the correlation with the courses studied.

GRT596 Final Project I 1 cr.

This course is the first half of the Final Year Project that each student must succeed in to obtain the engineering degree. The students are required to select a topic in telecommunications engineering or a related field, perform bibliographic study and propose solutions for further investigations.

GRT597 Final Project II 3 cr.

Pre-requisites GRT596

This course is the second half of the Final Year Project that each student must succeed in to obtain the engineering degree. The students are required to develop advanced studies on the topic selected in the course GRT596, finalize the proposed solutions and submit a detailed report of all the work done.

GRT631 Digital Image Processing 3 cr.

Co-requisites GRT671

This course consists of an introduction to digital image processing as well as video compression. The first part covers image acquisition, sampling, and quantization, gray scale image transforms, histogram processing, spatial filtering, 2D Fourier transform, filtering in the frequency domain, image degradations, enhancement techniques, and mathematical morphology. The second part introduces video coding: spatial and temporal sampling, motion estimation and compensation, transforms (KLT, DCT, and wavelets), differential coding and predictive coding (intra and inter frames).

GRT632 Antennas, Radars and GPS 3 cr.

This course covers antenna and Radar principles. It starts with the fundamental parameters of antennas, then moves on to the radiation integral used for antenna analysis. Detailed examination of wire antennas and antenna arrays will be presented next. After the antenna part is done, the course tackles some radar topics like the Radar equation, Radar Cross Section (RCS) of simple and complicated targets, Range and Doppler ambiguity in pulse radar, probability of detection and probability of false alarm. A GPS overview will be covered at the end of the term.

GRT633 Advanced Communication Systems 3 cr.

This course aims at introducing advanced topics in communications to Telecommunications Engineering students. Students are first introduced to detection theory. Synchronization and equalization techniques are studied next. Fading channels are introduced, with emphasis on practical channel models and applications in the wireless world. The topics covered next are multicarrier systems, diversity techniques and MIMO systems.

GRT634 Video Compression 2 cr.

Pre-requisites GRT631

This course introduces video coding concepts with emphasis on the H.264 standard. Advanced topics such as distributed video coding, Multiview coding, and unequal error protection are also discussed.

GRT635 **Advanced Networks Architectures** **3 cr.**

Co-requisites GRT673

Students will study: internal routing protocols (RIP, OSPF, EIGRP); external routing protocol (BGP4), evolution; architecture of IP multicast and group management protocol (IGMP) and multicast routing protocols (DVMRP, PIM-SM, PIM-DM); IP networks multi-service, IP and Quality of Service (QoS); DiffServ and differentiated quality of service, architecture; IntServ, architecture and protocols; voice and telephony over IP; Optical IP/ MPLS and GMPLS (architecture, main concepts, traffic engineering); METRO Ethernet; VPN services evolution; VPN architectures (layer 2 and layer 3); mobility in IP networks (Internet and private); mobility mechanisms in IPv4 networks; IPv6 basic mechanisms; mobile IPv6; Hierarchical Mobile IP (HMIP); handover mechanisms based on IPv6; and overlay networks (caches, CDN and peer-to-peer).

GRT671 **Digital Image Processing Lab** **1 cr.**

Co-requisites GRT631

This lab consists of an application of the concepts learned in the digital image processing and video compression course. The first part consists of an introduction to the image processing toolbox in MATLAB. Afterwards, image processing techniques will be studied, spatial and frequency domain filtering, image restoration, as well as color image processing. Finally, a video signal will be studied.

GRT672 **Advanced Transmission Systems Lab** **1 cr.**

Pre-requisites GRT551 And GRT553 And GRT632

This lab provides experience of: practical work for antenna theory, fibre optics and telephony communications; antenna gain, polarization, impedance; fibre optic characteristics, laser diode, PIN; telephone systems, signaling, transmitter-receiver, TDM, PCM.

GRT673 **Advanced Networks Architectures Lab** **1 cr.**

Co-requisites GRT635

Students will experience advanced routing techniques, IP Multicast, IP and Quality of Service, voice and telephony over IP, VPN, the mobility mechanism in IP networks, basic IPv6 mechanisms, and peer-to-peer networks.

MAT207 **Algebra for Engineers 1** **3 cr.**

The course aims at providing the necessary tools and the mathematical maturity for engineers, for the design and analysis of abstract mathematical models. Subjects covered: complex numbers, logic and proofs, propositional calculus, sets and mappings, relations and ordered sets, an introduction to algebraic structures, groups, rings and fields, polynomials, counting, finite and transfinite cardinals.

MAT216 **General Mathematics** **3 cr.**

This course provides the solid basics needed by students to be able to handle their specialty courses. Topics covered include: function of a real variable, elementary functions, Taylor's expansion, simple integral and methods of integration, differential equations, multivariable functions, continuity, partial derivative, the chain rule, differential, introduction to double integrals, methods of integration, matrix calculus, determinants, and linear systems.

MAT217 **Calculus for Engineers 1** **3 cr.**

The course covers integration methods to compute integrals and improper integrals. We will study the infinite series, Taylor expansion, Parametric curves and Polar curves, and double integrals.

MAT227 **Calculus for Engineers 2** **3 cr.**

Pre-requisites **MAT217**

This course teaches basic theory and techniques of Ordinary Differential Equations (ODEs). Topics include: solution of non-linear first-order ODE's; linear ODE's, especially second order with constant and variable coefficients; delta functions, convolution, and Laplace transform methods; power series and resolution of differential equations using power series; real and complex Fourier series; and an introduction to partial differential equations.

MAT307 **Algebra for Engineers 2** **3 cr.**

Pre-requisites MAT207

The main objective of this course is to continue the study of algebra, covering mainly linear systems and matrices, matrix algebra, inverses, Gauss elimination, elementary matrices, computing inverses, determinants, vector spaces, definition and examples of spaces and subspaces, linear independence, basis and dimension, change of basis, linear applications, reduction of an endomorphism, eigenvalues, eigenvectors, characteristic polynomial, solving linear systems of differential equations, diagonalization and applications, bilinear and quadratic forms, Gauss method, scalar and cross product, Euclidean and Hermitian spaces, Gram-Schmidt Orthogonalization process, geometric transformations.

MAT337	Calculus for Engineers 3	3 cr.
Pre-requisites	MAT217	

The main objective of this course is to continue the study of calculus, covering mainly parametric and polar curves, three dimensional analytic geometry, differentiation and integration of functions of several variables, and vector calculus. Line integrals, and Green's theorem are also covered.

PHY210	General Physics	3 cr.
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The objective of this course is the introduction of various laws, principles and physical mechanisms, whose understanding is essential to students in pursuing their studies in all branches of science. This course consists of several independent parts. The first one deals with dynamics, the different types of motion, Newton's laws, and conservation of energy. The second part deals with hydrostatics and fluid dynamics. The third part deals with the thermodynamics, calorimeters, the first principle and the basic transformations, the ideal gas, and thermodynamic cycles. The fourth part concerns the analysis of simple electrical circuits using Kirchhoff laws and the movement of a particle in an electromagnetic field. Finally in the fifth part we talk about relativity, the theory of photons, and the photoelectric effect. Upon completion of this course the students will have acquired sufficient knowledge of several basic principles in physics and be familiar with these topics.

STA307	Probability and Statistics for Engineers	3 cr.
Pre-requisites	MAT217	

This course aims to provide students with the most common concepts of probability theory and statistical inference, with a unique balance between theory and methodology. Interesting relevant applications using real data will be used to show how the concepts and methods can be applied to solve problems in the different fields of engineering in practice.

STA515	Statistical Analysis Methods	3 cr.
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The purpose of this course is to strengthen the knowledge of students in the field of applied statistics by minimizing the mathematical approach and developing practical and methodological aspects. It presents the main techniques of most known statistical tests (descriptive and inferential statistics, explanatory methods, and data analysis). The course provides an overview and practical techniques in the main methods available in software, and an aid to the interpretation of the results and fully processed examples using the statistical software program SPSS. Most of the themes will be covered by this course, including the analysis of Variance (ANOVA test), comparisons of samples (t-test & Chi - square), single and multiple regression.

STA220 - STS220	Applied Probability and Statistics	3 cr.
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This course prepares students for the practical use of probability and statistics in the biomedical field (agronomy, chemistry, biochemistry, nutrition, medicine, etc.). Topics to be covered are: elements of descriptive statistics, population, statistical units, frequency distribution, and characteristics of central tendency and dispersion. The course also covers these aspects in detail: probability and combinatorics, conditional probability and Bayes' formula, applications, discrete and continuous random variables, expectation and moments, the weak law of large numbers, empirical frequencies and basic probability laws (Binomial, Multinomial, Poisson, Normal) and asymptotic behavior, the law of large numbers, sampling and estimation, and an introduction to the use of hypothesis tests, and the Chi-2 contingency table.

TAG632	Quality Systems in Agri-food	3 cr.
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Food control includes all business activities to ensure the quality, safety and authenticity of food at all stages from primary production, processing, storage, to marketing and consumption. The course details the quality systems with aspects of food labeling and certification of products, the ISO 22000 which will be compared with other quality systems, and HACCP for integrated management of the sanitary quality.

School of Law and Political Sciences

Overview

USEK School of Law and Political Sciences was inaugurated on November 10th, 1988, symbolically on the 40th anniversary of the Universal Declaration of the Human Rights. From its beginnings, the School of Law and Political Sciences has always offered its students an exceptional education that consolidates the strength of tradition with the dynamism of the modern world.

The School of Law and Political Sciences is indeed the heir of a long history. The Lebanese Maronite Order, since its foundation, provided its monks with a solid education in canonical law, and has progressively extended its teaching to all legal disciplines for its monks, and the Lebanese public. This diversification, based on the educational needs of Lebanese society, has allowed the School of Law and Political Sciences to build on past experiences while opening up to modernity.

Initially based in Byblos, the School of Law and Political Sciences relocated to the central campus of Kaslik in the fall of 1999, to accommodate the rise of the number of its students and to allow them to integrate with other University students and experience campus life to the full. The School also has a Regional university center (RUC) in Zahle. Since 2016, it hosts the Higher Institute of political and administrative sciences, for students who wish to prepare themselves for management careers in government, public service, governmental agencies and nonprofit organizations.

The School of Law and Political Sciences proposes a full offering of legal education that includes, other than a Bachelor in Law, many Master's degrees as well as a doctoral degree. Its programs are offered in both French and English. Its school members include highly knowledgeable law professors as well as renowned professionals such as prominent judges, lawyers, and civil servants practicing in several administrations.

However, the School of Law and Political Sciences does not only provide a learning experience but aims at developing students personal qualities through its many extra-curricular activities such as mock trials, international pleading competitions, vis moot competitions in international arbitration, and clinical trainings. Most importantly, these experiences are designed to provide students with knowledge and skills to prepare them for the job market, locally and internationally.

It is an era of global legal practice and USEK School of Law and Political Sciences is committed to preparing its students for it by offering several opportunities for transnational experiences, by actively recruiting international scholars (from France, Italy, USA, Canada), by developing its students' options for study abroad within the Erasmus Plus program (mostly in Greece, France, Belgium, Germany, Great Britain, USA), and by building partnerships with reputable foreign universities, such as the Robert McKinney School of Law of Indiana-Purdue University, for the delivery of a LL.M. in International and Comparative law, and more recently, with the Syracuse University School of Law in New York.

In addition, the School of Law and Political Sciences has the advantage of offering, through programs implemented in Lebanon, double Master degrees, from France and Lebanon, such as the Master 2 in International contracts offered in conjunction with the University of Montpellier I where students are awarded a Master 2 degree from USEK and a Master 2 degree from the University of Montpellier I.

Affiliated to the School of Law and Political Science, the Higher Institute of Political and Administrative Sciences, was created in February 2006 (decree no 16410), to train future officials in public administration and civil society, who are mindful of community spirit and ethics. The Institute contains three multidisciplinary educational fields, those of political sciences, international relations and public administration. These aim to:

- Provide students with a specialized education in political sciences, thus giving them access to a professional life.
- Develop the students' analytical and synthesis spirit, thus enabling them to understand national and international issues.
- Prepare students to follow a specialized higher education curriculum.

Mission

The mission of the School of Law and Political Sciences is to provide students with the opportunity to develop specialized knowledge in all areas of law by offering high quality programs that comply with the national and international standards. In an era of global legal practice, USEK School of Law and Political

Sciences offers its students several opportunities for transnational experiences, by actively recruiting international scholars and building partnerships with reputable foreign universities.

The School of Law and Political Sciences consists of the following department/institute/programs:

Department of Law

- Law Degree
- Minor in Human Rights
- Minor in Public Administration: Public Law and Administrative Organizations of Lebanon
- Master in Criminology
- Master in Private Law
- Master in Public Law
- Master in Business Law
- Master of Laws in International and Comparative Law
- Master in International Contracts
- Ph.D. in Law

Higher Institute of Political and Administrative Sciences

- Bachelor in Political Sciences
- Bachelor in International Relations
- Minor in Middle Eastern Studies
- Master in Diplomacy and International Security
- Master in Middle Eastern Studies
- Master in Political Sciences
- Master in Political Sciences - International Relations

Administration and Full-time Faculty

Dr. Eric Savaux, Associate professor, **Dean**

Dr. Ghada Karam, Associate Professor, **Associate Dean**

Associate Professors:

Dr. Eric Savaux
 Dr. Francisco Barroso
 Dr. Ghada Karam
 Dr. Haitham Sakr
 Fr. Dr. Talal Hachem

Assistant Professors:

Dr. Bechara Karam
 Dr. Celine Baaklini
 Ms. Reine Daou
 Fr. Dr. Wissam Khoury

Lecturers:

Dr. Nicolas Badaoui

Undergraduate Programs

Law Degree (Hybridⁱ & Eng.)

Offered in Main Campus Kaslik, RUC Zahle and RUC Chekka

Mission

The mission of bachelor program in Law is to prepare a diverse community of students to be national and international leaders in private legal practice, business and industry, government service, and legal education. We believe that rigorous, comprehensive academic instruction is essential for a student to develop the proper capacity of critical and ethical judgment. We also seek to promote the professionalism of legal and paralegals, thereby enhancing their capacity for service to the legal community and ultimately contributing to the advancement of the justice in Lebanese society. Thus, the mission of the law school is to graduate students, undergraduate and graduate students who excel in the field of the judiciary, the bar, diplomatic careers, notaries, public service, international organizations and institutions, teaching, etc.

Program Educational Objectives

1. Graduates will be able to pass various exams: entrance exam for the Magistrates' School, the bar exam, civil service and international diplomacy exam, notarial exam, etc.
2. Graduates will be able to have an effective, ethical and responsible participation in the legal profession.
3. Graduates will be able to continue their studies in the Master's program.

Program Outcomes

Students will acquire:

- a. An ability to know and understand the importance of the rule of law, the principles governing its development and application, the essential steps for the development of the law, its contents, and the impact of international standards on its promotion.
- b. An ability to assess the application of a law and to provide adequate solutions to a legal problem.
- c. An ability to communicate in a clear, precise and structured manner the result of a legal analysis, in absolute respect of the rules governing scientific production.
- d. An ability to question the choices of the rules, and to get involved in the promotion of the founding values of law.

Degree Requirements

This program requires 137 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

The minimum passing grade for All undergraduate law courses, excluding General Education, is 70/100. The minimum passing grade for all TD courses is P.

General Education	30
General Education – Behavioral, Social Sciences and History ⁱⁱ	6 to 9
General Education - Civic Engagement	2
General Education - English and French Communication	3 to 6
General Education - Quantitative Reasoning	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
DRG210.1 - General Constitutional Law	3
DRG225 - International public law	3
Specialization	94
DRG216 - Legal Methodology	3
DRG217 - Legal Communication	2
DRG230.1 - Introduction to Law	3

ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Students enrolled in the hybrid section are required to take the course FRN240 - French Communication instead of 3 credits from the Behavioral and Social Sciences category.

DRG231.1 - TD Introduction to Law	1
DRG240.1 - Political Systems	2
DRG300.1 - Special Administrative Law I	2
DRG311 - Civil Liability	3
DRG327 - Contract law II	3
DRG328 - TD Contract law II	1
DRG351.1 - Labor and Social Security Law	3
DRG393.1 - Civil Liberties	2
DRG400.1 - Special Criminal Law	3
DRG411.1 - Commercial law	3
DRG414.1 - TD Special Criminal Law	1
DRG415.1 - Corporate Law	3
DRG421.1 - TD Commercial law	1
DRG424.1 - International Private Law	3
DRG425.1 - TD Corporate Law	1
DRG441.1 - TD International Private law	1
DRG450 - Land Law and Real Estate Securities	3
DRG460 - Banking Law and Commercial Deeds	3
DRG521.1 - Bankruptcy	3
DRG534.1 - Civil Law: Named Contracts II	3
DRG535.1 - TD Civil Law: Named Contracts II	1
DRG550.1 - Methods of Enforcing Judgments	3
DRL213.1 - Property law	3
DRL215.1 - TD Property law	1
DRL222.1 - General Administrative Law	3
DRL223.1 - Lebanese Constitutional Law	2
DRL227.1 - TD General Administrative Law	1
DRL228.1 - Contract law I	3
DRL229.1 - TD Contract law I	1
DRL235.1 - Civil Procedure I	2
DRL310.1 - General Criminal Law	3
DRL325.1 - Civil Procedure II	2
DRL412.1 - Civil Law: Named Contracts I	3
DRL415.1 - TD Civil Law: Named Contracts I	1
DRL426.1 - Tax Law and Public Finances	3
DRG461.1 - Arbitration Law	3
DRL510.1 - Civil law: Personal Status	3
DRL511.1 - Criminal Procedure	3
Electives	13 out of 70
DRG220.1 - Family Law I	2
DRG222.1 - Canon Law	3
DRG245 - Consumer law	2
DRG250 - Introduction to the Comparative law	2
DRG260 - Régime des obligations	2
DRG320.1 - Computer and Internet Law	2
DRG340- International humanitarian law	2
DRG395 - International Human Rights Law	2
DRG433.1 - International Institutions	2
DRG455.1 - Insurance Law	2
DRG463 - International Criminal Law	3

DRG465 - Legal Clinic	3
DRG470 - Moot Court Competition	3
DRG472.1 - Civil Service Law	2
DRG526.1 - European Union Law	2
DRG527.1 - Environmental and Urban Law	2
DRG529.1 - Introduction to the Common Law	2
DRG530.1 - Maritime and Air Law	2
DRG536.1 - Family Law II	2
DRG538.1 - Diplomatic and Consular Law	2
DRG540.1 - Administrative Litigation	3
DRG541.1 - Constitutional Litigation	3
DRG589.1 - Intellectual and Artistic Property	2
POL226 - Political Economy	3
POL321 - Modern and Contemporary Political History	3
RIN443 - The Arab-Israeli Conflict	3
RIN552 - International Economy	3
SPO442 - Negotiations and Conflict Resolutions	3
SPO461 - Analysis of Political Texts	3
Total	137

Bachelor in Political Sciences (Hybridⁱ)

Mission

The mission of the Political Science department is to train students in the Lebanese political system and other political systems. The main goal is to provide our students with the basic theoretical and methodological tools in the field of political science to be capable of understanding and explaining the political environmental and the main sociopolitical dynamics that affect the politics at its different levels. In order to reach this goal the Political Science department is offering a program focused on the following topics:

- Middle Eastern, Arabic and Lebanese policy
- Public affairs, public institutions, Constitutional Law
- Political communication
- Comparative politics, theory/philosophy of politics

Program Educational Objectives

1. Graduates will conduct educational, social, cultural programs, etc. within the Lebanese public service (ministries, municipalities or other public institutions).
2. Graduates will manage political life as a parliamentary attaches.
3. Graduates will integrate the political environment.
4. Graduates will organize political actions in the private sector (associations, lobbies, companies, committees).

Program Outcomes

- a. Students will produce documents relating to local and national politics.
- b. Students can assist a political leader as a parliamentary attaches.
- c. Students will be able to compose and implement projects related to internal political issues intended for public or private life (political parties, associations).

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

ⁱ Hybrid: Courses offered in French and/or English

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	3
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
POL211 - Introduction to Political Science	3
POL212 - Introduction to Geopolitics	3
Common Core	18
POL215 - Introduction to Public Administration	3
POL224 - Political Science Method	3
DRG210.1 - General Constitutional Law	3
POL226 - Political Economy	3
POL321 - Modern and Contemporary Political History	3
RIN431 - Diplomatic and consular law	3
Specialization	48
DRG225 - International Public Law	3
POL331 - European Union: History, Organization and Political Challenges	3
POL334 - Political Regimes of Arab Countries	3
POL335 - Politics and Mass Media	3
POL336 - History of Political Thought	3
POL340 - Internship and simulation	3
POL345 - Theories and History of the State	3
RIN443 - The Arab-Israeli Conflict	3
RIN444 - Water and Energy Issues in Regional Politics	3
RIN452 - Regional and international organizations	3
SPO431 - Principles of Law	3
SPO432 - Conflict Theories	3
SPO441 - Contemporary Political Thought in the Arab-Muslim World	3
SPO442 - Negotiations and Conflict Resolutions	3
SPO451 - Lebanon's Political Regime	3
SPO461 - Analysis of Political Texts	3
Total	96

Bachelor in International Relations (Hybridⁱ)

Mission

The mission of the International Relations department is to train students in the theories and political and economic issues that shape the relations between states, by offering a program focused on the following topics:

- Middle Eastern, Arabic and Lebanese policy
- International, diplomatic and constitutional law
- Political communication
- Economics and energy, and their contemporary challenges

Program Educational Objectives

ⁱ Hybrid: Courses offered in French and/or English

1. Graduates will have the ability to manage projects in for NGOs, local or international associations or embassies, both in Lebanon and abroad.
2. Graduates will be trained to handle complex cases as high-level officials in the Lebanese Ministry of Foreign Affairs and pass administrative exams.
3. Graduates will have the skills to analyze files and develop investigations in political journalism.
4. Graduates will defend their opinions, and deliver presentations relating to international relations, and in several languages.

Program Outcomes

- a. Students will conduct field work in an organization or association of a political or humanitarian nature, and/or relating to human rights and the application of the international law.
- b. Students will handle complex cases as high-level officials in the Lebanese Ministry of Foreign Affairs and pass administrative exams.
- c. Students will analyze files and develop investigations in political journalism.
- d. Students will be capable of analyzing a problem and drawing correct inferences. In this process, they will be ready to communicate ideas clearly and persuasively in different languages.

Degree Requirements

This program requires 96 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Behavioral, Social Sciences and History	3
General Education - Civic Engagement	2
General Education - English and French Communication	6
General Education - Quantitative Reasoning	3
General Education - Religious Sciences	3
General Education - Science and Health	3
General Education - Sports	1
POL211 - Introduction to Political Science	3
POL212 - Introduction to Geopolitics	3
Common Core	21
POL213 - Introduction to International Relations	3
POL224 - Political Science Method	3
DRG210.1 - General Constitutional Law	3
POL226 - Political Economy	3
POL321 - Modern and Contemporary Political History	3
POL334 - Political Regimes of Arab Countries	3
SPO431 - Principles of law	3
Specialization	45
DRG225 - International Public Law	3
POL331 - European Union: History, Organization and Political Challenges	3
POL335 - Politics and Mass Media	3
POL336 - History of Political Thought	3
POL340 - Internship and simulation	3
RIN210 - Introduction to Comparative Politics	3
RIN431 - Diplomatic and Consular Law	3
RIN441 - Existing and Emerging World Powers	3
RIN442 - Transnational Movements and Non-State Actors in World Politics	3

RIN443 - The Arab-Israeli Conflict	3
RIN444 - Water and Energy Issues in Regional Politics	3
RIN451 - Theories of International Relations	3
RIN452 - Regional and International Organizations	3
SPO442 - Negotiations and Conflict Resolutions	3
SPO451 - Lebanon's Political Regime	3
Total	96

Academic Minors

Minor in Human Rights (Hybridⁱ)

Mission

The minor in human rights is an option for students who are interested in this rapidly emerging field. The curriculum reflects the growing interest in human rights throughout the world – even as violations persist, and debate continues over the meaning and understanding of human rights. Many of the courses in the minor have an international approach. This program helps to prepare students for a career in research, working in NGOs that advocate for and monitor human rights compliance, or government agencies.

Program Educational Objectives

1. In the minor, students receive interdisciplinary instruction in domestic and international issues relating to human rights and civil liberties.
2. Students will have the opportunity to explore the history and structure of formal human rights and international law.
3. Students will have the opportunity to study a large number of historical or contemporary human rights struggles.
4. Students will develop a deeper understanding of the impact of international legal practices and organizations.

Program Outcomes

- a. Understanding the key functions and significance of human rights and international justice in the international legal order.
- b. Acquiring a solid knowledge of international human rights procedural and substantive norms and related institutions.
- c. Acquiring the skills to identify national and international violation in the context of case study on alleged prohibited conducts.
- d. Analyze and assess critically contemporary challenges related to international human rights.

Minor Requirements

DRG210.1 - General Constitutional Law	3
DRG340 - International Humanitarian Law	2
DRG393.1 - Civic Liberties	2
DRG395 - International Human Rights	2
DRG225 - International Public Law	3
DRG463 - International Criminal Law	3
Total	15

ⁱ Hybrid: Courses offered in French and/or English

Minor in Middle Eastern Studies (Hybridⁱ)

Mission

The mission of the minor in Middle Eastern Studies is to provide the student with a comprehensive perspective and an analytical understanding of Middle East politics and of major regional issues and challenges.

Program Educational Objectives

1. Students will have an understanding of the current political issues in the Middle East as well as the elements shaping these issues.
2. They will be able to apply their knowledge in their work in both the public and private sectors.
3. They will be able to analyze the current issues in the Middle East that have major influence on their professional careers.

Program Outcomes

- a. Students will understand the main patterns and key issues shaping the modern and contemporary history of the Middle East.
- b. Students will understand the nature and main characteristics of the Arab regimes and the elements influencing the functioning of these regimes.
- c. Students will be able to identify and assess the main determinants and the interplay among them as well as the major dynamics that shape the main regional issues.
- d. Students will be able to understand the main conceptual, intellectual and cultural underpinnings of the ideologies that greatly influence Middle Eastern politics.

Minor Requirements

POL321 - Modern and Contemporary Political History	3
POL334 - Political Regimes of Arab Countries	3
RIN443 - The Arab-Israeli Conflict	3
RIN444 - Water Issues in Regional Politics	3
SPO441 - Contemporary Political Thought in the Arab-Muslim World	3
SPO451 - Lebanon's Political Regime	3
Total	15 out of 18

Minor in Public Administration: Public Law and Administrative Organizations of Lebanon (Hybridⁱⁱ)

Mission

The Minor in "Public administration: Public Law and Administrative Organizations of Lebanon" is designed to provide students with an overview of employment in government, public service, and administrative organizations.

The public administration minor introduces students to core concepts in the field and provides students with the opportunity to develop specialized knowledge in the areas of organizational behavior, management, budgeting, and public policy.

This minor is appropriate for students planning careers in government, public service, governmental agencies and nonprofit organizations. The public administration minor also provides a foundation for continued studies in public administration, law, and international diplomacy.

Program Educational Objectives

1. Students studying "Public Administration" will gain a greater understanding of the public sector and the management of its agencies.
2. In this Minor, students learn about the policy process as well as specific government functions such as budgeting and personnel.

ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Hybrid: Courses offered in French and/or English

3. The Minor will provide knowledge and skills for students who wish to prepare themselves for management careers in government, community agencies, private not-for-profit organizations, planning and consulting firms, and private sector organizations that work in partnership with the public sector.

Program Outcomes

- a. Identify the core mechanisms of public administration, including the organization and management of human and financial resources.
- b. Discuss the political, economic, legal, and social environments of public policy and administration.
- c. Explain the unique challenges and opportunities of providing public goods and services in a diverse society.

Minor Requirements

DRG300.1 Special Administrative Law	2
DRG395 - International Human Rights Law	2
DRL222.1 - General Administrative Law	3
DRL223.1 - Lebanese Constitutional Law	2
DRL424.1 - Tax Law and Public Finances	4
DRL510.1 - Civil law: Personal Status	3
Total	16

Graduate Programs

Master in Business Law (Hybridⁱ)

Mission

The Master II in Business Law of the USEK Faculty of Law, in partnership with the Faculty of Law of Montpellier I University, aims to offer its students an in-depth training, through a comparative approach, in French, European and Lebanese Business Law.



Program Outcomes

- Students will be familiarized with and deepen their knowledge in French, European and Lebanese business Law in general including corporate Law, financial Law, contract Law, business Law and bankruptcy Law.
- Commercial contract drafting and trade contract are covered through a practical approach
- Students will gain a research methodology specifically designed for business and corporate Law.

Degree Requirements

The minimum passing grade for all graduate law courses is 80/100.

Specialization	20
DRG510 - Advanced Corporate Law	2
DRG520 - Advanced Business Law	2
DRG525 - Financial Instruments	2
DRG535 - Bankruptcy and Reorganization	2
DRG545 - Law and Business of Corporate Transaction	2
DRG555 - Criminal Business Law	2
DRG625 - International Contract Law	2
DRG665 - Contractual Technique	2
DRG670 - Competition Law	2
DRG675 - Distribution Contracts	2
Capstone	3 or 6
DRG590A - Research Dissertation	6
DRG650 - Internship Report	3
Total	23 or 26

Master in Criminology (Hybridⁱⁱ)

Mission

The Master in Criminology endorses a special mission: to make a better world of democracy. It means that the Master students take responsibility for developing a critical criminological thought process that is necessary for a democracy to be a home for security and fraternity.

Program Educational Objectives

- Lawyers and non-lawyers graduates in criminology will be able (a) to engage in research in criminology; (b) to effectively participate in the penal legal profession, and (c) to effectively participate in rehabilitating criminals in general, and prisoners in particular.
- Lawyers graduates in criminology will be able to assess the level of the defendant's criminological threat, with the aim of fixing equitable penalties: (a) as criminal judges (proving that the degree a defendant's criminological threat is high), either at prosecution level (general prosecutor), or at investigation level (investigating judge, indictment division), or at judgment level (assizes court or at all degrees of criminal jurisdictions for misdemeanors); (b) as criminal lawyers: proving that the degree

ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Hybrid: Courses offered in French and/or English

of the client's criminological threat is not high, and (c) as judiciary police: to be able to detect the criminological threat.

3. Non-lawyer graduates in criminology will have the ability to become (a) assistants to criminal judges or lawyers, and to assess a defendant's criminological threat; (b) assistants to medical examiners to participate in operating medico-legal autopsies; (c) assistants to medical experts in courts, to assess a defendant's or victim's mental health; (d) assistants to psychologists, psychiatrists or sexologists to study a defendant's or victim's mental health, and (e) activists in non-governmental organizations in fighting violence, sexual abuse, sexual harassment, etc.

Program Outcomes

- a. Students will acquire an ability to draft detainee assessment briefs.
- b. An ability to submit projects of law or bills for the prevention of crime.
- c. An ability to draft criminals' mental health assessment.
- d. An ability to assist in medico-legal autopsies.

Degree Requirements

The minimum passing grade for all graduate law courses is 80/100.

Specialization	36
CRM511 - General Criminology	3
CRM512 - Criminal Creology	3
CRM513 - Questions of Ethics in Criminology	3
CRM514 - Psychological Criminology	3
CRM515 - Sociological Criminology	3
CRM516 - Forensic Medicine I	3
CRM611 - Psychiatric Criminology	3
CRM612 - Forensic Medicine II	3
CRM613 - Forensics	3
CRM614 - Current Events in Criminology	3
CRM680 - Internship in Criminology	3
CRM690A - End of Studies Project	3
Total	36

Master in Diplomacy and International Security (Hybridⁱ)

Mission

The mission of the International Relations department is to train students in the theories and political and economic issues that shape the relations between states, by offering a program focused on the following topics:

- Conflict management
- The question of security
- The political, economic and international issues of the Mediterranean region

Program Educational Objectives

1. Graduates will demonstrate the ability to evaluate the various political, geographical, and cultural contexts on the international stage.
2. Graduates will interpret conflicts at international level in order to provide appropriate strategies for resolving these conflicts.
3. Graduates will develop their oral and written skills to communicate in the context of diplomacy and international security.

Program Outcomes

- a. Students will gain the methodologies of scientific research addressing various political, geographical, and cultural contexts on the international stage.

ⁱ Hybrid: Courses offered in French and/or English

- b. Students will re-frame the issues that encompass the international conflicts. They will be able to design and implement conflict resolution strategies.
- c. Students will adapt the tools and techniques of oral and written communication to the specific needs of diplomacy and international security.

Degree Requirements

Common Core	15
POL505 - Methodology of writing and research in political science	3
POL515 - Challenges of Globalization	3
RIN548 - Multilateral diplomacy in international and regional organizations	3
DIS535 - Foreign Policy Analysis	3
MES600 - Regional dynamics and current issues in the Middle East	3
Specialization	15 out of 18
RIN550 - Terrorism and International Security	3
DIS530 - Strategic Studies: issues of war and peace	3
DIS550 - Diplomacy and Risk Analysis in the Current Geopolitical Situation	3
DIS560 - Diplomatic Management of Energy Security in the Middle East	3
DIS565 - Actions and Humanitarian Law	3
MES605 - The Middle East and Europe: Issues and Challenges in the Tran-Mediterranean Relations	3
Capstone	6
POL580A - Dissertation	6
Total	36

Master of Laws in International and Comparative Law (English)

Presentation

The specialized LL.M. in International and Comparative Law is offered with an emphasis on corporate, business, and trade law. It provides intensive academic training in the regulation of US and global business activity. LL.M. students take all their classes with international professors, taught by some of the leading US experts in financial, corporate and transactional law.



The structure of the academic program ensures access to a broad and balanced curriculum and an exceptionally rich selection of courses in international business and trade law, various American law courses including bankruptcy, securities regulation, and numerous specialized seminars. Students are afforded a unique opportunity to earn two law degrees: a Master in Law from USEK and an American Master of Laws (LL.M.) degree from Robert H. McKinney School of Law.

Program Educational Objectives

1. Gain practical and theoretical knowledge in selected areas of international and comparative law, with an emphasis in international business and commercial law.
2. Learn the skills of legal research, analysis, and communication essential to understanding and applying international law and succeeding as a professional in this area.
3. Build an international network of professional contacts.

Program Outcomes

- d. Deepen their knowledge in selected areas of international and comparative law
- e. Learn the skills of legal research and analysis
- f. Build essential communication skills especially in English

Degree requirements

The minimum passing grade for all graduate law courses is 80/100.

Specialization	6
ICL500 - Introduction to the American Legal System	3

ICL650 - Contract Law	2
ICL655 - Legal Writing	1
Capstone	4
ICL690A - LL.M. Thesis	4
Electives	15 out of 75
ICL510 - Bankruptcy Law	3
ICL520 - Closely Held Business Organizations	3
ICL525 - Comparative Competition Law	3
ICL530 - European Union Law: Doing Business in and with the Internal Market	3
ICL535 - European Union Law: Foundations	3
ICL540 - International Business Transactions	3
ICL545 - International Commercial Arbitration	3
ICL550 - International Criminal Law	3
ICL555 - International Environmental Law	3
ICL560 - International Human Rights Law	3
ICL565 - International Law	3
ICL570 - International Tax	3
ICL575 - International Trade Law	3
ICL580 - International Intellectual Property	3
ICL585 - Internet Law	3
ICL590 - Sem. Intl. Legal Transactions	3
ICL595 - Oil & Gas Law	3
ICL610 - Professional Responsibility	3
ICL615 - Publicly Traded Corporations	3
ICL620 - Mergers and Acquisitions	3
ICL625 - Contracts and Sales I	3
ICL630 - Contracts and Sales (II)	3
ICL635 - Negotiations	3
ICL640 - International Securities Regulation	3
ICL645 - World Trade Organization Law	3
Total	25

Master in International Contracts (Hybrid)

Mission

The Master in International Contracts at the USEK Faculty of Law, in partnership with the Faculty of Law of Montpellier I University, aims to offer its students in-depth training in international Contracts Law.



Program Educational Objectives

Graduates will have:

1. Advanced legal knowledge in the field of international contract law and related provisions of public and private international law.
2. Enhanced competencies for comparative legal analysis.
3. Fundamental tools and competencies needed to deal with the complex reality of international commercial transactions from an international perspective.
4. Essential skills in legal research, analysis, and communication for understanding and applying business and contract law in a transnational legal environment.
5. Knowledge and skills to pursue employment with transnational corporations, commercial law firms, governmental and nongovernmental agencies.

Program Outcomes

- a. Students will be familiarized with and deepen their knowledge in international trade and master contract drafting.
- b. Students will be familiar with techniques of contract drafting for international trade.
- c. Students will gain experience in research methodology specifically designed for Contract Law.

Degree requirements

The minimum passing grade for all graduate law courses is 80/100.

Specialization	6
DRG631 - European Contract Law	2
DRG632 - International Business Law	2
DRG634 - International Subcontracting	2
DRG635 - Law of International Financial Contracts	2
DRG636 - International Arbitration	2
DRG637 - International Merchandise Trade	2
DRG639 - International Private Law	2
DRG665 - Contractual Technique	2
DRG670 - Competition Law	2
DRG675 - Distribution Contracts	2
Capstone	3 or 6
DRG690A - Research Dissertation	6
DRG680 - Internship Report	3
Total	23 or 26

Master of Arts in Middle Eastern Studies (Hybridⁱ)**Mission**

The Higher Institute of Political and Administrative Sciences aims at training future officials in public administration and civil society, who are mindful of community spirit and ethics. The Institute contains three multidisciplinary educational fields, those of political sciences, international relations and public administration. These aim to:

- Provide students with a specialized education in political sciences, thus giving them access to a professional life.
- Develop the students' analytical and synthesis spirit, thus enabling them to understand national and international issues.
- Prepare students to follow a specialized higher education curriculum.

Program Educational Objectives

1. Graduates will formulate original, critical responses to the arguments/theses advanced by the instructor during the lectures, their fellow students' presentations, and the assigned readings.
2. Graduates will structure these responses in their own original research paper with proper argumentation.
3. Graduates will evaluate different arguments and independently assess their merits and shortcomings.
4. Graduates will enhance both their oral and written skills and conduct autonomous research drawing from a plethora of sources.

Program Outcomes

- a. Students will understand the main determinants of regional powers and Great powers' foreign policies toward the Middle East.
- b. Students will understand the historical roots of controversial issues and ongoing debates, including Arab-Israeli relations and power competition.

ⁱ Hybrid: Courses offered in French and/or English

- c. Students will assess the political economy of Arab states and the impact of rentierism on their sociopolitical structure.
- d. Students will understand new dynamics at play in the post-Arab revolutions Middle East, including the role of NGOs, civil society and the media, the rise of transnational non-state actors like Daech and the Kurds, and the return of the “deep state”.

Degree Requirements

Common Core	15
DIS535 - Foreign Policy Analysis	3
DIS560 - Diplomatic Management of Energy Security in the Middle East	3
MES600 - Regional dynamics and current issues in the Middle East	3
POL505 - Methodology of writing and research in political science	3
RIN548 - Multilateral diplomacy in international and regional organizations	3
Specialization	15
MES605 - The Middle East and Europe: Issues and challenges in the Tran-Mediterranean relations	3
MES610 - Comparative study of political systems in the Middle East	3
MES615 - Contemporary History of the Middle East	3
MES620 - Political thought and ideologies in the Middle East	3
MES625 - Economic and development issues in the Middle East	3
Capstone	6
POL580A - Dissertation	6
Total	36

Master in Political Sciences (Hybridⁱ)

Mission

The mission of the Political Science department is to train students in the Lebanese political system and other political systems. The main goal is to provide our students with the basic theoretical and methodological tools in the field of Political Science to be capable of understanding and explaining the political environmental and the main sociopolitical dynamics that affect the politics at its different levels. In order to reach this goal the Political Science department is offering a program focused on the following topics:

- Middle Eastern, Arab and Lebanese policies
- Public affairs, public institutions, Constitutional Law
- Political communication
- Comparative politics, theory/philosophy of politics

Program Educational Objectives

1. Graduates will have the ability to manage a team within a parliamentary or ministerial group.
2. Graduates will have the ability to perform consultations in study offices or consulting firms.
3. Graduates will have the ability to work on political editorial projects.

Program outcomes

- a. Students will be able to define political projects with parliamentary leaders and ministerial offices.
- b. Students will be able to create special folders on economic policy for public and private companies.
- c. Students will collaborate in the design and evaluation of editorial projects in politics.

Degree Requirements

Common Core	15
POL505 - Methodology of Writing and Research in Political science	3
POL510 - Comparative Political Systems	3
POL515 - Challenges of Globalization	3

ⁱ Hybrid: Courses offered in French and/or English

POL520 - Current issues in the World order	3
MES605 - The Middle East and Europe: Issues and challenges in the Trans-Mediterranean relations	3
Specialization	15
ADP550 - Public Politics and Administrative Law	3
ADP552 - Constitutional Law and State Theories	3
ADP554 - Sustainable Development and Resource Management	3
ADP556 - Federalism, Decentralization and Regional Cooperation	3
ADP558 - Political System and Administrative Organization in Lebanon	3
Capstone	6
POL580A - Dissertation	6
Total	36

Master in Political Sciences - International Relations (Hybridⁱ)

Mission

The mission of the International Relations department is to train students in theories and political and economic issues that shape the relations between states, by offering a program focused on the following topics:

- Conflict management
- The question of security
- The political, economic and international issues of the Mediterranean region

Program Educational Objectives

1. Graduates will have the skills to negotiate and manage crisis situations as a diplomat or as part of a diplomatic type institutions.
2. Graduates will have the ability to provide solutions in handling complex cases as head of unit in an international, regional or local organizations.
3. Graduates will have the ability to direct an NGO or international organization of active character in the humanitarian sector, and in the area of human rights and the application of international law.
4. Graduates will have the ability to defend complex or controversial ideas in public.

Program Outcomes

- a. Students will manage diplomatic actions in the context of peace or war.
- b. Students will be able to create multiple projects related to national and international affairs.
- c. Students will defend ideas and actions related to the fields of human rights and international law.

Degree Requirements

Common Core	15
POL505 - Methodology of Writing and Research in Political science	3
POL515 - Challenges of Globalization	3
DIS535 - Foreign Policy Analysis	3
MES600 - Regional Dynamics and Current issues in the Middle East	3
RIN548 - Multilateral diplomacy in international and regional organizations	3
Specialization	15
POL510 - Comparative Political Systems	3
POL520 - Current Events Issues	3
RIN540 - Theories of International Relations	3
RIN550 - Terrorism and International Security	3
MES605 - The Middle East and Europe: Issues and Challenges in the Trans-Mediterranean Relations	3
Capstone	6

ⁱ Hybrid: Courses offered in French and/or English

POL580A - Dissertation	6
Total	36

Master in Private Law (Hybridⁱ)

Mission

The aim of the Master II in Private Law is to deepen students' knowledge in private law matters, predominantly in civil law, whose concepts and techniques forged the common ground of private law matters. Indeed the objective of this program is to train highly motivated professionals who are dynamic, inventive, creative and most importantly able to analyze complex information and dossiers.

Program Educational Objectives

1. Graduates will be able to pass various exams: entrance exam for the Magistrates' School, the bar exam, civil service and international diplomacy exam, notarial exam, etc.
2. Graduates will be able to have an effective, ethical and responsible participation in the legal profession.
3. Graduates will be able to pursue a doctoral program.

Program Outcomes

- a. Students will acquire an ability to mobilize and enrich, in a critical spirit, the knowledge and skills acquired at the end of the Bachelor of Law program.
- b. An ability to master the content of the main rules of substantive law in all its branches, as well as those of international law, to compare the essential features of some foreign systems, and be able to move from the abstract to the rule of law to the facts, even if they are presented in complex ways, and vice versa.
- c. An ability to skip easily from the rule to the facts, and vice versa, during a discussion, communicate the result of research and legal analysis in a clear, precise, structured and persuasive manner, and produce a legal study, with absolute respect to the governing scientific rules.
- d. An ability to update knowledge, perceive bridges between the different branches of law, to form personal opinions and, if necessary, to build on the opening resulting from an internship or an exchange trip.
- e. An ability to question the choices of the rules, getting involved in the promotion of the founding values of the law and organizing its work.

Degree Requirements

The minimum passing grade for all graduate law courses is 80/100.

Common Core	3
DRG500 - Research Methodology	3
Specialization	18
DRG610 - Civil Law	3
DRG611 - Business Law	3
DRG612 - Criminal Law and Criminal Procedure	3
DRG615 - Judicial Institutions	3
DRG660A - Master Thesis	6
Total	21

Master in Public Law (Hybridⁱⁱ)

Mission

The aim of the Master II in Public Law is to deepen students' knowledge in public law matters. Students will master the principles and concepts that govern all disciplines of public law. Indeed the objective of this program is to train highly motivated professionals who are dynamic, inventive, creative and most importantly able to analyze complex information and dossiers in their specialty.

ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Hybrid: Courses offered in French and/or English

Program Educational Objectives

1. Graduates will be able to present to the following exams: State Council, the bar, diplomatic career, notary, and public service
2. Graduates will be able to continue on to study at PhD level.

Program Outcomes

- a. Students will acquire an ability to mobilize and enrich in a critical spirit the knowledge and skills acquired at the end of the Bachelor of Laws program
- b. An ability to master the content of the main rules of substantive law in all its branches, as well as those of international law, to compare the essential features of some foreign systems, and be able to move from the abstract to the rule of law to the facts, even if they are presented in complex ways, and vice versa.
- c. An ability to skip easily from the rule to the facts, and vice versa, during a discussion, communicate the result of research and legal analysis in a clear, precise, structured and persuasive manner, and produce a legal study, with absolute respect to the governing scientific rules.
- d. An ability to update knowledge, perceive bridges between the different branches of law, to form personal opinions and, if necessary, to build on the opening resulting from an internship or an exchange trip.
- e. An ability to question the choices of the rules, getting involved in the promotion of the founding values of the law and organizing its work.

Degree Requirements

The minimum passing grade for all graduate law courses is 80/100.

Common Core	3
DRG500 - Research Methodology	3
Specialization	18
DRG620 - Administrative Law	3
DRG621 - Constitutional Law	3
DRG622 - International Public Law	3
DRG623 - Tax Law and Public Finances	3
DRG660A - Master Thesis	6
Total	21

Doctoral Programs

Ph.D. in Law (Hybridⁱ)

Mission

This program aims to train independent top researchers in law, who are able to make a significant original contribution to the legal discipline

Program Educational Objectives

1. Graduates will be able to teach in higher education institutes.
2. Graduates will be enrolled as a trainee judge without taking the entrance exam for the Magistrates' School.

Program Outcomes

Students will acquire:

- a. An ability to pursue original research independently.
- b. An ability to interpret complex data.
- c. An ability to develop a critical attitude towards the discipline
- d. An ability to contribute substantially and directly to the promotion of knowledge.

Degree Requirements

Specialization	60
Ph.D. Seminars by Doctoral College	15
Ph.D. Dissertation	45
Total	60

ⁱ Hybrid: Courses offered in French and/or English

Course Descriptions

ADP550	Public Politics and Administrative Law	3 cr.
<p>This course provides tools for policy analysis, a central theme in political science. The analysis of public policy helps to identify practical and ideological conditions in which publication is developed, formulated and implemented. It combines the practical instruction of general administrative law based on various case studies.</p>		
ADP552	Constitutional Law and State Theories	3 cr.
<p>This course offers a critical and comparative approach to constitutional law and the theory of the state, based on various case studies. Its content is structured around the questioning of the notion of state in Lebanon and the Arab countries, with regard to the sources of norms production and policies and legislative practices, in comparison with historical experiences the West has known, and other regions of the world (Indian subcontinent, Latin American world).</p>		
ADP554	Sustainable Development and Resource Management	3 cr.
<p>Sustainable development is a current topic which is investing more and more public action in the management of natural, cultural and historical resources. This course offers both practical and theoretical instruction, for putting into practice in the Lebanese and regional situation.</p>		
ADP556	Federalism, Decentralization and Regional Cooperation	3 cr.
<p>Federalism and decentralization are issues of debate in many countries including Lebanon. This course aims to provide students with practical knowledge through the study of case studies along with theoretical tools related to these fields.</p>		
ADP558	Political System and Administrative Organization in Lebanon	3 cr.
<p>Deep knowledge and critical approach of the political system and the administrative organization in Lebanon are necessary for any student who is interested in public policy and who wants to pursue a professional career or conduct research in this area.</p>		
CRM511	General Criminology	3 cr.
<p>The course studies the criminal phenomenon in its constitutive elements, including crime, the criminal, the victim and social reaction. The course will also examine such concepts as levels of dangerous, transition to criminal act, prevention of crime, issues confronting criminal law and criminology.</p>		
CRM512	Criminal Creology	3 cr.
<p>The course studies criminal phenomenon in its constitutive elements, including crime, This course examines the nature, object, and necessity of criminal creology: the creologic study of crime. Students will consider the theory of "human act in se"; shifting the study of crime from without to within human act per se, the compatibility and incompatibility of creative activity and criminal activity. This course will also study criminal creologization: a creative activity as a criminological factor, creative activity and development of psychological and psychiatric characteristics of criminal personality. Finally students will learn about levels of creological dangerous and criminological threats.</p>		
CRM513	Questions of Ethics in Criminology	3 cr.
<p>The aim of this course is to enable the would-be criminologists to become acquainted with the fundamental knowledge of medical ethics and to encourage them to think critically in a context related to ethical criminology. Facing a complex medical situation, the appropriate reaction is not always easy to determine. It is usually decided in reference to concepts that people have. This course, on the basis of specific themes, will help students to think, understand, criticize, compare, analyze and draw conclusions, thus enabling them make better decisions when decisions are not easy to make.</p>		
CRM514	Psychological Criminology	3 cr.
<p>This course will enable students to integrate psychological theories in order to understand the criminal phenomenon, to acquire the basic concepts of different theories and to become operational within the practice of research and future considerations. This course will also examine several clinical cases to illustrate and help students understand both the psychology of the person who committed a crime and the victim.</p>		
CRM515	Sociological Criminology	3 cr.
<p>Sociologists are interested in how society is created and how human beings form social relationships and interact with each other. Criminology is a related discipline that examines "crime" and "deviance", and the processes through which the criminal justice system responds to these phenomena. Studying Sociological criminology will provide a sound understanding of the key conceptual and substantive issues involved in the study of society, crime and criminal justice.</p>		
CRM516	Forensic Medicine I	3 cr.
<p>This course helps students to understand human thoughts and the consequences of pressure, know the basic ideas in forensic medicine, learn about the Lebanese legislation (law, decree), their rights and responsibilities, and know how to judge the quality and authenticity of an expert report. The course will also cover medico-legal study and dating of violence lesions, examination of a dead body, levee body, and importance of autopsy contribution and medico-legal</p>		

expertise.

CRM611 Psychiatric Criminology 3 cr.

Criminal threat is often associated with mental disorders. Recent studies using standardized diagnostic instruments confirm this relationship. Compared to the general population, the arrest rate of patients with mental disorders is significantly higher. Incarcerated persons suffer from more psychiatric disorders. Psychotic disorders, in particular schizophrenia with hallucinations and delusions, antisocial personality disorder and addiction disorders increase the risk of a person committing homicide. Epidemiological studies confirm that various DSM5 mental disorders significantly increase the prevalence of violent behavior. The higher the psychiatric comorbidity, the higher the risk of aggressive behavior and suicide.

CRM612 Forensic Medicine II 3 cr.

This course focuses on the study of medico-legal activities in matters of criminal law, and of civil law. With regard to the first type of activities, this course examines findings of physical, psychic and sexual violence, identification of the author of crime, age determination, amenability to detention, investigating alleged cases of torture, forensic psychiatry criminal expertise, etc. With regard to the matters of civil law, Forensic Medicine II concentrates on various studies, such as evaluation of suspected physical injury, guardianship, expertise in medical liability, etc. Students will learn to analyze medico-legal case studies that cover both criminal and civil law issues, such as murder, suspect death, victimology, sexual offences, abuse of children, collective criminology, testimony in court, information about driving abilities, etc.

CRM613 Forensics 3 cr.

This course will focus on the work of forensic experts and tribunals, fire and explosion forensic investigation, fingerprint identification (dactyloscopy), and bone identification (osteology).

CRM614 Current Events in Criminology 3 cr.

Students, researchers and practitioners participate in addressing questions on criminology relating to Lebanese, Arab, and World current events.

CRM680 Internship in Criminology 3 cr.

Students will complete an internship with a medico-legal institute, a psychiatric hospital, a prison, etc. in Lebanon or abroad.

CRM690A End of Studies Project 3 cr.

Criminology students are required to prepare a project, either theoretical or practical, at the end of their Master. It will be published in the USEK Journal of Criminology.

DIS530 Introduction to Strategic Studies 3 cr.

The objective of this seminar is to provide the students with an introduction necessary to the understanding of current debates about the threats of security order. The first part of the course provides an introduction to theoretical interpretations of international security. The second part, it deals with general issues such as coercion and use of force, alliances, security cooperation, etc.

DIS535 Foreign Policy Analysis 3 cr.

The seminar focuses on the comparative study of foreign policy. It addresses the foreign policies of Great Powers, medium sized Powers and regional Powers. It starts by a theoretical and empirical analysis of the decision making system in these countries, as well as the patterns of foreign policies.

The comparative analysis is also focused on the elements shaping FP decision making and conduct of foreign policy (the different components of the external and internal factors shaping the decision making). Particular emphasis will be put on their foreign policies in the Middle East.

DIS550 Diplomacy and risk analyzes in the current geopolitical Situation 3 cr.

"Risk" is a term that can be defined as "the product of a hazard and a vulnerability." This seminar starts from the evolution of international diplomacy since World War II, to then look at the development of diverse strategic and military threats, threat perceptions, as well as the manipulation of perceptions.

DIS555 Diplomacy and International Migration 3 cr.

These are the countries of the southern hemisphere that supply the bulk of international migration flows. Several Western countries emphasize their security policies related to the international mobility. However, it is commonly accepted that if there were no borders, there would be no migrants. This seminar highlights the link between the phenomenon of migration, which creates security problems and various diplomatic strategies put in place for its management.

DIS560 Diplomatic Management of Energy Security in the Middle East 3 cr.

The course focuses on the oil and Gas policies in the region and the role these sources of energy and others played in shaping and influencing the regional agenda, the configuration of power in the region and the international politics of the Middle East. It addresses also the different impact on the oil producing states mainly the emergence of rentier economies.

DIS565	Actions and Humanitarian Law	3 cr.
International humanitarian law is a set of rules designed to limit the effects of armed conflicts. It protects persons who are not taking part in hostilities. This seminar examines the development and implementation of international treaties and conventions, through an approach that is both theoretical (legal standards) and practical (diplomatic action, action on the ground). It attempts to answer the question to what extent international humanitarian law is able to protect the victims of armed conflicts.		
DRG210.1	General Constitutional Law	3 cr.
The course presents the concepts of constitutional law based on two main ideas: authority and freedom. This vision is founded according to the bodies constituting the public powers, their functions and their relationships between each other and the governed population		
DRG216	Legal Methodology	3 cr.
The law students will encounter several exercises that require different methodologies. The purpose of this course is to raise and increase the legal reasoning of students which will help them to find suitable solutions to different law cases; such as, legal dissertation, judgment file, decision commentary, practical cases. In addition to several assignments on each topic, this course aims to stimulate legal research and gain familiarity with the library where students will learn to research texts of law, jurisprudence and doctrine. Finally, the legal methodology is mainly based on legal logic, which is a way of reasoning translated by a chronological sequence of ideas leading to a certain solution. So the legal methodology is a way of searching for documents, references, judgments and legal decisions in order to analyze them, and discuss them logically.		
DRG217	Legal Communication	2 cr.
"Communication Juridique" teaches students the practice of written and spoken French in a legal context. This course aims to develop the students' legal knowledge and to fill their linguistic gaps. Its main objective is not only to enable students to understand the information in a legal document, but also to combine the vocabulary with grammar in order to allow them to communicate better.		
DRG220.1	Family Law I	2 cr.
The Family Law I course is an introduction to European family law, the French one is particular looked at. Sources and history of family law are offered. In addition, students learn about training conditions, effects, evidence and divorce: causes, procedure, and effects, as well as legitimate filiation: maternity and paternity legitimate, evidence, and the disallowance paternity.		
DRG222.1	Canon Law	3 cr.
Canon law is the name given to the rules that govern church order and discipline of the Roman Catholic Church. The goal of this course is to enable students to take a look at the vast field of the canon law of the Catholic Church. This course will allow students to understand some general principles and to learn the methodology of the discipline. This course has been updated to reflect changes and adaptations in canon law and new resources in the field, and offers an introductory orientation of all canon law. This course illustrates the relatively complex domains of canon law, and defines the primary framework and design of the several offices and functions within the church, and shows how they communicate to each other, which will lead to the more important fields of canon law of substance and the context in which more elaborate rules can be implied and comprehended.		
DRG225	International Public Law	3 cr.
Pre-requisites	DRG240.1	
This course enables students to learn about the subjects of international law and their legal status; such as, states, organizations, and private persons, and the sources of international law; such as, treaties, customs, general principles, unilateral acts, jurisprudence, etc. The course also discusses the general questions of international law, i.e. questions of law making, sovereignty, jurisdiction, responsibility, enforcement, the settlement of disputes, and specific topics such as the use of force.		
DRG230.1	Introduction to Law	3 cr.
Co-requisites	DRG231.1	
This course will actively explore all aspects of the law: in se and inter se; public and private; imperative and interpretative; founding principles and theories of law; sources; <i>ratione loci</i> , <i>ratione personæ</i> , <i>ratione materiæ</i> , <i>ratione temporis</i> ; the Lebanese judicial system.		
DRG231.1	TD Introduction to Law	1 cr.
Co-requisites	DRG230.1	
Law is a discipline based to a large extent on practice. Therefore, the practical applications, entitled tutorials (<i>travaux dirigés</i>), are crucial for a better knowledge and understanding of the course and will raise subjects and issues that might call into question the theory taught in the classroom. Consequently, the tutorials allow students to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials also introduce new information to enable students to delve deeper into the content of the lecture and increase their knowledge and to		

boost and stimulate their legal research and reasoning skills. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and encourage them to find adequate solutions and to develop their reasoning skills.

DRG240.1 Political Systems 2 cr.

Prerequisites DRG210.1

This course is designed to present a general overview on the importance of the elections, public powers, and the different political systems adopted by the states in all over the world. This course introduces the idea of the role of public power and the political system adopted within the state.

DRG250 Introduction to the Comparative law 2 cr.

The course offers students an introduction to legal comparison, to its nature and goals in connection with the contemporary globalization processes, with particular reference to the interaction of law and culture in Europe.

Through the first part of this course, students will be exposed to the historical evolution and the main features of the civil law tradition in comparison with the common law tradition. The analysis will touch on some issues that show the convergence of legal systems and traditions favored by the doctrine in the first half of the 20th century and by the European Union in the second.

The second part of this course explores the Italian legal system as example of legal reception and the convergence of legal systems in Europe. After an introduction of the main legal principles and the relevant sources of law, the course deals with different issues related to contract law. Starting from the rules governing Italian law, the selected topic is addressed in a broader European perspective, taking into account the influence of Eu's legislation, as well as the most recent developments in the progressive harmonization and unification of European private law.

DRG300.1 Special Administrative Law 2 cr.

Prerequisites DRL222.1 Or DRL222.2 Or DRL222

This course is designed to introduce public services and the Lebanese public institutions. It deals with the nature of public administration, as activity and as discipline. Administrative law has two different aspects: enabling and controlling. The course will explore how the law enables government to create institutions and programs to provide public goods and public services, and who oversees and controls the exercise of these powers. Students are expected to develop an understanding and a sense of appreciation of the role of Lebanese public administration, in a historical perspective and in contemporary society. It will also describe the legal regime of public service, the different categories, and the methods of administering public services, as well as the public institutions and their organization. Students are introduced to the role of administrative law in Lebanon from both theoretical and practical points of view. They will explore the rights of those affected and how they can confront abuses of this power, and also whether it is feasible to defy government for failure to exercise the powers given to it.

DRG311 Regime of Civil Liability 3 cr.

Prerequisites DRG327 Or DRL322 Or DRL322.1 Or DRL322.2

The course will introduce students to civil liability, the private law governing the rights, duties, and obligations that members of society are entitled to and owe to one another. The course will, firstly, draw the distinction between different forms of liabilities, then it will clarify the general framework of civil liability, through a critical assessment of the foundations on which it rests, and highlight the changes that such foundations have gone through.

DRG320.1 Computer and Internet Law 2 cr.

This course deals with learning the essentials of computer and network technologies, and how those technologies are challenging settled legal understandings. The sources of Internet law are many, from intellectual property to tort.

DRG327 Contract law II 3 cr.

Co-requisites DRG328

Prerequisites DRL228.1 Or DRL228.2 Or DRG250 Or DRL312.1 Or DRL312.2 Or DRL312 Or DRG251

This course studies general provisions regarding the extinction of contracts. It starts with generalities about the effects of contracts and elaborates on the obligatory force of contract as well as its relative value, and then it develops the illicit acts, the illegitimate growth of wealth as well as judicial acts. Then it treats the cancelation of a contract and its dissolution by reason or circumstances subsequent to its formation, which are the rescission of a contract and its termination. Furthermore, it develops the effects of obligations and the remedies available to creditors for the enforcement of performance due to them: right of detention, indirect action, direct action and Paulian action. Finally, it ends with an overview of the transmission of obligations.

DRG328 TD Contract law II 1 cr.

Co-requisites DRG327

Law is a discipline based to a large extent on practice. Therefore, the practical applications entitled tutorials are crucial to a better knowledge and understanding of the course and will raise subjects and matters that might call into question the theory taught in the classroom. Consequently, the tutorials (travaux dirigés), aim to apply the knowledge learned in

the course, and provide a useful complement to the lectures. Tutorials intend to introduce new information in order to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and push them to find adequate solutions and to develop their reasoning skills.

DRG340 International Humanitarian Law 2 cr.

This course aims at introducing and examining the foundations and key principles and rules of the law of war (also known as the law of armed conflict or international humanitarian law, IHL) applicable in times of armed conflict. IHL is comprised of norms designed to humanize and limit the effect of warfare. This course provides students with an overview of the history of IHL, its normative logic and its conditions of applicability as well as an understanding of the main substantive norms. The themes of the course include the sources of IHL, the definition of an armed conflict and the distinction between international armed conflict and non-international armed conflict, the status of persons not taking part or no longer taking part in hostilities, the rules and principles on the conduct of hostilities regulating the means and method of warfare, the means of implementation and enforcement of IHL as well as the interplay between this body of norms and international human rights law.

DRG351.1 Labor and Social Security Law 3 cr.

Prerequisites DRG327 or DRL322 or DRL322.1 or DRL 322.2

The course is intended to provide students with an in-depth understanding of labor laws and social security laws, as well as develop an appreciation for the application of labor laws to the collective labor agreements. The course is designed to give an overview of various aspects of labor relations and social security benefits, including the perspective of working people and their labor organizations. It aims at assisting students in the acquisition of full knowledge and understanding and is intended to stimulate critical reflection on this branch of law.

DRG393.1 Civil Liberties 2 cr.

This course provides, on the one hand, an understanding of the general theory of fundamental rights and freedoms, with an emphasis on the domestic and international safeguards of fundamental rights, as well as the mechanisms of protection to ensure their observance. The second part analyzes the legal regime of the protected fundamental freedoms, including the right to respect the dignity of a human being, the principle of equality, and civil and political liberties.

DRG395 International Human Rights 2 cr.

Prerequisites DRG426.1 OR DRG255

This course is a survey course in international human rights law in order to introduce the students to the basic principles of international human rights and the institutions that operate in this area of the law.

DRG400.1 Special Criminal Law 3 cr.

Co-requisites DRG 414.1

Prerequisites DRL310.1 Or DRL310.2 Or DRL310

This course studies of all the offenses under Lebanese criminal law, and their penalties: crimes against property, such as theft, fraud, breach of trust, and checks with insufficient funds; crimes and offences against persons, such as homicide, and assault and battery; crimes against public faith, such as forgery.

DRG411.1 Commercial law 3 cr.

Pre-requisites DRL228.1 or DRL228.2 or DRG250 or DRL312 or DRL 312.1 or DRL312.2

Co-requisites DRG 421.1

The course studies the rules of law that govern many aspects of business. An understanding of legal rules and constraints provides a framework for understanding the nature, structure and differences between several commercial deeds. It will help students understand the legal meaning of "merchant" and the legal importance of establishing a "business".

DRG414.1 TD Special Criminal Law 1 cr.

Co-requisites DRG 400.1

Law is a discipline based to a large extent on practice. Therefore, the practical applications entitled tutorials are crucial to a better knowledge and understanding of the course and will raise subjects and matters that might call into question the theory taught in the classroom. Consequently, the tutorials (travaux dirigés), aim to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials intend to introduce new information in order to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and push them to find adequate solutions and to develop their reasoning skills.

DRG415.1 Corporate Law 3 cr.

Prerequisites DRG411.1 Or DRG411.2 Or DRG411

Co-requisites DRG425.1

This course is an introduction to the law that governs corporations. It will examine first the rule of contract that governs the formation of corporations in general, and then onto the different types of corporations in a comparative approach between the Lebanese and the French law.

DRG421.1 **TD Commercial law** **1 cr.**

Co-requisites DRG 411.1

Law is a discipline based to a large extent on practice. Therefore, the practical applications entitled tutorials are crucial to a better knowledge and understanding of the course and will raise subjects and matters that might call into question the theory taught in the classroom. Consequently, the tutorials (travaux dirigés), aim to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials intend to introduce new information in order to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and push them to find adequate solutions and to develop their reasoning skills.

DRG424.1 **International Private Law** **3 cr.**

Pre-requisites DRL228.1**Co-requisites** DRG 440.1

This course explores one of the most fascinating and complex areas of law: what do you do when legal problems transcend jurisdictional boundaries? What happens when more than one sovereign state (e.g., two countries like Lebanon and France) can apply its laws to a particular situation or transaction? Whose law applies? Whose law should apply? And how should one state treat the laws and judgments of another? The course will draw heavily upon close reading, case analysis, and problem-solving skills.

DRG425.1 **TD Corporate Law** **1 cr.**

Co-requisites DRG 415.1

Law is a discipline based to a large extent on practice. Therefore, the practical applications, entitled tutorials (travaux dirigés), are crucial for a better knowledge and understanding of the course and will raise subjects and issues that might call into question the theory taught in the classroom. Consequently, the tutorials allow students to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials also introduce new information to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning skills. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and encourage them to find adequate solutions and to develop their reasoning skills.

DRG433.1 **International Institutions** **2 cr.**

Pre-requisites DRG426.1 Or DRG426.2 DRG426 or DRG225

This is a hybrid course combining face-to-face classroom instruction with computer-based learning. It examines the ways in which states and non-state actors organize themselves: intergovernmental, nongovernmental and transnational organizations. It tackles questions relating to the nature of the formal institutions, their legal foundations, structures, functions, activities, and their relevance to global events and issues. A special emphasis will be made on the study of some organizations and agencies in depth, and their relations to the United Nations, which will be given special attention due to the truly global scope of its activities and impact. As the course is presented in a hybrid seminar format, students will be expected to actively participate in the online exercises.

DRG441.1 **TD International Private Law** **1 cr.**

Co-requisites DRG 424.1

Law is a discipline based to a large extent on practice. Therefore, the practical applications, entitled tutorials (travaux dirigés), are crucial for a better knowledge and understanding of the course and will raise subjects and issues that might call into question the theory taught in the classroom. Consequently, the tutorials allow students to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials also introduce new information to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning skills. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and encourage them to find adequate solutions and to develop their reasoning skills.

DRG450 **Land Law and Real Estate Securities** **3 cr.**

Prerequisites DRL213.1 or DRL 213.2

This course aims to study the general provisions of the real estate securities, its definition, historical development, and divisions. It specifies the principle of the real estate securities' indivisibility, its inscription and radiation. This course

develops as well the compulsory delimitation and demarcation, its technical and administrative stage as well as the legal and judicial stage. It also explores the compulsory delimitation and demarcation effects in addition to the optional delimitation and demarcation procedures and effects. It also examines the competence of the land judge, the land register regulations such as the registering system, the procedures of registration and radiation, the types of registrations, the provisional measures and effects and finally the registration effects.

DRG455.1 Insurance Law 2 cr.

Insurance law is an integral part of commercial law, the right to the protection of the consumer and the right to compensation for people and their property. This evolutionary law also involves risk and damage prevention, and, by allowing subjects to stipulate conditions, guarantees the respect for precautionary measures and protective measures.

DRG461.1 Arbitration Law 3 cr.

Prerequisites (DRL228.1 Or DRL228.2 or DRL321.1 Or DRL321.2) and (DRL235.1 OR DRL235.2)

This course is focused on the third party with the power to settle disputes which may arise between individuals under an arbitration award. Power is generated, in principle, by the agreement of wills of the parties, is the settlement of a dispute by the arbitral dispute mechanism. The course is divided into two parts: the arbitration agreement (Part I), and the requirements of arbitration proceedings that enable the parties to resolve their dispute.(Part II).

DRG463 International Criminal Law 3 cr.

Prerequisites (DRL310.1 C1 Or DRL310.2 C1 Or DRL310) And (DRG225 or DRG426.1)

This course covers international criminal law from the application of domestic and international law to questions of jurisdiction over international criminal activities, the granting of amnesty to persons responsible for international crimes, international cooperation in criminal matters, substantive international law as contained in multilateral treaties concerning war crimes and terrorism, and the permanent International Criminal Court.

DRG465 Legal Clinic 3 cr.

This course focuses on shaping public policy by analyzing the limits on law-making authority, identifying options for changing policy, helping to draft policy proposals including model legislation, as well as speaking at a public hearing, conference and seminar in order to advance new policies. The course further offers students a unique opportunity to serve the public by providing pro-bono legal services at a high level of professionalism to low-income individuals (in particular children and women) and families who face difficulty in engaging lawyers for advice.

DRG470 Moot Court Competition 3 cr.

This course prepares the students for the ICC Moot Court Competition which welcomes universities from all over the world for a large scale moot court simulating the proceedings of the International Criminal Court (ICC). The Competition's case addresses fundamental issues of substantive and procedural international criminal law.

DRG472.1 Civil Service Law 2 cr.

This course gives a general view of the norms governing the service of public agents, be they civil servants or non-permanent staff, whether they serve the state or other public entities. It allows the student to assess the degree of originality of the law of public service in comparison with labor law.

DRG500 Research Methodology 3 cr.

The course focuses on both the method and methodology of academic research and explains both how and why it is necessary to carry out academic research work. The method / methodology is the focus of this course.

DRG510 Advanced Corporate Law 2 cr.

This course examines the following three topics: 1) the main operations that may affect the company as a group; 2) the legal acts that the partners can conclude to perfect the rules of corporate operations; 3) the rules of powers and responsibilities applicable to each corporate player, legal person and corporate organs.

DRG520 Advanced Business Law 2 cr.

This course undertakes a comparative study of the French and Lebanese law concerning the acts and assets of a commercial enterprise, including commercial transactions, business and business transactions, and commercial lease.

DRG521.1 Bankruptcy 3 cr.

Co-requisites DRG516.1

Prerequisites DRG415.1

This course is designed to provide students with a comprehensive introduction to bankruptcy law. The key general concepts studied will include: the bankruptcy estate, the different classifications of claims, exemptions, preferences, and fraudulent transfers. In examining the different types of bankruptcy proceedings, we will begin with the rules for liquidations and then explore individual reorganizations. Throughout the course we will explore the policies underlying the bankruptcy law

DRG525 Financial Instruments 2 cr.

This course studies the various legal instruments used in financing operations, such as banking practice contracts, assorted guarantees, and the financial instruments of corporate law.

DRG526.1 European Union Law 2 cr.

This course analyzes the legal European Union and its interaction with member State law and policy. There will be an emphasis on decision making, supremacy, direct effect, breaches of European law, legal remedies, and protection of human rights guarantees.

DRG527.1 Environmental and Urban Law 2 cr.

This course will review the law of the environment from a theoretical perspective, with an emphasis on international, European and comparative practices. It will increase the student's abilities to grasp a wider knowledge of various documents related to environmental law, such as directives, international conventions, judicial decisions, etc.

DRG529.1 Introduction to the Common Law 2 cr.

This course introduces the common law tradition to students of other legal traditions, in particular the civil law tradition. The focus will be on the case study approach that permeates most of the laws in the common law tradition. It will cover a wide variety of substantive law issues, ranging from contract law, property law, tort law, to criminal law issues. In addition, the course will familiarize the students with common civil law and criminal procedures.

DRG530.1 Maritime and Air Law 2 cr.

This course provides an overview of the laws governing transportation, customers and users of the means of sea or air transport, as well as intermediaries such as freight forwarders, tour operators, etc. In addition, it takes a thorough look at the responsibility of reviewing legal contracts.

DRG534.1 Civil Law: Named Contracts II 3 cr.

Co-requisites DRG535.1

Prerequisites DRL412.1 Or DRL412.2 Or DRL412

This course studies the special rules governing certain contracts, such as the loan and proxy. In its first part, this course studies the general provisions of the lease, which includes the applicable rules to all leases as well as special rules for building leases. It also examines the effects of the lease, which include the obligations of the lessor and the lessee. Finally, it analyzes the extinction of the lease and the land leases. In its second part, this course studies special rules governing the proxy. It starts with a general outline of a proxy, and then determines the effects of proxy between the principal and the agent as well as the effects of the proxy in relation to third parties. Finally, the last part of this course pays particular attention to the extinction of the proxy.

DRG535 Bankruptcy and Reorganization 2 cr.

This course examines the main rules and the philosophy of preventing and addressing business difficulties in French and European law, as compared to the Lebanese law, which takes after an older tradition.

DRG535.1 TD Civil Law: Named Contracts II 1 cr.

Co-requisites DRG534.1

Law is a discipline based to a large extent on practice. Therefore, the practical applications entitled tutorials are crucial to a better knowledge and understanding of the course and will raise subjects and matters that might call into question the theory taught in the classroom. Consequently, the tutorials (travaux dirigés), aim to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials intend to introduce new information in order to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and push them to find adequate solutions and to develop their reasoning skills.

DRG536.1 Family Law II 2 cr.

Prerequisites DRG220.1 Or DRG220.2 Or DRG220

This course is offered to students who succeeded in the course 'Family Law I'. They will learn about laws relating to personal status in Lebanon among Christians and Muslims. Starting with a comparison of nullity of marriage, this course considers the courts and the steps to the final judgment. In addition, students learn how to implement provisions to accelerate the procedure of the family law in ecclesiastical courts. Finally, conflicts of jurisdiction between the civil and ecclesiastical courts are taught in this course.

DRG538.1 Diplomatic and Consular Law 2 cr.

Prerequisites DRG300.1

This course reviews diplomatic and consular laws, in particular the Vienna Convention on Diplomatic Relations of 1961, in the light of state and judicial practices. It will study bilateral diplomatic relations that are maintained by permanent missions, including special missions. The course will also cover diplomatic and consular privileges and immunities.

DRG540.1 Administrative Litigation 3 cr.

Prerequisites DRL222 or DRL222.1 or DRL222.2

Administrative litigation entails some characteristics different from litigation. These differences meet during contentious administrative procedures that involve several phases ranging from introducing the appeal in the judgment itself, and passing by the statement. These are to be applied to the different actions referred to the administrative judge: recourses of full jurisdiction, action for annulment, and action for interpretation. Next to this

ordinary procedure exist emergency procedures allowing litigants to obtain a rapid decision from the judge.

DRG541.1 Constitutional Litigation 3 cr.

Prerequisites DRG210.1

This course is designed to present a general overview of the jurisdiction of the Constitutional Council in France Lebanon, and the importance of the constitutionality control of law, as well as the electoral litigations.

This course also introduces the prominence of specific rights and freedoms that must always be respected in each society.

DRG545 Law and Business of Corporate Transaction 2 cr.

This course provides a comparative approach to contract law, including intermediary contracts, commercial agencies, mandates, commissions, and brokerage under French and Lebanese law.

DRG550.1 Methods of Enforcing Judgments 3 cr.

Prerequisites DRL321.1 Or DRL321.2 Or DRL321 or DRL325.1 or DRL325.2

This course introduces the measures of enforcement, and the general provision of the measures of enforcement. Then it determines the competence of the enforcement court, including the subject matter competence, the competence by reason of the person concerned and the venue jurisdiction. Then it elaborates on the writ of enforcement, including executive power, object of the enforcement and the parties. Next, it determines the procedures before the enforcement judge and the decision of the latter. In addition, this course allows students to assimilate the plea to stay as well as the opposition. It develops also the sequestration of property, the garnishment, the enforcement by sale of the debtor's real property, the tender specifications and the sale by auction by order of the court. Finally it ends with a study on the seizure of movable goods for sale and imprisonment for debts.

DRG555 Criminal Business Law 2 cr.

This course provides an overview of the criminal offenses applicable to the business and corporate world: 1) common law offenses also applicable to enterprises, especially fraud, breach of trust, and money laundering; 2) specific business offenses, including the misappropriation of corporate assets, and bankruptcy.

DRG589.1 Intellectual and Artistic Property 2 cr.

This course introduces students to the principles and concepts of the Lebanese intellectual property law, including its two main categories: literature and artistic property and the industrial property (mostly patents). The course also focuses on the international aspects of branches of intellectual property and the patent laws.

DRG590A Research Dissertation 6 cr.

The student prepares a research paper under the direction of a Master's teacher and defends it before a jury composed of three teachers, at least two of whom are part of the Master's teaching team. The third member may be a USEK teacher and doctor of law.

DRG610 Civil Law 3 cr.

The course is designed to present a depth of knowledge on the basics of contracts and their typology, and to develop the negotiation period and study the liability of the parties in case of breach of contract. Moreover, this course allows students to assimilate the characteristics of the consumption contract, the franchise agreement, leasing, the electronic contract and, finally, the information technology contract.

DRG611 Business Law 3 cr.

This is an advanced corporate law course designed specifically for Master students. The course will discuss aspects of economic and legal policy of various issues in business law as well as their practical implications. It is designed to provide law students with the analytical tools necessary to understand the financial and economic factors that underlie business structures in corporate law.

DRG612 Criminal Law and Criminal Procedure 3 cr.

This course covers highly discussed topics in criminal law and criminal procedure, such as the principle of criminal legality, the application of criminal law *ratione temporis*, *actus reus* and *mens rea*, criminal responsibility and irresponsibility, impartiality of the judge in criminal proceedings, public action and civil action, criminal evidence, secrecy of criminal proceedings, rights of the defense, etc.

DRG615 Judicial Institutions 3 cr.

The course of Judicial Institutions has an introduction and two parts.

The introduction covers the concepts, the history and the sources of our judicial institutions.

Because procedural rules can be critical elements of litigation strategy and case success, one of the two major segments of this course will be devoted to overview of the entire body of rules of civil procedure ranging from commencement of proceedings, to defining issues for trial, to enforcement of judgments. The second major element of this course (and the one we will tackle first) is an area called jurisdiction. In this segment we will explore the constitutional and statutory sources of judicial power.

DRG620 Administrative Law 3 cr.

The administration is subject to a law which regulates its activity and, thereby, its relationship with citizens. This course

explains the unilateral administrative act, administrative contracts, various appeals and the liability of the public authority.

DRG621 Constitutional Law 3 cr.
The course presents the concepts of constitutional law based on two main ideas: authority and freedom. This vision is founded according to the bodies constituting the public powers, their functions and their relationships between each other and the governed population.

DRG622 International Public Law 3 cr.
This course enables students to learn about the subjects of international law and their legal status; such as, states, organizations, and private persons, and the sources of international law; such as, treaties, customs, general principles, unilateral acts, jurisprudence, etc. The course also discusses the general questions of international law, i.e. questions of law making, sovereignty, jurisdiction, responsibility, enforcement, the settlement of disputes, and specific topics such as the use of force.

DRG623 Tax Law and Public Finances 3 cr.
This course explains the fundamental concepts relating to the budget of the State, its preparation, enforcement and control. On the other hand, the general theory of tax requires the study of the notion of tax, classification of taxes, tax techniques, and tax administration. Then it focuses on the three main taxes: tax on income, VAT, and the estate tax.

DRG625 International Contract Law 2 cr.
This course examines several transversal topics, such as the conflicts of laws and jurisdictions, arbitration, and the United Nations' Vienna Convention on Contracts for the International Sale of Goods.

DRG631 European Contract Law 2 cr.
Students will learn the comparative approach to Contract Law by examining national laws in English, German and French.

DRG632 International Business Law 2 cr.
This course examines the general legal frame of international exchanges, including sources of law, operators, and litigation.

DRG634 International Subcontracting 2 cr.
This course examines all aspects of international subcontracting.

DRG635 Law of International Financial Contracts 2 cr.
This course examines the structure of all major financial Instruments in International trade, including credit, warranty, and payment.

DRG636 International Arbitration 2 cr.
Students will study arbitration in an international context.

DRG637 International Merchandise Trade 2 cr.
This course covers the substantive law applicable to International Sales of Goods (Vienna Convention).

DRG639 International Private Law 2 cr.
This course examines the rules that governs the selection of appropriate law and validity of judgements and jurisdictions in an international litigation (Rome I and Rome II Regulations; Brussels I Regulation; The Hague Convention...).

DRG650 Internship Report 3 cr.
The student completes an internship in a company or law firm for a minimum period of two months, in Lebanon or abroad. Following the internship, the student drafts an internship report and defends it before a jury composed of three members, at least two of whom are teaching personnel on the Graduate Studies level. The third member may be a USEK teacher and doctor of law, or the student's internship supervisor.

DRG665 Contractual Technique 2 cr.
This course adopts a practical approach to contract law, by examining the general structure of a contract and its principal provisions, and includes the analysis and drafting of clauses.

DRG670 Competition Law 2 cr.
This course examines the rules of competition in international, European and national laws.

DRG675 Distribution Contracts 2 cr.
This course examines all main contracts related to structuring a distribution network, including exclusivity agreements, selective distribution, exclusive concession, and franchise.

DRG680 Internship Report 3 cr.
In the Professional Master, students pursue an internship in a law firm, a legal department of a corporation, or an international organization, for a duration of 2 to 6 months, at the end of which they have to write an Internship Report.

DRG690A Research Dissertation 6 cr.

DRL213.1	Property law	3 cr.
Co-requisites	DRL215.1	
Prerequisites	DRG211.1 and DRG230.1	
<p>This course starts with a general comparison between objective and subjective rights. It then develops extrapatrimonial rights and a study regarding the estate, including its composition, characteristics and the position of the Lebanese law. It then deals with the patrimonial rights, including definition, sources, characteristics and its extinguish reasons. The course then develops the distinction between personal rights and property rights as well as the intellectual rights and the classification of properties: tangible and intangible assets. Finally this course ends with a study on the tangible real properties, the fixtures and the real actions.</p>		
DRL215.1	TD Property law	1 cr.
Co-requisites	DRL213.1	
<p>Law is a discipline based to a large extent on practice. Therefore, the practical applications entitled tutorials are crucial to a better knowledge and understanding of the course and will raise subjects and matters that might call into question the theory taught in the classroom. Consequently, the tutorials (<i>travaux dirigés</i>), aim to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials intend to introduce new information in order to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and push them to find adequate solutions and to develop their reasoning skills.</p>		
DRL222.1	General Administrative Law	3 cr.
Co-requisites	DRL227.1	
Prerequisites	DRL223.1 or DRL223.2 or DRL212 or DRL212.1 or DRL212.2	
<p>Administration is subject to a law which regulates its activity and, thereby, its relationship with citizens. This course explains the unilateral administrative act, administrative contracts, various appeals and the liability of the public authority.</p>		
DRL223.1	Lebanese Constitutional Law	2 cr.
Prerequisites	DRG210.1	
<p>This course includes the history of Lebanese institutions, and the main sources of the Lebanese Constitution. It includes a detailed study of the public powers of the State, their functions and their relationships between each other.</p>		
DRL227.1	TD General Administrative Law	1 cr.
Co-requisites	DRL222.1	
<p>Law is a discipline based to a large extent on practice. Therefore, the practical applications entitled tutorials are crucial to a better knowledge and understanding of the course and will raise subjects and matters that might call into question the theory taught in the classroom. Consequently, the tutorials (<i>travaux dirigés</i>), aim to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials intend to introduce new information in order to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and push them to find adequate solutions and to develop their reasoning skills.</p>		
DRL228.1	Contract law I	3 cr.
Co-requisites	DRL229.1	
Prerequisites	DRL213.1 or DRL213.2 or DRL211.1 or DRL211.2	
<p>This course studies the general theory of contracts. It starts with generalities regarding contracts, and then it develops the constituent elements or conditions of validity of the contracts, including consent, sollicitation, acceptance, the object, the cause and common provisions to the vitiation of consent. It will then elaborate on the vitiation of consent, including error, fraud, fear, tort, and incapacity.</p>		
DRL229.1	TD Contract law I	1 cr.
Co-requisites	DRL228.1	
<p>Law is a discipline based to a large extent on practice. Therefore, the practical applications entitled tutorials are crucial to a better knowledge and understanding of the course and will raise subjects and matters that might call into question the theory taught in the classroom. Consequently, the tutorials (<i>travaux dirigés</i>), aim to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials intend to introduce new information in order to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and push them to find adequate solutions and to develop their reasoning skills.</p>		
DRL235.1	Civil Procedure I	2 cr.

Prerequisites	DRG230.1 and DRG211.1	
	This course about civil procedure (part I) is designed to present a general overview of the basics of civil procedure. Therefore, it begins by presenting the general provisions related to the case, such as conditions of admissibility, the right and capacity to sue. It then introduces the plea of unacceptability and the plea in bar as well as the classification of actions and the estimation of the amount of the dispute. It also determines the judicial organization and the theory of competence. In addition, this course allows students to assimilate the provisions related to proof, including notarial act and simple contract, instrument in writing and plea of forgery, avowal, personal appearance, path and promissory oath, testimony evidence and finally presumption and authority of the adjudged matter.	
DRL310.1	General Criminal Law	3 cr.
Pre-requisites	DRG211.1 and DRG230.1	
	This course studies the driving principles of criminal law: legality; ignorance of law is no excuse; application of law <i>ratione temporis</i> ; application of law <i>ratione loci</i> , the constitutive elements of crime, qualification of a factual situation, criminal defenses, criminal liability and causes of criminal irresponsibility, absolving and extenuating excuses, and mechanism for sentencing, and, finally the criminal and its victim.	
DRL325.1	Civil Procedure II	2 cr.
Prerequisites	DRL233.1 Or DRL233.2 Or DRL230.1 Or DRL230.2 or DRL235.1 or DRL235.2	
	This course about civil procedure (part II) starts by developing representation before a court, the writ of summons, the delays, the legal judicial aid and the procedure before the court of first instance. Then it introduces the incidental plea, the theory of judgments and the special hearing in civil matters. In its second part, this course develops decision-making in a non-contentious matter, correction and interpretation of judgments and the several remedies of law, including the opposition, the appeal, third party opposition, retrial and cassation.	
DRL412.1	Civil Law: Named contracts I	3 cr.
Co-requisites	DRL415.1	
Prerequisites	DRL322.1 Or DRL322.2 Or DRL322 Or DRG327	
	This course studies the special rules governing certain contracts, such as the sale agreement and the barter system. It is designed to present some provisions about sales, like the conditions for a sale, who may buy or sell, things, what may be sold, the price and the perfect sale. It also treats the effects of the sale and develops in details the vendor's obligations and the buyer's obligations, as well as some special kinds of sale. Moreover, it gives an idea about the promise to sell and promise to buy. Finally, this course develops the barter agreement in its general and specific provisions.	
DRL415.1	TD Civil Law: Named Contracts I	1 cr.
Co-requisites	DRL412.1	
	Law is a discipline based to a large extent on practice. Therefore, the practical applications entitled tutorials are crucial to a better knowledge and understanding of the course and will raise subjects and matters that might call into question the theory taught in the classroom. Consequently, the tutorials (<i>travaux dirigés</i>), aim to apply the knowledge learned in the course, and provide a useful complement to the lectures. Tutorials intend to introduce new information in order to enable students to delve deeper into the content of the lecture and increase their knowledge and to boost and stimulate their legal research and reasoning. Therefore students will have to answer several types of assignments such as legal dissertation, case studies, decision commentaries, etc., that will be corrected by the professor, who will intervene to help students and push them to find adequate solutions and to develop their reasoning skills.	
DRL425.1	Tax Law and Public Finances	3 cr.
Prerequisites	DRG300.1	
	This course consists of two parts: the budgetary law and the tax law. It explains fundamental concepts relating to the budget of the State, its preparation, enforcement and control. On the other hand, the general theory of tax requires the study of the notion of tax, classification of taxes, tax techniques, and tax administration. Then it focuses on the three main taxes: tax on income, VAT, and the estate tax.	
DRL510.1	Civil law: Personal Status	3 cr.
	This course is aimed at studying the non-Muslim will, its conditions of validity, the characteristics of bequests, the testator's intent, consent, the capacity, the object, the cause and the interpretation of wills. It then elaborates the types of succession bestowed by a will, its forms and the appointment of devisee and legatee, the disposable portion of an estate as well as the revocation of a will and forfeiture and inheritance for non-Muslims, including: means of estate devolution, the opening of the succession, the entitlement to the inheritance, the estate distribution to the heirs, the participation per stripes and the devolution of an estate. Finally, in its last part, this course develops the Muslim will and the Islamic inheritance, the obligatory shares and the agnates, and lastly the restoration of property to a succession, the default of heirs and the case of a missing person.	
DRL511.1	Criminal Procedure	3 cr.
Prerequisites	DRL310.1 or DRL310.2	

This course covers the part of the criminal procedure that relates to criminal proceedings and criminal investigation. With regard to criminal proceedings, the course will study (a) Public Action: initiation; restrictions that apply to it; grounds for its extinction; such as, death of defendant, amnesty, expiry of the prescription period, and (b) Civil Action: relation to public action, civil parties, nature of damage, competent authorities to hear a civil case). The criminal investigation part of the course will closely follow the path of public action from the stage of (a) Preliminary Inquiry, as conducted by the judicial police force, up to the stage of (b) Investigation, as examined by the investigating judge and determined by the Indictment Division.

ICL500 Introduction to the American Legal System 3 cr.

This course introduces LL.M. students to the judicial function in a tripartite government (judicial independence and judicial review of legislative and executive authority), the structure of the American judicial systems (organization and functions of trial and appellate courts), the role of the federal courts in the federal system (subject matter jurisdiction and allocation of power), the meaning and use of judicial precedent, and the work of lawyers in an adversary system. This is a required course in the first semester of enrollment for all students in the ALFL track. Please note: this course is not available to J.D. students. .

ICL650 Contract Law 2 cr.

This course introduces students to the sources of basic principles of contract law in the United States. The course will study contract formation, performance, breach, and available remedies under the common law, with references to parallel provisions in Article 2 of the Uniform Commercial Code.

ICL655 Legal Writing 1 cr.

This course introduces the International LL. M. students to the basic tenets of the American legal system, writing styles, and basic research, and an overview of the law of contracts. This course is also designed to simulate an environment that a typical American practitioner commonly encounters in early law firm practice within the American system, but will also prove instructional and valuable to any student, regardless of career goals. Its ultimate goal is to ensure that participants become competent and confident in their ability to meet the demands of practice throughout their careers, within the American legal system, as legal researchers and writers. LL. M students will work on a series of research and writing assignments which closely simulate those typically given to associates or law clerks by law firms or judges within United States jurisdictions. The course also focuses on reinforcing skills proficiency through research instruction in general, as well as intensive assignment-specific writing instruction, guidance, feedback, and individual mentoring. Ultimately, the course is designed to give students as much practical training as possible to confidently master the ability to independently research, analyze, organize, and write legal memoranda and briefs on a variety of topics in both objective and persuasive writing. The course also provides a brief survey of American contract law, and may also include an essay-style examination on that subject at the end of the course.

ICL697A LL.M. Thesis 4 cr.

Every student is required to write a substantial research paper under faculty supervision. This requirement, which must be satisfied prior to graduation and after completion of the basic-level required courses, can be met in several ways: in connection with courses, seminars, law review, or independently.

ICL510 Bankruptcy Law 3 cr.

This course examines the rights and duties of financially distressed debtors and their creditors under the Bankruptcy Code and related state laws. Topics include fraudulent transfers, property exemptions, automatic stay, the powers of a bankruptcy trustee, relative priorities among secured and unsecured creditors, liquidation vs. debtor rehabilitation, and the social and economic implications of debt forgiveness.

ICL520 Closely Held Business Organizations 3 cr.

This course considers the formation, management, and control of partnerships and closely held corporations, including distribution of powers within such organizations and application to them of agency and fiduciary principles.

ICL525 Comparative Competition Law 3 cr.

After introducing the economic rationale for antitrust or competition law and enforcement, this course analyses the rules and their interpretation in the U.S. and E.U. with regard to the three major pillars of antitrust law: cartels/collusion, abuse of dominant position/monopolization, and merger control. Some discussion of the laws of other countries will be added for illustrative purposes or in response to student interest. Prerequisites: None.

ICL530 European Union Law: Doing Business in and with the Internal Market 3 cr.

This course is divided into three parts. The first part introduces the pros and cons of economic integration and the specific European model of market integration. The second part provides detailed analysis of the free movement of goods, employed people, services, capital, and the freedom of establishment in the internal market. The third part examines specific rules for U.S. and other third country businesses, in particular the customs and trade law of the EU.

ICL535 European Union Law: Foundations 3 cr.

This course analyzes the legal system of the European Union and its interaction with Member State law and policy in detail. There will be an emphasis on decision making, supremacy, direct effect, breaches of European law, legal

remedies, the protection of human rights and procedural guarantees, as well as the challenges of widening, deepening, and enlarging the European Union.

ICL540 International Business Transactions 3 cr.

This course analyzes the most common issues related to international sales and other business transactions, in particular the choice of law, drafting of the main contract, methods of financing problems related to shipping, passing of property and risk, insurance, as well as related issues, such as licensing and technology transfer.

ICL545 International Commercial Arbitration 3 cr.

This course provides a thorough introduction to this modern method of choice for disputes arising from international commercial transactions, including the specifics of the arbitration agreement, selection of arbitrators, presentation of cases, and the effect, limits, and enforcement of arbitration awards.

ICL550 International Criminal Law 3 cr.

This course covers the application of domestic and international law, questions of jurisdiction over international criminal activities, granting of amnesty to persons responsible for international crimes, international cooperation in criminal matters, substantive international law as contained in multilateral treaties concerning war crimes and terrorism, and the permanent International Criminal Court.

ICL555 International Environmental Law 3 cr.

This course examines how international law and legal institutions are responding to transboundary and global environmental challenges. Students review prominent issues such as climate change, water scarcity, deforestation, biodiversity loss, ozone depletion, mineral extraction, and marine resource threats, in the context of international development and transboundary trade. Students then analyze selected issues in depth, looking at the science and law of specific environmental challenges as well as the political, economic, and cultural context within which solutions must be formulated.

ICL560 International Human Rights Law 3 cr.

This course considers selected problems in international human rights law, including problems related to U.S. law and practice. The course focuses on the growing role of human rights in international relations, emphasizing the United Nations system for the promotion and protection of human rights as well as the regional systems in Africa, the Americas, and Europe.

ICL565 International Law 3 cr.

This course introduces basic concepts and principles such as sources of public international law, the law of treaties and international agreements, states and recognition, state liability and human rights, and jurisdiction and immunities from jurisdiction. The course also covers act of state doctrine, Law of the Sea, and resolution of transnational disputes through national and international courts, arbitration tribunals, the United Nations, and diplomatic exchanges. Course topics include terrorism and hostage-taking, U.S. executive-legislative conflict in the conduct of foreign relations, suits by and against foreign states, worldwide improvement of civil and political rights, extraction of seabed resources, and prohibition of the use of force in international relations.

ICL570 International Tax 3 cr.

This course introduces the fundamental U.S. income tax issues arising when (1) U.S. persons or entities earn income outside of the U.S. or (2) foreign persons or entities earn income inside the U.S. Depending upon the number of credit hours, specific topics may include the rules for classifying income as U.S. or foreign-source income, transfer pricing, income deferral and controlled corporations, double taxation and the foreign tax credit, foreign currency transactions, and the role of tax treaties. Although the course will not study non-U.S. tax systems in detail, it will highlight significant differences between the U.S. approach to cross-border transactions and those adopted by other taxing authorities.

ICL575 International Trade Law 3 cr.

This course addresses theory and practice of international business law issues likely to be encountered by attorneys representing clients engaged in international operations. Topics include foreign investment by U.S. companies, foreign investment in the U.S., international joint ventures, licenses, exporting of goods, international marketing, U.S. trade controls, customs, antidumping, and international antitrust.

ICL580 International Intellectual Property 3 cr.

This course examines the international context of the development of copyright, patent, and trademark law, with an emphasis on multinational treaties, developments in the European Union and other jurisdictions, and enforcement of international claims.

ICL585 Internet Law 3 cr.

This course examines a wide variety of legal and policy issues raised by the internet, involving many areas of law. The questions addressed may include issues of copyright, trademark, defamation, the Communications Decency Act, cybercrime, contracts, privacy and personal jurisdiction.

ICL590 Sem. Intl. Legal Transactions 3 cr.

Selected problems in international law and international legal transactions are addressed in this course. The focus is on

issues representing a convergence of public and private international law, with critical analysis of international law principles and practice. This is a problem-solving course, in which students are expected to participate actively. Problems covered in this course comprise of a range of private and public international law topics, including international trade, treaty compliance, the United Nations system, environmental concerns, use of force, international investment, and mechanisms for dispute settlement.

ICL595 Oil & Gas Law 3 cr.

This course examines the law associated with oil and gas as well as the rights and responsibilities of relevant parties throughout the production process, including the origin and production of oil, gas and minerals; the nature and protection of interests in oil and gas; the oil and gas lease and important provisions; covenants implied in oil and gas leases; title and conveyance problems (transfers by fee owners and lessors); and pooling and unitization agreements.

ICL610 Professional Responsibility 3 cr.

This course covers the history, traditions, and responsibilities of the legal profession as well as ethics of office practice and trial practice, admission, disbarment, and disciplinary proceedings. The number of credit hours will be announced when the course is scheduled.

ICL615 Publicly Traded Corporations 3 cr.

This course covers the management and control of publicly held corporations, including proxy regulations, struggles for control, transactions in shares by insiders, shareholder litigation, and fundamental changes in corporate structure.

ICL620 Mergers and Acquisitions 3 cr.

Pre-requisites ICL520 and ICL615

This course studies the motives for acquisitions, acquisition structures and techniques, friendly and hostile acquisitions, takeover defenses, regulation of acquisitions under federal securities law, state anti-takeover statutes, and corporate acquisitions agreements.

ICL625 Contracts and Sales I 3 cr.

This course introduces students to exchange relationships in contemporary American society, with some emphasis on classic contract doctrine and introduction to the Uniform Commercial Code.

ICL630 Contracts and Sales (II) 3 cr.

Pre-requisites ICL625

This course introduces students to exchange relationships in contemporary American society, with some emphasis on classic contract doctrine and introduction to the Uniform Commercial Code.

ICL635 Negotiations 3 cr.

This course explores the negotiation process in the context of legal problem-solving. The course may include negotiation exercises in which students participate.

ICL640 International Securities Regulation 3 cr.

Pre-requisites ICL520 And ICL615

This course addresses state and federal laws governing the offering and distribution of securities to the public by corporate issuers and others, regulation of securities markets, and the rights and liabilities of purchasers and sellers of securities under such statutes. The course emphasizes statutes administered by the Securities and Exchange Commission.

ICL645 World Trade Organization Law 3 cr.

This course begins with analysis of why nations trade and the effects of free trade vs. protectionism, typical import and export rules and procedures, and various forms of trade barriers. The main focus is on establishment of GATT and WTO rules and their impact on modern trade in goods and services. The course finishes with an outlook on twenty-first century hot spots in international trade, such as intellectual property rights, environmental protection, human rights and labor standards, and the perspectives of developing countries.

MES600 Regional dynamics and current issues in the Middle East 3 cr.

The course provides an analysis of the major changes and emerging trends focusing particularly on the post Arab spring period in terms of the threats facing the state the emerging role of NonState actors of all kinds in shaping the regional agenda the role of non-Arab regional powers such as a Turkey and Iran and the interplay between domestic and external factors in the ongoing crises.

MES605 The Middle East and Europe: Issues and challenges in the Tran-Mediterranean relations 3 cr.

After reviewing the key structures and forms of multilateral cooperation between the two shores of the Mediterranean drawing the lessons of such forums and structures of cooperation. The course focuses on the emerging joint challenges like fighting terrorism, dealing with immigration, the need for cultural dialogue for better understanding and the need for new forms of economic cooperation.

MES610 Comparative study of political systems in the Middle East 3 cr.

The course addresses the typology of political systems in the region: the structure of power and the issue of legitimacy;

its sources and its future, the evolution of the relations of the regime and the state and the issue of regime stability and its performance.

MES615 The modern history of the Middle East 3 cr.

The course addresses the politics of state building in the Middle East and its repercussions on the current issues in the region. It addresses also the wars and crises that shaped the emergence and the development of the Middle East Order and the role of external as well as regional actors in these developments.

MES620 Political thought and ideologies in the Middle East 3 cr.

The course addresses the politics of state building in the Middle East and its repercussions on the current issues in the region. It addresses also the wars and crises that shaped the emergence and the development of the Middle East Order and the role of external as well as regional actors in these developments.

MES625 Economic and development issues in the Middle East 3 cr.

The course offers an insight into the key economic and developmental challenges facing the states in the region and their political and other repercussions on the Middle Eastern societies. It offers a perspective on the different obstacles facing the many proposals for Economic integration in the region.

POL211 Introduction to Political Science 3 cr.

Pre-requisites LFR120

This course defines the notion of policy. It questions the concepts of "Political Science" and the different "Political Sciences" with a focus on the field of policy. The concept of State is an important part in this introduction given the interdependence and complementarity between "political" and "State".

POL212 Introduction to Geopolitics 3 cr.

Pre-requisites LFR120

This course offers an introduction to geopolitics, its development through history and, its different schools of thought. An analytical approach to the geopolitics of Lebanon and the Middle East is a key aspect of the course.

POL213 Introduction to International Relations 3 cr.

Pre-requisites LFR120

Beyond any theoretical perspective, this course presents the current state of international relations following the fall of communism; emphasizing the new world order, globalization, the role of the United States and its reappraisal.

POL215 Introduction to Public Administration 3 cr.

This course is designed to introduce broadly the Lebanese Public Institutions. It deals with the nature of public administration, as activity and as discipline. Public administration has two different aspects: enabling and controlling. The course will explore how the law enables government to create institutions and programs to provide public goods and public services, and who oversees and controls the exercise of these powers. Among the topics covered are major theories of management, the policy process, and the relationship between politics and administration. Upon completion of the course, students will have a general understanding of the history and practice of public administration. Students will also learn basic concepts from the fields of public budgeting, human resources, and strategic management.

POL224 Political Science Method 3 cr.

This course trains students on two levels: linguistic and reflexive. Its objective is to prepare students for the rigorous study in the Bachelor program. It aims to assist students in learning the working methods of political science. Several methodological tools will be taught for this purpose: linguistically, analysis and summaries of texts adapted to different areas of political science, lecture notes, presentations and oral argument, and on the reflexive level, mastery of techniques of dissertation writing, so students can learn to differentiate between personal thinking and personal opinion, engage in synthetic reflection, and present a mini-dissertation "research" applying the methods learned throughout the semester. This course is meant to be participative and students are advised to take this course at the beginning of their degree program.

POL226 Political Economy 3 cr.

This course aims, first, to analyze the microeconomic behavior; the subjective individual behavior of consumers and producers. The interaction between these two types of individuals, with the goal of maximizing their satisfaction, leads to the study of the market including the law of supply and demand and the equilibrium price. Thus, the analysis of competition in a market will be studied as well as non-competitive situations, such as, monopoly, monopsony, duopoly, oligopoly, etc. Then, individual behavior will be analyzed as a whole using the macroeconomic approach, including the relationship between large aggregates: GDP, consumption, unemployment, Gross Fixed Capital Formation, Export, and Import. This study will consider the different theoretical approaches concerning the choice of economic policy including monetary and fiscal policies for a country or a group of countries.

POL321 Modern and Contemporary Political History 3 cr.

The course focuses on the political, economic and sociological landscape covering the major issues of the twentieth century: the world wars, colonization, the East-West confrontation, the Cold War, decolonization, the disintegration of

the USSR, the fall of the Berlin Wall, the European integration, US hegemony, the new international order resulting from the Gulf War, etc.

This course focuses on the major constituent events in the modern and contemporary political history of the Middle East. It highlights fundamental aspects of the emergence and evolution of this region: the fall of the Ottoman Empire and its impact, Franco-British colonization, independences and confrontation with the State of Israel, etc.

POL331 European Union: History, Organization and Political Challenges 3 cr.

This course covers the history of the European Union and the political and economic context of its foundation. It deals with its organization, its institutions, its political issues, particularly those of its foreign policy, its economic power, etc. It addresses geographical, cultural, religious and linguistic features and their role in the formation of the European Union and in its enlargement. It focuses on the Euromed project that encompasses the countries of the European Union and the Mediterranean.

POL334 Political Regimes of Arab Countries 3 cr.

This course reveals the dominant features that constitute the characteristics of political regimes in the various Arab countries by comparing their respective constitutions.

POL335 Politics and Mass Media 3 cr.

Political power remains voiceless or even nonexistent if it does not communicate with the masses, and it is put in danger if it communicates poorly. At its worst it can become autocratic, communicating one way. This course is responding to the question of how to call upon mass communication without manipulating which, this is the policy issue in democracy and the main focus of this course.

POL336 History of Political Thought 3 cr.

This course covers the history of political thought, from ancient times to contemporary history. Particular attention is paid to concepts such of democracy, citizenship, the birth of the states, revolutionary movements, liberalism, socialism and conservatism.

POL340 Internship and simulation 3 cr.

This course introduces students to the conduct of political training and research using simulation technique, game theory methods and internship in appropriate institutions submitting report at its accomplishment. This will be done in the context of specific political and IR research activities like public opinion surveys, voting behavior, decision making systems, comparisons of political processes in different countries, and the evaluation of public policies making. Students participate in joint class projects and conduct individual projects. This course will be divided in two parts: internship and simulation.

POL345 Theories and History of the State 3 cr.

The main goal of this course is to provide students with the necessary analytical tools to understand the relevance of the State as a political institution. The first part of the course will be focused on the theoretical approaches to understand how important is the State for the political game (Hans Kelsen, Hermann Heller, and Carl Schmitt). The second part of this course will be addressed to the presentation and explanation of the evolution registered by the State, Constitution, and Declaration of Rights. Finally, the course will present the political game between Government and Parliament to understand how these two can affect the political process and policies.

POL505 Political Theories, Methodology and Political Science Challenges 3 cr.

This course is devoted to issues of political science research, from theoretical and methodological points of view, and it proposes to revisit the major themes that characterize the discipline. What are the main research areas favored by political scientists today? What are the theoretical implications? What impact can political science research have on the societies studied?

POL510 Comparative Political Systems 3 cr.

The comparative study of contemporary systems is a relatively recent development in the field of political systems and this course focuses on the comparative analysis of different Western political systems in particular. There will be an emphasis on the practice of comparing systems, comparing and classifying what is studied in order to achieve a generalization or a developing a better explanation. Political science is no exception to the rule and comparative work makes up a significant part of the analysis conducted on the diversity of socio-political phenomena around which the discipline is built. The methodological approach of this course will combine comparative analysis by subject and then by country. Throughout this course students will be invited to participate in an active way.

POL515 Challenges of Globalization 3 cr.

This course provides a multidisciplinary approach to the challenges of globalization, with a particular emphasis placed on its scope and its economic consequences. We will discuss the much debated theoretical questions about globalization, and combine it with an analysis of changes in the balance between powers in the 20th and 21st centuries, including the decline of traditional powers, the emergence of new regional powers, the multiplication of decision centers, and the role of international governance in organizations.

POL520 Current issues in the World order 3 cr.

This course is a set of practical activities focused on current issues. Presentations and press releases, the writing of book reviews and synthesis, and participation in simulation debates are all exercises that will allow students to gain practical and working methods in close contact with the current themes of international, regional and national politics.

RIN443 The Arab-Israeli Conflict 3 cr.

This course considers the history of the Arab-Israeli conflict since the founding of the State of Israel and its impact on the regional and international political map, including: the interference of international powers in this conflict, the political contexts of the wars of 1956, 1967, 1973, 1982, and the process of peace (the peace conference in Madrid, the Oslo Accords, and the peace treaty between Israel and Jordan), the problem of the Golan Heights and the Shebaa Farms.

RIN552 International Economy 3 cr.

International economics deals with economic relations between nations. It seeks essentially to account for the reasons for their exchange and for the effects of international trade on the structure of economies. The simplest questions are directly related to foreign trade analysis: Why exchange? Is this a gain or loss? What determines the structure of foreign trade of the countries? How are fixed the prices of traded goods fixed, while production costs are not the same in different countries? Other more detailed issues relate to the interaction between trade and economic and social development: How will international integration will affect inequalities between nations? What are the interrelationships between external openness and growth? , and, furthermore, normative trade policy issues, such as: Should imports to be taxed and should we promote exports? These questions are addressed throughout the course.

RIN210 Introduction to Comparative Politics 3 cr.

The main goal of this course is to provide students with the necessary analytical tools to understand the relevance of the State as a political institution. The first part of the course will be focused on the theoretical approaches to understand how important is the State for the political game (Hans Kelsen, Hermann Heller, and Carl Schmitt). The second part of this course will be addressed to the presentation and explanation of the evolution registered by the State, Constitution, and Declaration of Rights. Finally, the course will present the political game between Government and Parliament to understand how these two can affect the political process and policies.

RIN431 Diplomatic and Consular Law 3 cr.

This course is about the organization of diplomatic and consular posts, and the immunities and privileges attached to it according to the Vienna Conventions.

RIN441 Existing and Emerging World Powers 3 cr.

This course covers the political and economic issues of world powers: the United States, France, Britain, Germany, and Russia. It also addresses the emerging world powers: China, India, Brazil, and South Africa.

RIN442 Transnational Movements 3 cr.

This course deals with movements that do not position themselves necessarily under the traditional influence of the states, whether NGOs, lobbies, or Diasporas, all of which seem to obey their own logic. This class mainly attempts to explain their recent development, especially through international social movements, in the field of environmental protection and the phenomenon of globalization.

RIN443 The Arab-Israeli Conflict 3 cr.

This course considers the history of the Arab-Israeli conflict since the founding of the State of Israel and its impact on the regional and international political map, including: the interference of international powers in this conflict, the political contexts of the wars of 1956, 1967, 1973, 1982, and the process of peace (the peace conference in Madrid, the Oslo Accords, and the peace treaty between Israel and Jordan), the problem of the Golan Heights and the Shebaa Farms.

RIN444 Water and Energy Issues in Regional Politics 3 cr.

This course considers the issue of waters and rivers in Turkey and in the Middle East, as well as the issue of energy in the region, international and interstate conventions and agreements concerning water, strategies and regional water conflicts, large water projects established and executed in the region, the water needs of states and water projects in Lebanon.

RIN451 Theories of International Relations 3 cr.

This class will focus on the most important schools of thought and their approach to international relations. The main theoretical movements that will be covered include: Realism, Liberalism, Transnationalism, Marxism and Constructivism.

RIN452 Regional and International Organizations 3 cr.

This course offers an historical overview of international organizations since 1944, and tries to establish a classification system of these organizations depending on their competences, structures and missions on the level of international or regional organization, cooperation or integration. The course will particularly focus on the Arab League and specific UN organizations.

RIN548 Multilateral diplomacy in international and regional organizations 3 cr.

International organizations mainly the UN and regional organizations like the League of Arab States the European Union among others play an increasingly important role in the world and in different regions. This course offers students insights and practical knowledge about the conduct of multilateral diplomacy in different fields with particular focus on the Middle East.

RIN550 Terrorism and International Security 3 cr.

Pre-requisites POL211 And POL336 And POL213 And SPO431 And POL321 And POL212

This course discusses some theories of the causes and consequences of terrorism. The first part of the course provides a good background concerning the discipline of terrorism and counterterrorism studies. Indeed, this course offers the chance to develop an understanding of the scope and nature of terrorism as it relates to the Middle East. Students will develop the ability to differentiate between varying forms of terrorism in relation to the political and societal context from which they originate and the differing domestic, regional and international responses they provoke. The last part of this course provides the tools to analyze and to understand the new kind of terrorism (cyberterrorism, bioterrorism, etc...) and the new counterterrorism strategies.

SPO431 Principles of Law 3 cr.

The aim of this course is to introduce the students to the basic legal principles of law applied in Lebanon, with an emphasis on civil law, the penal code, and the commercial code, etc.

SPO432 Conflict Theories 3 cr.

This course provides a classification of different types of conflicts; for example, intra-state or sub-state, guerrilla wars of independence, etc. It also outlines the forms and economies of violence.

SPO441 Contemporary Political Thought in the Arab-Muslim World 3 cr.

This course examines the different political thought of the Arab-Muslim world from the late 19th century to present, including fundamentalist political Islam, the Arab national movement of the late 19th century, the liberal modernism influenced by West, Arab nationalism against the Franco-British occupation, projects of Arab unity, Arab socialism, and current political Islamism.

SPO442 Negotiations and Conflict Resolutions 3 cr.

This course is of practical nature, intended to prepare students to address the different forms of international negotiations: individual diplomatic negotiations, labor delegations, international trade negotiations, how to resolve political, ethnic, community, and economic conflicts. This education is provided by practitioners in the field, such as diplomats and international businessmen.

SPO451 Lebanon's Political Regime 3 cr.

This course covers, in detail, aspects of the Lebanese political system, the various political powers and their ways of operating, including, the Office of the President, Cabinet, Parliament, and judicial practices. This course also explains the community structure in Lebanon. It also introduces students to the Lebanese Constitution and its evolution since 1926.

SPO461 Analysis of Political Texts 3 cr.

This course aims to introduce students to the analysis of political texts, manifestos, declaration, charter, treaties, constitutions, political speeches and press releases, etc. The analysis of the text allows the student to build a rich and varied political terminology related to the specialization.

School of Medicine and Medical Sciences

Overview

In accordance with the mission of the Lebanese Maronite Order (O.L.M), with its 300-year tradition and principles, and wishing to contribute to the development of the medical sector and health services in Lebanon, the Holy Spirit University of Kaslik (USEK) created the School of Medicine and Medical Sciences, with the express purpose of providing initial and a continuing education of general practitioners and specialists.

Devoted to helping the development of competent professionals and, simultaneously, to be at the service of all, the School participates in the advancement of knowledge in the field of health and aims to be nationally and internationally recognized for to the excellent quality of its teaching programs. The School's work is based on the values of excellence, humanism, intellectual rigor and the application of high moral standards through a continuously evolving medical education and introduction to research, in the clinical domain, public health and basic research.

Theoretical studies take place at the School and training at the University Hospital Center, "Notre Dame des Secours", in Jbeil.

Mission

Anchored in the values of the Catholic Church, the School of Medicine and Medical Sciences aims to prepare the current and future generation of leaders in the medical field to become key contributors to improving the well-being of the Lebanese community.

The School's mission is to provide the next generation of medical doctors with high knowledge in basic sciences, world-class medical skills and high ethical standards, who are driven by undebatable sense of service and who strive to continuously improve their capabilities through continuous education and research.

Affiliated to the School of Medicine and Medical Sciences, the Higher Institute of Nursing Sciences, is a university foundation of teaching and research attached to the Holy Spirit University of Kaslik (USEK) and conforming to its statutes.

- In 1981, Our Lady of Help School of Nursing was set up within the premises of Our Lady of Help Hospital at Jbeil (Byblos) in order to provide a training for hospital nurses.
- In 1984, the Ministry of National Education accorded it the status of Institute of training in Nursing Care, dependent on the Department of Technical Education.
- In 1999, this foundation was transformed into a University Institute attached to Holy Spirit University of Kaslik and was accorded the status of Higher Institute of Nursing Sciences by virtue of Decree N° 1948 dated 21/12/1999.

The mission of the Institute is to provide a professional education at university level. This education should allow students to give all the nursing care required for the improvement of public health, the prevention of sickness and the treatment of patients, as well as to fill responsible positions in hospitals and specialized services.

The School of Medicine and Medical Sciences consists of the following departments/institute/programs:

Department of Research

Department of Medical Sciences

Department of Basic Health Sciences

- Bachelor of Science in Health Fundamental Sciences

Department of Doctoral Studies

- Doctor of Medicine

Postdoctoral Studies Department

- Diploma of Specialized Studies - Anesthesia and Critical Care
- Diploma of Specialized Studies - Cardiology
- Diploma of Specialized Studies - Cardiovascular and Thoracic Surgery
- Diploma of Specialized Studies - Laboratory Medicine
- Diploma of Specialized Studies - Dermatology
- Diploma of Specialized Studies - Emergency Medicine
- Diploma of Specialized Studies - Endocrinology and Metabolic Disorders
- Diploma of Specialized Studies - ENT

- Diploma of Specialized Studies - Gastro-enterology
- Diploma of Specialized Studies - General Surgery
- Diploma of Specialized Studies - Hematology-Oncology
- Diploma of Specialized Studies - Internal Medicine
- Diploma of Specialized Studies - Internal Medicine and Clinical Immunology
- Diploma of Specialized Studies - Nephrology
- Diploma of Specialized Studies - Neurology
- Diploma of Specialized Studies - Neurosurgery
- Diploma of Specialized Studies - Obstetrics and Gynecology (ob-gyn)
- Diploma of Specialized Studies - Ophthalmology
- Diploma of Specialized Studies - Orthopedic Surgery and Traumatology
- Diploma of Specialized Studies - Pathology
- Diploma of Specialized Studies - Pediatrics
- Diploma of Specialized Studies - Psychiatry
- Diploma of Specialized Studies - Pulmonology
- Diploma of Specialized Studies - Radiology
- Diploma of Specialized Studies - Urology

Department of Hospitalo-University

Higher Institute of Nursing Sciences

- Bachelor of Science in Nursing Sciences

Administration and Full-time Faculty

Dr. Hanna Mattar, Associate Professor, **Dean**

Dr. Zaki Ghorayeb, Associate Professor, **Associate Dean**

Dr. Walid Hleihel, Associate Professor, **Associate Dean for Administrative Affairs**

Prof. Georges Nohra, Professor, **Associate Dean for continuous Medical Education**

Professors:

Prof. Alex Jalkh

Prof. Edouard Chaiban Elias

Prof. Georges Nohra

Prof. Jean-Claude Lahoud

Associate Professors:

Dr. Amale Sukkarieh Chelala

Dr. Antoine Kossaify

Dr. Charbel Yazbek

Dr. Christian Haddad

Dr. Elias Makhoul

Dr. Elie Chelala

Dr. Elissar Dagher Nohra

Dr. Fadi Hoyek

Dr. Georges Merheb

Dr. Issa Issa

Dr. Issam Maalouf

Dr. Kamal Kallab

Dr. Marie-Claude Fadous Khalifé

Dr. Marcel Massoud

Dr. Maroun Khattar

Dr. Monique Tabet

Assistant Professors:

Dr. Alexandre Kharma

Dr. Alexandre Schakal

Dr. Ali Fadlallah Yahya

Dr. Amal Bassile Harb

Dr. Ameer Samaha

Dr. Antoine Kassis

Dr. Antoine Abdel Jalil

Dr. Bassam Romanos

Dr. Elias Khoury

Dr. Emile Andari

Dr. Fady Nasr

Dr. Georges Abi Aad

Dr. Georges Azar

Dr. Georges Nicolas

Dr. Georges Abi Fares

Dr. Hamid El Bayeh

Dr. Myriam Al Amm
Dr. Nabil Tawil
Dr. Paul Khoueiry
Dr. Rabih Hallit
Dr. Raghid EL Khoury
Dr. Saad Khairallah
Dr. Saadé Abboud
Dr. Souhail Chamandi
Dr. Wadih Ghanameh
Dr. Walid El Khoury
Dr. Ziad El Khoury

Dr. Juliana Menassa Saabi
Dr. Madona Matar Lahoud
Dr. Neemtallah Basile
Dr. Norma Ghosn Hakim
Dr. Patrick Zaarour
Dr. Peter Noun
Dr. Philip Rouadi
Dr. Pierre Khoury Edde
Dr. Samir Tarraf
Dr. Seba Mhanna
Dr. Souheil Hallit
Dr. Walid Harb

Lecturers:

Mr. Charbel El Houwayek
Mr. Marcel Moukarzel

Undergraduate Programs

Bachelor of Science in Health Fundamental Sciences (Hybridⁱ)

Mission

The mission of the Bachelor of Sciences program in Fundamental Health Sciences is to provide students basic sciences, basic medical sciences, general education, and ethical skills as a foundation for medical studies or other health specialties. The program is committed to providing quality and innovative teaching through expertise in the basic medical sciences in the servicing of undergraduate and postgraduate programs.

Program Educational Objectives

1. Graduates will have the basic knowledge, skills, behaviors, and attitudes that will enable them to pursue their education in medicine or in health sciences.
2. Graduates will be able to pursue careers in the fields of health management, public health, and scientific branches.
3. Graduates will be able to pursue postgraduate and PhD studies.

Program Outcomes

- a. Students will cultivate skills to become engaged and active citizens with critical and appreciative understanding of religious tradition, ethical theories and moral development.
- b. Students will acquire knowledge in basic sciences as prerequisites to basic medical sciences.
- c. Students will acquire knowledge in basic medical sciences, a basis for understanding diseases.
- d. Students will develop skills in handling basic epidemiologic methods and statistical principles that underlie evidence-based medicine as well as socio-economic issues related to health.
- e. Students will integrate the ethical principles of the medical profession as well as the psychological aspects of illness.
- f. Students will initiate basic life support procedures to the sick or injured until advanced medical aid is available, or the urgency of the situation has been controlled.

Degree Requirements

This program requires 110 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

English Communication*	3
Sports*	1
Religious Sciences*	3
Behavioral, Social Sciences and History	11
History of Lebanon*	3
PSY201 - Introduction to Psychology*	3
SOC217 - Citizen and Civic Engagement*	2
SRO217 - Bioethics*	3
Basic Sciences	26
BCH320 - Structural Biochemistry	3
BCH421 - Metabolic Biochemistry	3
BIO377 - Biochemistry and Molecular Biology Laboratory	1
BIO413 - Molecular Biology	3
CHM212 - General Chemistry*	3
CHM317 - Organic Chemistry	3
CHM377 - General Chemistry and Physics Laboratory	1
INF308 - Applied Computer Sciences*	3
MAT216 - General Mathematics*	3
PHY210 - General Physics*	3
Basic Medical Sciences	66
MEDL200 - Cytology and Human Cell Pathologies	3

ⁱ Hybrid: Courses offered in French and/or English

MEDL205 - General Histology	3
MEDL210 - Musculoskeletal Anatomy	3
MEDL215 - Biostatistics and Introduction to Epidemiology	3
MEDL220 - Human Anatomy	3
MEDL300 - Human Embryology	3
MEDL310 - Human Cellular Physiology	3
MEDL315 - Human Parasitology and Mycology	3
MEDL320 - Histology of Organs	3
MEDL321 - Cytology and Histology Laboratory	1
MEDL325 - Physiology I	3
MEDL330 - Homeostasis Physiology	3
MEDL335 - Biophysics	3
MEDL400 - General Pathology	3
MEDL405 - Immunology	3
MEDL410 - Microbiology	3
MEDL411 - Parasitology and Microbiology Laboratory	1
MEDL420 - Surgical Semiology	3
MEDL425 - Epidemiology	3
MEDL430 - General Pharmacology and Toxicology	3
MEDL435 - Medical Genetics	3
MEDL445 - Economics and Health Management	3
MEDL450 - Medical Semiology	3
MEDL455 - Emergency First AID and Introduction to Hospital	1
Total	110

**Courses that fulfil the USEK General Education Requirements (total of 30 credits).*

Bachelor of Science in Nursing Sciences (Hybridⁱ)

Accreditation

This program is accredited by the Applied and Natural Science Accreditation Commission of ABET, <http://www.abet.org>, the global accreditor of college and university programs in applied science, computing, engineering, and engineering technology.



Applied and
Natural Science
Accreditation
Commission

Mission

The mission of the department is to train university-level nurses to provide preventive, curative, and palliative care, and to promote, preserve or restore health. Such interventions contribute to the education and to the health of individuals or groups of people and take place, whether autonomously or collaboratively, within the framework of a multidisciplinary team in all areas of activity in the nursing profession.

Program Educational Objectives

1. Graduates will have the theoretical, technical and relational knowledge needed to understand and take care of the health needs of individuals or groups of people within the framework of a multidisciplinary team.
2. Graduates will conduct self-assessment, scientific curiosity and critical awareness in order to improve the quality of nursing care and professional practices, and have the ability to acquire new knowledge quickly and adapt to various situations.
3. Graduates will have values based on respect for individuals and their rights, thus exercising professional ethical behavior, allowing them to make informed decisions and act with autonomy and responsibility within the scope of their function.

ⁱ Hybrid: Courses offered in French and/or English

Program Outcomes

- g. An ability to apply knowledge in applied science and natural science to relevant fields of nursing science.
- h. An ability to assess a clinical situation and formulate a nursing diagnosis.
- i. An ability to plan and conduct a nursing project.
- j. An ability to apply and use the knowledge, gestures and modern technical and scientific tools needed for nursing practice.
- k. An ability to identify complications or risks associated with care and / or disease and provide appropriate solutions.
- l. Ability to initiate and implement educational and preventive care and / or projects in an individual, societal and global context.
- m. An ability to communicate and lead an effective connection in a care setting.
- n. An ability to analyze and improve professional practice, and engage in training.
- o. An understanding of professional and ethical responsibility.
- p. An ability to organize and coordinate care interventions and those related to trainee training, as part of a multidisciplinary team.
- q. A capacity to understand contemporary issues related to public and community health.

Degree Requirements

This program requires 110 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Arts and Humanities	3
General Education - Civic Engagement	2
General Education - English Communication	3
General Education- Behavioral, Social Sciences and History	3
General Education - Quantitative Reasoning	3
General Education - Science and Health	6
General Education - Sports	1
General Education - Religious Sciences	3
NTR211 - Fundamentals of Human Nutrition	3
PSY201 - Introduction to Psychology	3
Specialization	80
SIN240 - Introduction to Nursing Sciences	3
SIN242 - Human Anatomy and Physiology	3
SIN243 - Basic Nursing Care	3
SIN245 - Clinical Training and First Aid	3
SIN246 - Elderly Nursing Care	3
SIN260 - Clinical Internships I	2
SIN265 - Clinical Internships II	2
SIN270 - Clinical Internships (Summer)	1
SIN323 - Public and Community Health and Nursing Care	3
SIN340 - Pharmacology - Toxicology	3
SIN342 - Pediatric Pathology and Nursing Care	3
SIN343 - Respiratory Pathology and Nursing Care	3
SIN345 - Psychiatry and Nursing Care	3
SIN346 - Nutritional Endocrine Pathology and Nursing Care	3
SIN347 - Cardiovascular Pathology and Nursing Care	3
SIN348 - Digestive Pathology and Nursing Care	3
SIN349 - Sense Organs Pathology and Nursing Care	3
SIN350 - Urinary Pathology and Nursing Care	3
SIN360 - Clinical Internships III	2

SIN365 - Clinical Internships IV	2
SIN370 - Clinical Internships of Liability (Summer)	1
SIN441 - Obstetrics-Gynecology and Nursing Care	3
SIN442 - Infectious Diseases - Microbiology and Nursing Care	3
SIN443 - Neurological Pathology and Nursing Care	3
SIN444 - Pathology of the Musculoskeletal System and Nursing Care	3
SIN445 - Hematology-Oncology and Nursing Care	3
SIN446 - Medical-Surgical Intensive Care and Nursing Care	3
SIN450 - Administration and Professional Organization	3
SIN460 - Clinical Internships V	2
SIN465 - Clinical Internships VI	2
Total	110

Doctoral Programs

Doctorate of Medicine (Hybridⁱ)

Mission

The mission of the Doctorate of Medicine program is to improve the well-being of the Lebanese community by training current and future generation of general practitioners by providing them high knowledge in basic sciences, world-class medical skills, and high ethical standards. The program prepares graduates for different specializations in medicine, who are driven by undebatable sense of service and who strive to continuously improve their capabilities through continuous education and research.

Program Educational Objectives

Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate:

A. Expertise in the medical field and profession

- A.1. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate knowledge in the principles of biomedical sciences, psychology, social sciences, public health, epidemiology, healthcare systems, basic healthcare economics, medical research, technology, and ethics.
- A.2. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate knowledge of established and emerging principles of clinical sciences.
- A.3. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to gather essential and accurate information about patients and their conditions through history-taking, physical examination, mental state examination, laboratory data, imaging and other medical tests.
- A.4. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate clinical reasoning and critical thinking skills such as problem formulation, development of diagnostic hypotheses, formulating a course of action and the development of a monitoring plan.
- A.5. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate clinical reasoning skills to diagnostic and therapeutic decision-making, clinical problem-solving, and other aspects of evidence-based health care.
- A.6. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to perform all medical and surgical procedures considered essential for the area of practice.
- A.7. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate knowledge in skills and procedures of diverse medicine specializations.
- A.8. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate skills to organize and prioritize responsibilities to provide care that is safe, effective, and efficient.

B - Communication skills

- B.1. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate communication skills that result in effective exchange of information and collaboration with patients and their families.

ⁱ Hybrid: Courses offered in French and/or English

B.2. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate communication skills that result in effective exchange of information and collaboration with other health professionals.

B.3. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to produce written documentation of clinical activities.

C - Collaboration skills

C.1. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to work within a multidisciplinary team in a responsive and responsible manner to provide patient -and population- centered care that is safe, timely, efficient, effective, and equitable.

C.2. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to work with the authorities especially in national emergency situations.

D.1. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to call effectively on other resources in the health care system to provide optimal health care.

D.2. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to promote public health.

D - Health promotion activities

D.3. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to meet the needs of the Lebanese society.

D.4. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate awareness of the concept of public health and responsiveness to emerging situations at national, regional and global levels.

E - Lifetime educational commitment

E.1. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate qualities required to sustain lifelong personal and professional growth.

E.2. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to search for and use publications and international literature to improve their performances.

F - Management skills

F.1. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to manage their practice.

F.2. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate awareness of stress management.

F.3. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate qualities required to organize the work within a team.

G - Ethics

G.1. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate commitment to the values of USEK and the code of conducts of the School of Medicine and Medical Sciences.

G.2. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate commitment to the moral, ethical, and professional principles as laid out in the Physician's Pledge.

G.3. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate commitment to the Lebanese Medical Ethics Law, and the Lebanese Act on the Rights of Patients and Informed Consent.

H - Adequate preparation for future careers

H.1. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to take national and international exams and apply to residency programs.

H.2. Physicians graduated from the School of Medicine and Medical Sciences at USEK will demonstrate ability to pursue a professional career in health care system administration, research and medical education.

Degree Requirements

MED1 & MED 2	78
MDG510 - Clinical Pharmacology and Toxicology	3
MDG515 - Electrocardiology and Hemodynamics	3

MDG520 - Cardiovascular Pathology	3
MDG525 - Pulmonary Pathology	3
MDG530 - Urinary Tract Pathology	3
MDG535 - Endocrine and Metabolic Diseases	3
MDG540 - Specialized Anatomic Pathology	3
MDG545 - Gastrointestinal Pathology	3
MDG550 - Anatomic Pathology Laboratory	1
MDG555 - Hepatobiliary and Pancreatic Pathology	3
MDG560 - Obstetrics and Gynecology	3
MDG565 - Dermatology and Plastic Surgery	3
MDG570 - Pathology of the Musculoskeletal System	3
MDG575 - Psychopathology	3
MDG580 - Neurological Diseases	3
MDG585 - Ear, Nose, and Throat Pathology, and Ophthalmology	3
MDG590 - Oncology	3
MDG595 - Infectious Diseases	3
MDG600 - Pediatrics	3
MDG610 - Systemic Diseases and Internal Medicine	3
MDG615 - Hematology and Clinical Biology	3
MDG620 - Public Health and Occupational medicine	3
MDG625 - Forensic Pathology and Medical Law	3
MDG630 - Introduction to Medical Research	3
SMG510 - Introduction to Hospital Training	1
SMG511 - Hospital Training I	1
SMG512 - Hospital Training II	3
SMG513 - Hospital Training III	3
MED3 & MED4	42
MDG635 - Medical and Surgical Therapeutics Seminars I	3
MDG640 - Medical and Surgical Critical Care	3
MDG645 - Clinical Reasoning and Risk Management	3
MDG650 - Medical and Surgical Therapeutics Seminars II	3
SMG514 - Hospital Training IV	3
SMG515 - Hospital Training V	3
SMG516 - Hospital Training VI	3
SMG517 - Hospital Training VII	3
SMG518 - Hospital Training VIII	3
SMG519 - Hospital Training IX	3
SMG520 - Hospital Training X	3
TMG697A - Thesis of Medicine	9
Total	120

Postdoctoral Programs

Diploma of Specialized Studies – Anatomical Pathology (Hybridⁱ)

Mission

The mission of the pathology residency program is to provide trainees the opportunity to acquire the subject knowledge, procedural skills, professional attitudes and practical experience. The main challenge remains the multidisciplinary of both the diseases and the specialists to collaborate with.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to diagnose diseases and support the team for the best treatment of the patient.
2. Must collaborate with colleagues (their lab skills, their clinical skills) for a better diagnosis.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.

Program Outcomes

At the end of the program, the young pathologists will:

- a. Master the basic knowledge in order to analyze the specimen, to then propose an adequate diagnosis.
- b. Acquire deep knowledge in other specialties (nearly everything) to integrate the morphological pattern in the pathology of the disease.
- c. Be prepared to use new knowledge and new techniques to improve their practice.
- d. Master the gestures and techniques (biopsy, autopsy, cytopathology) plus those proper to the specialty and apply them according to the rules of professionalism and ethics.
- e. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- f. Share their knowledge with peers, students and other healthcare professionals.

Degree Requirements

Common Core	12
MEDR929 - Cellular and Histological Physiology	3
MEDR930 - Morbid Processes	3
MEDR931 - Pathology of Organs and Systems	3
MEDR932 - Pathology of the Skin, the Central Nervous System and Soft Tissue System	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR966A - Residency Rotation in Pathology I	6
MEDR966B - Residency Rotation in Pathology II	6
MEDR966C - Residency Rotation in Pathology III	6
MEDR966D - Residency Rotation in Pathology IV	6
MEDR966E - Residency Rotation in Pathology V	6
MEDR966F - Residency Rotation in Pathology VI	6
MEDR966G - Residency Rotation in Pathology VII	6
MEDR966H - Residency Rotation in Pathology VII	6
Total	72

ⁱ Hybrid: Courses offered in French and/or English

Diploma of Specialized Studies - Anesthesiology (Hybridⁱ)

Mission

The mission of the anesthesia residency program is to provide state-of-the-art patient care in the areas of pre-operative evaluation, intraoperative anesthesia, post-operative critical care and pain management. Students will not only be skilled in the procedural aspects of the specialty but also have a strong base in the cognitive aspects of it.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient (in the OR and ICU) within the specialty but without forgetting their skills in general practice.
2. Graduates must support the patient psychologically and morally, and the family and entourage for better acceptance.
3. Graduates must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of their patients according to the rules of professionalism and ethics.
4. Graduates have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Graduates must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young anesthesiologists will:

- a. Master the basic knowledge and clinical knowledge in anesthesia and resuscitation in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (cardiology, pneumatology, nephrology ...) for a better practice.
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (intubation, work with dangerous drugs, central lines, etc.) and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles.

Degree Requirements

Common Core	12
MEDR904 - Principles of Anesthesia and Critical Care Medicine	3
MEDR907 - Anesthesia according to the Surgical/medical Procedure	3
MEDR908 - Anesthesia according to the Status and Medical Background of the Patient	3
MEDR909 - Anesthesia in Children, Chocks and Aggressions	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR960A - Residency Rotation in Anesthesia	6
MEDR960B - Residency Rotation in Anesthesia	6
MEDR960C - Residency Rotation in Anesthesia	6
MEDR960D - Residency Rotation in Anesthesia	6

ⁱ Hybrid: Courses offered in French and/or English

MEDR960E - Residency Rotation in Anesthesia	6
MEDR960F - Residency Rotation in Anesthesia	6
MEDR960G - Residency Rotation in Anesthesia	6
MEDR960H - Residency Rotation in Anesthesia	6
MEDR960I - Residency Rotation in Anesthesia	6
MEDR960J - Residency Rotation in Anesthesia	6
Total	84

Diploma of Specialized Studies – Cardiology (Hybridⁱ)

Mission

The mission of the cardiology residency program is to educate MD graduates to evaluate and manage critically ill patients requiring advanced cardiology therapies, through a multidisciplinary team approach. They will be introduced to all cardiology sub-specialties.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within their specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put to the service of their patient according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young cardiologists will:

- a. Master the basic knowledge and clinical knowledge in cardiology in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly upon urgent cases.
- b. Acquire a deep knowledge in other specialties (sister and/or complementary and / or additional).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (ECG, US, KT) proper to the specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to cardiology without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0

ⁱ Hybrid: Courses offered in French and/or English

MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR954A - Residency Rotation in Cardiology	6
MEDR954B - Residency Rotation in Cardiology	6
MEDR954C - Residency Rotation in Cardiology	6
MEDR954D - Residency Rotation in Cardiology	6
MEDR954E - Residency Rotation in Cardiology	6
MEDR954F - Residency Rotation in Cardiology	6
Total	84

Diploma of Specialized Studies - Cardiovascular and Thoracic Surgery (Hybridⁱ)

Mission

The thoracic and cardiovascular surgery residency program provides residents with the range and depth of academic experience and academic exposure required to develop superior surgical skills and an ability to make mature, informed, independent judgments with high professional standards.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put to the service of their patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, young cardio- thoracic surgeons will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties, surgery, cardiology pulmonary etc., in order to better perform their practice.
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (surgical, resuscitation) proper to their specialty and apply them according to the rules of professionalism and ethics (to be defined).
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
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ⁱ Hybrid: Courses offered in French and/or English

MEDR901 - Surgical anatomy	3
MEDR906 – Trauma	3
MEDR911 – Non-Trauma Urgent Surgical Situations	3
MEDR916 - Surgical Methodology	3
Specialization	96
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR941A - Residency Rotation in Surgery I	6
MEDR941B - Residency Rotation in Surgery I	6
MEDR941C - Residency Rotation in Surgery I	6
MEDR941D - Residency Rotation in Surgery I	6
MEDR951A - Residency Rotation in Cardiovascular and Thoracic Surgery	6
MEDR951B - Residency Rotation in Cardiovascular and Thoracic Surgery	6
MEDR951C - Residency Rotation in Cardiovascular and Thoracic Surgery	6
MEDR951D - Residency Rotation in Cardiovascular and Thoracic Surgery	6
MEDR951E - Residency Rotation in Cardiovascular and Thoracic Surgery	6
MEDR951F - Residency Rotation in Cardiovascular and Thoracic Surgery	6
MEDR951G - Residency Rotation in Cardiovascular and Thoracic Surgery	6
MEDR951H - Residency Rotation in Cardiovascular and Thoracic Surgery	6
MEDR951I - Residency Rotation in Cardiovascular and Thoracic Surgery	6
MEDR951J - Residency Rotation in Cardiovascular and Thoracic Surgery	6
Total	108

Diploma of Specialized Studies - Dermatology (Hybridⁱ)

Mission

The mission of the dermatology residency program is to provide trainees the opportunity to acquire knowledge, procedural skills, professional attitudes and practical experience in the subjects of medical dermatology and cosmetology.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of their patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young dermatologists will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly upon urgent cases.
- b. Acquire deep knowledge in other specialties (especially medical specialties).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.

ⁱ Hybrid: Courses offered in French and/or English

- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (medical, dermic surgery and cosmetology) and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention (sun, STD) and other public health principles.

Degree Requirements

Common Core	12 out of 18
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
MEDR947 - Basic Principles in Dermatology	3
MEDR948 - Clinical Dermatology	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR968A - Residency Rotation in Dermatology I	6
MEDR968B - Residency Rotation in Dermatology II	6
MEDR968C - Residency Rotation in Dermatology III	6
MEDR968D - Residency Rotation in Dermatology IV	6
Total	72

Diploma of Specialized Studies - Emergency Medicine (Hybridⁱ)

Mission

The mission of the emergency medicine program is to advance the specialty for the direct benefit of the patients by educating, mentoring, and developing future leaders in emergency medicine, whether they devote their efforts to advancing emergency prehospital care, research, public health, or public policy. We aim to be collaborative, across disciplines, specialties and health systems.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within their specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of their patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young emergency specialists will:

ⁱ Hybrid: Courses offered in French and/or English

- a. Master the basic knowledge and clinical knowledge of both medical and surgical and critical situations in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly.
- b. Acquire deep knowledge in other specialties.
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (medical, surgical and critical care) and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles.
- i. Be able to dispatch patients and take priority choices.

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR965A - Residency Rotation in Emergency Medicine I	6
MEDR965B - Residency Rotation in Emergency Medicine II	6
MEDR965C - Residency Rotation in Emergency Medicine III	6
MEDR965D - Residency Rotation in Emergency Medicine IV	6
Total	72

Diploma of Specialized Studies - Endocrinology and Metabolic Disorders (Hybridⁱ)

Mission

The mission of the program is to educate physicians to become outstanding clinicians, teachers and scientists in the broad field of Endocrinology and Metabolism for the improvement of patient care and public health.

Program Educational Objectives

A. Patient Care

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Fellows are expected to:

- A.1. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- A.2. Gather essential and accurate information about their patients.

ⁱ Hybrid: Courses offered in French and/or English

- A.3. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- A.4. Develop and carry out patient management plans.
- A.5. Counsel and educate patients and their families.
- A.6. Use information technology to support patient care decisions and patient education.
- A.7. Perform competently all medical and invasive procedures considered essential for the area of practice.
- A.8. Provide health care services aimed at preventing health problems or maintaining health.
- A.9. Work with health care professionals, including those from other disciplines, to provide patient-focused care.

B. Medical Knowledge

Fellows must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.

Fellows are expected to:

- B.1. Demonstrate an investigatory and analytic thinking approach to clinical situations.
- B.2. Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

C. Practice-Based Learning and Improvement

Fellows must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.

Fellows are expected to:

- C.1. Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- C.2. Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- C.3. Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
- C.4. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- C.5. Use information technology to manage information, access on-line medical information; and support their own education.
- C.6. Facilitate the learning of students and other health care professionals.

D. Interpersonal and Communication Skills

Fellows must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients' families, and professional associates.

Fellows are expected to:

- D.1. Create and sustain a therapeutic and ethically sound relationship with patients.
- D.2. Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- D.3. Work effectively with others as a member or leader of a health care team or other professional group.

E. Professionalism

Fellows must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Fellows are expected to:

- E.1. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.
- E.2. That supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
- E.3. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent and business practices.
- E.4. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

F. Systems-Based Practice

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Fellows are expected to:

- F.1. Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
- F.2. Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- F.3. Practice cost-effective health care and resource allocation that does not compromise quality of care.
- F.4. Advocate for quality patient care and assist patients in dealing with system complexities.
- F.5. Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	72
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR970A - Residency Rotation in Endocrinology and Metabolic Disorders	6
MEDR970B - Residency Rotation in Endocrinology and Metabolic Disorders	6
MEDR970C - Residency Rotation in Endocrinology and Metabolic Disorders	6
MEDR970D - Residency Rotation in Endocrinology and Metabolic Disorders	6
MEDR970E - Residency Rotation in Endocrinology and Metabolic Disorders	6
MEDR970F - Residency Rotation in Endocrinology and Metabolic Disorders	6
Total	84

Diploma of Specialized Studies - ENT (Hybridⁱ)

Mission

The fundamental purpose of the training program in otorhinolaryngology (ENT) is to educate and train physicians to function independently as specialists in the field of otorhinolaryngology – head and neck surgery. They will be trained to practice their skills with a high level of professionalism.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of their patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.

ⁱ Hybrid: Courses offered in French and/or English

5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young ENT specialists Will:

- Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- Acquire deep knowledge in other specialties (sister and/or complementary and / or additional).
- Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- Be prepared to use new knowledge and new techniques to improve their practice.
- Master the gestures and techniques (to be specified) proper to their specialty and apply them according to the rules of professionalism and ethics.
- Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- Share their knowledge with peers, students and other healthcare professionals.
- Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR918 - Principals in ENT	3
MEDR919 - Surgical Anatomy in ENT	3
MEDR920 - Semiology and Pathology of the Ear, the Nose and the Sinuses	3
MEDR921 - Semiology and Pathology of the Head and Neck	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR941A - Residency Rotation in Surgery I	6
MEDR941B - Residency Rotation in Surgery I	6
MEDR963A - Residency Rotation in ENT	6
MEDR963B - Residency Rotation in ENT	6
MEDR963C - Residency Rotation in ENT	6
MEDR963D - Residency Rotation in ENT	6
MEDR963E - Residency Rotation in ENT	6
MEDR963F - Residency Rotation in ENT	6
MEDR963G - Residency Rotation in ENT	6
MEDR963H - Residency Rotation in ENT	6
Total	84

Diploma of Specialized Studies - Gastro-enterology (Hybridⁱ)

Mission

The mission of the gastro-enterology residency program is to improve medical care by providing the best specialists in the field through better education and research. They will acquire knowledge, technical skills and especially ethical skills in order to best serve their society.

Program Educational Objectives

- Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within their specialty but without forgetting their skills in general practice.

ⁱ Hybrid: Courses offered in French and/or English

2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of their patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young GI specialists will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (internal medicine, rheumatology, general surgery, etc.).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (biopsies, endoscopy) proper to their specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship residency I	6
MEDR940D - Internship residency I	6
MEDR958A - Residency Rotation in Gastro-enterology	6
MEDR958B - Residency Rotation in Gastro-enterology	6
MEDR958C - Residency Rotation in Gastro-enterology	6
MEDR958D - Residency Rotation in Gastro-enterology	6
MEDR958E - Residency Rotation in Gastro-enterology	6
MEDR958F - Residency Rotation in Gastro-enterology	6
Total	84

Diploma of Specialized Studies - General Surgery (Hybridⁱ)

Mission

ⁱ Hybrid: Courses offered in French and/or English

The general surgery residency program will train general surgeons with a comprehensive approach in the state-of-the-art field of general surgery (neck, breast, gastro-intestinal, oncological, endocrine surgery and all aspects of laparoscopy) to provide residents with first-hand experience of managing surgical patients in a variety of surgical areas by developing their technical, professional and ethical skills according to the values of our institution.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of their patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young specialists will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (all surgical specialties, plus more medical).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques proper to their specialty (surgery, endoscopic surgery...) and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR901 - Surgical Anatomy	3
MEDR906 – Trauma	3
MEDR911 – Non-Trauma Urgent Surgical Situations	3
MEDR916 - Surgical Methodology	3
Specialization	72
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR941A - Residency Rotation in Surgery I	6
MEDR941B - Residency Rotation in Surgery I	6
MEDR941C - Residency Rotation in Surgery I	6
MEDR941D - Residency Rotation in Surgery I	6
MEDR949A - Residency Rotation in General Surgery	6
MEDR949B - Residency Rotation in General Surgery	6
MEDR949C - Residency Rotation in General Surgery	6
MEDR949D - Residency Rotation in General Surgery	6
MEDR949E - Residency Rotation in General Surgery	6

MEDR949F - Residency Rotation in General Surgery	6
Total	84

Diploma of Specialized Studies - Hematology-Oncology (Hybridⁱ)

Mission

The hematology-oncology residency program has the mission to educate physician scientists, teachers and clinicians so they become able to provide indispensable clinical service of the highest quality, and all of this in respect to ethical and humanistic laws.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young specialists will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (all specialties and pathology).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (bone marrow aspiration, biopsy...) proper to the specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	84
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6

ⁱ Hybrid: Courses offered in French and/or English

MEDR940D - Internship Residency I	6
MEDR957A - Residency Rotation in Hematology-oncology	6
MEDR957B - Residency Rotation in Hematology-oncology	6
MEDR957C - Residency Rotation in Hematology-oncology	6
MEDR957D - Residency Rotation in Hematology-oncology	6
MEDR957E - Residency Rotation in Hematology-oncology	6
MEDR957F - Residency Rotation in Hematology-oncology	6
MEDR957G - Residency Rotation in Hematology-oncology	6
MEDR957H - Residency Rotation in Hematology-oncology	6
Total	96

Diploma of Specialized Studies - Internal Medicine (Hybridⁱ)

Mission

The mission of the internal medicine residency program is to train and foster the development of future experts in the field and to train future generations of specialists who will not only be skilled in the procedural aspects of the specialty but also in the ethical rules that guide their practice.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young specialists will:

- a. Master the basic knowledge and clinical knowledge of the internal medicine domain in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties.
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques proper to their specialty and apply them according to the rules of professionalism and ethics
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3

ⁱ Hybrid: Courses offered in French and/or English

Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR953A - Residency Rotation in Internal Medicine	6
MEDR953B - Residency Rotation in Internal Medicine	6
MEDR953C - Residency Rotation in Internal Medicine	6
MEDR953D - Residency Rotation in Internal Medicine	6
Total	72

Diploma of Specialized Studies - Internal Medicine and Clinical Immunology (Hybridⁱ)

Mission

The mission of the internal medicine residency program is to train and foster the development of future experts in the field and to train future generations of specialists who will not only be skilled in the procedural aspects of the specialty but also in the ethical rules that guide their practice.

Program Educational Objectives

6. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
7. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
8. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
9. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
10. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young specialists will:

- i. Master the basic knowledge and clinical knowledge of the internal medicine domain in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- j. Acquire deep knowledge in other specialties.
- k. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- l. Be prepared to use new knowledge and new techniques to improve their practice.
- m. Master the gestures and techniques proper to their specialty and apply them according to the rules of professionalism and ethics
- n. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- o. Share their knowledge with peers, students and other healthcare professionals.
- p. Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

ⁱ Hybrid: Courses offered in French and/or English

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	72
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR953A - Residency Rotation in Internal Medicine	6
MEDR953B - Residency Rotation in Internal Medicine	6
MEDR953C - Residency Rotation in Internal Medicine	6
MEDR953D - Residency Rotation in Internal Medicine	6
MEDR953E - Residency Rotation in Internal Medicine	6
MEDR953F - Residency Rotation in Internal Medicine	6
Total	84

Diploma of Specialized Studies - Laboratory Medicine (Hybridⁱ)

Mission

The mission of the residency in Laboratory Medicine is the training of physicians who are specialized in the field of laboratory medicine and who can contribute to the healthcare system of the country by acting as support to other clinical specialties. Moreover, the aim of the program is to graduate specialized doctors with the appropriate skills and knowledge and with ethics in line with the mission of the Lebanese Maronite Order (O.L.M.).

Program Educational Objectives

1. Graduates will be able to manage a laboratory in both the private and/or hospital setting.
2. Graduates may also ultimately work in the polyvalent, specialized or research tracks.
3. Graduates will be able to use both the fundamental and specialized knowledge for the processing of and the validation of the interpretation of various laboratory tests.
4. Graduates will be able to function in multidisciplinary teams in respect to ethical codes of the profession.

Program Outcomes

- a. The Students of the residency in clinical pathology will have both the fundamental and specialized knowledge for the processing and the clinical interpretation of various laboratory tests.
- b. Aid the patient's primary treating team in reaching a diagnosis in the most appropriate and efficient ways.
- c. Acquire communication skills to ensure proper collaboration with other health care professionals in a multi-disciplinary setting.
- d. Be trained to take responsibility, recognize limitations and be ethical in their dealings with colleagues and patients.
- e. The students will master the management and the organizational operations of the laboratory.
- f. There will also be an emphasis on quality assurance and the judicious use of available resources and finances.

ⁱ Hybrid: Courses offered in French and/or English

- g. They will learn to stay up to date by critically reading literature and studies relevant to the specialty and will be encouraged and taught to contribute to the medical literature by conducting research and writing medical papers.

Degree Requirements

Common Core	12
MEDR937 - Medical Microbiology	3
MEDR938 - Medical Biochemistry	3
MEDR939 - Clinical Hematology	3
MEDR946 - Polyvalent Clinical Pathology	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR969A - Residency Rotation in Laboratory Medicine	6
MEDR969B - Residency Rotation in Laboratory Medicine	6
MEDR969C - Residency Rotation in Laboratory Medicine	6
MEDR969D - Residency Rotation in Laboratory Medicine	6
MEDR969E - Residency Rotation in Laboratory Medicine	6
MEDR969F - Residency Rotation in Laboratory Medicine	6
MEDR969G - Residency Rotation in Laboratory Medicine	6
MEDR969H - Residency Rotation in Laboratory Medicine	6
Total	72

Diploma of Specialized Studies – Nephrology (Hybridⁱ)

Mission

The mission of our nephrology training program is to provide each trainee with a broad range of experiences in nephrology including scientific, technical and ethical skills and the knowledge necessary for the preparation of a successful career as an academic leader or a clinical practitioner.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young nephrologists will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (cardiology, internal medicine, etc.).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage, especially those under chronic treatment (dialysis, renal transplant...).
- d. Be prepared to use new knowledge and new techniques to improve their practice.

ⁱ Hybrid: Courses offered in French and/or English

- e. Master the gestures and techniques (renal biopsy, dialysis) proper to the specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR959A - Internship Residency Nephrology	6
MEDR959B - Internship Residency Nephrology	6
MEDR959C - Internship Residency Nephrology	6
MEDR959D - Internship Residency Nephrology	6
MEDR959E - Internship Residency Nephrology	6
MEDR959F - Internship Residency Nephrology	6
Total	84

Diploma of Specialized Studies – Neurology (Hybridⁱ)

Mission

The mission of our training program is to educate physicians who will be prepared at the end of their training to become leaders in the field of neurology as clinicians, teachers, researchers, and advocates.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young neurologists will:

ⁱ Hybrid: Courses offered in French and/or English

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (internal medicine, ENT, ophthalmology, radiologist).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (EEG, LP ...) proper to the specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR956A - Residency Rotation in Neurology	6
MEDR956B - Residency Rotation in Neurology	6
MEDR956C - Residency Rotation in Neurology	6
MEDR956D - Residency Rotation in Neurology	6
MEDR956E - Residency Rotation in Neurology	6
MEDR956F - Residency Rotation in Neurology	6
Total	84

Diploma of Specialized Studies – Neurosurgery (Hybridⁱ)

Mission

The neurosurgery residency program is committed to training future leaders and innovators in academic neurological surgery by fostering the development of the cognitive, technical, academic, administrative and humanistic capabilities of our residents and training them to become highly motivated, confident, and clinically excellent specialists, equipped to contribute to the advancement of neurosurgery.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.

ⁱ Hybrid: Courses offered in French and/or English

3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young neurosurgeons will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (surgery, orthopedics, neurology, ENT, ophthalmology).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques proper to the specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles.

Degree Requirements

Common Core	12
MEDR901 - Surgical Anatomy	3
MEDR906 - Trauma	3
MEDR911 – Non-Trauma Urgent Surgical Situations	3
MEDR916 - Surgical Methodology	3
Specialization	84
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR941A - Residency Rotation in Surgery I	6
MEDR941B - Residency Rotation in Surgery I	6
MEDR941C - Residency Rotation in Surgery I	6
MEDR941D - Residency Rotation in Surgery I	6
MEDR950A - Residency Rotation in Neurosurgery	6
MEDR950B - Residency Rotation in Neurosurgery	6
MEDR950C - Residency Rotation in Neurosurgery	6
MEDR950D - Residency Rotation in Neurosurgery	6
MEDR950E - Residency Rotation in Neurosurgery	6
MEDR950F - Residency Rotation in Neurosurgery	6
MEDR950G - Residency Rotation in Neurosurgery	6
MEDR950H - Residency Rotation in Neurosurgery	6
Total	96

Diploma of Specialized Studies - Obstetrics and Gynecology (ob-gyn) (Hybridⁱ)

Mission

The obstetrics and gynecology residency program will train physician leaders who provide innovative, compassionate, and comprehensive health care for women by caring about the health of mother and fetus and providing the latest innovation in the field in the respect of ethical principles and social beliefs.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the mother and fetus, and female diseases within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young ob-gyns will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (surgery, urology, endocrinology).
- c. Be able to take charge of a patient and or mother/fetus, and provide moral and psychological support to her and her entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (US, surgical, delivery, endoscopy) proper to their specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to their prenatal diagnosis, STD, etc. without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR950 - Basic Principles in Gynécologie Obstétrique	3
MEDR951 - Gynecology Emergencies	3
MEDR952 - Obstetrics and Gynecology I	3
MEDR953 - Obstetrics and Gynecology II	3
Specialization	72
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR941A - Residency Rotation in Surgery I	6
MEDR941B - Residency Rotation in Surgery I	6
MEDR941C - Residency Rotation in Surgery I	6
MEDR941D - Residency Rotation in Surgery I	6
MEDR952A - Residency Rotation in Gynecology	6
MEDR952B - Residency Rotation in Gynecology	6

ⁱ Hybrid: Courses offered in French and/or English

MEDR952C - Residency Rotation in Gynecology	6
MEDR952D - Residency Rotation in Gynecology	6
MEDR952E - Residency Rotation in Gynecology	6
MEDR952F - Residency Rotation in Gynecology	6
Total	84

Diploma of Specialized Studies – Ophthalmology (Hybridⁱ)

Mission

The mission of the ophthalmology residency program is to train future ophthalmologists in both clinical and academic ophthalmology. The residents' responsibilities have been meticulously structured to maximize the educational experience. This program will serve as a guideline for training centers enabling them to meet the Arab, European and American standards as set out by the different Boards.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young ophthalmologists will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties, both medical and surgical, related to the specialty and their future practice.
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (diagnostic procedures, non-surgical management, and surgical management) proper to the specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share his knowledge with his peers, students and other healthcare professionals.
- h. Promote the principles of (prevention) and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR922 – Anatomy, Embryology and Physiology of the Eye	3
MEDR923 - Ophthalmic Investigation Methods, Surgical Methodology in Ophthalmology and External Ocular Pathologies	3
MEDR924 - Anterior Segment Pathologies	3
MEDR925 - Posterior Segment Pathologies and Neuro-ophthalmology	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0

ⁱ Hybrid: Courses offered in French and/or English

MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR941A - Residency Rotation in Surgery I	6
MEDR941B - Residency Rotation in Surgery I	6
MEDR964A - Residency Rotation in Ophthalmology	6
MEDR964B - Residency Rotation in Ophthalmology	6
MEDR964C - Residency Rotation in Ophthalmology	6
MEDR964D - Residency Rotation in Ophthalmology	6
MEDR964E - Residency Rotation in Ophthalmology	6
MEDR964F - Residency Rotation in Ophthalmology	6
MEDR964G - Residency Rotation in Ophthalmology	6
MEDR964H - Residency Rotation in Ophthalmology	6
Total	84

Diploma of Specialized Studies - Orthopedic Surgery (Hybridⁱ)

Mission

The mission of the orthopedic surgery residency training program is to provide the trainees with the knowledge, clinical and surgical skills in all areas of orthopedic surgery necessary for either academic or private practice at the highest possible level of competence, and all of this in line with the highest standards of ethics towards patients and collaborators.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within his specialty but without forgetting his skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young orthopedic surgeons will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (general surgery, vascular surgery and neurosurgery) in order to better perform their practice.
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques proper to the specialty (tools, materials, surgery, cast) and apply them according to the rules of professionalism and ethics (to be defined).
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to bones and joints) without forgetting their skills as generalists.

ⁱ Hybrid: Courses offered in French and/or English

Degree Requirements

Common Core	12
MEDR901 - Surgical anatomy	3
MEDR906 – Trauma	3
MEDR911 – Non-Trauma Urgent Surgical Situations	3
MEDR916 - Surgical Methodology	3
Specialization	72
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR941A - Residency Rotation in Surgery I	6
MEDR941B - Residency Rotation in Surgery I	6
MEDR941C - Residency Rotation in Surgery I	6
MEDR941D - Residency Rotation in Surgery I	6
MEDR947A - Residency Rotation in Orthopedics	6
MEDR947B - Residency Rotation in Orthopedics	6
MEDR947C - Residency Rotation in Orthopedics	6
MEDR947D - Residency Rotation in Orthopedics	6
MEDR947E - Residency Rotation in Orthopedics	6
MEDR947F - Residency Rotation in Orthopedics	6
MEDR947G - Residency Rotation in Orthopedics	6
MEDR947H - Residency Rotation in Orthopedics	6
Total	96

Diploma of Specialized Studies – Pediatrics (Hybridⁱ)

Mission

The pediatrics residency program mission provides residents with a broad exposure to the health care of children and substantial experience in the management of diverse pediatric pathologic conditions. Primary care, preventive health care, ethical issues, and discussions of the cost of diagnostic tests, procedures, and therapies are all a part of this program. Also, the program will introduce them to subspecialties of child medicine.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young pediatricians will:

- a. Master the basic knowledge and clinical knowledge of child medicine in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire knowledge in all pediatric specialties.

ⁱ Hybrid: Courses offered in French and/or English

- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques proper to the specialty and apply them according to the rules of professionalism and ethics.

Degree Requirements

Common Core	12
MEDR902 - Pediatric Emergencies	3
MEDR912 - Pediatric and Neonatal Resuscitation	3
MEDR913 - Basic Principles in Pediatrics	3
MEDR914 - General Pediatrics Guidelines	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR961A - Residency Rotation in Pediatrics	6
MEDR961B - Residency Rotation in Pediatrics	6
MEDR961C - Residency Rotation in Pediatrics	6
MEDR961D - Residency Rotation in Pediatrics	6
MEDR961E - Residency Rotation in Pediatrics	6
MEDR961F - Residency Rotation in Pediatrics	6
MEDR961G - Residency Rotation in Pediatrics	6
MEDR961H - Residency Rotation in Pediatrics	6
Total	72

Diploma of Specialized Studies – Psychiatry (Hybridⁱ)

Mission

The mission of the psychiatry residency program is to promote the development of post-graduate psychiatrists who will be exceptional communicators, skillful psychotherapists, highly competent practitioners, and effective leaders. They will value lifelong learning, adhere to the highest ethical standards of the profession, and serve the community as role models.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must provide psychological support to the patient, and the family and entourage and empower social support for a better therapeutic response.
3. Must provide psycho-education to the patient, and the family and entourage in order to increase compliance to treatment and reduce relapses.
4. Must remain up to date and improve their knowledge and their skills in parallel to the new medical advances and put it to the service of patients according to the rules of professionalism and ethics.
5. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
6. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young psychiatrists will:

ⁱ Hybrid: Courses offered in French and/or English

- a. Master the basic knowledge and clinical knowledge of psychiatry in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases (suicide, self-harm, harm to others...).
- b. Acquire deep knowledge in other specialties (especially in neurology).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to remain up to date in their knowledge and use it to improve their practice.
- e. Master psychiatry and apply their knowledge according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to psychiatry without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR933 - Psychiatric Pathologies I	3
MEDR934 - Psychiatric Pathologies II	3
Specialization	72
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR967A - Residency Rotation in Psychiatry I	6
MEDR967B - Residency Rotation in Psychiatry II	6
MEDR967C - Residency Rotation in Psychiatry III	6
MEDR967D - Residency Rotation in Psychiatry IV	6
MEDR967E - Residency Rotation in Psychiatry V	6
MEDR967F - Residency Rotation in Psychiatry VI	6
MEDR967G - Residency Rotation in Psychiatry VII	6
MEDR967H - Residency Rotation in Psychiatry VIII	6
Total	84

Diploma of Specialized Studies – Pulmonology (Hybridⁱ)

Mission

The mission of the pulmonology residency program is to educate MD graduates to evaluate and manage critically-ill patients requiring advanced pulmonology therapies, through a multidisciplinary team approach. They will be introduced to all subspecialties, in particularly intensive care and critical patient care.

Program Educational Objectives

1. The graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient, psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of the patient according to the rules of professionalism and ethics.

ⁱ Hybrid: Courses offered in French and/or English

4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young pulmonologists will:

- a. Master the basic knowledge and clinical knowledge in pulmonology in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly upon urgent cases.
- b. Acquire deep knowledge in other specialties (cardiology, intensive care, ENT, etc.).
- c. Be able to take in charge of a patient and provide moral and psychological support to them and the entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (endoscopy) proper to the specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or para-clinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with his peers, students and other healthcare professionals.
- h. Promote the principles of (prevention) and other public health principles (specific to pulmonology without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR955A - Residency Rotation in Pulmonology	6
MEDR955B - Residency Rotation in Pulmonology	6
MEDR955C - Residency Rotation in Pulmonology	6
MEDR955D - Residency Rotation in Pulmonology	6
Total	72

Diploma of Specialized Studies - Pulmonary Diseases and Intensive Care Medicine (Hybridⁱ)

Mission

The mission of the program is to educate physicians to become outstanding clinicians, teachers and scientists in the broad field of Pulmonary diseases and Intensive Care Medicine for the improvement of patient care and public health.

Program Educational Objectives

A. Patient Care

ⁱ Hybrid: Courses offered in French and/or English

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Fellows are expected to:

- A.1. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- A.2. Gather essential and accurate information about their patients.
- A.3. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- A.4. Develop and carry out patient management plans.
- A.5. Counsel and educate patients and their families.
- A.6. Use information technology to support patient care decisions and patient education.
- A.7. Perform competently all medical and invasive procedures considered essential for the area of practice.
- A.8. Provide health care services aimed at preventing health problems or maintaining health.
- A.9. Work with health care professionals, including those from other disciplines, to provide patient-focused care.

B. Medical Knowledge

Fellows must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.

Fellows are expected to:

- B.1. Demonstrate an investigatory and analytic thinking approach to clinical situations.
- B.2. Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

C. Practice-Based Learning & Improvement

Fellows must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.

Fellows are expected to:

- C.1. Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- C.2. Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- C.3. Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
- C.4. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- C.5. Use information technology to manage information, access on-line medical information; and support their own education.
- C.6. Facilitate the learning of students and other health care professionals.

D. Interpersonal & Communication Skills

Fellows must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates.

Fellows are expected to:

- D.1. Create and sustain a therapeutic and ethically sound relationship with patients.
- D.2. Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- D.3. Work effectively with others as a member or leader of a health care team or other professional group.

E. Professionalism

Fellows must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Fellows are expected to:

- E.1. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.

- E.2. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent and business practices.
- E.3. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

F. Systems-Based Practice

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Fellows are expected to:

- F.1. Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
- F.2. Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- F.3. Practice cost-effective health care and resource allocation that does not compromise quality of care.
- F.4. Advocate for quality patient care and assist patients in dealing with system complexities.
- F.5. Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Degree Requirements

Common Core	12
MEDR910 - Medical Emergencies	3
MEDR926 - Medical Pathologies I	3
MEDR927 - Medical Pathologies II	3
MEDR928 - Medical Pathologies III	3
Specialization	84
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR940A - Internship Residency I	6
MEDR940B - Internship Residency I	6
MEDR940C - Internship Residency I	6
MEDR940D - Internship Residency I	6
MEDR955A - Residency Rotation in Pulmonology	6
MEDR955B - Residency Rotation in Pulmonology	6
MEDR955C - Residency Rotation in Pulmonology	6
MEDR955D - Residency Rotation in Pulmonology	6
MEDR955E - Residency rotation in Pulmonary diseases and Intensive Care Medicine	6
MEDR955F - Residency rotation in Pulmonary diseases and Intensive Care Medicine	6
MEDR955G - Residency rotation in Pulmonary diseases and Intensive Care Medicine	6
MEDR955H - Residency rotation in Pulmonary diseases and Intensive Care Medicine	6
Total	96

Diploma of Specialized Studies – Radiology (Hybridⁱ)

Mission

The mission of the diagnostic radiology residency program is to offer rich and diverse clinical experiences, a didactic curriculum, mentoring, and opportunities to train and educate residents to become experts in their field, skilled in their practice, excellent team workers and devoted teachers. X rays, ultrasounds, magnetic resonance and other technologies to come will transform them to the “eyes” of modern medicine.

ⁱ Hybrid: Courses offered in French and/or English

The radiology program promotes the use of therapeutic skills in interventional radiology.

Program Educational Objectives

1. Graduates must use their basic and clinical knowledge acquired during their pre-graduate and postgraduate path in order to diagnose and in some cases treat.
2. Must help colleagues for the best diagnosis and treatment of the patient.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.

Program Outcomes

At the end of the program, the young radiologists will:

- a. Master the basic, clinical and technical knowledge in order to propose diagnosis.
- b. Acquire deep knowledge in other specialties (all).
- c. Be able to take charge of a patient and provide expertise in a team working for the best treatment.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (diagnostic and treatment) proper to the specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinicians, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.

Degree Requirements

Common Core	12
MEDR903 - Semiology in Radiology	3
MEDR906 - Trauma	3
MEDR910 - Medical Emergencies	3
MEDR911 – Non-Trauma Urgent Surgical Situations	3
Specialization	60
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR962A - Residency Rotation in Radiology	6
MEDR962B - Residency Rotation in Radiology	6
MEDR962C - Residency Rotation in Radiology	6
MEDR962D - Residency Rotation in Radiology	6
MEDR962E - Residency Rotation in Radiology	6
MEDR962F - Residency Rotation in Radiology	6
MEDR962G - Residency Rotation in Radiology	6
MEDR962H - Residency Rotation in Radiology	6
Total	72

Diploma of Specialized Studies – Urology (Hybridⁱ)

Mission

The mission of the urology specialty program is to contribute to the improvement of the productivity of the medical community by providing experts trained with the information, procedural skills, professional attitudes and practical experience in the specialty.

Program Educational Objectives

ⁱ Hybrid: Courses offered in French and/or English

1. Graduates must use their basic and clinical knowledge acquired during the specialization path in order to support and treat the patient within the specialty, but without forgetting their skills in general practice.
2. Must support the patient psychologically and morally, and the family and entourage for better therapeutic compliance.
3. Must improve their knowledge and skills in parallel to the new technological discoveries and put them to the service of patients according to the rules of professionalism and ethics.
4. Have to practice their profession in accordance with the principles of quality, in particular the principles of efficiency and equity.
5. Must share their knowledge and promote prevention principles and other public health principles.

Program Outcomes

At the end of the program, the young urologists will:

- a. Master the basic knowledge and clinical knowledge of the specialty in order to analyze the clinical situation, to propose a course of action and the appropriate treatment and be ready to act quickly in urgent cases.
- b. Acquire deep knowledge in other specialties (surgery, ob-gyn, nephrology).
- c. Be able to take charge of a patient and provide moral and psychological support to the patient and entourage.
- d. Be prepared to use new knowledge and new techniques to improve their practice.
- e. Master the gestures and techniques (endoscopic, manometric) proper to the specialty and apply them according to the rules of professionalism and ethics.
- f. Collaborate with other clinical or paraclinical specialists, respecting the principle of efficiency and in the best interest of the patient.
- g. Share their knowledge with peers, students and other healthcare professionals.
- h. Promote the principles of prevention and other public health principles (specific to their specialty without forgetting their skills as generalists).

Degree Requirements

Common Core	12
MEDR901 - Surgical anatomy	3
MEDR906 – Trauma	3
MEDR911 – Non-Trauma Urgent Surgical Situations	3
MEDR916 - Surgical Methodology	3
Specialization	72
MEDR930A - Seminars and Conferences Residency	0
MEDR930B - Seminars and Conferences Residency	0
MEDR930C - Seminars and Conferences Residency	0
MEDR930D - Seminars and Conferences Residency	12
MEDR941A - Residency Rotation in Surgery I	6
MEDR941B - Residency Rotation in Surgery I	6
MEDR941C - Residency Rotation in Surgery I	6
MEDR941D - Residency Rotation in Surgery I	6
MEDR948A - Residency Rotation in Urology	6
MEDR948B - Residency Rotation in Urology	6
MEDR948C - Residency Rotation in Urology	6
MEDR948D - Residency Rotation in Urology	6
MEDR948E - Residency Rotation in Urology	6
MEDR948F - Residency Rotation in Urology	6
MEDR948G - Residency Rotation in Urology	6
MEDR948H - Residency Rotation in Urology	6
Total	96

Course Descriptions

BCH320	Structural Biochemistry	3 cr.
Pre-requisites	CHM317 Or CHM311 Or CHE311	
<p>This course is based on an understanding of the different biochemical processes taking place in the human body. Students will learn about the basic formations in biochemistry, so they are then able to competently address all areas related to medical biochemistry. Structural biochemistry defines the structure of the various molecules of living matter such as carbohydrates, lipids, amino-acids, proteins, enzymes, nucleotides and vitamins.</p>		
BCH421	Metabolic Biochemistry	3 cr.
Pre-requisites	BCH415 Or BCH410 Or BCH300 Or BCH320 Or BCM320	
<p>Understanding all vital processes requires knowledge of the biochemical reactions and their integration in metabolic pathways. This course covers two basic areas of molecular biochemistry which are the production and storage of energy, and the biosynthesis of macromolecules. The course starts with the metabolism of carbohydrates, the main producer of energy in the cell. Several topics are devoted to the study of glycogen metabolism, glycolysis, the Krebs cycle and the pentose phosphate pathway. Then lipid metabolism (β oxidation, fatty acid synthesis, cholesterol synthesis), and on to protein metabolism (transamination, urea cycle) and then nucleotide metabolism.</p>		
BIO377	Biochemistry and Molecular Biology Laboratory	1 cr.
<p>This lab is divided into two parts: a biochemistry part and a molecular biology part. In the biochemistry sessions, the students are initiated into the methods used to measure the levels of lipids, proteins and carbohydrates in the serum of patients. In the second part of this lab, the students are introduced to molecular biology methods. They are allowed to practice most of the concepts covered in the course of molecular biology: genomic and DNA plasmid extractions, PCR amplification, enzyme digestion, SDS-PAGE, Western blot and bacterial transformation.</p>		
BIO413	Molecular Biology	3 cr.
Pre-requisites	BIO411 Or MEDL200	
<p>The course begins with a review of nucleic acids and looks at the methods for their extraction, separation and analysis. Secondly, the course extensively studies the regulation of gene expression and provides an update on the changes to the nucleic acids transcriptionally, post-transcriptional and translational. Finally, detailed molecular analysis techniques, cloning, PCR, sequencing and development of DNA banks are described.</p>		
CHM212	General Chemistry	3 cr.
<p>The purpose of this course is to present a general outline on chemistry. Through this course chemistry is introduced in its various aspects: the structure of the atom, the various models, and the properties of the elements in the periodic table; various chemical bonds, the Lewis structure, VSEPR rules; thermochemistry, thermodynamics and chemical equilibrium; kinetic chemistry, reactions rate orders, the Arrhenius law; solutions chemistry, acids and bases and various acid-base equilibrium; complexation, liquid solid equilibrium and solubility product; and redox titration and electrochemical cells.</p>		
CHM317	Organic Chemistry	3 cr.
Pre-requisites	CHM212	
<p>Organic chemistry is an introduction to the structure, reactivity, and properties of organic compounds. This course is intended to introduce students to the major concepts in organic chemistry and prepare them for the upper level classes in chemistry and biochemistry and the organic requirements for medical schools. Topics include: introduction and review, electronic structure and bonding in organic molecules; nomenclature of organic compounds; structure and properties of alkanes, cycloalkanes, and alkyl halides; stereoisomerism and chirality of organic compounds; and the structure, properties and reactivity of alkynes and alkenes.</p>		
CHM377	General Chemistry and Physics Laboratory	1 cr.
Pre-requisites	CHM212	
<p>In its chemistry parts the objective of the course is to introduce the students to the basic techniques used in a chemistry laboratory, including solution preparations, titration, distillation and recrystallization and aspirin synthesis. The physics part of this lab aims to achieve: the experimental measurement of the latent heat of vaporization at constant volume, the experimental study of the magnetic field, the operational amplifiers and the RLC circuit.</p>		
MAT216	General Mathematics	3 cr.
<p>This course provides the solid basics needed by students to be able to handle their specialty courses. Topics covered include: function of a real variable, elementary functions, Taylor's expansion, simple integral and methods of integration, differential equations, multivariable functions, continuity, partial derivative, the chain rule, differential, introduction to double integrals, methods of integration, matrix calculus, determinants, and linear systems.</p>		
MEDL200	Cytology and Human Cell Pathologies	3 cr.

This course aims to introduce concepts of molecular biology, cell biology, biochemistry, and genetic to medicine students. The topics include introduction to cell, organelles and cytoskeleton, DNA, membrane structure and transport, cell communication, cell cycle control, cell death, citric acid cycle, ATP production and electron transport/oxidative phosphorylation. In addition, the course will discuss the basis of the development of certain important diseases such as cancer, diabetes and mechanisms of therapeutic intervention.

MEDL205	General Histology	3 cr.
The purpose of this course is the theoretical and practical acquisition of the fundamental basics in general functional histology. Outline: the histology techniques, supporting tissues, epithelial, muscle tissue, nerve tissue, hematopoietic tissue.		
Methodology: theoretical acquisitions in lectures, tutorials and practical TD TP. Personal research work to strengthen and deepen these acquisitions. This course prepares the students for the understanding of the histology of organs.		
MEDL210	Musculoskeletal Anatomy	3 cr.
The teaching of the anatomy of the musculoskeletal system has changed in recent years in the direction of simplification, a return to the essential, eliminating many unnecessary details. The program of the musculoskeletal system concerns the descriptive and topographic anatomy of the upper limbs and lower spine including the sacrum and the anatomy of the skull and rib cage.		
MEDL215	Biostatistics and Introduction to Epidemiology	3 cr.
Pre-requisites	MAT218 Or MAT216	
This course introduces statistical information. It includes: information regarding how to organize and summarize data, how to reach decisions about a large body of data by examining only a small part of the data, the use of statistical data in medical literature and using frequently used statistical methods of data analysis.		
MEDL220	Human Anatomy	3 cr.
This course introduces the students to the human body and its many complex structures. The structure and function of important organs will be demonstrated, discussed and related to common surgical scenarios and current research. Each part of the course will focus on a specific area of the human body. This will help the students to apply their understanding of basic anatomy to common clinical scenarios and research.		
MEDL300	Human Embryology	3 cr.
This course helps the students understand how a well-organized and complete individual develops from the zygote (single totipotent) following inductions in chains. The aim is also to understand that the development of the human body is dependent on endogenous factors (regulatory genes) and is also dependent on external or environmental factors. This course is closely related to anatomy and also helps students to understand the anatomy of the adult.		
MEDL310	Human Cellular Physiology	3 cr.
Pre-requisites	BIO211 Or MEDL200	
This class is a cellular human physiology course for students entering the medical professions. The students will study human cell functions and relate them to cell structure. Furthermore, this course involves the structure and function of the principal systems of the human body, as it pertains to how the body systems relate to one another in organization, adaptation, and homeostasis. While the course will focus on examining basic mechanisms in cell physiology, there will be a thread of discussion of disease mechanisms throughout preparing the students for the clinical physiology courses.		
MEDL315	Human Parasitology and Mycology	3 cr.
Human parasitology and mycology involves the study of animals or fungal organisms that might be pathogenic to their host. The course will explore the importance of parasites and fungi, their biological classification and the diagnostic techniques used in their identification. Opportunistic diseases (such as toxoplasmosis, cryptococcal disease, and aspergillosis in the setting of HIV) will be of particular importance in this course. Furthermore, there will be a focus on tropical parasitic diseases that are common to our region and that require the ability to make a rapid diagnosis and initiate the appropriate specific treatment (as is the case with malaria and amebiasis). The course will include clinical cases that will be discussed to maximize the understanding and grasp of relevant content and ideas.		
MEDL320	Histology of Organs	3 cr.
Pre-requisites	SCS211 Or MEDL205	
This course will familiarize the students with the structure of different organs in the human body. It will integrate the data learned in the general histology courses. Some physiological hints will be explained.		
MEDL321	Cytology and Histology Laboratory	1 cr.
This course will initiate students into recognizing the histological structure of primary tissues in the human body. They will learn the basic functions of each tissue and the place it occupies in the organs. They will become aware of the importance of each structure for the good functioning of the organs.		
MEDL325	Physiology I	3 cr.

Pre-requisites MEDL310 Or SCS325

The course is a complete review of the different systems in their normal and physiological situation. Neurology: the motor, somatosensory, vegetative reflexes, cortical, and vigilance states, emotions and fluid studies (CSF circulation) and metabolism. Endocrine: regulating the release and action of different hormones with clinical implications of their excesses and their disability. Gastric, intestinal and hepatic: general concepts, digestive, liver and biliary secretion, intestinal absorption, digestive motility and continence mechanism. The purpose of this course is to enable the students to thoroughly study the nervous, endocrine, gastric and hepatic systems functioning in normal conditions. It prepares students for the understanding of semiology (endocrine, neurology, gastric, hepatic) and their pathology.

MEDL330 Homeostasis Physiology 3 cr.**Pre-requisites** MEDL310 Or SCS325

This course is given to medical students who have taken basic cell physiology and body anatomy. At this point of their training, the students will be introduced to the detailed functions of three major organs: the kidneys, the lungs and the heart. These three organs maintain the homeostasis of the body, namely the body fluid status, the acid/base balance, blood pressure, and gaseous exchanges.

MEDL335 Biophysics 3 cr.**Pre-requisites** PHY210 And MAT218 Or MAT216

This course introduces the students to different types of radiation, explains their effects on the organism and defines the basic principles of radioprotection. It illustrates the physics of the different imaging modalities (XRay, US, CT, MRI, PET), their utility in clinical practice and their optimal usage. Molecular imaging enables visualization of the cellular function and the follow up of the molecular process in organisms by using biomarkers. It has numerous potentialities and helps diagnose cancer and neurological diseases.

MEDL400 General Pathology 3 cr.**Pre-requisites** MEDL320 Or SCS320

The students will become aware of the lesions related to morbid processes and their morphological appearances in tissues. This will be carried out with some clinical, biological, physiopathological and epidemiological data. An overview of the different anatomo-pathological techniques will be provided.

MEDL405 Immunology 3 cr.

This class is a fundamental immunology course for students entering the medical professions. The students will study immune system physiopathology which is typically divided into two categories: innate and adaptive responses. This course includes the anatomy of central and peripheral lymphoid organs and functions of immune cells (T and B lymphocytes, NK cells, dendritic cells) and molecules (MHC, TCR, BCR, complement system) in physiological and pathological situations such as transplantation, infections, tumors and autoimmunity. The second part of the course provides the core information required to understand diseases with an immunological basis. It covers the underlying pathophysiology, the signs and symptoms of disease, the investigations required (mainly the immunologic laboratory tests intended to aid in clinical diagnosis). It also includes a brief review of immunohematology and blood transfusion issues.

MEDL410 Microbiology 3 cr.

The course will provide a foundation for the infectious diseases course. To achieve this the course has the following objectives to: understand the mechanisms by which pathogens cause infectious diseases at the environmental, molecular and cellular levels and the implications that these mechanisms have on both treatment and prophylaxis; identify the main pathogenic bacteria, their epidemiology, the infections that they cause, as well as the notions of pathogen-specific antibiotic treatment and prophylaxis; explore the general laboratory techniques and methods used in the diagnosis of infections and in the identification of specific disease-causing pathogens.

MEDL411 Parasitology and Microbiology Laboratory 1 cr.

The experimental work supports the ideas explained in the course and introduces microbiological and experimental approaches. It includes bacteriological analysis of samples and a review of cyto-bacteriological bronchopulmonary secretions as well as blood culture. It deals with the cyto-bacteriological examination of urine and urethral smears.

MEDL420 Surgical Semiology 3 cr.**Pre-requisites** SCS405 And SCS410 And SCS430 And SCS435 And SCS440 And SCS445 Or (MEDL325 And MEDL330)

This course discusses and explains the different signs and symptoms related to surgical pathologies as well as providing an introduction to how to take a medical history and do a physical exam.

MEDL425 Epidemiology 3 cr.**Pre-requisites** STA220 Or MEDL215

This integrated course is a multi-disciplinary series of lectures and tutorials covering basic issues in epidemiology and biostatistics. The overall aim of this course is to familiarize students with concepts and measures of vital events, health, disease, disability and death. It also introduces students to epidemiologic methods related to identification of disease

risk and protective factors, and to the assessment of causal associations and inferences. Special attention is given to presenting the contents in the context of the situation in Lebanon where possible. The statistical component of the course will present an overview of statistical estimation and hypothesis-testing procedures, and an introduction to relevant probability models.

MEDL430 General Pharmacology and Toxicology 3 cr.

Pre-requisites MEDL325 And MEDL330

The objective of this course is to familiarize the students with medications. It explains the different phases the medication has to go through before being manufactured and used on the market, the fate of medications in the body as well as the mechanism of action of the medications. The students will become familiar with major side effects of medications, drug-drug interactions and precautions to be taken while prescribing medications in specific populations.

MEDL435 Medical Genetics 3 cr.

The course will focus on human genetics: fundamental aspects, applications and methods. It will include principles of classical genetics and genomics, chromosomal studies, cytogenetic and molecular approaches, genetic variations, population genetics and patterns of inheritance (monogenic, polygenic, and complex).

MEDL445 Economics and Health Management 3 cr.

This course is an introduction to theoretical health systems in the world giving students an insight into different economic, social and ethical aspects. The course covers principles of management focusing on hospital management.

MEDL450 Medical Semiology 3 cr.

The objectives of this course are to teach the students about the basics of physical exam, the signs and symptoms along with the associated biological and radiological signs related to the different syndromes and diseases in medicine.

MEDL455 Emergency First Aid and Introduction to Hospital 1 cr.

This course is for students entering the medical professions. This class is divided in two sessions: 1. Emergency first aid including CPR, first aid care of dislocation and neck fracture and back injuries, and bleeding emergencies; 2. Introduction to the different wards of a teaching hospital, and rotating in small groups to surgical and medical wards - ICU, pain, emergency, pediatrics requiring primary and essential skills.

PHY210 General Physics 3 cr.

The objective of this course is the introduction of various laws, principles and physical mechanisms, whose understanding is essential to students pursuing studies in various branches of science. This course consists of several independent parts. The first one deals with dynamics, the different types of motion, Newton's laws, and conservation of energy. The second part deals with hydrostatics and fluid dynamics. The third part deals with thermodynamics, calorimeters, the first principle and the basic transformations, the ideal gas, and thermodynamic cycles. The fourth part concerns the analysis of simple electrical circuits using Kirchhoff laws and the movement of a particle in an electromagnetic field. In the fifth part we talk about relativity, the theory of photons, and the photoelectric effect. Upon completion of this course the students will have acquired sufficient knowledge of several basic principles in physics and be familiar with these various topics.

PSY201 Introduction to Psychology 3 cr.

This course will provide students with the basic concepts in psychology and will facilitate their access to knowledge during their academic curriculum. It includes the following objectives: understanding psychology from a historical and a theoretical perspective (Gestalt, phenomenological, experimental, scientific, psychoanalytic and cognitive, etc.); understanding the various fields of psychology (clinical, experimental, developmental, educational, social, etc.) and the different methods used (experimental, clinical, psychometric, projective, etc.); providing an appropriate approach to personality issues - basic needs, affective and emotional (feelings, emotions), intellectual (cognition, memory) and social (social influence).

SOC217 Citizen and Civic Engagement 2 cr.

The course aims to teach USEK students notions, concepts and practical applications indicative of a civic and citizenship commitment which would contribute to the development of society.

This course is built on theoretical and practical learning areas as follows: a) Acquiring the concept of commitment and its forms (contract, charity work, activism, promise, voluntarism, giving, love of the other, etc.); b) Adopting the fundamental values of citizens such as: freedom of religion and expression, justice, equality, togetherness, family and social solidarity, patriotic and world collective identity, the place of religion in society, etc. ..); c) Integrating the components of social life: democracy, laws, rights, civil society, communal life, social and community diversity, participation in political and public life, elections, individual, institutional and collective security, municipal activities, union activities, etc...) d) Addressing and dealing with social issues such as sustainable development, community health, social discrimination, work ethics, the integration of people with special needs, etc. (A description of performed observation and action is provided with the course, based on concepts covered in class).

SRO217 Bioethics 3 cr.

More and more, human beings have acquired power over nature due to sciences development and techniques. As a result of biology progress, he is trying to master health problems, reproduction and genetics. As for an essential question: Is all possible desirable?

This biological - techno - scientific upheaval which is causing an effective medicine meet another socio-cultural and ideological upheaval that has influenced the representations of life and death, health and sickness, care and preventive care, curative and palliative treatment... These changes are causing a huge social phenomenon that was materialized with bioethics term in 1971.

MDG510 Clinical Pharmacology and Toxicology 3 cr.

This course will cover all the major classes of medications. For each class of medications, the following subjects will be covered (including but not limited to): Therapeutic use of the class, mechanism of action, pharmacological properties, pharmacokinetics, side effects, drug-drug interactions, use of the medications in specific populations (Pregnancy, Lactation, Renal failure, liver failure...)

MDG515 Electrocardiology and Hemodynamics 3 cr.

This course covers multiple topics regarding dysfunction of the cardiovascular system, mainly in electrocardiology and cardiac mechanics. After a quick review of normal physiology, cardiac pathologies will be presented with a focus on recognized diseases, mainly those related to Dysrhythmias and Heart failure. The course is presented by cardiologists, cardiac anesthesiologist and cardiovascular surgeon, each of them has a different expertise in the field. Consequently, we expect that this course will give you a solid basis in the cardiovascular pathologies relevant to the course and prepare you adequately for the future therapeutics courses.

MDG520 Cardiovascular Pathology 3 cr.

This course covers the dysfunction of the cardiovascular systems. There will be a quick review of normal physiology, focus on cardiac pathology with all recognized diseases, mainly those most frequently encountered in clinical practice. This section 2 mainly focuses on Coronary artery diseases and Valvular diseases. This course will give you a solid foundation in cardiovascular pathology and prepare you for future therapeutics courses.

MDG525 Pulmonary Pathology 3 cr.

Following the acquisition of physiology, pathophysiology and clinical symptomatology, the course of medical and surgical lung diseases, coupled with clinical training and access to records of hospitalized patients, allows students to get to know the different lung diseases in their different aspects; clinical presentation, diagnosis, assessment, differential diagnosis and therapeutic approach that any general practitioner should know. This course focuses on various lung diseases; Infections, interstitial diseases, obstructive diseases, Asthma, neoplasm, vascular disease, pleural disease, respiratory distress...

MDG530 Urinary Tract Pathology 3 cr.

This is a urology-nephrology course that enables the students to study, diagnose and treat male and female urinary tract diseases, and the male reproductive system diseases. It familiarizes them to common urological problems including urinary obstruction, urinary incontinence, infections, and tumors of the urogenital tract...etc... It also teach students nephrological pathologies to know the diagnosis and pathophysiology of renal diseases (tubular, glomerular, and vascular). Differentiate between acute and chronic renal failure. It allows the student to know the essential concepts of urology for future daily practice.

MDG535 Endocrine and Metabolic Diseases 3 cr.

This course aims to introduce, elaborate and explore diseases of the endocrine system and some of the frequent metabolic disorders to the med student in order to help him achieving a good GP practice.

MDG540 Specialized Anatomic Pathology 3 cr.

This course will give the student the tools to diagnose lesions in different organs of the human body. It will let them recognize the abnormal appearance of the tissues in a given organ when subject to a pathological process.

MDG545 Gastrointestinal Pathology 3 cr.

This course covers medical and surgical diseases of the digestive tract. The development of the various chapters of the sessions will be supervised by recall and synthesis to make them easy to understand and enjoyable to browse. As in, students will learn flexibly a significant pathology for their medical education. At the end of the course, students will be able to acquire the basic knowledge of the discipline, to prepare successfully their medical degree and to adequately prepare testing and specialization contests.

MDG550 Anatomic Pathology Laboratory 1 cr.

These lab courses will put the students facing real tissue preparation and allow them to concretize what they have learned in the oral presentations they got in the anatomical pathology courses.

MDG555 Hepatobiliary and Pancreatic Pathology 3 cr.

This course treats the pathologies of the liver, biliary tract and pancreas. The courses will be shared between gastroenterologists and surgeons teachers. This course will aim to be complete and sufficient for students to acquire the basic knowledge necessary for their installation as general practitioners or specialists.

MDG560	Obstetrics and Gynecology	3 cr.
This course allows the student to recognize the various obstetrical and gynaecologic conditions beginning with normal delivery and ending with the different surgical gynaecologic pathologies. The content of this course is the following: normal delivery; its presentation, surveillance, complications... spontaneous abortions, vulvar and vaginal pathologies, uterine pathologies, ovarian and tubal pathologies, breast tumors, hemorrhages, infertility, hormonal problems; puberty, menstrual cycle, menopause.		
MDG565	Dermatology and Plastic Surgery	3 cr.
At the end of this course the student, a future general practitioner, must be able to examine a patient suffering from dermatosis, to recognize the lesions and to describe them, and to be able to differentiate and diagnose the most frequent dermatological pathologies. The student must know how to recognize the surgical indications and appreciate the urgency of the treatment.		
MDG570	Pathology of the Musculoskeletal System	3 cr.
The purpose of this course is to enable students to acquire notions of useful bases that any general practitioner should know, to be able to make diagnoses in everyday bone and joint diseases. The course includes concepts on pediatric orthopedics, notions on degenerative and infectious diseases and finally traumatology.		
MDG575	Psychopathology	3 cr.
Modern psychiatry has expanded its focus to other areas than alienation, such as anxiety in all its forms, somatoform disorders, pain, psycho-oncology, eating disorders, sexuality etc... It is estimated that around 25% of patients seen in general practice suffer from psychiatric symptoms or disorders. It is essential that (future) doctors receive more training in these newly recognized diseases that represent the quarter of their professional activity. Training in conventional psychiatry (such as schizophrenia) is no longer sufficient. The purpose of this course is to learn the basics in the diagnosis and treatment of the major psychiatric disorders found in child and adult psychiatry.		
MDG580	Neurological Diseases	3 cr.
The purpose of this course is to deliver to the student a thorough knowledge of (surgical and medical) diseases of the nervous system, that are the most useful for a general practitioner because of their prevalence, their severity, the presence of possible therapeutic resources or their didactic interest. It will outline different disease processes and diagnostic procedure for each and allow the student to have hospital diagnostic and therapeutic responsibilities in decision-making procedures.		
MDG585	Ear, Nose, and Throat Pathology, and Ophthalmology	3 cr.
This course will develop ENT pathology concerning the ear pathologies, and functional hearing disturbances, nose and sinuses diseases, oropharynx pathologies laryngeal and cervical, and facial pathologies in order to help the GP to treat the most frequent, to detect the most critical and follow up the most dangerous.		
MDG590	Oncology	3 cr.
Hemato-Oncology course is divided into 2 parts: The part one is on solid tumour. The part two is on hematologic malignancies The first session is an introduction to the course, followed by sessions on the carcinogenesis and principles of cancer's therapy than a detailed one on prevention and early detection. The other sessions are about oncologic emergencies, paraneoplastic syndromes and detailed sessions focused on the most prevalent and the most lethal cancer as well on those that shows some exemplarity. The second part describes the most common hematologic malignancies as well as those who need particular care as they are extremely dangerous.		
MDG595	Infectious Diseases	3 cr.
The purpose of this course is to deliver to the student a thorough knowledge of different infectious diseases, which are the most useful for a general practitioner because of their prevalence, their severity, and the presence of possible therapeutic resources or their didactic interest. It will outline different disease processes and diagnostic procedure for each and allow the student to have hospital diagnostic and therapeutic responsibilities in decision-making procedures.		
MDG600	Pediatrics	3 cr.
The objective of this course is to provide a rapid overview of common paediatric topics. This course implies much about the ability of the medical student to gather and analyze data and formulate a treatment plan. In addition, an overview of the most frequent surgical situations is analysed.		
MDG610	Systemic Diseases and Internal Medicine	3 cr.
Pre-requisites	SMG512	
This course is made as a description of the various rheumatic diseases most frequently observed in internal medicine and general medicine to rapid diagnosis and plans a course of action therapeutic and educational.		
MDG615	Hematology and Clinical Biology	3 cr.
Pre-requisites	SMG512	
The first part of the Clinical Biology course, hematology, will discuss the basic concepts required to understand the physiology of blood cells, bone marrow and blood-forming organs, as well as, hemostasis. This understanding can then be used to properly interpret laboratory tests and make treatment and management plans. There will be a special		

emphasis on both the cytologic and immunophenotypic diagnostic aspect of hematological diseases. The second part of the course, clinical chemistry, will teach the foundations of clinical biochemistry that are necessary to understanding biochemical investigations. By using clinical cases as teaching material, the student will gain the knowledge and skills to make appropriate use of biochemical tests for the diagnosis and management of disease.

MDG620 Public Health and Occupational medicine 3 cr.

- Introduction to the doctor-patient relationship, doctor-hospital relationship, doctor-justice
- Lebanese Code of Medical Ethics
- Introduction to the three areas of medical law: medical liability, patient rights and bioethics
- Bioethics laws currently in force

MDG625 Forensic Pathology and Medical Law 3 cr.

This course is given in the form of 17 class sessions and 6 group work sessions. This course is equivalent to 3 credits. It aims to familiarize students (future practitioners) with public health and occupational medicine.

MDG630 Introduction to Medical Research 3 cr.

This integrated course is a series of lectures and tutorials covering fundamental concepts and basic analytic methods pertaining to the design, analysis, and interpretation of clinical research studies. It will prepare students to medical thesis concepts as well as clinical research organization.

MDG635 Medical and Surgical Therapeutics Seminars I 3 cr.

Pre-requisites SMG513

The course assembles in two parts a broad spectrum of pathologies (the more frequent in daily practice of a general practitioner) in medical and surgical areas and helps the students to assess frequent and urgent situations in matters of diagnosis and therapeutics.

MDG640 Medical and Surgical Critical Care 3 cr.

Pre-requisites SMG513

The aim of the course is to prepare future generalists for airway techniques, CPR techniques, analgesic techniques and other critical care and anesthesia skills to use in critical situations for their patients.

MDG645 Clinical Reasoning and Risk Management 3 cr.

This course describes and elaborates on the process of reasoning facing a clinical situation, dealing with the best use of the knowledge gained by the students through the learning process considering above all the safety of the patient, of the team and finally themselves.

The course will be divided into 3 parts: (1) The reasoning process (2) The risk management (3) The ethical problems, with clinical examples concerning in particular organ transplantation.

MDG650 Medical and Surgical Therapeutics Seminars II 3 cr.

Pre-requisites SMG513

The course assembles in two parts a broad spectrum of pathologies (the more frequent in daily practice of a general practitioner) in medical and surgical areas and helps the students to assess frequent and urgent situations in matters of diagnosis and therapeutics.

SIN240 Introduction to Nursing Sciences 3 cr.

This course aims at teaching current medical vocabulary. It introduces students to the history of the profession and the various concepts and theories of nursing. It is a theoretical course on basic nursing care: hygiene, comfort and vital parameters. Furthermore, the students are introduced to the study of the basic needs of human beings according to influential nurse, researcher, theorist and author, Virginia Henderson, in addition to the care process and handling the nursing care file. It concludes with an exploration of professional ethics through brainstorming.

SIN242 Human Anatomy and Physiology 3 cr.

This course provides a general overview of the human anatomy and the organization of the various human body systems. It introduces the basics of the normal functioning of an organ, starting with the structural and functional unit that is the cell and ending with the most organized systems and the links among them. Students will become acquainted with these essential key concepts, and will learn to master them, as they are essential for the assimilation and understanding of the pathophysiology and pathology.

SIN243 Basic Nursing Care 3 cr.

Pre-requisites SIN240

The course teaches basic knowledge about child health from birth to adolescence and the description of associated nursing health care, in particular prevention and detection of pathologies and specific risks from the stages of early childhood to adolescence. This theoretical course covers the basics of nursing competencies, known as "cross-sectional care". Students will deepen their knowledge of the nursing care process with an introduction to the concept of nursing diagnosis.

SIN245 Clinical Training and First Aid 3 cr.

This course familiarizes students with the basic knowledge of the functioning of the various systems of the body and their main diseases. In addition, awareness of accident prevention, infectious diseases and those related to current lifestyle (sedentary lifestyle, poor eating habits, etc.), prevention and cancer screening will be covered. This is a practical course where students will learn through activities; they will be taught how to conduct first aid practices, including all the steps to follow when facing life-threatening emergencies or accidents (a first aid certificate is delivered by the Lebanese Red Cross).

SIN246 Elderly Nursing Care 3 cr.

This course explores the role of the elderly in society, the aging physiology and psychological difficulties facing the multiple losses due to old age. Specific diseases and pathologies of the elderly will be examined and the associated nursing and basic care will be taught.

SIN260 Clinical Internship I 2 cr.

Internships are where students learn and practice basic nursing care procedures in a hospital setting, including hygiene care, comfort of the patient, and monitoring of vital parameters. This internship experience will introduce students to the structure and organization of a hospital, the role of each member of the team, the opportunity to observe patient care procedures in hospital wards, and practical experience in basic care and hygiene monitoring as studied.

SIN265 Clinical Internship II 2 cr.

This internship focuses on the observation and participation by students in providing care to preschool and school children, adolescents and the elderly in daycare centers, schools and hospices. Observation and implementation of the healthcare and basic nursing care procedure as studied and demonstrated during the course will be put into practice, which will provide students with essential practical experience.

SIN270 Clinical Internships (Summer) 1 cr.

Students will participate in two full-time internships to gain experience in the implementation and enhancement of basic theoretical knowledge and skills studied during the first two semesters.

SIN323 Public and Community Health and Nursing Care 3 cr.

This course introduces students to the elements that influence health, helps them to identify information resources that allow and facilitate the knowledge of a community, and to practice nursing in different community health and public health environments with different clientele living with particular health problems.

SIN340 Pharmacology - Toxicology 3 cr.

The pharmacology course includes theoretical teaching and bibliographic research. The theoretical training consists of two parts: general and specific pharmacology. The first part is based on the fundamental concepts in pharmacology, and the second part talks about the drugs used for diseases of different systems. This second part introduces the therapeutic classes, the most frequently prescribed drugs, and the more recent drugs on the market. It also provides practical remarks and notes, and preventive measures, while focusing on the profession of nursing in particular, for a better and easier practice in situ. Regarding the practical part, students will choose a topic they would like to deal with among a series of suggested topics. Then, students will be asked to prepare a written report, followed by a short oral presentation about their research topic, allowing all students to benefit from all subjects discussed. This course is specifically designed for nursing students, as it provides them with the essential concepts and practical recommendations that will be important for them later on in the workplace. The toxicology course covers all acute situations and cases of toxic origin that an ER doctor or nurse may face. The groups of the most important toxic substances seen are studied as well as medicines, drugs, corrosives, and chemical weapons, etc.

SIN342 Pediatric Pathology and Nursing Care 3 cr.

Pre-requisites SIN242

This course acquaints students with the prevailing exemplary pathologies, and the most urgent and serious neonatal cases, emergency infant, young child and adolescent cases and situations, as well as the various methods of preventing these diseases. It also describes the most common pediatric syndromes or diseases requiring surgical treatment. Students will acquire the theoretical knowledge needed for the care and supervision of a child in a neonatal period, in the hospital and in society. This useful knowledge is essential for any nursing student wishing to be a health promoting agent within the community.

SIN343 Respiratory Pathology and Nursing Care 3 cr.

Pre-requisites SIN242

In this course students will revisit in detail the physiological anatomy of the respiratory tract system, including the main pathologies of pneumology and nursing care associated with the diagnosis, and the medical treatment and surgical management of these diseases. The role of nurses combating the health consequences, prevention, and cessation of smoking is also a focus subject tackled on this course.

SIN345 Psychiatry and Nursing Care 3 cr.

This course describes the major psychiatric illnesses and explores the various available treatments of these diseases.

SIN346 Nutritional Endocrine Pathology and Nursing Care 3 cr.

Pre-requisites SIN242

This course offers a clinical and para-clinical description of the various endocrine syndromes, their treatment and the role of the nurse with patients showing these symptoms. The course describes also the various endocrine pathologies requiring surgery, detailing the medical indications, surgical techniques, complications to be faced and the role of the nurse with patients. It also introduces them to the nutrition and nutritional strategies in situations of abuse and various pathologies that may benefit from nutritional care, such as diabetes, kidney disease, dyslipidemia, obesity and cardiovascular disease.

SIN347 Cardiovascular Pathology and Nursing Care 3 cr.**Pre-requisites** SIN242

The nursing care part of the course revisits the physiological anatomy of the cardiovascular system, a description of the main diseases in cardiology and the nursing care responsibilities related to the diagnosis, as well as the medical treatment and surgical management of these diseases. The cardiac surgery part of the course covers the main surgery procedures of the heart and thoracic aorta, detailing surgical pathologies, the principle of procedure as well as the major surgical complications and their treatment.

SIN348 Digestive Pathology and Nursing Care 3 cr.**Pre-requisites** SIN242

This course provides an understanding of the basics of physiopathology and an assimilation of the basic concepts of the various digestive and liver diseases and their consequences, in order to design and manage the care of patients. It accurately describes the nursing care of patients with digestive diseases.

SIN349 Sense Organs Pathology and Nursing Care 3 cr.**Pre-requisites** SIN242

This course teaches students about the elementary physiopathology of the sense organs and how to assimilate the fundamentals of the various eye, ENT sphere, and skin diseases and their consequences, in order to design and manage the treatments and care for patients without any complications. Learning about the prevention measures, the application of the nursing care process and the establishment of the nursing diagnoses are fundamental to this course.

SIN350 Urinary Pathology and Nursing Care 3 cr.**Pre-requisites** SIN242

This course teaches students the basic concepts of the physiopathology of the male urinary and genital tract and its various pathologies: general introduction, etiology, symptoms, clinical and para-clinical evaluation, complications, therapeutic steps and the nursing role that arises. It includes a detailed description of the nursing care of patients with major urinary pathologies.

SIN360 Clinical Internship III 2 cr.

This course teaches students the basic concepts of the physiopathology of the male urinary and genital tract and its various pathologies: general introduction, etiology, symptoms, clinical and para-clinical evaluation, complications, therapeutic steps and the nursing role that arises. It includes a detailed description of the nursing care of patients with major urinary pathologies.

SIN365 Clinical Internship IV 2 cr.

This internship will facilitate the development of knowledge and theoretical/practical skills in relation to nursing care, clinical assessment in the nursing field, the organization of care and the patient/care provider relationship. Knowledge acquisition in this internship is preferably centered on the teaching of diseases and nursing care, which is provided in parallel during the course.

SIN370 Clinical Internships of Liability (Summer) 1 cr.

These two full-time internships include one in psychiatry, aiming to develop knowledge, and another in the theoretical/practical skills studied over the last two semesters.

SIN441 Obstetrics-Gynecology and Nursing Care 3 cr.**Pre-requisites** SIN242

The first part of the course covers general information about pregnancy and possible nursing interventions for patients in the delivery room and postpartum. The second part provides an understanding of the basics of the different pathologies in gynecology in order to oversee the care of patients and avoid any complications. In both parts, learning preventive measures, applying nursing care processes and the establishing nursing diagnoses are essential knowledge and skills to acquire.

SIN442 Infectious Diseases – Microbiology and Nursing Care 3 cr.**Pre-requisites** SIN242

This course covers infectious disease mechanisms including ecological, molecular and cellular, and the implications of these mechanisms for the treatment and prophylaxis. The focus will be on the integration of basic concepts of antibiotic treatment and specific prophylaxis and general methods of diagnosing bacterial infections and pathogens requiring technical methods. Students will study the most common infectious diseases, treatments, prevention methods and the

specific nurse responsibilities for these pathologies, along with a study of nosocomial infections and the role of the nurse (AD) in their prevention.

SIN443 Neurological Pathology and Nursing Care 3 cr.

Pre-requisites SIN242

This course provides an understanding of elementary physiopathology and the basic concepts of the different pathologies of the nervous system and their consequences, in order to design and manage the care of patients and avoid complications as much as possible. In addition, learning about prevention, the application of the nursing process and the establishment of nursing diagnoses are important aspects of this course.

SIN444 Pathology of the Musculoskeletal System and Nursing Care 3 cr.

Pre-requisites SIN242

This course provides essential knowledge in how to manage major trauma orthopedic conditions and basic nursing care skills in orthopedic pathologies trauma. Students will be introduced to clinical presentation, the means of diagnosis, and the therapeutics of mechanical rheumatic and inflammatory diseases, in addition to a description of the nursing care procedures undertaken with patients with musculoskeletal trauma and orthopedic pathologies.

SIN445 Hematology-Oncology and Nursing Care 3 cr.

Pre-requisites SIN242

This course is designed to provide students with the necessary information to understand the various benign and malignant hematological diseases, and cancer diseases. The various parts of the course allow students to understand the basic mechanisms of disease formation and help them adopt the related treatments. It accurately describes the nursing care procedures for patients with hematological disorders and cancerous diseases.

SIN446 Medical-surgical Intensive Care and Nursing Care 3 cr.

Pre-requisites SIN242

This course helps students understand and assimilate the basic concepts of the different pathologies in intensive care units and their consequences, in order to design and manage the type of care required for patients in critical conditions. It describes in detail the nursing care procedures to be given to critically-ill patients.

SIN450 Administration and Professional Organization 3 cr.

This course is an introduction to professional organization and the knowledge and skills related to leadership and nursing care procedures management in view of delivering a better community service.

SIN460 Clinical Internship V 2 cr.

This internship is for the development of knowledge and theoretical/practical skills in relation to nursing care, clinical assessment in the nursing field, the organization of care and the patient/care provider relationship. It is preferable that this knowledge acquisition is centered on the teaching of diseases and nursing care, which is provided in parallel during the course.

SIN465 Clinical Internship VI 2 cr.

Last training internship: consolidation of acquired skills.

SMG510 Introduction to Hospital Training 1 cr.

During their internship, the students must be able to integrate all their knowledge in semiology and pathology in order to: interrogate the patient and family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; respect the rules of ethics and deontology.

SMG511 Hospital Training I 1 cr.

Pre-requisites SMG510

During internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; and respect ethics and deontology.

SMG512 Hospital Training II 3 cr.

Pre-requisites SMG511

During internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; and respect ethics and deontology.

SMG513 Hospital Training III 3 cr.

Pre-requisites SMG512

During the internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; elaborate a tailored plan of investigations based on a clear structure; and respect ethics and deontology.

SMG514 Hospital Training IV 3 cr.

Pre-requisites SMG513

During the internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; elaborate a tailored plan of investigations based on a clear structure; and respect ethics and deontology.

SMG515 Hospital Training V 3 cr.

Pre-requisites SMG514

During the internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; elaborate a tailored plan of investigations based on a clear structure; and respect ethics and deontology.

SMG516 Hospital Training VI 1 cr.

Pre-requisites SMG515

During the internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; elaborate a tailored plan of investigations based on a clear structure; and respect ethics and deontology.

SMG517 Hospital Training VII 3 cr.

Pre-requisites SMG516

During the internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; elaborate a tailored plan of investigations based on a clear structure; and respect ethics and deontology.

SMG518 Hospital Training VIII 3 cr.

Pre-requisites SMG516

During the internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; elaborate a tailored plan of investigations based on a clear structure; and respect ethics and deontology.

SMG519 Hospital Training IX 3 cr.

Pre-requisites SMG517

During the internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; elaborate a tailored plan of investigations based on a clear structure; and respect ethics and deontology.

SMG520 Hospital Training X 3 cr.

During the internship, the students must be able to recall all their knowledge in semiology and pathology in order to gain skills to: interrogate the patient and the family regarding the patient's medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the residents and the attending physicians; elaborate a tailored plan of investigations based on a clear structure; and respect ethics and deontology.

TMG697A Thesis of Medicine 9 cr.

Pre-requisites SMG517

The medical students are asked for a thesis which is intended to deliver basic principles that form the foundation for scientific investigation and prepare students with the fundamentals for development of research. They will use, under

the supervision of their tutors, a clinical research method, and research the literature and public information in support of their work, to provide a written document to be discussed in front of a jury.

MEDR901 Surgical Anatomy 3 cr.

This course deals with the knowledge of applied anatomy according to different surgical approaches. It teaches residents how to evaluate the anatomical and surgical risk of different approaches and master the urgent actions to be performed using anatomical knowledge.

MEDR902 Pediatric Emergencies 3 cr.

This course gives students a clear indication of what they need to prioritize. It provides an educational road map. At the end of this course, the learners should be able to manage all situations in the emergency room, like interpreting a standardized ECG, and list a differential diagnosis to all essential pathologies received in ED. This course is more practical than theoretical. It is a process of collecting, synthesizing, and interpreting information to aid decision-making.

MEDR903 Semiology in Radiology 3 cr.

The course enables residents to identify, understand and interpret radiologic signs in different pathologies.

MEDR904 Principles of Anesthesia and Critical Care Medicine 3 cr.

This course is given to the residents in anesthesiology as an introduction and an upgrading of their basic knowledge in anesthesia to all future specialists in this field.

MEDR906 Trauma 3 cr.

This course allows residents to understand and evaluate traumatic emergencies and classify clinical syndromes. They become familiar with the study of the circumstances and the know-how to establish a diagnostic approach. They learn to master the urgent actions to be executed and chart the course of action and ensure medical care.

MEDR907 Anesthesia according to the Surgical/Medical Procedure 3 cr.

This course aims to prove that, independently of the patient status and medical background, anesthesia can differ according to the intervention (procedure) to be carried out.

MEDR908 Anesthesia according to the Status and Medical background of the Patient 3 cr.

This course aims to prove that, independently of the intervention (procedure) to do, anesthesia can differ according to the patient status and medical background.

MEDR909 Anesthesia in Children, Shocks and Aggressions 3 cr.

This course is an upgrading in special areas and subspecialties in particular in pediatric patients. Also, critical care situations and aggressions will be discussed extensively.

MEDR910 Medical Emergencies 3 cr.

This course helps residents recognize urgent situations requiring immediate intervention. It describes an appropriate diagnostic approach and teaches them to apply the basic principles of management with proper prioritization of solving problems and taking actions.

MEDR911 Non-trauma Urgent Surgical Situations 3 cr.

This course allows residents to understand and evaluate non traumatic emergencies and classify clinical syndromes. Residents study the circumstances and the know-how to establish a diagnostic approach. They learn how to master the urgent actions to be executed and chart the course of action and ensure medical care.

MEDR912 Pediatric and Neonatal Resuscitation 3 cr.

This course is an educational program that introduces the concepts and basic skills of pediatric and neonatal resuscitation. By completing this course, the teachers are responsible for determining the level of competence and qualifications required for residents to assume clinical responsibility for resuscitation cases in hospital.

MEDR913 Basic Principles in Pediatrics 3 cr.

This course is essential to check that residents have acquired the basics during their M.D. and to guide them to the specific resources of their specialty. It will lead them to understand the challenges faced by children living in resource-poor settings.

MEDR914 General Pediatrics Guidelines 3 cr.

The guidelines are developed by the AAP in response to the lack of standardized guidelines for international health training in pediatric residencies. Residents are encouraged to utilize and adapt these guidelines to assess their progress in meeting the objectives of their training.

MEDR916 Surgical Methodology 3 cr.

This course allows residents to understand the basic principles of surgery. They learn how to support a patient pre- and post-operatively. They learn how to guarantee the follow up of procedures and manage complications and know the latest updates in surgery.

MEDR918 Principals in ENT 3 cr.

During the first year, courses are held for the residents in the basic sciences of Ear, Nose and Throat (ENT) (such as embryology, anatomy and physiology of the ENT and head and neck), at the Eye & Ear Hospital.

MEDR919 Surgical Anatomy in ENT 3 cr.

This course will cover a large number of the ENT diseases which are found in the pediatric population. It will also deal with surgical anatomy aspects related to ENT.

MEDR920 Semiology and Pathology of the Ear, the Nose and the Sinuses 3 cr.

This course will cover the special ENT diseases which are diseases of the regions of the nose and the ear. The course will also develop the techniques to explore these special regions.

MEDR921 Semiology and Pathology of the Head and Neck 3 cr.

This course will cover the head and neck pathology which includes diseases, injuries and malformations.

MEDR922 Anatomy and Embryology and Physiology of the Eye 3 cr.

During the first year, courses are held for the residents in the basic sciences of ophthalmology (such as embryology, anatomy and physiology of ocular structures) at the Eye & Ear Hospital.

MEDR923 Ophthalmic Investigation Methods, Surgical Methodology in Ophthalmology and External Ocular Pathologies 3 cr.

This academic credit is held all year long, the courses being given at the Eye & Ear department in the form of clinical cases and/or presentations which may be prepared by the residents themselves in the presence of attending physicians who may discuss specific cases with residents. Emphasis is placed on methods of examination in ophthalmology.

MEDR924 Anterior Segment Pathologies 3 cr.

This covers anterior segment pathologies, diseases of the orbit, pediatric ophthalmology and neuro-ophthalmology.

MEDR925 Posterior Segment Pathologies and Neuro-ophthalmology 3 cr.

This covers posterior segment pathologies, diseases of the orbit, pediatric ophthalmology and neuro-ophthalmology.

MEDR926 Medical Pathologies I 3 cr.

This course helps residents master their knowledge in physiology, clinical findings, diagnosis and differential diagnosis, investigations and treatment of frequent diseases in cardiology, gastro-intestinal medicine, and hematology (benign and malignant).

MEDR927 Medical Pathologies II 3 cr.

This course helps residents master their knowledge in physiology, clinical findings, diagnosis and differential diagnosis, investigations and treatment of frequent diseases in pneumology, neurology, oncology and dermatology.

MEDR928 Medical Pathologies III 3 cr.

This course helps residents master their knowledge in physiology, clinical findings, diagnosis and differential diagnosis, investigations and treatment of frequent diseases in internal medicine, rheumatology, endocrinology, infectious diseases, nephrology and dermatology.

MEDR929 Cellular and Histological Physiology 3 cr.

This course aims to upgrade the basic knowledge about cell and tissue physiology in order to understand the morphology and the pathological transformations.

MEDR930 Morbid Processes 3 cr.

This course aims to upgrade the basic knowledge of the morbid processes at the microscopic level to understand more about pathophysiology and diseases.

MEDR930A-B-C-D Seminars and Conferences 12 cr.

Seminars and conferences represent both a learning and assessment tool knowing that the theoretical education of the resident remains mostly a personal work that begins with reading books and articles, preparing conferences and is ongoing with continuing medical education and self-learning (erudition). During development, the "apprentice doctors" must initially attend and listen to their elders, then submit records to the staff, then present lectures to peers and seniors locally (hospital) and in a local congress and finally in an international congress. In parallel and concerning teaching, it begins with clinical teaching to the youngest and finishes during university courses.

MEDR931 Pathology of Organs and Systems 3 cr.

This course discusses the pathology of all organs and systems on the microscopic and macroscopic levels.

MEDR932 Pathology of the Skin, the Central Nervous System and Soft Tissue System 3 cr.

This course discusses the pathology of the skin, the central nervous system and soft tissue system on the microscopic and macroscopic levels.

MEDR933 Psychiatric Pathologies I 3 cr.

Psychiatry is the branch of medicine concerned with the bio-psycho-social study of the etiology, assessment, diagnosis, treatment and prevention of mental, emotional and behavioral disorders, alone or as they coexist with other medical

or surgical disorders across the life span. Upon completion of training, the residents are expected to be competent specialists in psychiatry. Residents must demonstrate the requisite knowledge, skills and attitudes for effective patient-centered care and service to a diverse population across the life span. The residents must acquire a working knowledge of the theoretical basis of psychiatry, including its foundations in the basic medical sciences and research. In all aspects of specialist practice, the residents must be able to address issues of gender, sexual orientation, age, culture, ethnicity and ethics in a professional manner.

MEDR934 Psychiatric Pathologies II 3 cr.

Psychiatry is the branch of medicine concerned with the bio-psycho-social study of the etiology, assessment, diagnosis, treatment and prevention of mental, emotional and behavioral disorders, alone or as they coexist with other medical or surgical disorders across the life span. Upon completion of training, the residents are expected to be competent specialists in psychiatry. Residents must demonstrate the requisite knowledge, skills and attitudes for effective patient-centered care and service to a diverse population across the life span. The residents must acquire a working knowledge of the theoretical basis of psychiatry, including its foundations in the basic medical sciences and research. In all aspects of specialist practice, the resident must be able to address issues of gender, sexual orientation, age, culture, ethnicity and ethics in a professional manner.

MEDR937 Medical Microbiology 3 cr.

The medical microbiology course aims to: understand the collection, transport and processing of different microbiological samples; explore the general laboratory techniques and methods used in the diagnosis of infections and in the identification of specific disease-causing micro-organisms; survey the main pathogens in bacteriology, virology, parasitology and mycology - their epidemiology, the clinical infections that they cause as well as treatment and prophylaxis.

MEDR938 Medical Biochemistry 3 cr.

This course will explore the theoretical principles, interferences and clinical interpretation of the different tests that are performed in clinical chemistry. Furthermore, residents will learn the mechanisms, proper methods of operation, maintenance and quality control of the lab equipment used to measure various chemical parameters.

MEDR939 Clinical Hematology 3 cr.

The clinical hematology course will teach the students the theory of hematology, lab techniques in hematology and the proper extension of hematology lab investigations to the clinical setting.

MEDR940A-B-C-D Internship Residency I 24 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR941A-B-C-D Residency Rotation in Surgery 24 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR946 Polyvalent Clinical Pathology 3 cr.

This course will explore quality control, management and administrative issues related to laboratory functioning. The students will also deepen previously acquired knowledge in clinical microbiology, clinical chemistry and clinical hematology.

MEDR947A-B-C-D-E-F-G-H Residency Rotation in Orthopedics 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR948A-B-C-D-E-F-G-H Residency Rotation in Urology 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR949A-B-C-D-E-F Residency Rotation in General Surgery 36 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR950A-B-C-D-E-F-G-H Residency Rotation in Neurosurgery 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR951A-B-C-D-E-F-G-H-I-J Residency Rotation in Cardiovascular and Thoracic Surgery 60 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR952A-B-C-D-E-F Residency Rotation in Gynecology 36 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR953A-B-C-D Residency Rotation in Internal Medicine 24 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR954A-B-C-D-E-F Residency Rotation in Cardiology 36 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR955A-B-C-D Residency Rotation in Pulmonology 24 cr.

During the residency, the students must be able to integrate all their knowledge in physiology, pathophysiology, semiology and pathology in order to: interrogate the patient and family regarding the patient's active and past medical history; perform a complete and thorough clinical examination; write a good medical observation based on the collection of data and the clinical examination; develop diagnostic hypotheses and discuss them with the other residents and the attending physicians; elaborate a tailored plan of investigations and treatment based on a clear structure and common sense and respect of ethics and deontology.

MEDR955E-F-G-H Residency rotation in Pulmonary diseases and Intensive Care Medicine 24 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR956A-B-C-D-E-F Internship Residency in Neurology 36 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR957A-B-C-D-E-F-G-H Residency Rotation in Hematology-Oncology 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR958A-B-C-D-E-F Residency Rotation in Gastroenterology 36 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR959A-B-C-D-E-F Internship Residency Nephrology 36 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR960A-B-C-D-E-F-G-H-I- J Residency Rotation in Anesthesia 60 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR961A-B-C-D-E-F-G-H Residency Rotation in Pediatrics 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR962A-B-C-D-E-F-G-H Residency Rotation in Radiology 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR963A-B-C-D-E-F Residency Rotation in ENT 36 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR964A-B-C-D-E-F-G-H Residency Rotation in Ophthalmology 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR965A-B-C-D Residency Rotation in Emergency Medicine 24 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR966A-B-C-D-E-F-G-H Residency Rotation in Pathology 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical

skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR967A-B-C-D-E-F-G-H Residency Rotation in Psychiatry 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR968A-B-C-D Residency Rotation in Dermatology 24 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR969A-B-C-D-E-F-G-H Residency Rotation in Clinical Biology 48 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

MEDR970A-B-C-D-E-F Residency Rotation in Endocrinology and Metabolic Disorders 36 cr.

The core curriculum is the phase in which residents will acquire all the basic theoretical knowledge of their specialty as well as multidisciplinary expertise in relation to the specialty. During this phase, residents improve basic clinical skills (diagnostic, medical strategy and treatment), improve their technical skills in the specialty, their organizational skills, their communication skills, during the study of the curriculum and beyond, as well as their ethical and professional skills.

Pontifical School of Theology

Overview

Under the official mandate given to the School by the Lebanese Assembly of Catholic Patriarchs and Bishops in 1974 and ratified by Rome in 1982, the Pontifical School of Theology works hard to ensure its students – most of which are preparing for ministry – receive a university theological education initiating students to the theological speech's critical and analytical method, and that is by promoting a constructive dialogue with other university majors especially philosophy and humanities. The Catholic Church in Lebanon recognizes through this choice that university theology is necessary to the revival of the pastoral ministry in the Church. In addition, the Pontifical School of Theology is fully aware that its vocation is to be "oriental" and "catholic" just like the Church from which it depends and which it serves. Our school, with the help of the Liturgy Institute affiliated to it, has been concentrating since its foundation on shedding the light the best way possible on the oriental theology and its dogmatic, liturgical and spiritual components without neglecting the occidental theological thought. Through this double approach, the school aims at providing a theological teaching in an ecumenical spirit.

The Pontifical School of Theology consists of the following programs:

Undergraduate Studies

- Bachelor of Arts in Theology

Graduate Studies

- Master of Arts in Theology

Doctoral Studies

- Ph.D. in Theology

Administration and Full-time Faculty

Fr. Dr. Elias Ghattas Jamhoury, Associate Professor, **Dean**

Professors:

Fr. Prof. Hady Mahfouz

Associate Professors:

Fr. Dr. Antoine Mikhael

Fr. Dr. Antoine Al Ahmar

Fr. Dr. Ayoub Chahwan

Fr. Dr. Charbel Chléla

Fr. Dr. Elias Hanna

Fr. Dr. Gaby Hachem

Fr. Dr. Jean Azzam

Fr. Dr. Marwan Azar

Fr. Dr. Michel Abou Tacca

Fr. Dr. Wahib Khawaja

Assistant Professors:

Sr. Dr. Dolly Chaaya

Fr. Dr. Toni Eid

Undergraduate Programs

Bachelor of Arts in Theology

Mission

The Canonical Bachelor degree in Theology is a five-year basic program. It aims to impart a solid philosophical education, which is a necessary propaedeutic for theological studies, and to offer an organic exposition of the whole of Catholic doctrine, covering a coordinated presentation of all the disciplines, along with an introduction to theological scientific methodology.

Program Educational Objectives

1. Graduates will acquire a deep grasp of the entire catholic doctrine grounded in divine revelation, which allows them to gain nourishment for their own spiritual life, and to announce and safeguard it in the exercise of the ministry.
2. Graduates will acquire a personal theological synthesis, a mastery of the method of scientific research and thus become able to explain sacred doctrine appropriately.
3. Graduates will be ready to fulfill pastoral ministry and other functions in the Church, especially in the administration of a parish, in catechetical and homiletic skills, in divine worship and particularly the celebration of the sacraments.

Program Outcomes

- a. Ability to understand major philosophical systems, especially those which exercise a greater influence in the region, and to discern what is proven to be true therein and detect the roots of errors and refute them.
- b. Ability to understand the characteristics of the contemporary mind, and enter into dialogue with men and women of today.
- c. Ability to read the Holy Scriptures in their original languages.
- d. Ability to explain biblical texts according to a valid method of exegesis and in the light of a comprehensive view of the whole of Sacred Scripture.
- e. Ability to announce in a suitable way the teaching of the Gospel and of the doctrine of the Catholic Church to the people of today in a manner adapted to their understanding.
- f. Ability to exercise a pastoral ministry in the Church.
- g. Ability to understand doctrine of non-Catholic Churches and non-Christian religions and enter into dialogue with them.
- h. Ability to examine theological questions by their own appropriate research and with scientific methodology.
- i. Ability to go on to the second cycle and pursue higher theological studies.

Degree Requirements

This program requires 153 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

Common Core	39
PSY215 - Psychologie	2
SOC220 - Introduction to Sociology	2
MTR222 - University Working Methodology	3
PHI210 - Greek Philosophy	3
PHI213 - History of Contemporary Philosophy	3
PHI301 - Medieval Philosophy	3
PHI326 - Philosophy of Nature	3
PHI327 - Philosophical Anthropology	3
PHI333 - Modern Philosophy	3
PHI420 - Logic and Philosophy of Knowledge	3
PHI225 - Metaphysics	2
PHI231 – Moral Philosophy	3

PHI235 - Arabic Studies	2
PHI328 – Philosophie de l’homme	2
PHI465 – Philosophy of St. Thomas	2
Specialization	107
THEO211 - Pentateuch and Historical Books	3
THEO212 - Synoptics and Acts of the Apostles	3
THEO213 - Introduction to the Bible	3
THEO220 - Fundamental Theology: Revelation and Faith	3
THEO221 - Oecuménisme	2
THEO233 - Ecclésiologie	2
THEO232 - Christology	3
THEO251 - Fundamental Moral Theology	3
THEO273 - Histoire de l'Eglise Antique	2
THEO310 - Grec biblique I	2
THEO311 - The Prophets	3
THEO312 - Johannine Corpus	3
THEO320 - Grec biblique II	2
THEO315 - Hébreu Biblique I	2
THEO325 - Hébreu biblique II	2
THEO331 - The Holy Trinity	3
THEO332 - Introduction aux Pères de l’Eglise	3
THEO336 - Patrologie Orientale	3
THEO337 - Patrologie Occidentale	3
THEO340 - Sacrements de l'Initiation chrétienne	2
THEO342 - Sacerdoce	3
THEO344 - Eucharistie	3
THEO345 - Introduction à la liturgie	2
THEO347 - Sacrement de guérison	3
THEO351 - Social Ethics	3
THEO353 - Théologie spirituelle orientale et mystique	2
THEO361 - Pastoral and Practical Theology	2
THEO373 - Histoire de l'Eglise Médiévale	2
THEO410 - Droit Canonique I: Normes et Personnes	2
THEO411 - Pauline Corpus	3
THEO412 - Psalms and Wisdom Scriptures	3
THEO413 - Lettres Catholiques	2
THEO420 - Droit Canonique II: Institutions	2
THEO422 - Islam	2
THEO430 - Droit canonique III: Mariage	2
THEO431 - Christian Anthropology	3
THEO432 - Eschatology	2
THEO451 - Family Ethics, Sexuality and Marriage	3
THEO452 - Bioethics	2
THEO465 - Théologie de Saint Thomas	2
THEO470 - Mariologie	2
THEO473 - Hist. De l'Eglise Moderne et contemporaine	2
THEO485 - Vertus Humaines et Théologiques	3
Seminar	4 out 10
SEM430 - Séminaire : st. Georges de Nysse	2
SEM435 - Seminar: Liturgie	2

SEM440 - Seminar: Bible	2
SEM450 - Séminaire : Catéchisme de l'Eglise catholique	2
THEO475 – Séminaire: Conciles de l'Eglise	2
Capstone	3
THEO490A – Examen De Universa	3
Total	153

Graduate Programs

Master of Arts in Theology

The Pontifical School of Theology through its Master program aims to become a center of teaching and research for the Truth. It is called “to offer the decisive contribution of leaven, salt and light of the Gospel of Jesus Christ and the living Tradition of the Church, which is ever open to new situations and ideas” (*Veritatis Gaudium*, Preamble, 3). It has a twofold purpose: first, “to deepen and systematically expose, according to the scientific method peculiar to it, the Catholic doctrine drawn from the sources of Divine Revelation, then to seek, in the light of this Revelation, solutions to the problems that men face” (cf. *Sapientia Christiana*, Art. 66; Art. 3) “in various cultures” (*Veritatis Gaudium*, Art. 3,1), according to the four criteria of *Veritatis Gaudium*: a. The prioritized and permanent criterion is that of contemplation and spiritual, intellectual and existential introduction into the heart of the kerygma, i.e., of the new and fascinating joyous proclamation of the Gospel of Jesus; b. Dialogue in all areas: not as a mere experience of the joy of Truth and to deepen its meaning and practical implications; c. Inter and transdisciplinarity exercised with wisdom and creativity in the light of Revelation; d. A fourth and final criterion concerns the urgent need to “forge a network” between various institutions which, throughout the world, cultivate and promote ecclesiastical studies” (*Veritatis Gaudium*, Preamble, 4).

Program Educational Objectives

1. Graduates will acquire fidelity to the Catholic Church’s Magisterium.
2. Graduates will consider particularly the great richness of Oriental Traditions.
3. Graduates will communicate the truth of the Gospel in the midst of religious pluralism without renouncing the truth.

Common Core	18
THEO506: <i>Bible</i>	3
THEO507: La Theologie de l'Orient et du Vatican II	3
THEO508: <i>Morale</i>	3
THEO509: <i>Patristique / Spirituelle</i>	3
THEO514: La Pastorale de la semaine sainte	3
THEO519: Séminaire I	1
THEO523: Séminaire II	1
THEO524: Séminaire III	1
Specialization	12
<i>Théologie Biblique:</i>	
THEB505: Messianisme et salut universel	3
THEB510: Entre le Prophétisme et Luc-Actes	3
THEB605: <i>Theologie Biblique 3</i>	3
THEB610: <i>Theologie Biblique 4</i>	3
<i>Théologie Morale:</i>	
THEM505: Education et Famille	3

THEM510: L'Ethique Paulinienne et Contemporaine	3
THEM605: Entre le Magistère et la Bioéthique	3
THEM610: Lux Mundi au Niveau Social	3
THEO698: Comprehensive Exam	15
THEO699A: Thesis	15
Total	60

Doctoral Programs

Ph.D. in Theology

The third cycle normally extends over three years after which the student is given a “Canonical PhD in Theology” which is equivalent to the “PhD in Theology” in the Lebanese System.

A minimum of 60 credits are required to obtain the canonical PhD.

Course Descriptions

MTR222 University Working Methodology 3 cr.

This course will provide first year students with essential methods for the preparation of their work during the years of study at the University. These methods are common to all material and address different levels, ranging from exercises promoting correct educational attitudes in the introduction to the methods of work, the investigation of a text, and finally, to the mastery of speech essential to establish exchange with others, orally and in writing, and to assert with confidence and autonomy. In addition, the objectives of this course will address data essential for the design, drafting and the realization of research work.

PHI201 Introduction to Philosophy 3 cr.

The course will introduce students to philosophical thinking and practice. It will cover, on the one hand, the main philosophical trends, highlighting their specificity and their creative input and, on the other hand, the most representative authors in the history of philosophical thought. In an effort not to separate these themes and the fundamental questions of mankind, the course attempts to show the relationship that develops between the aforementioned notions; with the aim of addressing their impact on certain world views that constantly interpolate us within contemporary societies.

PSY201 Introduction to Psychology 3 cr.

This introductory course is also enrolled in general education as a prerequisite for students who will pursue psychology training. This course will provide students with the basic concepts in psychology and will facilitate their access to knowledge during their academic curriculum. It includes the following objectives: understanding psychology from a historical and a theoretical perspective (Gestalt, phenomenological, experimental, scientific, psychoanalytic and cognitive, etc.); understanding the various fields of psychology (clinical, experimental, developmental, educational, social, etc.) and the different methods used (experimental, clinical, psychometric, projective, etc.); providing an appropriate approach to personality issues - basic needs, affective and emotional (feelings, emotions), intellectual (cognition, memory) and social (social influence).

SOC201 Introduction to Sociology 3 cr.

This course provides a basic knowledge of general sociology: a) it presents an overview of the context of the event-emergence of sociology on the basis of the main founders and focuses on methodological perspectives and applied sociological methods and techniques. b) it focuses on the key principles of social themes, which description and definition have fueled and fed the many debates that are changing the discipline in the vast corpus of scientific knowledge. This course provides students with general sociology elements, sensitizes their "sociological perspective" and develops their critical reflection on various social issues.

PHI210 Greek Philosophy 3 cr.

This course is divided into two parts. The first part examines pre-Socratic sources that give students the proper tools to acquire philosophical thinking in their quest for the nature of things, and in their attempt to unveil both natural and human phenomena. It thus includes the main schools of thought such as the School of Miletus (Thales, Anaximander, Anaximenes), the Pythagorean school (Pythagoras), the Ionian school (Heraclitus), the Eleatic school (Parmenides), as well as the Sophists. The second part deals with Socrates, Plato and Aristotle.

PHI225 Metaphysics 2 cr.

Pre-requisites PHI210

The purpose of this course is to present a reflection on metaphysics and its relation to primitive philosophy, which discusses, for example, "The science of Being as Being." It is divided into three areas. The first focuses on Aristotelian metaphysics. The second reflects upon the problems of the world, the soul and God, from the analysis of two antithetical philosophers, Leibniz and Spinoza. The third examines the different theories of the nineteenth and twentieth century, taking an in-depth look into the philosophies which were eager to put an end to metaphysics; the philosophies, which are attributed to Kant, Nietzsche, Heidegger and Habermas.

PHI213 History of Contemporary Philosophy 3 cr.

This course is intended to develop, in the first part, the philosophical question of existence of Kierkegaard and other existentialist philosophers (Sartre, Jaspers, Scheler, Gabriel Marcel). This course analyzes, in the second part, the basic principles of phenomenology as defined by Edmund Husserl and by numerous contemporary phenomenologists. In this framework, the course explains the Husserl phenomenological heritage and its innovative Heidegger reception. Different manifestations of phenomenological practice and its particular development will be considered within the French phenomenological school represented by Maurice Merleau-Ponty, Emmanuel Levinas, Henry Michel and Jean-Luc Marion. Particular attention will be given to the "phenomenology of life" of Michel Henry.

PHI301 Medieval Philosophy 3 cr.

Pre-requisites PHI210 or PHI210

This course is designed to analyze the highlights of the thought of St. Augustine, St. Thomas Aquinas and Meister

Eckhart. We seek, from the analysis of the Augustinian singular experience of truth, to understand in depth the issues relating to the problem of knowledge, the metaphysics of inner experience, the self-certainty based on the truth of God immanent in our interiority, temporality and eternity and the unitive and tripartite constitution of the same soul to the constitution of the Trinitarian life in God. We will study, starting from a critical reading of the writings of St. Thomas, the themes related to the receipt of Thomistic Aristotelian heritage, the question of creation and the evidence of the existence of God, the question of analogy and the problem of knowledge. A contemporary reading of the mystic Meister Eckhart, which largely contributed to the emergence of German philosophical speculation, will be analyzed as well. The research will, at this level, tackle Eckhart's unitive structure of knowledge and life, that animates the vital relationship between God and man.

PHI326 Philosophy of Nature 3 cr.

Among the Greeks, nature is physical, all of which appears; hence the problem of natural, supernatural and the supernatural. In Christian theology, nature is one; hence the problem of the two natures of Christ. In Latin, natura is "character", which poses the problem of nothing less than human nature. In medical sciences, nature bounds genetics. In law, it opposes the Civic. In literature, he opposes romanticism and classicism. Today, ecology seems to oppose nature and man; it is even about "green policy" as of 'ecological theology,' 'brief' 'ecological philosophy'.' Nature is everywhere, but is the concept of nature the same thing everywhere, in all areas? What is then "nature"? A kind or nature? And why is the definition a hermeneutical problem? That's what our course of Philosophy of Nature will try to address.

PHI327 Philosophical Anthropology 3 cr.

Pre-requisites PHI210 or SOC210

The question "What Is Man?" is at the heart of philosophical questioning. Starting from the anthropocentrism need of philosophy, the course firstly explores the meaning of the question about the essence of man through its history, the challenges imposed by the cyborg, the computational world or gender theory (Gehlen, Leach, Butler, Blumenberg, etc.). The course questions the difficulties of defining the human being through current changes by building on the thinkers of classical humanism and post-humanism. Secondly, the course presents the basic categories of philosophical anthropology and offers a thorough analysis of the being-in-relation (or the human being-in-relationships) and discussion of political, social and cultural implications, with reference to contemporary thinkers of otherness (Levinas, Buber, Marion, etc.).

PHI333 Modern Philosophy 3 cr.

Pre-requisites PHI210

The students will be introduced to two great philosophical currents, both stemming from the works of Francis Bacon, rationalism (Descartes, Leibniz and Spinoza) and empiricism (Locke, Condillac, Hume), leading to Kant's philosophy of knowledge - critical rationalism.

PHI420 Logic and Philosophy of Knowledge 3 cr.

Pre-requisites PHI333

This course initially outlines a perspective of language as an object of study that shows how much of the philosophy of the twentieth century developed as a "philosophy of language" (Analytic Philosophy). Secondly, it deals with the general theoretical framework of the argument as a discursive act, based on the theory of acts of language (speech acts), that the two philosophers Longshaw John Austin and, later, John Searle paved the way for. Thirdly, general issues related to logic are discussed, and are examined by the induction and deduction master concepts - truth and validity. A brief discussion is given on the methods and endorsements of formalization. The formal approach is exemplified, when it comes to conducting the analysis and evaluation of simple deductive arguments, called syllogism.

PHI447 Moral and Political Philosophy 3 cr.

Pre-requisites PHI210

The course aims to consider a reflection on the foundations and the meaning of democracy, in order to find the place of morality in politics; knowing that the two concepts "moral" and "politics" are written mostly in separation rather than in conjunction. This is how we can understand the great debates relative to moral and political philosophy, from the ancient Greeks - particularly those of Plato and Aristotle - until modern or contemporary times. Starting with an approach to these two concepts, the course is essentially questioning, on one hand, the need for the interaction of these two areas of morality and politics, and also that of their separation. Students will analyze in-depth the answer to these questions by drawing on texts of classical and modern philosophers such as Plato, Aristotle, Kant, Machiavelli, Thomas Hobbes, Max Weber, Hannah Arendt and Julien Freund, who have pondered this topical issue.

PHI453 Hermeneutics 3 cr.

Pre-requisites PHI210

Having originated within the context of biblical interpretation, hermeneutics was freed from its dogmatic and institutional limits to become a discipline that mediated and reconciled stylistics, trans-linguistics, word-for-word linguistics and dissertation analysis, as well as a reading of the world as text. It is the restoration and disclosure of

meaning that interprets and identifies the significance of the written and spoken word. The course traces the journey that this discipline has made from Schleiermacher to Ricoeur, as well as Dilthey, Heidegger, Gadamer, Szondi, Jaussand and Appel.

PHI456 Modern and Contemporary Arab Thought 3 cr.

The course focuses on two distinct but complementary parts. The first socio-political and historical part is the source of modern Arab thought, born in the Ottoman Middle East, of language and Arab cultural heritage. At the origin of this modern thought, expressed in the Arabic language and in the service of the promotion of Arab society, are Lebanese Christians, mostly, and in particular, Syrian and Egyptian. New concepts circulate, such as "tolerance", "freedom", "equality", "brotherhood", "citizenship", etc., allowing the contribution of new transnationalistic, Arabic and nationalistic ideas, operating progressively in favor of the introduction of a democratic political regime that would terminate the dictatorship and the cult of "me" politically translated into a sultanate recognized as the shadow of God on earth. The second part focuses on the emergence of a political, socialist, communist, progressive, Baathist, Nasserist, democratic thought; work of the enlightened Christians and Muslims in the Arab world in search of a new national ideology, which tried to contribute to the emergence of a state concept, an identity that includes all the components of a national community and a political philosophy capable of challenging the rapid changes within the global plan. The aim of the course is to enable students to grasp the dimension of Arab thought outside the religious framework that limits the concept of state and denies democracy the right to be admitted.

THEO201 Biblical Greek 3 cr.

The objective of this course is to introduce students to the reading of the Greek text of the New Testament and to its translation, by studying the main principles related to the grammatical and syntactic systems of the Greek language and the minimum required vocabulary.

THEO202 Biblical Hebrew 3 cr.

The objective of this course is to help students in theology read and translate the Hebrew biblical texts and analyze them grammatically, in order to prepare them for biblical exegesis. The study of the Hebrew language will mainly focus on the Hebrew grammar (morphology and syntax) based on a selection of Hebrew texts from the Bible.

- The 1st level of grammar will cover morphology and nouns, while the 2nd level will cover verbs.

- The texts will include readings and translations, and grammatical analysis of selected passages from the Pentateuch, the books of the Prophets and the Psalms.

THEO210 Introduction to the Bible 3 cr.

The Introduction to the Bible course aims to answer questions whose knowledge is a prerequisite to understanding the inspired Book, though written in well-defined historical, social and cultural contexts. More specifically, it is related to the history of the biblical texts writing, of sacred history that is told therein, the world of the Bible, its geography and its various political and religious movements. The course also outlines the history of biblical exegesis.

THEO211 Pentateuch and Historical Books 3 cr.

Prerequisites THEO 202 - THEO 210

This is the first course on the Old Testament. It aims to introduce students to the biblical exegesis and allows them to be well-informed about this biblical corpus, its books, its characters and its theology.

After a brief introduction on the importance of the Pentateuch in the Old Testament, the course highlights a detailed reading of a number of texts covering different literary genres and theological currents of this corpus. This will lead to the understanding of the biblical concept of "history" and its theological meaning, as well as its key issues such as land, election, royalty, politics, and exile.

THEO212 Synoptics and Acts of the Apostles 3 cr.

Prerequisites THEO 201 - THEO 210

The synoptic writings are introduced in this course, namely: the Gospels of Mark, Matthew and Luke, in addition to the Acts of the Apostles which is the second volume of the Lucan work. The course starts with an introduction on the "synoptic question" and the adoption of the modified theory of the two documents, followed by the study of each of these writings and their most important themes.

The approach is synchronic. The method adopted is criticism of the composition which is a specification of the writing criticism which reviews the editorial activity of the author in order to discover the theological thought.

THEO215 Research Seminar: Holy Scriptures 2 cr.

Prerequisites THEO 201 - THEO 202- THEO 210

Research seminars are designed to initiate students in doing biblical theology by examining the right methodological approaches while focusing on a biblical book or biblical theme. During the weekly meetings in small groups, participants in the seminar are invited to engage in discussion by revealing their thoughts and projects on a chosen theme, before producing a research paper.

THEO220 Fundamental Theology: Revelation and Faith 3 cr.

This is the introductory course to theological studies which also addresses the foundations of Christianity, divine

revelation and faith.

First, it explains what theology is, by exploring its history, specifying its nature, its methods, its purpose, and by presenting its fields of reflection, and the different theological disciplines, along with a particular focus on fundamental theology.

The second part of the course is devoted to the themes of Revelation and faith, in addition to the study of the main theological concepts, the Word of God, the living Tradition, and the Church's Magisterium.

THEO221 Ecumenism 2 cr.

This course meets the recommendation of the Second Vatican Council to give future pastors of the Church, and also all believers, an ecumenical education which aims to strive for the construction of one Church of Christ in the world. This education is especially important in the life of our Oriental Churches that live beside one another.

After presenting the unity challenge and the divisions danger, especially the roots of certain doctrinal issues, their branching and development throughout history, the course explores the situations of today's Churches and Christian communities, explains the foundations of ecumenical behavior, and determines ways that contribute to the reestablishment of Christian unity. The course outlines clearly the history of the ecumenical movement which emerged in the early twentieth century and which had deeply influenced the life of various Churches, by stimulating the desire for visible unity and communion among all Christians.

THEO231 Ecclesiology 3 cr.

Prerequisites THEO 220

This course is an introduction to Catholic ecclesiology found in the documents of the Second Vatican Council, particularly in the Dogmatic Constitution *Lumen Gentium*, its ultimate expression and the fundamental source of renewing the concept of Church in fidelity to the Bible and to Tradition. After a brief biblical introduction of the word "Church", we will first explore the Trinitarian foundation of the Church where the latter proves to be at the same time the *People of God*, *Body of Christ* and *Temple of the Holy Spirit*. In the second part, we will discuss the four Church attributes as mentioned in the Nicene-Constantinopolitan Creed, namely unity, holiness, catholicity and apostolicity. We will conclude by studying the Church's relationship with the world, from the perspective of the expansion of the reign of God in Jesus Christ. The theme of the Christian presence in Lebanon and the Middle East will also be highlighted.

THEO232 Christology 3 cr.

Christology is the core and foundation of the Christian dogma. It presents, develops and explains the fundamental profession of Christian faith: "Jesus of Nazareth is the Christ, the Son of God, our Lord and Savior." It is the principle of the whole Christian theology, and the short word of faith. The course is based on four main movements. The first is devoted to listening to the Word of God, the standard and basis of all Christological thoughts. After a brief introduction on historical research on Jesus, we will explore the original experience of the New Testament communities, seeking to present their testimony on Christ following its chronological and thematic development. The second movement follows the development of faith in Jesus in the living Tradition of the Church, through the thought of the Fathers and the most important dogmatic decisions of the ecumenical councils. The third movement deals with contemporary Christology developed through a surprising variety of Christological movements which express, each in its own way, the present status of faith and the main place occupied by Christ in the life of Christians and every human being. Finally, in the fourth movement, Christology is reflected through soteriology which shows that personal communion with Jesus through faith achieves the aspiration of people for salvation and deification.

THEO241 Basics of Sacramental Theology and Liturgy 3 cr.

The sacraments cannot be understood or experienced unless they are based on a fundamental theological approach that highlights the sacramentality of the Church in relation to the salvation of Christ and the active role of the Holy Spirit. The objective of this course is to shed light on this approach and introduce students to the extensive and particular study of each sacrament. The sacraments are celebrated in the community and communicate the energies of the Risen Christ by the action of the Holy Spirit. This celebration is always liturgical. For this reason, it is important to have an introduction to the theology of the liturgy of the Church and the Churches (especially Oriental) which determines the theological or ecclesial foundations, and underlines liturgical practices in relation to the celebration of the whole Christian ministry.

THEO251 Fundamental Moral Theology 3 cr.

This Fundamental Moral Theology course deals with the Christian action in a rational process, while relying on the Holy Scripture, and placing Tradition, Magisterium and human sciences within a contemporary situation scenario.

The course will particularly address: Biblical perspectives of moral theology, its creative evolution and fundamental principles, such as freedom, responsibility, will, the good and the bad in the act, conscience, law, sin, conversion, salvation and revelation, theological and human virtues, bliss as the end of all Christian actions.

Following a careful reading of the *Veritatis Splendor* encyclical and the document of the International Theological

Commission on the natural law, we will present some new perspectives for moral thoughts, illustrated and enlightened by two concrete examples.

THEO260 Sacred Art 3 cr.

The objective of this course is to give students a general knowledge of religious visual representations in the fields of architecture, painting and sacred music from the early Christian period to the contemporary world.

This global vision of Christian art will take into account the main movements of the West and East, and the various monumental and minor art objects displayed in our churches and used during liturgical celebrations.

This will enable students to recognize the plans of churches and determine the architectural elements characterizing their style. They will also become able to differentiate between the sacred element of religious music, to clarify its role in liturgy, and determine the different genres and the various actors according to their grades and their roles.

THEO271 Ancient Church History 3 cr.

The objective of this course is to initiate students in the reading and understanding of Christianity during its rise and its religious, social and doctrinal development in ancient times. First, students will study the encounter/conflict between Christianity and Judaism, then the encounter/conflict between Christianity and the pagan Roman society on the religious and social levels. Second, students will examine the history of ideas and dogmas between the third and fifth centuries. This will lead students to the development of bilateral relations between Empire/Church and Christianity of the East and that of the West. A special attention will be given in this course to the historical development of the Antiochian Church.

THEO272 Patrology 3 cr.

This course aims to introduce students to the theology of the Church Fathers, as a living and unique testimony of the life of the Church during this period of the expression of faith, i.e. the period of the main ecumenical councils (1st - 8th century).

First, the course will outline the socio-cultural, theological and ecclesial backgrounds of the Fathers, then the biographical traits of their lives and the list of their works. Finally, the major axes of the theological thought of the Fathers will be identified based on the analysis of some representative texts.

We will conclude by showing the role and the importance of Fathers in the life of the ancient and contemporary Church.

THEO281 Canon Law: Norms, Institutions and Persons 3 cr.

After an introduction to the norms of Canon Law, the course deals with the two sections on institutions and people in the Church organization (c. 1-583).

In the first part corresponding to the canons 1-322, we will clarify the concept of "the *Sui iuris* Church" and how a faithful Christian becomes a member, and we will show the variety of *Sui iuris* Churches which form part of the Oriental Churches, as well as their structures and their managing authorities.

As for the "People", we will deal with three categories of Christian believers: the clerics (323-398 c.), the lay persons (399-409 c.), the monks and other religious persons (410-583 c.), in order to show the legal status of each of these three categories in addition to their rights and duties.

THEO311 The Prophets 3 cr.

The course aims to study the prophets' school of thought, their writings, their role in the history of salvation and the major themes of their preaching. This course is based on a text analysis with all the available exegetical techniques. However, these writings are sacred and revealed texts, containing a theology and a religious message that are valid for every believer. It is therefore necessary to grasp their theological meaning and discover their relevance in our life today.

THEO312 Johannine Corpus 3 cr.

This is an introduction to the Johannine corpus, with particular emphasis on the fourth Gospel. The course will focus on the texts themselves, and on the different environments of their composition. In order to approach these testimonies of faith, passages under study are resituated in the historical context of their development and analyzed using narrative and rhetorical strategies used by the authors of communal and personal literary books.

THEO321 Theology of Religions 3 cr.

The course presents the Christian theology of religions within a perspective of fundamental theology in dialogue with other theological disciplines (anthropological, Christological, Trinitarian, ecclesiological and practical). Teaching focuses on the development of theology from the Second Vatican Council and aims to introduce students to the extensive reading of the relevant main texts of the Magisterium.

THEO331 The Holy Trinity 3 cr.

This course deals with the mystery of Trinity which is at the heart of the Christian faith, the core of the Gospel and the Christian mark of discourse about God. It starts with an introduction designed to show the place of Trinitarian theology in the whole Christian dogma, and consists of four parts, biblical, historical, systematic and patristic, in order to rejoin in their own site in the ever-actual "places" of any Trinitarian theology.

THEO335	Research Seminar: Dogmatic, Patristic and Sacramental Theology	2 cr.
<p>Research seminars are designed to initiate students in dogmatic theology by examining the right methodological approaches while focusing on a book, author or theme. During the weekly meetings in small groups, participants in seminars are invited to engage in discussion by revealing their thoughts and projects on a chosen theme, before producing a research paper.</p>		
THEO341	Sacraments of Christian Initiation	3 cr.
<p>The course aims to highlight the theological foundations of the Sacraments of Initiation: baptism which gives access to the Body of Christ and the divine adoption, completed by the confirmation that is the work of the Holy Spirit living in the heart of the believers as in a temple, and crowned by the Eucharist which is the real and historical incorporation into the ecclesial body of Christ. The course is largely based on the baptism catechesis of Cyril of Jerusalem, Theodore of Mopsuestia and John Chrysostom, and shows the evolution of sacramental doctrine of the Church with special emphasis on the teaching of the Council of Trent.</p>		
THEO351	Social Ethics	3 cr.
<p>The course deals with both the relationships between members of the same society, and those between various societies. It opens the way to a very wide field, that of social issues addressed from the perspective of the Church's social doctrine, and enables students to deepen their thoughts and actions on various themes: the dignity of the human being created in the image of God, human rights, labor as the key of social issues, economy, peace, politics, and role of the family.</p> <p>In our analysis of the different themes of social doctrine, we will use their anthropological and theological foundations in the Scripture, the main principles developed by the Fathers of the Church and the teaching of the Magisterium stated in official documents from <i>Rerum Novarum</i> (1891) until <i>Centesimus Annus</i> (1991).</p> <p>Finally, we will address the question of social morality from a pastoral point of view based on the current vision of the Church.</p>		
THEO352	Theology of Spirituality and Oriental Mystic	3 cr.
<p>The dwelling of God in the human being and participation in the Trinitarian life are at the heart of the Christian faith. This course aims to deepen the scope of this statement in the light of biblical and spiritual tradition, by highlighting the essential dimensions of the Christian spiritual life: experiential (experience of God, marriage), Trinitarian (divine filiation, God's will, the paschal mystery, christocentricity, living in the Holy Spirit, gifts, charisma), ecclesial, liturgical (prayers), dynamic (path towards the union with God, stages of spiritual growth) and by presenting some great schools of Christian spiritualities and important figures who marked the history of Christian spirituality.</p>		
THEO361	Pastoral and Practical Theology	3 cr.
<p>This course is an introduction to pastoral and practical theology. If theology was the Christian faith in search of its intelligence, the theological disciplines that offer theology students the keys to the broad "Science of God" and to its salvation in the world would be numerous and various. Practical (and pastoral) theology is one of these disciplines, but with the distinction of being more oriented towards the Christian praxis which brings together the different aspects of the Christian faith and its various transmissions in communities, parishes, groups, catechesis or others. The Christian experience is understood at this point as a "response" to the Word of God received by Revelation and "recovered" in the Tradition. This experience is "imposed" in practical (and pastoral) theology in a theological place where intelligence of the Christian faith occurs.</p> <p>This discipline, as entitled in this course (pastoral and practical), covers two levels of thinking and research; the first "empirical" and the second "applied". The empirical level is that of practical theology which proceeds to an analytical reading of how faith is experienced among the People of God (theology of practice). The "applied" level is that of the pastoral theology which seeks to find the best way to convey and accompany faith among the People of God. In their quests of meaning, both types of theology, pastoral and practical, refer to theological knowledge conferred by all other theological disciplines, as well as to many other disciplines related to human sciences and others.</p>		
THEO371	Medieval Church History	3 cr.
<p>The Middle Ages is positioned between Antiquity and Modern Times and lasts for almost a thousand years. It covers three major eras of civilization: Byzantium, the Occident and the Arab and Muslim World. Every civilization tries to forge the causes of its livelihood and life and interact with each other in different ways; sometimes by the development of trade and intellectual exchange, sometimes by the constraints of violence and war. The Church strives for this long period of being the vector of union, peace and intellectual and spiritual development. The course is assigned to teach students about the structures of permanence and change beyond the contingencies of turmoil.</p>		
THEO411	Pauline Corpus	3 cr.
<p>The course mainly focuses on the thirteen epistles which are part of the Pauline school. It covers the epistles ranging from the Romans to Philemon, as ranked by our Bibles.</p> <p>Before studying the epistles themselves, we start with two preliminary parts. The first part studies the life of the Saint Paul according to the Acts and to the epistles; the second part presents the epistolary genre, the categories of epistles</p>		

and some hints for a better understanding of the studied epistles.

THEO412 Psalms and Wisdom Scriptures 3 cr.

The wisdom books are an assortment of the Old Testament books seeking to convey a moral teaching. This set includes the Psalms, Book of Job, Proverbs, Ecclesiastes, Song of Solomon, and Wisdom. Given its complexity, biblical wisdom requires a global approach to its various aspects, before covering in detail its modes of expression and its themes. This course will enable students to become more familiar with the Psalms and the other various wisdom books, in order to better grasp the development of wisdom harvested throughout the journey of the Israelites and which remains valid to this day, and to better understand the New Testament.

The course will shed light on the fundamental biblical themes found in the Psalms such promise, marriage, descent, land, blessing, royalty, messianism, worship, and fidelity.

The Wisdom literature will be studied; some books almost completely, others partially. An overview of each book will be given.

THEO421 Islam 3 cr.

This course is an introduction to Islam, as both a religion and a tradition consisting of various schools of thought. After examining the origin of Islam and the history and themes of the Quran, it approaches the major doctrinal and philosophical patterns of the different branches of Islam and their practices. Students are encouraged to engage in a dialogue with Muslims who constitute the major religion in the region.

THEO431 Christian Anthropology 3 cr.

This course consists of three distinct parts, namely the treatise of creation, the treatise of original sin and the treatise of grace. It aims to explain the content of the Christian doctrine of creation of the human being in God's image, with different biblical positions in opposition to scientific theories of origins. Then, the course examines the doctrine of original sin and attempts to formulate the problem of evil by explaining the impact of sin on the situation of the human being. After a brief overview on the scriptural doctrine of the original sin, we cover the Augustinian doctrine of the original sin, by reviewing ecclesial decisions and scholastic theology. At the end of the course, we tackle the theme of grace in order to better grasp the significance of salvation that culminates in the incarnation of Christ and the meaning of the human being's life as a creature totally open to Him, and this in communion with all creatures.

THEO432 Eschatology 2 cr.

In the Nicene symbol, the "resurrection of the flesh" and "eternal life" are the last explicitation of faith in the Holy Spirit. Life under the Holy Spirit possesses a dynamism that tends to a future fulfillment, during which it will reach its entire fullness. The course is divided into two stages: first, we will study the general, collective and universal eschatology, that is to say, the completion of the world, and then move to the individual eschatology or the fulfillment of the individual. This order responds better to the account of the biblical history of salvation, and clarifies at the same time an intrinsic logic: hope for the individual is placed in a broader horizon, that of hope for the world

THEO441 Orders and Healing Sacraments 3 cr.

This course aims to help students discover the theological foundations of ministries and the sacraments of healing, penance and anointing of the sick.

The question of ministries is a particularly important chapter of ecclesiology, simply because the departments are above all in the service of the Church. This issue entails multiple dimensions: historical, sociological, theological, canonic, pastoral, and ecumenical, and it is conditioned by the realities of church life and, consequently, subject to constant evolution.

THEO451 Family Ethics, Sexuality and Marriage 3 cr.

Based on a Christian anthropology, marriage and sexuality involve human and spiritual attitudes, which, along with the physical and corporal activities related to it, engage the whole human person. The history of salvation progressively reveals the ultimate and deep meaning of sexuality and marriage, namely the love that is rooted in God's love. However, conjugal sexuality requires an awareness of the inevitable link between its many dimensions: physical, psychological, social, cultural and religious. Through their union, morality and Christian faith have values that grant dignity to human sexuality.

On the other hand, forms of cohabitation and marriage, influenced by gender theories, as the PACS, cohabitation, marriage for all, are on the rise in several societies, threatening therefore the "traditional" image of marriage and family. It is urgent and useful to rediscover the principles and values of the Catholic Church teachings on the sacrament of marriage and the family in order to meet the challenges that these forms cause to its pastoral care of the family.

THEO452 Bioethics 2 cr.

Human beings have gained more and more power over nature due to the development of science and technology. And thanks to advances in biology, they are seeking to control health, reproduction and genetics. Hence, the eternal question is: Is what is possible desirable? This biological-techno-scientific turmoil which underlies effective medicine meets another socio-cultural and ideological debate that has influenced the representations of life and death, health and sickness, care and preventive, and curative or palliative treatments. These changes have led to a huge social and

intellectual phenomenon embodied with the emergence of the term bioethics in 1971.

The bioethics course covers three areas: reproductive technologies (artificial insemination, in vitro fertilization, prenatal diagnosis, abortion, contraception, and genetic engineering); the application of techniques at the end of life (euthanasia, palliative care, and organ harvesting); and medical experimentation on the human body and cloning.

THEO455 **Research Seminar: Moral and Pastoral Theology** **2 cr.**

Research seminars are designed to initiate students in moral and/or pastoral theology by examining the right methodological approaches while focusing on a book, author or theme. During the weekly meetings in small groups, participants in seminars are invited to engage in discussion by revealing their thoughts and projects on a chosen theme, before producing a research paper.

THEO471 **Modern and Contemporary Church History** **3 cr.**

From the Renaissance Church (16th century) to Vatican II (1962-1965)

This course covers five centuries, from the Renaissance Church (16th century) to Vatican II (1962-1965), and includes two parts: the first part focuses on the Renaissance in addition to the Protestant and Catholic reforms; the second part tackles the 19th and 20th century, the era of revolutions and adaptations. Luther's revolt in the 16th century and the 1789 Revolution are main events for society and the Church. What had paved the way for them? Who are the main actors and what are their motivations? What were the challenges facing the Church in all fields, both doctrinal and pastoral, life of the clergy and involvement of the lay persons? A council marks each studied period: the Council of Trent and the Second Vatican Council. We examine how each of them blends tradition and adaptation, their development, their key documents, their receipt, their actors and especially the Popes from John XXIII to John Paul II. This course helps students learn to "read the signs of the times" through world events, in the middle of which the People of God live and to whom He was sent.

THEO481 **Canon Law: Marriage** **3 cr.**

This course corresponds to the canons 667-775 about the sacraments, and 776-866 about marriage, of the Code of Canons of the Oriental Churches.

The course will help students to differentiate between what is licit and valid and what is illicit and invalid in the different sacraments. Special attention is given to the sacrament of marriage, with explanation of the historical development of this sacrament, and the novelty of the CCEO in relation to previous legislation; the pastoral and theological range of the canons will also be highlighted.

The adopted methodology helps students familiarize themselves with the code read and interpreted in class and they will learn the legal terminology. It grants them the ease of dealing with marital conflicts and introduces them to the appropriate bodies at the social, pastoral, or legal levels.

THEO499 **Baccalaureate Comprehensive Examination** **1 cr.**

The scope of the comprehensive examination required to obtain the canonical Baccalaureate in theology is to ensure that students have acquired a methodological approach and are able to elaborate a theological synthesis in the major fields of the curriculum, i.e. biblical, dogmatic and moral theology.

Business School

Overview

The School was first founded in 1966, under the name of the Faculty of Business and Commercial Sciences and was considered as one of the pioneers in business education in the Near-East and was later, in 2018, renamed as the Business School. As part of USEK, it has dedicated itself, since its creation, to teach students how to administrate organizations, in the scope of sustainable development, while remaining devoted to its three-hundred years tradition of the Lebanese Maronite Order, a heritage conscientiously preserved and incessantly enriched.

In 50 years, we have succeeded in providing local and regional markets with a wide range of specializations under the American Credit System in BBA, MBA and PhD.

The Business School is currently engaged in AACSB accreditation process and has submitted its initial Self-Evaluation Report (iSER). On November 13, 2018, the AACSB Initial Accreditation Committee accepted the initial Self-Evaluation Report (iSER) submitted by the Business School. Upon the acceptance of iSER, the Business School officially became a candidate for the AACSB accreditation. The School will submit updates to the iSER to inform the Committee of its progress toward alignment with the standards (a three-year implementation period is permitted).

Mission

We offer quality programs in business in a student centered environment, and help our students in achieving their goals. Through enriching multidisciplinary programs, we nurture an entrepreneurial spirit and graduate civically minded and ethically responsible professionals for the sustainable development of Lebanon and the region.

The Business School consists of the following programs:

Undergraduate Programs

- Bachelor of Business Administration
 - Emphasis:*
 - Audit
 - Finance
 - Business Computing
 - Management
 - Marketing
 - Transport and Logistics
- Bachelor of Business Administration - Hotel Management
- Minor in Audit
- Minor in Finance
- Minor in Hotel Management
- Minor in Management
- Minor in Marketing

Graduate Programs

- Master of business Administration
 - Emphasis:*
 - Audit
 - Finance
 - Marketing
- Master of Business Administration - Management and International Affairs
- Master of Business Administration - Human Resources
- Master of Business Administration - Financial Engineering
- Executive Master of Business Administration - Digital Management

Doctoral Programs

- Ph.D. in Business

Administration and Full-time Faculty

Dr. Danièle Khalifé-Fraiha, Associate Professor, **Dean**

Dr. Charbel EL Khoury, Assistant Professor, **Associate Dean**

Dr. Charbel Salloum, Associate Professor, **Associate Dean for Research and Doctoral Studies**

Professors:

Prof. Nehmé Azoury

Associate Professors:

Dr. Antoine Habchi

Dr. Badih Baz

Dr. Bettina Lynda Bastian

Dr. Elie Bouri

Fr. Dr. Georges Azzi

Dr. Hajer Jarrar-Cheikh Ali

Fr. Dr. Joseph Wakim

Dr. Mario Sassine

Assistant Professors:

Mr. Charles Assouad

Dr. Fleur Clara Khalil

Dr. Gisèle Msann

Dr. Joseph Azzi

Dr. Madonna Salameh-Ayanian

Dr. Michel Karam

Dr. Nada Sarkis

Dr. Pascal Lahoud Abou Jaoudeh

Dr. Tarek Azzi

Lecturers:

Mr. Georges Jalkh

Mrs. Ina Aurelia-Issa

Mrs. Ruba Younes Mhanna

Undergraduate Programs

Bachelor of Business Administration (hybridⁱ & Eng.)

Emphasis

- Audit *Main Campus Kaslik, RUC Zahle and RUC Chekka*
- Finance *Main Campus Kaslik, RUC Zahle, RUC Chekka and RUC Rmeich*
- Business Computing *Main Campus Kaslik, RUC Rmeich*
- Management *Main Campus Kaslik, RUC Zahle, RUC Chekka and RUC Rmeich*
- Marketing *Main Campus Kaslik*
- Transport and Logistics *Main Campus Kaslik*

Learning Goal 1: Graduates will have the knowledge related to various disciplines in business administration.

Learning Objective 1: Identify the fundamental theories from the disciplines in audit, business computing, finance, management, marketing, and transport and logistics.

Learning Objective 2: Analyze and compare/contrast the various theories from the disciplines in audit, business computing, finance, management, marketing and transport and logistics.

Learning Goal 2: Graduates will have the necessary skills to communicate effectively.

Learning Objective 1. Practice formal oral presentation skills.

Learning Objective 2. Compose professional business reports.

Learning Goal 3: Graduates will be ethically responsible.

Learning Objective 1. Identify ethical issues related to various business fields.

Learning Objective 2. Indicate the implications of ethical issues related to various business fields.

Learning Goal 4: Graduates will be able to work in teams.

Learning Objective 1. Set goals/tasks and execute them within a specific time.

Learning Objective 2. Listen to other (opposing) viewpoints.

Learning Objective 3. Communicate own viewpoints with others.

Learning Goal 5: Graduates will have an entrepreneurial mindset.

Learning Objective 1. Write a business plan for venture opportunities.

Degree Requirements

This program requires 99 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Civic Engagement	2
General Education - English and French Communication	3 to 6
General Education - Behavioral, Social Sciences and History	3
General Education - Science and Health ⁱⁱ	0 to 3
General Education - Sports	1
General Education - Religious Sciences	3
DRT223 - Business Law	3
CSC204 - Information Technology and Networking	3
ECO222 - Macroeconomics or MGT225 - Foundations of Entrepreneurship	3
MAT216 - General Mathematics	3
STA220 - Probability and Applied Statistics	3
Common Core	36
ACT210 - Financial Accounting I	3
ACT220 - Financial Accounting II	3
BUS211 - Mathematics of Finance	3
BUS303 - Business Planning	3

ⁱHybrid: Courses offered in French and/or English

ⁱⁱStudents enrolled in the hybrid section are required to take the course FRN240 - French Communication instead of 3 credits from the Science and Health category.

ECO221 - Microeconomics	3
ENG290 - Business Professional	3
FIN310 - Financial Management	3
FIN315 - Financial Analysis	3
MGT220 - Principles of Management	3
MGT330 - Human Resources Management	3
MIS320 - Quantitative Techniques Applied to Business	3
MKT220 - Principles of Marketing	3
Electives	9
ACT225 - Internal Audit	3
ACT320 - Cost Accounting	3
BUS390 - Verbal and Non-Verbal Communication for Business	3
FIN420 -International Finance	3
FIN421 - Financial Markets	3
ITB321 - Database	3
ITB350 - E-Business	3
MGT320 - Organizational Behavior	3
MGT415 - Small Business Management	3
MKT315 - Advertising	3
MKT405 - Media Planning	3
MKT430 - Pricing Strategy	3
TRA310 - Transport and Logistics	3
LCB200 - Introduction to Hospitality Management	3
Emphasis: Audit	
Specialization	21
ACT225 - Internal Audit	3
ACT312 - Advanced Accounting	3
ACT320 - Cost Accounting	3
ACT345 - Enterprise Internship	1
ACT410 - Groups Accounting	3
ACT425 - Management Control	3
ACT455 - Enterprise Simulation	2
BUS320 - Taxation	3
Capstone	3
ACT330 - External Audit	3
Emphasis: Finance	
Specialization	22
BUS320 - Taxation	3
ECO410 - Banking and Finance	3
FIN345 - Enterprise Internship	1
FIN412 - Corporate Finance	3
FIN420 - International Finance	3
FIN421 - Financial Markets	3
FIN425 - Company Valuation	3
FIN430 - Financial Engineering	3
Capstone	2
FIN455 - Enterprise Simulation	2
Emphasis: Business Computing	
Specialization	22
CSC225 - Business Programming I	3

CSC319 - Technology and Networks Infrastructure	3
CSC325 - Business Programming II	3
CSC359 - Internet Development and Technology	3
CSC407 - Systems Analysis and Design	3
CSC450 - Database Design and Programming	3
ITB321 - Database	3
ITB345 - Enterprise Internship	1
Capstone	2
ITB455 - Enterprise Simulation	2
Emphasis: Management	
Specialization	22
BUS410 - Operations Research	3
ECO315 - Managerial Economics	3
FIN425 - Company Valuation	3
MGT320 - Organizational Behavior	3
MGT345 - Enterprise Internship	1
MGT405 - Project Management	3
MGT415 - Small Business Management	3
MGT420 - Strategic Planning	3
Capstone	2
MGT455 - Enterprise Simulation	2
Emphasis: Marketing	
Specialization	22
MKT310 - Consumer Behavior	3
MKT320 - Marketing Research	3
MKT325 - Distribution Strategy and Sales management	3
MKT345 - Enterprise Internship	1
MKT410 - Communication Strategy	3
MKT415 - Brand and Product Management	3
MKT422 - Marketing Services	3
MKT430 - Pricing Strategy	3
Capstone	2
MKT455 - Enterprise Simulation	2
Emphasis: Transport and Logistics	
Specialization	22
BUS475 - Financing Import/Export	3
MGT400 - Supply Chain Management	3
MKT325 - Distribution Strategy and Sales Management	3
TRA310 - Transport and Logistics	3
TRA325 - Commercial Contract and Transport Law	3
TRA335 - Introduction to Air Transportation	3
TRA345 - Enterprise Internship	1
TRA440 - Shipping Economics and Management	3
Capstone	2
TRA455 - Enterprise Simulation	2
Total	99

Bachelor of Business Administration - Hotel Management (Eng.)

Learning Goal 1: Graduates will have knowledge related to hotel management.

Learning Objective 1: Identify knowledge of professional practices in hotel management and related fields.

Learning Objective 2: Analyze and compare/contrast various theories from the professional hotel management industry and related fields.

Learning Goal 2: Graduates will have the necessary skills to communicate effectively.

Learning Objective 1. Practice formal oral presentation skills.

Learning Objective 2. Compose professional reports in hotel management and related business areas.

Learning Goal 3: Graduates will be ethically responsible

Learning Objective 1. Identify ethical issues in hotel management and related business fields.

Objective 2. Indicate the implications of ethical issues related to hotel management and related business areas.

Learning Goal 4: Graduates will be able to work in teams.

Learning Objective 1. Set goals/tasks and execute them within a specific time.

Learning Objective 2. Listen to other (opposing) viewpoints.

Learning Objective 3. Communicate own viewpoints with others.

Degree Requirements

This program requires 99 credits for students entering at the sophomore level (holders of freshman or a recognized baccalaureate - equivalent to 30 credits), distributed as following:

General Education	30
General Education - Civic Engagement	2
General Education - Behavioral, Social Sciences and History	3
General Education - Science and Health	3
General Education - Sports	1
General Education - Religious Sciences	3
DRT223 - Business Law	3
CSC204 - Information Technology and Networking	3
ECO222 - Macroeconomics or MGT225 - Foundations of Entrepreneurship	3
ENG240 - English Communication	3
MAT216 - General Mathematics	3
STA220 - Probability and Applied Statistics	3
Common Core	33
ACT230 - Hospitality Accounting	3
LCB200 - Introduction to Hospitality Management	3
LCB213 - Hospitality Business Communication	3
LCB220 - Food and Beverage Service Operations	3
LCB226 - Oenology	3
LCB230 - Le Cordon Bleu Kitchen A	3
LCB235 - Le Cordon Bleu Kitchen B	3
LCB255 - Hygiene and Security	3
LCB260A - Internship I: Food and Beverage	3
MGT220 - Principles of Management	3
MGT330 - Human Resources Management	3
Specialization	24
LCB221 - Hospitality and Tourism Marketing	3
LCB246 - Hospitality Purchasing Management	3
LCB250 - Food and Beverage Cost Control	3
LCB305 - Food and Beverage Management	3
LCB310 - Catering and Events Management	3

LCB325 - Strategic Management for Hospitality Industry	3
LCB400 - Facilities and Property Development Management	3
LCB441 - Rooms Division Management	3
Capstone	3
LCB260B - Internship II: Rooms Division	3
Electives	9 out of 15
LCB240 - Bar and Beverage Service Operations	3
LCB410 - Quality Management in Hospitality	3
LCB415 - Hospitality Protocol and Etiquette	3
MGT320 - Organizational Behavior	3
MGT415 - Small Business Management	3
Total	99

Academic Minors

Minor in Audit (Hybridⁱ)

Mission

The mission of the audit minor is to prepare students for careers involving financial and cost accounting or internal auditing, in order to enable them to understand how to prepare, analyze and use the information produced by companies and thus integrate them in the world of work. This happens through offering them an adequate knowledge of management and auditing.

Program Educational Objectives

1. Students will integrate effectively in a professional context involving financial and cost accounting, internal auditing and management and grow into mature, ethical and honest specialists.
2. Students will demonstrate strong communication skills and master the concepts, methods and tools of financial and cost accounting and internal auditing by developing their capabilities to observe, analyze, solve problems and advise.
3. Students will conduct their work using logical analysis, reasoning and clear-sightedness, while adapting to all the different operational situations of the company. They will ensure a regular update of their legal and regulatory knowledge and will be active and responsible members of their communities.

Program Outcomes

- a. Students will prepare the financial statements of a company and analyze its financial structure, cash flow, activity and profitability.
- b. Students will master the essential components related to the internal control system and the international standards of internal auditing and understand the objectives and strategy of a company.
- c. Students will evaluate short and medium term decisions and understand the role of the management accountant in an organization and how company resources can be deployed to reach the expected objectives.
- d. Students will understand professional, ethical and legal problems and ensure regular updates of knowledge, to work effectively in a team and communicate properly with different audiences.

Minor Requirements

ACT210 - Financial Accounting I	3
ACT220 - Financial Accounting II	3
ACT225 - Internal Audit	3
ACT312 - Advanced Accounting	3
ACT320 - Cost Accounting	3
MGT220 - Principles of Management	3
Total	18

ⁱ Hybrid: Courses offered in French and/or English

Minor in Finance (Hybridⁱ)

Mission

The mission of the minor in finance is to integrate students into the business world by offering them a multidisciplinary experience with specific finance skills and by providing them with a strong theoretical and analytical background.

Program Educational Objectives

1. Students will work effectively with good analytical and problem solving skills in finance.
2. Students will work successfully with a developed ability to think clearly and communicate effectively in finance.
3. Students will apply strategic decision making processes in real world business challenges with their knowledge of capital structure and capital markets.

Program Outcomes

- a. Students will be able to define investment theory, hedging, and security portfolio management.
- b. Students will be able to utilize financial tools, quantitative applications and accounting statement analysis in a financial context.
- c. Students will be able to perform financial analysis in differing situations including comparative case studies, and of public-traded corporations in a world with or without taxes.
- d. Students will be able to conduct strategic financial decision reviews (capital decisions, budgeting and performance analysis).

Minor Requirements

BUS211 - Mathematics of Finance	3
FIN310 - Financial Management	3
FIN412 - Corporate Finance	3
FIN420 - International Finance	3
FIN421 - Financial Markets	3
MGT220 - Principles of Management	3
Total	18

Minor in Hotel Management (English)

Mission

The mission of the hotel management minor is to prepare students for dynamic and distinguished careers in the hospitality field by providing them with a contemporary educational experience and a unique friendly and ethical culture that strengthens their academic knowledge and practical background while encouraging sustainable and social practices.

Program Educational Objectives

1. Students will use their acquired knowledge and communication skills in hotel management by adhering to ethical standards and professional work behavior.
2. Students will promote a unique attitude towards excellent food and service quality by recognizing international standards and inspiring trends.
3. Students will be aware of technological advancements and gain some knowledge of entrepreneurship and social responsibility in the hospitality field.

Program Outcomes

- a. Apply knowledge of concepts in hotel management and related fields, and demonstrate varied and suitable practical and technical hospitality skills.
- b. Demonstrate ability to perform effective analysis and manage real life situations professionally.
- c. Possess effective written and oral communication skills and use precise terminology.
- d. Examine the ethical and social practices in the hospitality field, and demonstrate awareness of opportunities within entrepreneurship.

ⁱ Hybrid: Courses offered in French and/or English

Minor Requirements

LCB200 - Introduction to Hospitality Management	3
LCB230 - Le Cordon Bleu Kitchen A	3
LCB305 - Food and Beverage Management	3
LCB310 - Catering and Events Management	3
LCB415 - Hospitality Protocol and Etiquette	3
MGT220 - Principles of Management	3
Total	18

Minor in Management (Hybridⁱ)**Mission**

The mission of the management minor is to develop and enhance student leadership capabilities in order for them to become knowledgeable and ethical managers for modern societies and support sustainability. Therefore, they are provided with a solid theoretical background and pushed a step closer to the society and to the professional field.

Program Educational Objectives

1. Students will acquire knowledge and communication skills in business management.
2. Students will gain awareness of social entrepreneurship and corporate social responsibility.
3. Students will work successfully, utilize managerial skills and become effective leaders by thinking and acting differently.

Program Outcomes

- a. Students will be able to apply theoretical business knowledge to support and enhance the organizations in which they are employed.
- b. Students will be able to define business problems, select and identify alternatives and evaluate solutions while working in teams.
- c. Students will be able to outline logically and analytically complex problems while understanding the human relationships involved in an organization and taking into consideration the social and ethical responsibilities that organizations and managers face.
- d. Students will be able to use theoretical learning in real-life business activities.

Minor Requirements

MGT220 - Principles of Management	3
MGT225 - Foundations of Entrepreneurship	3
MGT320 - Organizational Behavior	3
MGT330 - Human Resources Management	3
MGT415 - Small Business Management	3
MGT420 - Strategic Planning	3
Total	18

Minor in Marketing (Hybridⁱⁱ)**Mission**

The mission of the marketing minor is to cultivate students' quality marketing knowledge and meet the needs of employers, customers and society, by promoting an educational environment that enables students to excel at developing, implementing and controlling strategies and tactics for consumers in areas such as markets, products and services, communication and pricing.

Program Educational Objectives

1. Students will integrate marketing skills and solve problems while adapting a company's marketing mix to the constantly changing global economy.

ⁱ Hybrid: Courses offered in French and/or English

ⁱⁱ Hybrid: Courses offered in French and/or English

2. Students will understand the numerous areas in which marketing is involved and be able to grasp the marketing concepts and strategies put by marketing departments in all corporations.
3. Students will creatively approach business challenges and understand the role of marketing with other disciplines.

Program Outcomes

- a. Students will be able to apply theoretical marketing knowledge to support and enhance the company's marketing mix.
- b. Students will be able to elaborate a comprehensive marketing plan that aims at solving problems and providing solutions.
- c. Students will be able to understand the characteristics and motivation behind consumer and business buying behavior.
- d. Students will be able to identify various careers in marketing and media by combining academic learning with real marketing situations.

Minor Requirements

MKT220 - Principles of Marketing	3
MKT310 - Consumer Behavior	3
MKT325 - Distribution Strategy and Selling Techniques	3
MKT410 - Communication Strategy	3
MKT422 - Marketing Services	3
MKT430 - Pricing Strategy	3
Total	18

Graduate Programs

Master of Business Administration (hybridⁱ)

Emphasis

- Audit
- Finance
- Marketing

Learning Goal 1: Graduates will have advanced knowledge of various fields in business.

Learning Objective 1: Apply detailed knowledge in theories and practices in Audit, Finance and Marketing.

Learning Goal 2: Graduates will have strategic-decision making abilities.

Learning Objective 1. Identify and analyze strategic actions in various areas of business.

Learning Objective 2. Propose, contrast and synthesize different solutions to problems in various areas of business.

Learning Goal 3: Graduates will be ethically and socially responsible.

Learning Objective 1. Identify and analyze the various ethical issues in a business environment.

Learning Objective 2. Propose solutions of ethical issues related in a global business environment.

Learning Objective 3. Execute plans to ensure solutions are sustainable.

Learning Goal 4: Graduates will have effective communication skills.

Learning Objective 1. Organize, write and execute oral and written professional reports for business in a global environment.

Learning Objective 2. Speak and present using professional communication skills and technology.

Degree Requirements

Common Core	15
BUS500 - Quantitative Research Methods	3
BUS689 - Case Study Methodology	3
BUS691 - Thematic Seminar I	1
BUS692 - Thematic Seminar II	1
BUS693 - Thematic Seminar III	1
MGT500 - Organizational Behavior and Change Management	3
MGT520 - Corporate Governance and Business Ethics	3
Specialization	18
Emphasis: Audit	
AUD610 - Regulation (CPA)	3
AUD615 - Financial Accounting and Reporting (CPA)	3
AUD620 - Auditing and Attestation (CPA)	3
AUD625 - Business Environment and Concepts (CPA)	3
AUD630 - Internal Auditing Strategy	3
FIN610 - Risk Management	3
Emphasis: Finance	
ECO600 - Macroeconomics and Public Policy	3
FIN600 - Applied Corporate Finance	3
FIN610 - Risk Management	3
FIN640 - Financial Systems and Economic Dynamic	3
FIN655 - Portfolio Management	3
MGT620 - Strategic Management and Decision-Making	3
Emphasis: Marketing*	
MGT640 - Theories and Practices of Negotiation	3
MGT680 - Applied Competitive Strategy	3

ⁱHybrid: Courses offered in French and/or English

MKT530 - Brand Strategy and Communication	3
MKT610 - Applied Research in Marketing	3
MKT650 - Applied Marketing Management	3
MKT660 - International Marketing	3
Capstone	6
BUS699A-B - Training and Analytical Report	6
Total	39

* Students admitted to the Master of Business Administration - Marketing and not holding any primary degree in business studies must be enrolled in the following remedial courses in their first semester: **RMKT501** - Marketing; **RMGT501** - Management; **RACT501** - Accounting; **RFIN501** - Finance.

Master of Business Administration - Human Resources (Eng.)

Program offered in Collaboration with the Université Panthéon-Assas - Paris II. Upon completion of the program, students earn an MBA from USEK and a Master Degree from the University of Paris II.



Learning Goal 1: Graduates will have advanced knowledge for the practice of human resources management.

Learning Objective 1: Apply various concepts and theories in managing employees.

Learning Objective 2. Demonstrate ability to handle proper career planning and development.

Learning Goal 2: Graduates will possess problem solving and decision-making skills.

Learning Objective 1. Identify problems and develop appropriate solutions for complex human resources situations.

Learning Objective 2. Implement recruiting, selecting and staffing decisions for work-life balance.

Learning Goal 3: Graduates will be ethically and socially responsible.

Learning Objective 1. Identify and analyze the various ethical issues in a business environment.

Learning Objective 2. Propose solutions of ethical issues related in a global business environment.

Learning Goal 4: Graduates will have effective communication skills.

Learning Objective 1. Organize, write and execute oral and written professional reports for business in a global environment.

Learning Objective 2. Speak and present using professional communication skills and technology.

Degree Requirements

Students admitted to the Master of Business Administration - "Financial Engineering / Human Resources / Marketing" and not holding any primary degree in business studies must be enrolled in the following remedial courses in their first semester: **RMKT501** - Marketing; **RMGT501** - Management; **RACT501** - Accounting; **RFIN501** - Finance.

Common Core	9
HRM650 - Seminars, Conferences and Group Work	3
MGT520 - Corporate Governance and Business Ethics	3
MGT620 - Strategic Management and Decision-Making	3
Specialization	24
HRM515 - Understanding the Business Environment from an HR Viewpoint	3
HRM530 - Attracting and Selecting People	3
HRM540 - Developing People	3
HRM555 - Enhancing People Involvement	3
HRM565 - Mastering the HR Tools	3
HRM580 - Mastering the Legal Context	3
HRM590 - Industrial Relations	3
HRM630 - Introducing the Research Methods and Literature of the HR Field	3
Capstone	6
BUS688A - Training and Analytical Report	6
Total	39

Master of Business Administration - Financial Engineering (hybridⁱ)

Learning Goal 1: graduates will have advanced knowledge of concepts in financial engineering.

Learning Objective 1: Apply programming and mathematical tools to complex financial problems.

Learning Goal 2: graduates will have focused decision-making abilities.

Learning Objective 1. Apply econometric theory and software in analyzing and evaluating investment decisions.

Learning Objective 2. Use quantitative tools in testing and implementing trading strategies.

Learning Goal 3: graduates will be ethically and socially responsible.

Learning Objective 1. Identify and analyze the various ethical issues in a business environment.

Learning Objective 2. Propose solutions of ethical issues related in a global business environment.

Learning Goal 4: graduates will have effective communication skills.

Learning Objective 1. Organize, write and execute oral and written professional reports for business in a global environment.

Learning Objective 2. Speak and present using professional communication skills and technology.

Degree Requirements

*Students admitted to the Master of Business Administration - "Financial Engineering / Human Resources / Marketing / Banking Operations and Management" and not holding any primary degree in business studies must be enrolled in the following remedial courses in their first semester: **RMKT501** - Marketing; **RMGT501** - Management; **RACT501** - Accounting; **RFIN501** - Finance.*

Specialization	30
FIM510 - Financial Math	3
FIM520 - Quantitative Analysis Applied to Finance	3
FIM590 - Financial Markets and Bondholder Business	3
FIM600 - Conjuncture	3
FIM610 - Technical Analysis	3
FIM635 - Financial Products Engineering	3
FIM640 - Financial Futures and Spread Trading	3
FIM650 - Options Dynamic Assessment	3
FIM670 - Structured Products	3
FIN655 - Portfolio Management	3
Capstone	9
BUS689 - Case Study Methodology	3
BUS699A-B - Training and Analytical Report	6
Total	39

Master of Business Administration - Management and International Affairs (hybridⁱⁱ)

Dual Diploma in Management: Graduate Diploma in Management, equivalent to a D.E.S.S. from HEC Montréal and MBA in Management from USEK.

Learning Goal 1: Graduates will have advanced business and leadership skills.

Learning Objective 1: Identify, analyze and synthesize complex business problems in a global environment.

Learning Objective 2. Offer a variety of solutions to complex business problems.

Learning Objective 3. Organize others into teams to accomplish strategic goals/tasks with a required time period.

Learning Goal 2: Graduates will have strategic-decision making abilities.

ⁱHybrid: Courses offered in French and/or English

ⁱⁱHybrid: Courses offered in French and/or English

Learning Objective 1. Identify and analyze strategic actions in various areas of business.

Learning Objective 2. Propose, contrast and synthesize different solutions to problems in various areas of business.

Learning Goal 3: Graduates will be ethically and socially responsible.

Learning Objective 1. Identify and analyze the various ethical issues in a business environment.

Learning Objective 2. Propose solutions of ethical issues related in a global business environment.

Learning Goal 4: Graduates will have effective communication skills.

Learning Objective 1. Organize, write and execute oral and written professional reports for business in a global environment.

Learning Objective 2. Speak and present using professional communication skills and technology.

Degree Requirements

Students admitted to the Master of Business Administration - Management and International Affairs and not holding any primary degree in business studies must be enrolled in the following remedial courses in their first semester:

RECO545 Economics, RHRM580 Legal Context, RMGT500 Organizational Theory, RMGT520 Governance and Business Ethics

Common Core	6
BUS500 - Quantitative Research Methods	3
BUS689 - Case Study Methodology	3
Specialization	30
HEC510 - Fundamentals of Management	3
HEC520 - Decision Support Model	3
HEC525 - Human Resource Management	3
HEC530 - Marketing	3
HEC540 - Basic Corporate Finance	3
HEC550 - Accounting Information	3
HEC570 - Information Systems	3
HEC670 - Management Change	3
HEC675 - Theories and Practices of Negotiations	3
HEC680 - International Management	3
Capstone	3
BUS690 - Research Methodology in Business	3
Total	39

Executive MBA - Digital Management (hybridⁱ)

In collaboration with ESSCA School of Management, France. Students will be provided with a dual diploma: a specialized Master degree in Digital Management from ESSCA, and an Executive MBA from USEK

Learning Goal 1: Graduates will master the strategic digital marketing experience.

Learning Objective 1. Analyze experiential marketing strategies in order to implement an e-shopping experience.

Learning Objective 2. Demonstrate ability to synchronize a mobile marketing plan within a multichannel strategy.

Learning Objective 3. Exploit data and construct a performing business marketing approach based on customer knowledge.

Learning Goal 2: Graduates will practice innovation pertaining to digital business models.

Learning Objective 1. Develop an innovation and use a business canvas model.

Learning Objective 2. Define a digital communication strategy.

Learning Goal 3: Graduates will possess digital strategic brand abilities.

Learning Objective. Develop and implement a 360° digital brand action plan.



ⁱHybrid: Courses offered in French and/or English

Learning Goal 4: Graduates will gain the necessary skills related to digital transformation.

Learning Objective 1. Understand the digital transformation of the organizations and management evolutions related to digital development.

Learning Objective 2. Understand agile project management concepts and apply appropriate management methods in a digital business environment.

Learning Goal 5: Graduates will have effective communication skills.

Learning Objective 1. Organize, write and execute oral and written professional reports for business in a global environment.

Learning Objective 2. Speak and present using professional communication skills and technology.

Degree Requirements

Common Core	21
DMGT510 - Essentials of Business Studies	2
DMGT515 - Business Research Methods and Professional Development	4
DMGT520 - Customer Path, Mobile Strategies and Social Media	5
DMGT525 - Digital Marketing and Connected Devices	4
DMGT530 - Digital Business Models, Innovation and Big Data	4
DMGT534 - International Learning Expedition	2
Specialization	9
Option 1 - Specialization in Digital Transformation of the Enterprise	
DMGT610 - Brand Strategy in a Digital World	4
DMGT615 - Digital Transformation and Change Management	5
Option 2 - Specialization in Business Development	
DMGT620 - Web Design & E-Commerce Platform	4
DMGT625 - Business Development Strategies	5
Capstone	8
DMGT690A - Professional Thesis	8
Total	38

Doctoral Programs

PhD in Business (hybridⁱ& Eng.)

Learning Goal 1: Graduates will have the essential literature knowledge in business administration.

Learning Objective 1: Identify, analyze, compare/contrast and synthesize key theories in business administration.

Learning Objective 2. Analyze, compare/contrast and synthesize scientific contributions in business administration.

Learning Goal 2: Graduates will have a comprehensive knowledge of business research methods.

Learning Objective 1. Apply quantitative and qualitative tools in order to analyze and test defined hypotheses or generate the related propositions in business administration.

Learning Goal 3: Graduates will be able to demonstrate ethical research skills.

Learning Objective 1. Identify and analyze the various ethical theories and standards to support the development of a moral research community in business administration.

Learning Objective 2. Propose solutions / anticipate outcomes of ethical issues related to various business fields.

Learning Objective 3. Write a proposed ethical policy incorporating the various philosophies.

Learning Goal 4: Graduates will be able to produce original researches.

Learning Objective 1. Identify, analyze and synthesize general publication procedure for business Journals.

ⁱHybrid: Courses offered in French and/or English

Course Descriptions

ACT210	Financial Accounting I	3 cr.
The course explains the principles of general accounting and related applications, explains how to record business transactions, and allows students to read and understand financial statements.		
ACT220	Financial Accounting II	3 cr.
Pre-requisites	ACT210	
The course explains in detail the main components of a balance sheet and explains the nature, classification, and treatment of accounting for long term assets, current assets, liabilities and stockholders' equity. The main objective of the course is to provide students with a general knowledge of the preparation of financial statements, in addition to the analysis of the financial figures with the key ratios and comments, and the preparation of the company's cash flow.		
ACT225	Internal Audit	3 cr.
Pre-requisites	ACT220 And MGT220	
This course explains all the procedures and recommendations that provide the safeguarding of assets, reliability and integrity of financial and operational information, and the effectiveness and efficiency of operations designed to improve the performance of an organization. The course allows the participants to obtain an understanding of the concepts, methodologies and tools of internal auditing, to understand the role of internal auditing in identification and evaluation of risks and in improving governance processes of organizations.		
ACT230	Hospitality Accounting	3 cr.
This course provides a solid introduction to accounting for those students who are required to study hospitality accounting. It is also of benefit to those managers in business, government or industry whose work involves them in dealing with accounting information.		
ACT312	Advanced Accounting	3 cr.
Pre-requisites	ACT220	
This course will teach students how to prepare constitution legal entity accounting transactions, liquidation accounting transactions and any unusual accounting items. The objective of the course is to train the students how to understand financial statements and how to prepare the four statements and disclosures under IFRS.		
ACT320	Cost Accounting	3 cr.
Pre-requisites	ACT220	
This course is intended to explain the role of the management accountant in an organization and to illustrate the different methods of costs and revenue calculation, in addition to the budget preparation and the analysis of variance.		
ACT330	External Audit	3 cr.
Pre-requisites	ACT312 And ACT320	
Financial Statement Auditing is accumulation and evaluation of evidence according to established criteria (ISA's, IFRS, GAAP, accounting policies, etc.). This course is intended to introduce the auditing profession and explain the auditing processes and their application on all the transaction cycles, with the objective to express an opinion on the fair presentation of the financial statements of a company. The course will enable students majoring in auditing to differentiate between assurance and nonassurance services, type of audits, type of auditing opinions and the preparation of a complete audit file. It will explain the auditing process from planning to closing a meeting.		
ACT345	Enterprise Internship	1 cr.
Pre-requisites	ACT320	
This course allows students to apply knowledge and skills acquired at the University in a real life setting. The main goal is to obtain hands-on experience necessary to qualify for a good entry level position in audit. Moreover, students will learn how to create and write a professional report with emphasis on their experience in the audit industry. The course is thus practical and theoretical in the sense that students will participate in theoretical classes at the University and at the same time partake in a 120 hour training program at a recognized corporate establishment.		
ACT410	Groups Accounting	3 cr.
Pre-requisites	ACT312 And BUS320	
Corporate acquisitions, mergers and the formation of other strategic alliances, and international transactions are staples of today's business environment. The objective of this course is to provide students with an understanding of financial reporting for these complex business transactions and the entities they create. Specific topics include accounting for business combinations, consolidated financial statements, financial reporting for partnerships, and foreign currency transactions. This class is taught from the perspective of a preparer of financial statements (as opposed to a user) and involves a significant amount of technical detail. This course requires students to solve complex problems, use information technology and to communicate clearly and concisely in writing to enable them to prepare consolidated financial statements as per IFRS.		
ACT425	Management Control	3 cr.

Pre-requisites ACT320

The course illustrates how costs work and presents some analysis and key performance indicators, in addition to capital budgeting models useful for business decisions. The main objectives include detailed descriptions of cost behavior, pricing decisions, balanced score card, sales variance analysis and capital budgeting decisions. The student will be able to assess the business key performance indicators and handle capital budgeting.

ACT455 Enterprise Simulation - Audit 2 cr.**Pre-requisites** ACT312

The objective of this course is to explain the mission and objectives of the International Accounting Standards Board (IASB), the scope of the International Financial Reporting Standards (IFRS), processes for developing IFRS and interpretations, and policies. IFRSs apply to general purpose financial statements and other financial reporting by profit-oriented entities; those engaged in commercial, industrial, financial, and similar activities, regardless of their legal form. Moreover, entities other than profit-oriented businesses may also find IFRSs appropriate. Students will learn to understand how the IASB framework works, some of the standards listed in IFRS, and how the whole conceptual framework and embedded standards work.

ACT540 Cost and Managerial Accounting in Banking 3 cr.

In an environment that has become increasingly very competitive, accurate measurement of returns, performance monitoring and management planning condition the development of banking and financial institutions as well as the decisions of their policymakers. This course reviews all the techniques used in the field of management control and how to use them in a bank context such as profitability per Division/Product/Employee, transfer pricing models and cost control measures.

AUD610 Regulation (CPA) 3 cr.

The main objective of this course is to examine taxation, ethics, professional and legal responsibilities and business law topics, as well as the skills needed to apply that knowledge.

AUD615 Financial Accounting and Reporting (CPA) 3 cr.

This course will cover accounting principles for business enterprises, governmental entities and non-profit organizations, as well as provide the skills needed to apply that knowledge. Through considering questions about the International Financial Reporting Standards (IFRS), the course allows the participants to identify and understand the difference between financial statements prepared on the basis of U.S. GAAP and those prepared on the basis of IFRS.

AUD620 Auditing and Attestation (CPA) 3 cr.

This course will offer knowledge of auditing procedures, auditing standards and other standards related to attest engagements, as well as provide the skills needed to apply that knowledge. The course allows the students to become familiar with the International Auditing and Assurance Board (IAASB) and its role in establishing International Standards on Auditing (ISA).

AUD625 Business Environment and Concepts (CPA) 3 cr.

This course provides participants knowledge of general business environment and business concepts in order to understand the underlying business reasons for, and accounting implications of, business transactions. Questions pertaining to international standards will test students' grasp of globalization in the business environment.

AUD630 Internal Auditing Strategy 3 cr.

The course objective is to deepen knowledge in the field of internal auditing. It also allows students to draft a detailed program related to operational and internal auditing that is applied to the enterprise specific functions or operations, and to understand strategic norms and principles linked to the internal auditing mission.

BUS211 Mathematics of Finance 3 cr.**Pre-requisites** BUS210 Or MAT206 Or MAT213 Or MAT310 or MAT216

This course will provide students with knowledge on the funding problems, discount, financial amortization, and bonds, through concrete cases.

BUS303 Business Planning 3 cr.**Pre-requisites** MGT220 And MKT220 And FIN310

Generating a business plan needs a methodological approach that provides students with a road map to follow to create new business ideas or develop existing ones. As most businesses seek financial sources, it helps students and future entrepreneurs to introduce potential investors to business opportunities.

BUS320 Taxation 3 cr.**Pre-requisites** FIN310

This course allows the participants to obtain an understanding of the concepts, methodologies and tools of the tax system. It will enable them to gain a sufficient knowledge of the government financial organization and an overview of the public economic sector.

BUS390 Verbal and Non-Verbal Communication for Business 3 cr.

Pre-requisites ENG290

This business English language course is a workshop course, which includes mostly taskbased activities, along with theory sessions, team and individual research projects, role playing, questionnaires, team building experiences and team oral presentations. The course teaches practical skills and the rules of conduct needed within the business environment where English is spoken.

BUS410 Operations Research 3 cr.**Pre-requisites** MIS320

Operations Research is an art and science at the same time. The art part is acquired through experience, while the science part is based on the mathematical tools of Operations Research (OR). When facing a real life problem the OR practitioner should be able to create a mathematical model that represents his/her problem, and then use mathematical techniques to resolve the model and analyze the optimum solution. The learning objectives of this course include the introduction of optimization thinking and its importance in competitive business management. Also, training on technological tools to solve complex problems will help students in real world applications.

BUS475 Financing Import/Export 3 cr.**Pre-requisites** BUS223 or DRT223 or TRA310

The objective of this course is to familiarize students with the basic concepts of the various payment instruments used in the financing of imports and exports in Lebanon and deliberately moving towards banking instruments of international payment and the use made of it. They will be exposed to: documentary credits, standby letters of credit, documentary collections and bank guarantees internationally. The course also visits important issues such as the sales contract, the terms of international sales, checks, bank transfers and commercial papers.

BUS500 Quantitative Research Methods 3 cr.

This course tackles the use of statistical techniques in the elaboration of a methodological protocol. It supposes that students have already completed the course on elementary statistics, statistic tests and poll theory. It mainly aims at joining theoretical thinking to empirical practice. It also summarizes the main actions of the researcher in management and focuses on the meaning of these acts: what does a hypothesis mean? What is a measure? What does the elaboration of a fact mean? What about a model? An important part of this course is assigned to longitudinal data processing.

BUS505 Qualitative Research Methods 3 cr.

This course teaches qualitative methods in business sciences. It also aims to understand the meaning of scientific reasoning and positioning of the researcher in a research approach. The course is based therefore on cross-learning reflections between theory and practice and illustrates the epistemic legitimacy vis-à-vis the qualitative methodological approach.

BUS600 Applied Quantitative Analysis 3 cr.

The quantitative analysis applied in economics and business uses many econometric techniques whose main objective is to help the manager in decision-making. These methods have two advantages: (i) make forecasts (sales, turnovers, profits ...), and (ii) test the relevance of a decision on the running of the organization through statistical tests to validate certain assumptions related to econometric models. These models consider, inter alia, the effect of one or more variables (quantitative or qualitative) called "exogenous or independent variables" on other endogenous variables called explained or dependent. This course also aims to introduce students to the concepts of stationarity, causality, cointegration and panel data too, that are infrequently mentioned in the course of quantitative methods.

Moreover, this material will allow students to use correctly the various statistical data they collect during the thesis writing which must always include an empirical part. It will help them, too, become familiar with the various software including Excel and SPSS. In addition, the empirical analysis is precisely aimed to validate or not the various approaches outlined in the theoretical part of a research work. As such, this course will equip students with expertise on the use of statistics in their future professional environment and enhance their analytical capacity.

BUS650 Responsibility, Ethics and Sustainable Development 3 cr.

The objective of this course is to enable the students comprehend the various ethical and managerial approaches by providing them with insights on the organization as part of the community and the behaviors of the managers have a great impact on the performance of the organization. After completing this course, students will be able to contrast different degrees of social responsibility and ethics in the business world. Furthermore they will be able to generate green culture and conduct ethical decisions in their scope of work.

BUS688A Training and Analytical Report 6 cr.

A professional report should be based on the professional mission of a firm. By mobilizing the knowledge that has been acquired in one or two courses, the report should highlight the capacity of the student to conduct an analysis in relation to a practical problem. The report should not be limited to a description of the enterprise, but should have a point of view and include an analytical dimension, which promotes solutions, offer recommendations and show

adapted measures.

BUS689 Case Study Methodology 3 cr.

This course aims to help, to prepare, to conduct and present a research project, with the help of numerous concrete examples. This course is based on the main stages of the realization of a research project. It is similar to a report of research since the authors' researches are introduced through this course. Not only the book offers guidance and examples to develop a research project but it also serves as a model for the presentation.

BUS690 Research Methodology in Business 3 cr.

This course tackles the main skills allowing the student to understand, assess, conduct and write a research in social sciences in general and business sciences in particular. In fact, the course consists of a general introduction aiming at developing research stakes, foundations and techniques in management sciences, provided that students deepen their reflection.

BUS691 Thematic Seminar I 1 cr.

Business and academic professionals will intervene within the scope of various current events at the level of finance, management and marketing, etc. in order to provide a fully rounded training program.

BUS692 Thematic Seminar II 1 cr.

Business and academic professionals will intervene within the scope of various current events at the level of finance, management and marketing, etc. in order to provide a fully rounded training program.

BUS693 Thematic Seminar III 1 cr.

Business and academic professionals will intervene within the scope of various current events at the level of finance, management and marketing, etc. in order to provide a fully rounded training program.

BUS698A M.Sc. Thesis 9 cr.

In this course the students will choose, plan, implement, write and reveal the content of their scientific research by following a scheme that blends theoretical backgrounds with empirical data.

BUS699A-B Training and Analytical Report 6 cr.

The professional report should be based on a professional mission of a firm. By mobilizing the knowledge that has been acquired in one or two courses, the report should highlight the capacity of the students to conduct an analysis in relation to a practical problem. The report should not be limited to a description of the enterprise, but should have a point of view and include an analytical dimension, which promotes solutions, offers recommendations and shows adapted measures.

CSC204 Information Technology and Networking 3 cr.

This course introduces the basics of the integration of information technology and networking in professional life. Subjects treated include: application software; systems software; system unit; Excel spreadsheets; HTML language; physical architecture of a network; internet; internet services; internet protocols (TCP/IP, HTTP, FTP, SMTP et POP); the IPV4 addressing classes; and applications.

CSC225 Business Programming I 3 cr.

Pre-requisites INF204OrCSC204

This course facilitates the acquisition of a practical method to solve problems using the Visual Basic .NET programming language. Students will be taught methods for problems analysis, structural and detailed conception of solutions, base concepts of pseudo code and flowchart, coding and verification of programs. Topics include: an introduction to Visual Basic .NET language, basic concepts of the language, types, expressions, control structures (selection, repetition), one and two dimensional arrays, strings, functions, and text files. The course is completed by lab workshops.

CSC319 Technology and Networks Infrastructure 3 cr.

Pre-requisites INF204 Or CSC204

This course aims to introduce the basics of computer networks. This studies infrastructures, features and network topologies, transfer techniques, switching, encoding, transmission and routing, the reference model, the protocols of different layers, including deepening the study on the TCP / IP architecture used in the internet.

CSC325 Business Programming II 3 cr.

Pre-requisites CSC225 And ITB321

This course is an introduction to the basic concepts of object-oriented programming. It focuses on the concepts of inheritance, polymorphism, and exception handling. It enables students to acquire a good knowledge in the concepts of event-driven programming and the Windows environment. Topics include applications to databases, new technologies of XML, SQL, and ADO. NET

CSC359 Internet Development and Technology 3 cr.

Pre-requisites CSC225 And ITB321

The main objective of this course is to build database-driven web applications using Visual Studio .NET. Students will learn how to: develop web applications based on the ASP.NET Web Forms model; and program using ADO.NET and

SQL Server to provide the site access to the database. It also provides the website proper authorization and authentication using the .NET security model.

CSC407 Systems Analysis and Design 3 cr.

Pre-requisites ITB321

This course introduces students to an analytical framework that involves analyzing organizations as systems, or the process of systematically and objectively gathering information about business systems and subjecting that information to formal analysis. This includes identifying broad organizational goals and supporting business areas and processes, and business process definition and deconstruction.

CSC450 Database Design and Programming 3 cr.

Pre-requisites CSC407

This course aims to design a database based on a specific case study. Students will learn about the database components, including tables, queries, and views, by using Microsoft SQL Server as a tool. In addition, students will learn how to create and maintain database information, including sorting, indexing and relating tables. Furthermore, how data are to be input and retrieved, displayed and manipulated in order to create a useful, efficient, and coherent design. Since this is an application oriented course, the student should be familiar with Microsoft SQL Server.

DRT223 Business Law 3 cr.

The main objective of this course is to provide students a general description of business corporations especially under the Lebanese legal system. We address in particular the laws of merchant, business concern, partnership, and corporations. However, our approach is based on a functional perspective of the law. Thus, we attempt to ask how these legal structures function to produce desired benefits to parties who enter into relationships, or how rules can affect sensible business organization.

ECO221 Microeconomics 3 cr.

Pre-requisites BUS210 Or MAT206 Or MAT213 Or MAT310 Or MAT217 or MAT216

This course gives students an insight into microeconomics, which is a key component to designing and understanding public policy and is an essential tool for managerial decision-making, while offering an understanding of the operation of modern economy.

ECO222 Macroeconomics 3 cr.

This course gives an insight into macroeconomics, portraying the economy as a whole. It is by developing an understanding of fundamental economic terminology, and concepts and principles that we are able to interpret economic changes and their impact on a country's situation.

ECO315 Managerial Economics 3 cr.

Pre-requisites ECO221

Managerial economics is an applied branch of microeconomics. It gives insight on the development of tools and models of analysis assisting managers and consultants with resource allocation, and strategic and tactical decision-making in private and public companies.

ECO410 Banking and Finance 3 cr.

This course aims at expanding knowledge in economics with an emphasis on accounting, financial intermediaries, banking and their public policies.

ECO600 Macroeconomics and Public Policy 3 cr.

This course is designed to provide students with an advanced understanding of macroeconomic concepts and models used in economic and policy analysis. It elaborates on the main macroeconomics topics including national income, money and inflation, unemployment, business cycles and economic growth. The course also discusses government economic policies and their implications.

Some of the questions that we examine include: Why are some countries doing so much better than others? What leads to persistent inflation and how can hyperinflation arise? What are the causes and consequences of global imbalances? What determines exchange rates? What are the causes of business cycle fluctuations and what are their implications for financial markets? What is the role of fiscal and monetary policy?

ENG240 English Communication 3 cr.

Pre-requisites ENG120

This course is designed to upgrade student proficiency in the English language. It offers guidance in critical reading and instructions in writing to develop clear, well organized prose. It emphasizes the writing process with an introduction to rhetorical strategies, such as compare and contrast, cause and effect, and argument, through the integration of the four language skills (listening, speaking, reading and writing).

ENG290 Business Professional 3 cr.

Pre-requisites ENG240

The study of communication theory and its application to business is the main focus of this course. Emphasis is placed

on composing basic forms of business communication, including correspondence and reports. Attention is also given to the ethical objectives of communicating in the managerial environment.

FIM510 Financial Math 3 cr.

Due to the important revolution that took place in the financial markets in the past twenty years, new techniques have been presented in this course for trading purposes and have been tested for efficiency and potential profitability in the market. The content of this course will provide students with the methodology that enables them to tackle a variety of econometric models with a direct application in the economy as well as in the financial market and facilitates the comprehension of technical instruments through the application of quantitative methods on the financial markets. To that end, a full range of topics in probabilistic statistics and financial modelling will be addressed, given that financial mathematics is a must for all candidates who want to join dealing rooms as quantitative traders and arbitrageurs. Statistical techniques can be employed to test if and how well securities are correlated and, by implication, how well suited they are for arbitrage and trading. The curriculum includes parametric and non-parametric regression analysis, estimation methodologies, forecasting analysis, as well as high frequency pairs trading techniques.

FIM520 Quantitative Analysis Applied to Finance 3 cr.

The course herein begins with an overview on many financial instruments in terms of pricing, valuation and sensitivity analysis. Then it moves to introducing the notion of risk, in particular the identification and measurement procedures. To that end, it elaborates the value at risk methodology to quantify all types of risks that exist in the financial market for a variety of instruments and structured products, all based on advanced statistical approaches with empirical analysis implemented on excel and Matlab. Subsequently, the Value at risk metric is undertaken on a portfolio level which enables to run inclusive optimization with ideal weights allocation amongst different asset classes trying to weigh up the risk/return perspectives. Finally, it went through Asset-Liability management for banks and financial institutions with more emphasis on Interest Rate, Foreign Exchange and Liquidity Risk.

FIM590 Financial Markets and Bondholder Business 3 cr.

This course emphasizes on the structuring of interest rate based products, in order to understand the sensitivity concepts for hedging purposes. It will handle both duration and convexity in a quantitative approach and their implications on duration neutral strategies. An introduction to short and long term futures is a must to help understand the Basis of fixed income derivatives. A software that prices any collection of cash flows by generating a discount function will be designed and used to replicate bond index trackers.

FIM600 Conjunction 3 cr.

This course introduce the concept of technical analysis and charting. Studies performed on historical charts show recognizable and tradable patterns that enable the student to put on trades. There will be a special emphasis on Elliott and Gan theory. The course also prepares students to submit the chartered market technicians certificate (CMT).

FIM610 Technical Analysis 3 cr.

This course aims at analyzing historical data in graphs in order to find tendencies, support and resistance points. In addition, pricing and the future evolution of prices will be tackled. Furthermore, tendency indicators and oscillators will be introduced, as well as the Elliott and Gan theory. An introduction to the economic system as a whole and the way it functions is affected by the behavior of interdependent sectors, which will also be addressed in order for the student to understand and highlight the intrinsic links between financial and macroeconomic cycles.

FIM635 Financial Products Engineering 3 cr.

This course aims to cover in depth the techniques of pricing and valuing interest rates swaps using STIRS and FRAs. All swap structures will be tackled by putting forward both method of comparison swap and zero coupon. Finally, we will use the concept of vanilla swap equivalent position to delta hedge a swap book.

FIM640 Financial Futures and Spread Trading 3 cr.

This course will cover the major aspects of financial Futures for hedging, arbitrage, trading strategies and techniques. A special emphasis on directional v/s spread trading will be introduced to deal with Futures spread trades, yield curve spreads and benchmark over benchmark relative values.

FIM650 Options Dynamic Assessment 3 cr.

This course is exclusively dedicated to the study of options; thus, it will enable students to better define option pricing issues within the context of binomial trees and stochastic process. In addition, the course seeks to cover all aspects of implied volatility concepts through the study of cones and surfaces in order to design volatility spread strategies. The dynamic follow up of options portfolio through engaging its Greeks will be stressed on especially for hedge requirements. Acquiring expertise in the valuation of exotic options (barriers, digital, no touch, etc.) is crucial to introduce capital structured notes.

FIM670 Structured Products 3 cr.

This course aims to give the students the ability to identify the risk reward equilibrium through contingent claims, vanilla and exotic products.

A deep understanding of the major options profits will be dealt with in order to give students the ability to combine

traditional assets with contingent ones to create customized structured products.

Most of the structured notes available in the market will be subject to thorough examination in relation to their structure and profile (Best of; double no touch) ranging from equity linked to FX assets.

FIN310 Financial Management 3 cr.

Pre-requisites BUS211 And STA205 and STA220

Financial management includes all the activities of an organization aimed at planning and controlling the use of cash (money) and assets (property) that are owned by the company to achieve its strategy.

FIN315 Financial Analysis 3 cr.

Pre-requisites ACT220

The evaluation of the health of a business is an essential component of financial analysis. Shareholders, creditors, and managers are questioning the value establishment by the company. Techniques and appropriate methods help them to form their opinion. Consequently, the content of this course follows an approach that is based on the annual accounts, including the study of the income statement, the study of time record, plus the study of changes in positions between two periods.

FIN345 Enterprise Internship 1 cr.

Pre-requisites BUS320

This course allows students to apply knowledge and skills acquired at the University in a real life setting. The main goal is to obtain hands-on experience necessary to qualify for a good entry level position in finance. Moreover, students will learn how to create and write a professional report with emphasis on their experience in the banking and finance industry. The course is thus practical and theoretical in the sense that students will participate in theoretical classes at the University and at the same time partake in a 120 hour training program at a recognized corporate establishment.

FIN412 Corporate Finance 3 cr.

Pre-requisites FIN310

The course will focus on the problems facing a financial manager in any business. In particular, students will examine how to obtain adequate funds to allow a firm to operate, and how to decide on the optimal allocation of funds obtained by the firm. To obtain funds, the financial manager must participate in markets for debt and equity securities. Thus, there will be discussions on how these markets work and how they can be most efficiently used by the firm. In allocating funds, students will learn how to assess the economic benefits of long-lived projects and how to make optimal choices between projects. Students will also spend time developing basic financial tools that will assist them in the decision-making process.

FIN420 International Finance 3 cr.

Pre-requisites BUS211

This course provides a conceptual framework that can be used to understand how recent events have affected the financial environment. Each type of financial market is described with a focus on its utilization by financial institutions, its internationalization, and recent events that have affected it. It will also cover the different economic causes and risk factors of the foreign exchange for enterprises, financial institutions, and households.

FIN421 Financial Markets 3 cr.

Pre-requisites BUS211 or MAT312 or MAH312

This course enables students to understand the concepts, terminology, instruments, and investment strategies when dealing with money. This includes the introduction of the broad and closely related areas of financial markets and investments, including the various tools used to determine the value of different investment vehicles. The risk inherited with investing as well as the risk return tradeoff will be considered. Accordingly, the principles of modern portfolio management, including diversification, will be addressed. Particularly, common stocks will be analyzed and valued using multiple valuation techniques. Within the context of fixed income valuation, the concept of bond duration and the yield curve will be examined. Financial derivatives, including options and futures, will also be considered as a hedging tool in the overall investment strategy. Practical application will be emphasized throughout the course using Thomson Reuters Eikon.

FIN425 Company Valuation 3 cr.

Pre-requisites FIN310

The main aim of this course is to initiate students to the methods and techniques of business valuation; underlining strongly the fact that the business valuation practice is a half art and half science practice. The whole is presented within a context where we can discuss the theoretical implication of a firm's value by different valuation methods, illustrated by case studies aiming at showing students (future managers) what the concepts of business valuation mean in practice, and initiating them to practicing the techniques and the negotiation processes.

FIN430 Financial Engineering 3 cr.

Pre-requisites FIN420 And (STA205 Or BUS317 Or STA220 Or STS205)

The course enables the students to understand the main derivative products traded on financial markets (futures, forward contracts, options and swaps), as well as their use for hedging, speculation and arbitrage. They also acquire practical knowledge on the mechanics of organized markets and learn how to price a derivative: forward price calculation, premium calculation, P&L calculation, and NPV calculation.

FIN455 Enterprise Simulation - Finance 2 cr.

Pre-requisites FIN421

This course focuses on key principles of technical analysis necessary to make successful investment decisions. Individual investors and traders are increasingly recognizing the importance of technical analysis in decision-making. With the advancement of the technical analysis profession, many sophisticated techniques have also developed. This course, which revolves around price analysis, will provide students the basic knowledge to read charts and identify specific patterns and shapes. This includes how to identify the right price to enter and exit the financial markets to maximize profits in several asset classes (FX, equities, bonds, futures, commodities, ETF, etc.).

FIN600 Applied Corporate Finance 3 cr.

In this course, students will acquire more advanced knowledge related to corporate finance main decisions: investment decisions, financing decisions and dividends policies. This course teaches students how to implement these decisions in specific contexts such as SME context (small and medium enterprises) and develops a critical analysis of the concepts and traditional tools of corporate finance.

FIN610 Risk Management 3 cr.

The course aims to provide students with a tangible educational experience that will allow them to acquire the know-how and control of organizational risk management tools and processes. Students will learn how to identify the main risks of a project, estimate their impacts and propose suitable action plans.

FIN640 Financial Systems and Economic Dynamic 3 cr.

The course addresses the unique entrepreneurial experience of conceiving, evaluating, creating, managing, and potentially selling a business. The goal is to provide a solid background with practical application of important concepts applicable to entrepreneurial environment. Entrepreneurial discussions regarding the key business areas of finance, accounting, marketing and management include the creative aspects of entrepreneurship. The course relies on classroom discussion, participation, guest speakers, case analysis, the creation of a feasibility plan, and building a business plan to develop a comprehensive strategy for launching and managing a business. Students will need to draw upon their business education and experience, and apply it to the task of launching a new venture. Students are expected to interact with the business community, advisors, be able to work effectively in teams, and be active participants in classroom discussions and exercises.

FIN655 Portfolio Management 3 cr.

This course covers the various theoretical and practical aspects of the quantitative portfolio management. It sheds light on the implication of theories, notably in the course of "Capitals Market Theory" at the level of investment policies and performance measure. Great attention is given to portfolio management and active strategies. Furthermore, students will be aware of the themes related to investment policies (objectives, constraints), asset allocation, assessment and performance. Global and mandatory management along with the use of derivative products for insurance and coverage objectives will be examined as well.

FIN680 Economic and Financial Theories 3 cr.

The course is based on the analysis and interpretation of scientific articles in economy and finance that relate to Management practices; it explains practically the process of interpreting explicitly theories from research studies and understanding their contribution to the advancement of science in economic and financial theories.

HEC510 Fundamentals of Management 3 cr.

The course explores the economic, political, social and cultural challenges that pertain to any organization, thus introducing participants to the world of the manager. It covers the basic functions of management, namely strategic planning, organizing and structuring, and leading and controlling. In the process, students will be exposed to the challenges of international and intercultural management, innovation, management of creative enterprises and knowledge management. The course reviews different aspects of existing organizations, such as marketing, finance, accounting and human resources. New issues introduced include sustainable development, corporate social responsibility, corporate ethics and governance.

HEC520 Decision Support Model 3 cr.

The course objective is to present quantitative tools used in practice to support decisions, as well as the management situations to which they apply. Using stylized cases, students will learn to recognize several types of decision-making problems, express them as mathematical models and identify the appropriate techniques to solve them. Special attention is given to prescriptive models, which help identify the best management decisions. At the end of the course, students will have gained a basic knowledge of the main techniques involved for these decision support models. This will allow them to deal with current problems of decision-making with the help of specialized software attached to

Microsoft Excel.

HEC525 Human Resource Management 3 cr.

The underlying premise of the course is that Human Resources Management (HRM) is a responsibility shared by both HR specialists and the managers of firms. HRM is viewed as a key component of business strategy and as a potential source of competitive advantage. The course highlights the numerous challenges facing today's firms: growing pressures for continuous productivity improvement, better quality goods and services, more flexible production systems and changing employee expectations. These pressures are straining the traditional HRM model and leading to a realignment of HR practices and the restructuring of relationships among the firm's major players, including executives, managers, employees and unions. This course is designed for managers, as they often do not have access to a human resources department, but must still manage human resources in all activities ranging from planning, recruitment and selection to performance evaluation, compensation and development of competencies.

HEC530 Marketing 3 cr.

Marketing is an applied science built on the foundations of economic, behavioral and management sciences. It is associated with a large number of topics, concepts, theories and examples. The objectives of the course are to demystify the terminology, concepts and theories, to understand and apply marketing management principles, and to develop the analytical and decision skills required in a competitive marketplace. The course will present this material within a systematic framework so that students will be able to link the different subjects and understand the relationships between marketing research, consumer behavior, market segmentation, targeting, product positioning, distribution channels and promotion alternatives.

HEC540 Basic Corporate Finance 3 cr.

The course will focus on the problems a financial manager faces. In particular, students will examine how to obtain adequate funds to allow a firm to operate and how to decide on their optimal allocation. To obtain funds, the financial manager must participate in markets for debt and equity securities. Thus, we will discuss how these markets work and how they can be most efficiently used by the firm. In allocating funds, we will learn how to assess the economic benefits of long lived projects and how to make optimal choices between projects. We will also spend time developing basic financial tools that will assist us in the decision-making process.

HEC550 Accounting Information 3 cr.

Managers make decisions based on various sources of information, one of which is the accounting system that produces financial information. The end products of this system are financial statements prepared according to a standardized set of rules. The first part of the course is designed to give students a general knowledge of the most important international standards used in financial reporting. The second part of the course focuses on management accounting. A key role for management accountants is to establish the control systems used to achieve organizational goals and minimize risks. One of the most important of these is budgetary control, a powerful tool that encourages planning, sets milestones, evaluates performance and suggests paths for improvement. The objective of this part of the course is to help students understand the role and functioning of the budget.

HEC570 Information Systems 3 cr.

The ability to manage and use information in the pursuit of business objectives is an important managerial skill. Developing this skill requires an understanding of information technologies, the competencies and processes used to manage these technologies, such as, the governance of information systems, and the collection, manipulation and analysis of operational data. The course will focus on three critical technologies: data management, integrated systems and business intelligence. Students will examine the management and use of these technologies, their relationships to one another and the responsibilities of managers in their application. Participants will be asked to design the essential elements of an information system to support the implementation of a particular business initiative.

HEC670 Management Change 3 cr.

Contemporary organizations have to deal with rapidly changing environments. The globalization of the economy forces organizations to seriously reconsider the design as well as the deployment of the organization itself. Public as well as private organizations throughout the world are living laboratories of this phenomenon. Confronted with market deregulation, privatization, global competition, achievement of world-class practice and rapidly changing technologies, institutions that want to survive in their field must adjust constantly. This adjustment requires that private companies and even state-owned companies constantly re-examine the chosen organizational models. They are more and more confronted with reorganizations, new partnerships, out-sourcing and all other types of organizational transformation. Moreover, it becomes evident that this redeployment of organizations goes far beyond their simple reconfiguration. It requires that managers of these organizations develop specific competencies concerning the implementation of major changes. These changes often have significant social and political effects, which managers must be able to identify and handle.

HEC675 Theories and Practices of Negotiations 3 cr.

The course is an introduction to negotiation as a management tool used by individuals in and between organizations. It

focuses on learning the main models of negotiation. The primary goal of this course is to give an opportunity to critically evaluate current strengths and weaknesses in relation to negotiation so that students can develop a personal toolkit of effective negotiation skills, strategies, and approaches. A related aim is to provide them with a broad intellectual understanding of concepts central to the scientific research on negotiation. In concrete terms, the students will be required to experience negotiation within various contexts.

HEC680 International Management 3 cr.

Students who intend to work in the area of trade and international business development must have some essential points of reference in order to achieve a successful career. This course is intended to provide students with these essential points of reference. As such, its objectives for students are: to understand the international business environment in which firms operate, to evaluate opportunities and challenges faced by firms in the global and competitive environment of prominent emerging markets in which domestic and multinational firms currently operate, to analyze national and international policies with regard to globalization, trade and firm growth, to differentiate between domestic and multinational business strategies, to understand the important place of consensus in international business, and to develop a corporate social responsibility policy in this context. This course will help students achieve these objectives; concrete cases will be presented in order to facilitate their understanding of the fundamental concepts taught in the course.

HRM515 Understanding the Business Environment from an HR Viewpoint 3 cr.

The purpose of this course is to deal with accounting and financial tools for HR while understanding the structure of a profit and loss account, and assessing the impact of accounting decisions in human resources. It is also about introducing students to Enterprise Resource Planning Systems. Furthermore, students will learn the concept of corporate strategy, and how to develop intercultural competences in multicultural teams while thoroughly focusing on organizational knowledge to help create and maintain learning organizations.

HRM530 Attracting and Selecting People 3 cr.

The objective of this course is to show how HR professionals and top managers can construct and maintain a high-performing workforce. Students will learn, within this context, the best practice for attracting and selecting well-qualified talented employees. They will also be introduced to the best ways for achieving strategic objectives and obtaining better and stronger results through people.

HRM540 Developing People 3 cr.

This course encourages students to think strategically about talent and career development, through competencies management and Performance appraisal techniques as used by international companies. The course will also involve a discussion about the range of successful practices and contexts related to the HR corporate Marketing strategy as derived from research and experience. Students will also be given the opportunity to reflect on what is expected from HR practitioners with regards to installing a collaborative culture based on the principles of collective intelligence.

HRM555 Enhancing People Involvement 3 cr.

This course aims to enhance group cooperation, foster collaboration and develop new approaches to team work. It is about getting to know each other by using new approaches, exploring methods of cooperation, stimulating fluidity in team work, and gaining empowerment, freedom, and creativity. It also introduces students to organizational behavior (theory and practice), to leadership and to top team management skills.

HRM565 Mastering the HR Tools 3 cr.

The idea of this course is to discuss and share experiences of HR Information Systems from a user point of view. The HR function is responsible for providing reliable and relevant data in the decision-making process. Future HR managers will have to deal with HRIS on a daily basis, which requires understanding how these systems support HR strategy. Students will also learn how to differentiate between information and knowledge to define organizational learning, and to identify main factors driving companies and society to learn and better manage knowledge.

HRM580 Mastering the Legal Context 3 cr.

This course seeks to provide students with a broad overview of individual and collective labor laws and national legal systems. Within this context, students analyze case studies given by HRDs and lawyers. They are also introduced to negotiation theory, crisis management and social conflicts, and employee relations in Multinational Enterprises. (MNE).

HRM590 Industrial Relations 3 cr.

The objective of this course is to provide a broad overview of the industrial system in Europe, its complexity and evolution, and offers the opportunity for students to run a European work council. It also seeks to help students to negotiate in a group and within a multicultural context. This aspect of the course also encompasses a broad overview of the main issues governed by European Labor Law, such as the Council of Europe and European Union Law.

HRM630 Introducing the Research Methods and Literature of the HR Field 3 cr.

This course aims to help, to prepare, to conduct and present a research project, with the help of numerous concrete examples. This course is based on the main stages of the realization of a research project. It is similar to a report of research since the authors' researches are introduced through this course. Not only the book offers guidance and

examples to develop a research project but it also serves as a model for the presentation.

HRM650 Seminars, Conferences and Group Work 3 cr.

This part of the course encompasses several interactive seminars and lectures given by international experts on various themes, with an emphasis on entrepreneurship, compensation and benefits, ethical issues in transnational firms, diversity management in the workplace, and equity practices. Such seminars and lectures will be conducted through group work and discussions with lecturers.

ITB321 Database 3 cr.

Pre-requisites CSC204

This course is dedicated to exploring the characteristics of data to enable students to design a database and use these characteristics to solve common business problems. Students will also learn how to design database components (tables, forms, queries, reports and macros) by using Microsoft Access as a tool. In addition, they will acquire the skills to create and maintain database information, including sorting, indexing, and relating tables. Students will think about data input and retrieval, and how it is displayed and manipulated in order to create a useful, efficient, and coherent design. Since this is an application oriented course, no access programming code is expected from the students.

ITB345 Enterprise Internship 1 cr.

Pre-requisites CSC325

This course allows students to apply knowledge and skills acquired at the University in a real life setting. The main goal is to obtain hands-on experience necessary to qualify for a good entry level position in information technology. Moreover, students will learn how to create and write a professional report with emphasis on their experience in IT. The course is thus practical and theoretical in the sense that students will participate in theoretical classes at the University and at the same time partake in a 120 hour training program at a recognized corporate establishment.

ITB350 E-Business 3 cr.

Pre-requisites MKT220

This course provides a basic understanding of eBusiness, mainly over the internet. It introduces the types of eBusiness and its various revenue models, and the driving technologies, as well as the driving sociocultural and environmental aspects behind the increase in demand for eBusiness. The course gives students a good foundation in understanding the potential of eBusiness without neglecting the challenges it faces. Both technical and strategic aspects of eBusiness are discussed.

ITB455 Enterprise Simulation - ITB 2 cr.

Pre-requisites CSC450 and CSC359

Increasingly organizational survival and/or efficiency are related to the ability to acquire and maintain excellent information about itself and competing organizations. Information treated as a resource for strategic planning and operational management has a value like other assets in the organization. Once information is placed in the proper perspective, management issues regarding all the departments and units of the entity become strongly handled. More than ever there appears a need for faster access to critical information by all of the decision makers to make better decisions. The impact of information technology (IT) on firms' performance and efficiency has been repeatedly stated. Firms have found opportunities to use IT in products and processes to reduce costs and increase product value, as well as to improve organizational effectiveness, through enhanced coordination, communication and control. It is claimed that these uses have allowed firms to gain competitive advantages over other firms. All levels of management have the burden of insuring that appropriate information systems are in place to bring about a productive profitable organization. Therefore, this course will explore necessary management actions which will ensure that information is available, correct, manipulatable, protected, and archived in proper forms.

LCB200 Introduction to Hospitality Management 3 cr.

Pre-requisites ENG240

This course offers a comprehensive tour of the fascinating areas of the hospitality industry. Some of the topics that will be covered in this course include the concept of service, the lodging industry, the restaurant business, institutional foodservices, tourism, gaming entertainment, leisure and recreation. Students will be introduced to the basic managerial functions and how they relate to the hospitality industry. The course also familiarizes students with career opportunities and introduces them to large hospitality organizations and companies.

LCB213 Hospitality Business Communication 3 cr.

Pre-requisites ENG240

In this course students will apply business communication principles through the creation of effective business documents and oral presentations. This business communication course will also include the study and application of team communication and the use of technology to facilitate the communication process.

LCB220 Food and Beverage Service Operations 3 cr.

Pre-requisites ENG240

This course covers the basic functions of food and beverage services, and introduces students to a servers job, types of establishments, and different types of service. Some current issues, such as embracing diversity, preventing harassment, and maintaining a drugfree work environment are also discussed. The course covers both theoretical and practical aspects of food and beverage services, and apart from attending lectures in the classroom, students will be practicing and participating in real life service.

LCB221 Hospitality and Tourism Marketing 3 cr.

Pre-requisites ENG240

This course describes service marketing as applied in the hospitality and tourism industry, including but not limited to unique attributes of service marketing, consumer orientation, understanding consumers and consumer behavior, market segmentation principles, target marketing, promotion planning and pricing theory and practices.

LCB226 Oenology 3 cr.

The main purpose of this course is to acquaint students with basic knowledge of wine and other spirits. Specifically, they will acquire knowledge about wine making throughout the world, the grape varieties, wine ageing and matching wine with food.

LCB230 Le Cordon Bleu Kitchen A 3 cr.

Pre-requisites LCB255

This practical course aims to introduce the students to the world of culinary food. Therefore, students will learn the basic international food and pastry recipes that enhance that culinary knowhow and integrate them to the world of gastronomy.

LCB235 Le Cordon Bleu Kitchen B 3 cr.

Pre-requisites LCB230

This advanced practical course aims to significantly integrate the students into the culinary domain. In this context, diverse international recipes will be carefully demonstrated with professionalism and art.

LCB240 Bar and Beverage Service Operations 3 cr.

The main purpose of this course is to acquaint students with basic knowledge about beer, cider, mead and sake. It explains the distillation process and the five basic spirits: whisky, gin, vodka, rum and tequila as well as the national drink: arak. Students will learn how to successfully manage a bar and how to avoid squandering.

LCB246 Hospitality Purchasing Management 3 cr.

Pre-requisites LCB200 And ACT230 And MGT220

This course presents a comprehensive introduction to the basic principles of purchasing food, beverages and FFE. Topics include writing product specifications and ordering, supplier selection, store management and negotiations. Emphasis is placed on how to make effective managerial purchasing decisions. The course clarifies the relationship between food specifications, and purchasing methods, while enhancing the organizational skills of students in the administration of a successful purchasing department.

LCB250 Food and Beverage Cost Control 3 cr.

Pre-requisites ACT230

This course provides a fresh and realistic approach to the control and management of resources in the challenging hospitality industry. This creates an immediate awareness within the student that success in the hospitality industry is challenging and that resources must be controlled and used for their intended purposes if an operation is to be successful. This course mirrors the financial aspect of the food and beverage operations, the methods to be used for an efficient control process and the strategies to be adopted when pricing any product.

LCB255 Hygiene and Security 3 cr.

Pre-requisites ENG240

This course aims at shedding light on the areas of food safety, and employee health and safety in the hospitality industry. Students will be prepared to face the challenge of food safety management as this is considered essential in this type of business. More specifically, this course will give the students hygiene and sanitation methods and principles as should be applied in the market and will introduce them to the practical implementation of the current food safety management systems such as HACCP and ISO 22000:2005. Moreover, they will learn the principles related to the health and safety of employees in the workplace so as to make their organization more productive and efficient.

LCB260A Internship I: Food and Beverage 3 cr.

This course allows students to apply knowledge and skills acquired at the University in a real life setting. The main goal is to obtain handson experience necessary to qualify for a good entry-level position in hotel, restaurant, or food service management. Moreover, students will learn how to create and write a professional report with an emphasis on their experience in the hospitality industry. The course is practical and theoretical in the sense that students will participate in theoretical classes at the University and at the same time partake in a training program at a recognized hospitality establishment.

LCB260B	Internship II: Rooms Division	6 cr.
Pre-requisites	LCB260A	
<p>This course allows students to apply knowledge and skills acquired at the University in a real life setting. The main goal is to obtain hands-on experience necessary to qualify for a good entry-level position in hotel, restaurant, or food service management. Moreover, students will learn how to create and write a professional report with an emphasis on their experience in the hospitality industry. The course is practical and theoretical in the sense that students will participate in theoretical classes at the University and at the same time partake in a training program at a recognized hospitality establishment.</p>		
LCB305	Food and Beverage Management	3 cr.
Pre-requisites	LCB220AndLCB200	
<p>This course offers the essential managerial tools to plan, organize, lead and control an effective and efficient food and beverage operation. Reflecting the financial aspect of the food and beverage operation, this course covers not only the financial management of the food and beverage exercise but also tackles the operational side inclusive of the service, the production and the stock flow cycle. A fresh and realistic approach to facilities management and to the allocation of resources in the challenging hospitality industry is shown to ensure the success of the exercise.</p>		
LCB310	Catering and Events Management	3 cr.
Pre-requisites	LCB305	
<p>This course takes the student step by step through the complicated process of creating and opening a restaurant starting from generating or modifying a restaurant concept, to developing a menu, a staff of personnel and a market plan. In addition, this course is designed to address the complex operation of catering. The focus is on two major areas: the off premises and on premises catering for business functions and the management of large scale and special events. Along the way, the course gives a comprehensive picture of what the restaurant business will be about, and the same for events management.</p>		
LCB325	Strategic Management for Hospitality Industry	3 cr.
Pre-requisites	LCB221 Or MKT220 And LCB305 And MGT220	
<p>This course introduces students to the strategic management process with a focus on the hospitality industry. Students will learn about the external environment and stakeholders, and how these impact on an organization. Moreover, students will become familiar with how to perform an internal analysis of a company, and how to formulate and implement strategies at different levels within the organization. The course will focus on global strategic management issues, and introduce students to topics such as market entry tactics, international market selection, and stakeholder management in foreign environments.</p>		
LCB400	Facilities and Property Development Management	3 cr.
Pre-requisites	LCB310 and LCB255	
<p>This course introduces students to facilities management from concept and feasibility planning to space and architectural design as well as construction and procurement management. Topics covered include setting appropriate facilities requirements, layout and detailed design, the implementation of properties decisions within a balanced design operations, and the financial framework. Special emphasis is given to preventative maintenance programs, energy management, basic building systems design and operation, and security and control efforts.</p>		
LCB410	Quality Management in Hospitality	3 cr.
Pre-requisites	MGT220	
<p>This course aims at preparing students to handle the challenges of quality management in the hospitality industry, by enabling them to measure and improve quality as being both, a primary component of, and an important competitive advantage in the hospitality field. More specifically, this course will give the students quality management methods and principles as applied in the market and will teach them how to use practical skills to make their organization more productive and quality oriented.</p>		
LCB415	Hospitality Protocol and Etiquette	3 cr.
<p>This course will provide an overview of general protocol and etiquette in the hospitality industry. Students will learn about soft skills and social intelligence, correct behavior, and proper communication techniques as they apply in the real world. The course will also cover topics such as international etiquette, presentations and public speaking, as well as conflict resolution with a focus on the hospitality industry. It is an interactive course in which role plays and class participation are important aspects.</p>		
LCB441	Rooms Division Management	3 cr.
Pre-requisites	LCB200	
<p>This course acquaints the students with the operations and procedures of the rooms division department of a hotel. Some of the topics covered in this course include hotel organization and interdepartmental communications, property management systems, reservations, revenue management, security issues, executive housekeeping, and environmental management and sustainability. The purpose of the course is to enable students to develop knowledge</p>		

and skills necessary to control, supervise and manage the front office, housekeeping and security departments within the rooms division of international hotels or resorts.

MAT216 General Mathematics 3 cr.

Pre-requisites MAT110

This course provides students with the solid base they need to be successful in their specialty courses. Topics covered include: function of a real variable, elementary functions, Taylor's expansion, simple integral and methods of integration, differential equations, multivariable functions, continuity, partial derivative, chain rule, differential, introduction to double integrals, methods of integration, Matrix calculus, determinants, and linear systems.

MGT220 Principles of Management 3 cr.

Pre-requisites ENG120 and ENG140

An introductory course explaining the definition of management as a set of activities, including: planning and decision-making, organizing, leading, and controlling, directed at an organization's resources, including the human, financial, physical, and informational, with the aim of achieving organizational goals in an efficient and effective manner.

MGT320 Organizational Behavior 3 cr.

Pre-requisites MGT220

Organizational behavior is the study of actions and attitudes that people exhibit within the organization and their impact on the organization. The effective design and management of organizations require the thoughtful application of knowledge concerning the behavior of people at work.

MGT330 Human Resources Management 3 cr.

Pre-requisites MGT220

This course provides students with the basic principles and theories of human resource management. It expands on the five functions of human resources management: staffing, training and development, safety and health, compensation and benefits, and employee labor relations. This course is the foundation for students majoring in human resource and the course material is translated into practice through relevant discussions of the topic at hand and an analysis of cases, thus requiring a logical integration of learning to the business context. Lectures are used to introduce the key concepts and theories, and articles and cases provide an opportunity to clarify and reinforce students' understanding of the subject.

MGT345 Enterprise Internship 1 cr.

Pre-requisites MGT320

This course allows students to apply knowledge and skills acquired at the University in a real life setting. The main goal is to obtain hands-on experience necessary to qualify for a good entry level position in management. Moreover, students will learn how to create and write a professional report with emphasis on their experience in management. The course is thus practical and theoretical in the sense that students will participate in theoretical classes at the University and at the same time partake in a 120 hour training program at a recognized corporate establishment.

MGT400 Supply Chain Management 3 cr.

Pre-requisites MGT220

Logistics and supply chain management is unique and, to some degree, represents a paradox because it is concerned with one of the oldest and also the most newly discovered activities in business. The supply chain system activities of communication, inventory management, warehousing, transportation, and facility location have been performed since the start of commercial activity. It is difficult to visualize any product that could reach a customer without logistical support. Yet it is only over the last few years that firms have started focusing on logistics and supply chain management as a source of competitive advantage. There is a realization that no company can do any better than its logistics system. This becomes even more important given that product life cycles are shrinking and competition is intense. Logistics and supply chain management today represents a great challenge as well as a tremendous opportunity for most firms.

MGT405 Project Management 3 cr.

Pre-requisites BUS410 And ENG240

This course identifies specific challenges facing the project manager and explains how to address those challenges. It will take the students, step by step, through the life cycle of a project, explaining how projects exist, how they are planned, how they are executed and controlled and how they must be formally closed. It is based on the Project Management Framework Version 4 of the Project Management Institute (PMI).

MGT415 Small Business Management 3 cr.

Pre-requisites MGT220

This course focuses on recognizing a business opportunity, starting or acquiring a business based on the recognized opportunity, and operating that business. Entrepreneurship is necessary not only for students who will become entrepreneurs, but also for individuals working in the increasingly competitive corporate world.

MGT420	Strategic Planning	3 cr.
Pre-requisites	FIN425 And MGT220	
This course will take the students on a journey where they will learn to analyze a company's business environment, select a strategy, and construct the organization structure necessary to put the strategy into action. The course will allow students to bring together all of their learned functional skills, such as accounting, finance, and marketing, etc., and use them to study organizational problems within the context of real world business case studies.		
MGT455	Enterprise Simulation - Management	2 cr.
Pre-requisites	MGT420	
This course is specifically designed for the upper level undergraduate students in Management. During this course, students will be asked to handle several virtual situations pertaining to international companies in which immediate managerial actions are required.		
MGT500	Organizational Behavior and Change Management	3 cr.
Working in and with organizations is not a purely rational action. It also requires learning about how people act in organizations, why they do so and how to predict and manage their behavior. This course will provide students with tools allowing managers to observe systematically the organizational behavior.		
MGT520	Corporate Governance and Business Ethics	3 cr.
This course aims at familiarizing students with managerial and financial theories of governance as well as recent developments concerning the responsibilities of administrative bodies at the level of corporate governance. Additionally, it enables the students comprehend the various ethical and managerial approaches by providing them with insights on the organization as part of the community and the behaviors of the managers that have a great impact on the performance of the organization. After completing this course, students will be able to play various roles related to the effective functioning of the administrative body of several organizations as well as generate ethical and social culture decisions in their scope of work.		
MGT580	Essentials of Entrepreneurship and Small Business Management	3 cr.
The course is based on the analysis and interpretation of scientific articles in entrepreneurship that relate to Management practices; it explains practically the process of interpreting explicitly theories from research studies and understanding their contribution to the advancement of science in entrepreneurial management.		
MGT605	Human Resources Management and Social Audit	3 cr.
This course explains the role of HRM as the main factor for human capital's improvement within an organization. The course undertakes, as well, staffing activities and actions that help improving knowledge and social conditions in a given organization. More precisely, the strategic function of social audit, as a professional tool for professionalizing HRM, will be addressed from a cross between the themes addressed and the issues of each. Illustrations to students are given through case studies that highlight explanatory themes and practical aspects in the field. Together, case studies and scientific articles will shed light on the approaches adopted by social auditing and indicators mobilized for measuring the efficiency of HRM.		
MGT620	Strategic Management and Decision-Making	3 cr.
This course is based on a multidisciplinary approach of strategic management that enables students to understand the decision-making nature in various strategic contexts, formulate and implement affair strategies and integrate functional policies in strategic problems resolution. The course presents the fields activities in which the enterprise seeks to integrate. It also tackles the subject of resources allocation to enable enterprises to preserve a strong and defensible position, and to progress in the sector(s) it currently occupies, or seeks to occupy, with a view to maximize invested capital profitability.		
MGT640	Theories and Practices of Negotiation	3 cr.
This course enables the student to acquire the competencies and the basic theoretical and practical techniques needed to be an influential negotiator, and to carry out and manage the negotiation process. This course covers negotiation theories in association with relational models of behavior in negotiations, which have been developed through cognitive and behaviorist theories and the science of decision making. Many exercises, study cases and real simulations will be done in order to apply the theoretical and practical concepts.		
MGT665	Bank Strategic Management and Decision-Making	3 cr.
The objective of this course is to bring together the concepts of strategic management and strategic marketing and their application in the local and international banking industry, based on field experience. We will then link them to the process of decision making in the local banking industry. The course covers, in particular strategic planning and its implementation in the bank, profitability improvement, retail banking/commercial banking strategies, and involvement on bank's organizational structure.		
MGT680	Applied Competitive Strategy	3 cr.
This course develops students' ability to analyze, formulate, and execute corporate and business strategy by evaluating		

the competitive and organizational aspects needed to create sustainable competitive advantages for international firms' success. The aim of the course is to develop the competitive strategic thinking of students through the utilization of concepts, models, and tools that facilitates experiential learning between academic theory and managerial practices in any competitive situations.

Finally, this course develops the students' skills to be more systematic, logical, judgmental, complete, critical thinker about competition and competitive strategies.

MGT685 Strategic Management and Enterprise Policy 3 cr.

The course is based on the analysis and interpretation of scientific articles in corporate governance that relate to Management practices; it explains practically the process of interpreting explicitly theories from research studies and understanding their contribution to the advancement of science in corporate governance.

MIS320 Quantitative Techniques Applied to Business 3 cr.

Pre-requisites STA220 Or STA205 Or STA220 Or STS205

Business quantitative methods help students understand the business world better, so they can search for variables, in order to translate them into mathematical models to help solve them. These methods are used to assist managers in decision-making by performing provisions such as sales, sales turnover, and benefits in an uncertain world as well as helping in testing and assessing decisions with respect to the organization's performance. Furthermore, this course considers linear programming techniques and analyzing decisions in uncertain conditions, as well as helping managers maximize short-term and long-term company profit. This course has a prerequisite course of probability and statistics for engineers. By the end of the course students should have knowledge of Excel and SPSS.

MKT220 Principles of Marketing 3 cr.

Pre-requisites ENG211 Or ENG240

This course is designed to help the students learn about and apply the basic concepts and practices of modern marketing as they are used in a variety of settings. It is intended for business students who wish to become the decision-makers of tomorrow at the middle or upper levels of management since it gives students a comprehensive and innovative managerial and practical introduction to marketing.

MKT310 Consumer Behavior 3 cr.

Pre-requisites MKT220 Or LCB221

Consumer behavior reflects numerous social sciences, such as psychology, anthropology, and sociology. In this course, students will discover and learn how perceptions, memory, learning, personality, and attitudes affect consumption behavior, how consumption changes during one's life cycle, and how powerful cultural and subcultural influences are on consumers. From these aspects, marketers can then properly build their brands to appeal to various customers' needs, and to formulate the adequate marketing strategies that ensure consumers satisfactions and loyalties.

MKT315 Advertising 3 cr.

Pre-requisites MKT220

Advertising is an "ideas" industry, which allows marketers and brand custodians to create, position, or reposition their brands. It is a considerable part of most of modern companies, corporations, and brands, being the most visible and immediate point of communication between them and their customers/audiences. Advertising is also a business, but not any kind of business. It is a business full of excitement, fascination, and fun. Today, it constitutes a respected, strategic, and profitable industry. This course is designed to introduce students to advertising, while aiming to provide a firm grounding in its fundamentals. It will show the links between media, society, advertising, and business. It will thoroughly investigate the foundations of advertising and check the media planning process in action, based on true business/media/communication problematics. The course will also explore the business aspects of advertising through a global industry overview, and business transactions of organizations, with illustrations of advertisers and advertising agencies. Finally, the course will focus on market realities in order to allow the students to have a practical link with business life and bridge the gap between the theoretical aspect and the professional side of advertising.

MKT320 Marketing Research 3 cr.

Pre-requisites MIS320 And MKT310

The purpose of the course is to introduce students to the role of marketing research and to the process of marketing research. The emphasis in this course is on how to actually conceptualize and conduct a marketing research project as well as how to use research as an aid for marketing management decisions. A fundamental skill possessed by successful marketing managers is the ability to obtain and use factual information within the managerial decision-making process.

MKT325 Distribution Strategy and Sales Management 3 cr.

Pre-requisites MKT220

This course is designed to introduce students to issues related to the management of a sales program, the role and responsibilities of sales management, and the relationship of the sales management process to the broader issues of

managing demand, the marketing process, as well as the distribution channels. This course will focus on the role of the sales manager in developing and implementing strategic and tactical decisions, and on administrating the sales force operations. Moreover, it focuses on building and maintaining relationships with partners in order to establish an effective distribution network.

MKT345 Enterprise Internship 1 cr.

Pre-requisites MKT325

This course allows students to apply knowledge and skills acquired at the University in a real life setting. The main goal is to obtain hands-on experience necessary to qualify for a good entry level position in marketing. Moreover, students will learn how to create and write a professional report with emphasis on their experience in marketing. The course is thus practical and theoretical in the sense that students will participate in theoretical classes at the University and at the same time partake in a 120 hour training program at a recognized corporate establishment.

MKT405 Media Planning 3 cr.

Pre-requisites MKT310 or MKT315

Today media planning constitutes one of the most respected, strategic, highly sought after, and very well paid professions in advertising. This course is designed to introduce students to this industry, while aiming to provide a firm grounding in its fundamentals. It will describe the links between media, society, advertising, and business. It will thoroughly investigate the foundations of media planning and check the media planning process in action, based on true business/media/communication problematics. The course will also explore the business aspects of media and media planning through a global industry overview, the media transactions organizations, with illustrations of advertisers, advertising agencies and media agencies. Finally, the course will focus on the Lebanese market realities in order to allow the students to have a practical link with business life and to bridge the gap between the theoretical aspect and the professional side of media planning.

MKT410 Communication Strategy 3 cr.

Pre-requisites MKT310

This course details the Integrated Marketing Communications (IMC) within the FMCG and consumer service sectors in addition to the business to business sector. We will explore IMC's role within the marketing process, consumer behavior, the role of ad agencies, creative strategy, advertising, sales promotion, direct marketing, and electronic commerce. The main objective of this course is to help students understand how different companies communicate with internal and external customers and how communication strategy can facilitate the exchange. By the end of this course, students will have the skills needed to develop an effective communication plan.

MKT415 Brand and Product Management 3 cr.

Pre-requisites MKT220

A brand is a company's most visible (intangible) asset in a market. It is the company's main product connection channel with customers who are searching for value in their purchases. Brands are created in the minds of consumers. This perceived value by a consumer of a brand and product results in brand equity. This course will outline the theories and framework that are used to build and manage a brand for the long term mutual benefits of the consumer and the supplier. Brand equity is the core element of the course and it will be examined through the strategic brand management process, including: positioning, marketing programs, measuring brand performance, and product lines.

MKT422 Marketing Services 3 cr.

Pre-requisites MKT220

The marketing services and retail management course presents an integrated approach to studying services that places marketing issues within a broader general management context. This course is suitable for students who are interested in learning more about the problems and possibilities related to the marketing of service companies, and other service organizations. In addition, it introduces the basics of retail management, which will introduce students to retailing theories, retailing operations, and the vital aspects of retail management at both the strategic and operational level.

MKT430 Pricing Strategy 3 cr.

Pre-requisites MKT220

Price is the most sensitive marketing element in the supplier customer relationship. It has an immediate and direct effect on a company's bottom line, and it's perceived by the customer as a signal of the value of a product offering, thus strongly influencing his/her purchase decisions. The course will introduce the participants to various strategies and steps that are used by companies for pricing their offerings. The notion that "price equals perceived value" is the basis of this course. The process of establishing price and value, and the importance of communication under different product and market conditions, are presented in detail. The framework of the course will follow the concept of the "Pricing Pyramid". Practical examples, through real life case studies, will be employed to assist participants in a deeper understanding of the strategies behind pricing decisions.

MKT455 Enterprise Simulation - Marketing 2 cr.

Pre-requisites MKT410

The main objectives of the course are to explain to students the specific and original marketing contribution to the company's management, and give them the opportunity to use the strategies and apply the main concepts relating to the market analysis, including environment, consumers behavior, demand and segmentation. The second part of the course covers various marketing decisions, namely the ones pertaining to mix marketing variables: product, price, distribution, promotion. The outcome of the course would be the development of a marketing plan for a local business.

MKT530 Brand Strategy and Communication 3 cr.

Brand strategy and communication provide a strategic step-by-step approach about brand creation, innovation, launching, communication and effective management. It represents an interesting balance between theory and cases. This course also emphasizes on internationalization, globalization, megabrand management and on the interrelationship between the business strategy and the brand strategy.

MKT610 Applied Research in Marketing 3 cr.

The course objective is to present a general review of research and assessment methods that are used by marketing researchers with a view to get fundamental and applied knowledge in marketing. In addition, this course enables students to develop their research work, which should be relevant to the thesis they will complete within their curriculum.

MKT650 Applied Marketing Management 3 cr.

The course mainly aims at allowing students to learn and understand marketing's specific and original contribution within the field of business administration. It also enables students to use and apply the main concepts related to markets assessment: environment, consumer behavior, demand and segmentation. The second part of the course covers the various decisions related to marketing; those linked to marketing variables: product, price, distribution and promotion.

MKT660 International Marketing 3 cr.

This course covers around the basic principles of marketing management, and explains its fundamental role within an international context. Based on the enterprise operational data, the participants set forth an international marketing plan. They conduct a market study, identify the product or service, make any necessary adaptations and establish a price, distribution and promotion strategy according to the product and the nature of the market.

TRA310 Transport and Logistics 3 cr.**Pre-requisites** ENG240

Transport involves the physical movement of products between the providers and the receivers. It is a critical activity, performed, at most stages, in the supply chain process. In pure financial terms it is the second largest element, next to storage, in total distribution costs. Transportation also represents the physical operation's interface with the customer and is often classed as the "ambassadorial" activity of the supply chain. The primary objective of transportation is to deliver the right goods, to the right place, at the right time, in the right condition at the minimum cost.

TRA325 Commercial Contracts and Transport Law 3 cr.**Pre-requisites** BUS223 or DRT223 or TRA310

This course provides a thorough understanding of transport-related contracts as well as transport-related insurance covers. In its first part, the course discusses the different parties involved in the transportation industry and the interaction between them that is secured by different types of contracts specific to the industry. In its second part, the course discusses transport insurance covers and their constituents, while explaining how different parties mitigate their risks.

TRA335 Introduction to Air Transportation 3 cr.**Pre-requisites** TRA310

This course explores the history, management and future trends in air transportation. It covers the four principal segments of air transportation: major carriers, regional carriers, all-cargo carriers and general aviation. In each segment, the issues of aircraft design, market share, finance, insurance and operations are discussed. The course analyzes the development and application of national and international regulations that impact air transportation. Topics include, cost structure, air fares, flight crews and safety, environmental impacts of aircraft and airports, operating and service characteristics, technological advances, world competition and intermodal operations.

TRA345 Enterprise Internship 1 cr.**Pre-requisites** TRA335

This course allows students to apply knowledge and skills acquired at the University in a real life setting. The main goal is to obtain hands-on experience necessary to qualify for a good entry level position in transport. Moreover, students will learn how to create and write a professional report with emphasis on their experience in the transport and logistics industry. The course is thus practical and theoretical in the sense that students will participate in theoretical classes at the University and at the same time partake in a 120 hour training program at a recognized corporate establishment.

TRA440 Shipping Economics and Management 3 cr.**Pre-requisites** ECO221 and TRA310

The course focuses on the economics of chartering, containerization, ship finance, international trade, political factors and ship manning. It concentrates on the marketing and management area which are so important nowadays for a successful ship management, whether in the liner cargo, bulk cargo or specialized tonnages. The course is essential as it connects the transport sector to the business industry, showing that transportation is a business sector by itself.

TRA455 Simulation Enterprise - Transport 2 cr.**Pre-requisites** BUS475

The objective of this course is for students to gain skills and knowledge in all aspects and issues of logistics in a sustainable supply chain. The course offers a broad-based business education to undergraduate students, with a particular focus on transport, distribution, logistics and other transport-related industries and issues. The content covers the basic operations of a freight forwarding agency including types of cargo, trade lanes, terminology and abbreviations, equipment and facilities, and the various relationships that exist between the forwarder, clients, carriers and government agencies.

Learning and Teaching Excellence Center (LTEC)

Mission

The Learning and Teaching Excellence Center (LTEC) at the Holy Spirit University of Kaslik is dedicated to the development of the professional qualifications of educators in teaching and learning through the promotion of teamwork, innovation, self-reflection and the efficient use of instructional technologies, and through sharing best practices to enhance the student learning experience.

LTEC serves USEK and non USEK faculty members by engaging and supporting them in their research-based teaching and learning concepts, and bringing them into intentional daily practice both inside and outside the classroom.

The LTEC provides a number of tools that can improve and enhance the online teaching and learning process, and also offers training on emerging digital platforms (such as e-learning) that can be used in both distance and face-to-face classrooms.

Objectives

The main focus of the Learning and Teaching Excellence Center at the Holy Spirit University of Kaslik is to support, promote and enhance teaching effectiveness and student learning.

LTEC aims to:

- Facilitate the professional and intellectual development of faculty, staff, and graduate students as educators.
- Promote and support a community of teachers where the theory and practice of teaching and learning are shared.
- Help faculty members develop, implement, and assess instructional approaches and methods.
- Foster innovations in Higher Education teaching and learning.
- Advocate appropriate use of technology in enhancing university teaching and learning.
- Help individual instructors assess their teaching effectiveness and their students' learning.
- Sustain a university culture that recognizes and rewards both scholarly teaching and the scholarship of teaching and learning.
- Develop and maintain learning systems and technologies that can be used by staff and students across the university to facilitate and enable the online and hybrid teaching and learning process.

Activities

The Learning and Teaching Excellence Center at the Holy Spirit University of Kaslik offers diverse activities in order to meet the professional needs and development of its educators.

- Training on instructional technologies in teaching and learning
- Training on program design and evaluation
- Workshop on integrated course design and assessment
- Online courses on online course design
- Brown bag sessions

Programs Offered

- Post-Graduate MA / Certificate in Learning and Teaching for Higher Education
- Post-Graduate Online Certificate in Teaching and Learning
- Post-Graduate Intensive Track Certificate
- Online Course About Online Course Design

MA / Certificate in Learning and Teaching for Higher Education

USEK offers a MA/Certificate in Learning and Teaching for Higher Education. It is designed to equip professionals who already have subject matter expertise within their academic discipline with the knowledge, skills, and credentials to teach at the university level or train in a corporate setting. Throughout the program, participants will examine the roles and responsibilities of faculty and students and acquire skills for effective teaching in both online and in-person settings. Key curriculum objectives include learning how to craft educational experiences for diverse learners, creating effective assignments and classroom materials, and developing and sustaining a vibrant learning community.

Program Educational Objectives

1. Graduates will support and contribute to the growth of the higher education learning community;
2. Graduates will become professional educators and promote amongst their students the notion of proactive, autonomous, lifelong learning and to increase the flexibility of program delivery, improve access, and emphasize the increasing significance and potential of technology enhanced learning, teaching and assessment;
3. Graduates will demonstrate leadership and initiative to ethically advance professional goals, and facilitate the achievements of others.

Program Outcomes

- a. Analyze and explore the role and function of teaching and learning in higher education;
- b. Apply theories of learning, teaching and assessment for making critical judgments of performance within the HE setting;
- c. Use appropriate skills of curriculum design, teaching and assessing;
- d. Develop reflective practice and experiential learning in teaching and learning facilitation;
- e. Review their own professional needs, and plan and undertake relevant and appropriate activities to meet these identified needs;
- f. Develop their skills and understanding in designing and conducting their own research into practice;
- g. Undertake critical evaluation of research into learning and teaching in higher education and provide them with the skills and knowledge to participate in such research;
- h. Utilize all learning opportunities to maintain and enhance personal and professional growth;
- i. Show a commitment to teamwork while working with others of diverse cultural and interdisciplinary backgrounds;
- j. Conduct researches to strengthen knowledge and critical understanding in teaching and learning.

Program content

The MA in Learning and Teaching for Higher Education is organized over 2 to 3 years with four modules in addition to the thesis dissertation or seminar delivery that lead to obtain the Master degree:

Module 1: Teaching and supporting learning in Higher Education (9 credits)

LTE505 - Learning theories: building your philosophy of T&L (3 credits)

This course provides a detailed analysis of modern learning theories and practices as they relate to education. The question, “how do humans learn (best)?” is at the heart of such theories, and faculty are invited to construct and reconstruct their personal theories of teaching and learning throughout the course. It embarks on a detailed investigation of major research in educational psychology focusing on learning cognition.

LTE510 - Active learning strategies (3 credits)

This course explains how active Learning includes a range of teaching and learning activities. These strategies, supported by decades of classroom research, may be thought of as a continuum from low risk to high risk for both teachers and students. The course will also explain how more complex and higher risk as well as highest risk processes might include in active learning activities.

LTE515 - Faculty leadership skills for student’s motivation and supporting learning (3 credits)

This course studies how leadership influences student learning. According to the evidence compiled, Faculty will learn how leadership tends to be greatest in teaching where the learning needs of students are most acute and how do high-quality leaders achieve this impact while setting directions in course delivery and developing people.

Module 2: Assessment, feedback and discipline specific pedagogy (6 credits)

LTE520 - Assessment and feedback (3 credits)

In this practical course, faculty will learn how to create and use assessment tools that improve instruction (formative assessments) as well as gauge its success (summative assessments), and how to arrive at an effective balance of the two. The course demonstrates how educators come away with tools and strategies that they can use immediately, making balanced assessment an integral part of their own instruction.

LTE525 - Discipline specific pedagogy for effective learning (3 credits)

While the principles of pedagogy remain the same, discipline areas have different ways of teaching that work best for that discipline. Discipline specific pedagogy is not the same as habits of teaching that grow up among groups of teachers in sections. Teachers understand and develop discipline specific pedagogy best by talking to people outside their own discipline as well as those inside.

Module 3: Designing and evaluating for learning and teaching (9 credits)

LTE530 - Integrated course and program design (3 credits)

The course on integrated course and program design enables participants from all areas of higher education to reflect on the power of creating good courses; courses that are based on significant learning experiences in and out of the classroom. By focusing on learner goals, teaching activities and assessment of learning, participants develop a template they can use in creating their own course that integrates these three areas. Of particular value is Fink's Taxonomy of significant learning: foundational knowledge, application, integration, caring, human dimension and learning how to learn.

LTE535 - Course and program evaluation strategies (3 credits)

This course will be focused on giving you hands-on experience in the specific research skills and tools required for effective program evaluation. Individual written assignments will build on each other over the course of the semester, culminating in a final paper documenting your evaluation plan for a real-world project.

LTE540 - Instructional technology for supporting learning (3 credits)

This is a course involving the selection and use of various educational technologies within an instructional design framework. Students will be exposed to various ways of thinking about educational media and technology. The course provides students with experiences that enable them to integrate technology resources to support clearly defined learning objectives.

Final thesis dissertation or Seminar delivery (6 credits)

LTE690 - Final thesis dissertation (6 credits)

This course is designed to assist students in the completion of their research paper or graduate project. The expectation is that all students begin this course having already attended the modules 1 and 2. Therefore, this course is designed to provide guidance in the final completion of the research paper/graduate project until achieving the oral defense.

LTE695 - Seminar delivery (6 credits)

This is a course that trains students to present an in-depth examination of a topic in Teaching and Learning through the delivery of a professional seminar and to observe and listen to how scientific research is presented.

Post-Graduate Online Certificate in Teaching and Learning

In collaboration with Norwich University in the United States, USEK offers an Online Certificate in Teaching and Learning. The program consists of two 11-week courses given online through the University's flexible online platform, allowing faculty to access program content and contribute to weekly class discussions in their own time and at their own pace.



NORWICH
UNIVERSITY
Online

Post-Graduate Intensive Track Certificate

“The Professional Educator”: “The Professional Educator” program is a special Faculty Development Module offered with the collaboration of the UT Global Initiative for Education and Leadership at University of Texas at Austin. The training module, based on ten days of instruction offered at USEK main campus, is designed for the Professional Educator to acquire instructional best practices, as well as assessment tools and techniques, and is available to USEK and non USEK full-time and part-time Faculty members from various disciplines.



The University of Texas at Austin
**Global Initiative for Education
and Leadership**

Online Course about Online Course Design

LTEC provides online courses about online course design with the collaboration of Dee Fink and Associates.

DEE FINK & ASSOCIATES 
DESIGNING COURSES FOR SIGNIFICANT LEARNING

USEK Continuing Learning Center (UCLC)

Overview

The USEK Continuing Learning Center (UCLC) is committed to making learning accessible to a broad audience by designing a wide range of multi-leveled course offerings for adult learners with a busy schedule and other responsibilities. In line with the University's dedication to providing high quality learning, we aim to meet community needs for non-degree career training, workforce training, and personal enrichment, and extend to you an invitation to join in the programs and courses we offer for lifelong learning.

We offer you:

- A quality learning experience
- Innovative and exciting teaching methods: interactive courses, practical trials, close supervision
- Course schedules out of working hours, during school hours, and on weekends
- An assortment of programs and services

Mission and Vision

The mission of the USEK Continuing Learning Center (UCLC) is to provide continuing education and lifelong learning opportunities for the local community and the region.

Our vision is to become a leading educational center offering quality learning and training in a variety of fields to the diverse population of Lebanon.

Policies

Admission

Once you are ready to apply for a UCLC program, you should complete the application form at the Registrar's Office and submit the following documents:

- A copy of your Lebanese ID Card or passport
- Two passport-size photos

General Regulations

Student ID card

All UCLC Students will be issued with a USEK ID card which must be shown when entering the campus and accessing the parking lot.

In case of loss or damage of the card, a duplicate can be made by the Registrar's Office for a fixed cost.

Registration fees

UCLC applicants need to settle all the tuition fees at the Student Accounting Desk at the Registrar's Office at the time of admission and after submitting the required documents.

Course Cancellation

UCLC reserves the right to cancel any course due to insufficient enrollment or to other unavoidable circumstances. All registered candidates will be notified, and a total reimbursement will be performed.

Deregistered candidates can collect the refunded amount in the set date communicated by the Financial Department.

Withdraw Policy

If for some reason you have to drop the course/s or program before it begins, you will need to inform the Registrar's Office and UCLC by sending an email to the official email addresses registrar@usek.edu.lb and uclc@usek.edu.lb. A refund will be issued; however, a penalty fee will apply.

If for some reason you have to drop the course/program after it begins, you should inform the Registrar's Office and UCLC by also sending an email. However, no reimbursement will be effected.

Certificates

Upon completion of the program or course/s requirements, your certificate will be issued by the Registrar's Office stating the number of attended hours.

Goals

We aim to:

- Respond to the local and regional market needs by offering continuing education opportunities.
- Provide learning opportunities to various local community groups (professionals, inspiring entrepreneurs, students etc.)
- Offer a selection of quality educational programs and professional development opportunities at different levels.
- Provide educational experiences to young people from different cultural backgrounds through the Summer School program.

Programs

Certificate in Esthetics in Cosmetology:

This certificate program is jointly delivered by USEK and Riviera Cosmetics Sarl and teaches the appropriate knowledge and training needed to be able to evaluate cosmetic products based on their composition, analyze skin types and conditions, and suggest and perform skincare treatments. Moreover, this certificate will offer basic concepts of the management of a business in esthetics and cosmetology.

This certificate program is suitable for individuals from different backgrounds:

- People wishing to enter the esthetics profession.
- Individuals already practicing esthetics and wishing to upgrade their career level and expand it to skincare and skin treatments.
- People that are enthusiastic about esthetics and cosmetics wishing to deepen their knowledge in the field.

The program is composed of 5 component parts including dermatology, cosmetology, esthetics, management, and a 15 hours internship in a well-known beauty and cosmetology center. The program duration is 10 weeks.

Online Certificate on the New Great Game of Geopolitical Competition Between Major Powers in the Middle East

The Online Course on the New Great Game on Geopolitical Competition between Major Powers in the Middle East trains you and gives you the ability to:

- Expand your knowledge on the Middle East
- Understand the main geopolitical factors and the role displayed by Great Powers in the region
- Develop your skills in negotiation, decision-making and consulting
- Boost your career and academic experience by incorporating new techniques in a field in perpetual regeneration
- Study and work at the same time

The distance learning course that we offer is presented with the aim to promote the acquisition of sufficient knowledge to adequately understand the geopolitical dynamics that affect Lebanon in particular, and the Middle East in general.

This online course is addressed to students, professors, members of the diplomatic corps, members of the security and defense corps, and all those interested in learning more about the geopolitical dynamics that occur in the Middle East and the great changes that are taking place not only in the east and south of the Mediterranean but also in the Gulf region. In addition to other goals you'll know how and why Lebanon became a crucial part in the Geo-sectarianism chessboard, and on the U.S. and European Union's agenda.

At the end of this course, students will have acquired:

1. Knowledge of the various definitions of Geostrategic and Geopolitics and their implications for the field of International Relations.
2. An understanding of the linkages among International Relations, Political Science, Security and Defense studies, History, Political and Economic Geography, Geopolitics and Geostrategic.
3. Familiarity with theories of the state as a geographical and political unit, such as Geopolitics.

4. An understanding of the elements and nature of power, power analysis, and power projection in the world of politics, to include not only the traditional nation-state as actor, but also contemporary non-state phenomena such as Hezbollah, the Islamic State, and the environment as Geostrategic factors.
5. An understanding of the geopolitical dynamics registered in the Middle East Region and the Geopolitical behavior of the regional and external Potencies and Great Powers (U.S.A, Russia, Iran, Saudi Arabia, Turkey, etc.)
6. Awareness of the Geostrategic implications related to Contemporary International Relations issues (international migrations, globalization, international terrorism, etc.)
7. Capability of Reading, understanding, and analyzing articles of varying complexity on Geopolitics.

Advanced Energy Audit and Process Integration

The Faculty of Engineering at USEK, in a joint effort with the Centre for Energy Efficiency of Systems (CES) at MINES ParisTech, PSL University, have developed the most recent methodologies for advanced energy audit including the process integration and thermodynamic heat recovery and conversion.

Engineers, consultants, and professionals from industry are invited to gain knowledge in advanced energy audit and process integration and earn applicable skills in methodologies for energy integration of industrial processes, and high-level expertise on heat recovery technologies.

Participants will get a certificate of attendance from CES-MINES ParisTech.

Who is this course for?

- Professionals in the industry (e.g. gas and oil, pharma and chemical industry...);
- Engineering consultancy companies working of process design and energy audit;
- University professors, researchers and Ph.D. students in the field of process design and energy engineering;
- Institutional professionals from the Ministry of Energy, UNDP and NGO's.

Summer School

USEK International Summer School is an exciting summer opportunity designed for international students. This intensive program was generated to give interested students an opportunity to discover Lebanon from a wider and deeper prospective.

The USEK International Summer School combines 120 enjoyable hours of interesting courses and social activities which are a gate to the Lebanese culture and the Middle East region.

It is beyond doubt that, over 4 weeks, you will be able to benefit from a unique international experience.

Besides the Lebanese summer season offer exceptional and memorable experiences for visiting tourists. With sun, fun, mountain escapes and cultural festivals, Lebanon's summer season has something for everyone.

Certified Professional Development Courses

Languages

English Conversation

This course will teach you to hold a conversation in which you voice your opinion and clearly explain yourself through well-constructed arguments and examples taken from daily lives.

French Conversation

This course will teach you to hold a conversation in which you voice your opinion and clearly explain yourself through well-constructed arguments and examples taken from daily lives.

Syriac Language

This course will serve as an introduction to the Syriac language: its history, evolution and usage. You will learn the letters and how to create simple sentences and paragraphs in the language.

Arts

Photography

You will acquire the tools needed to manipulate and control cameras, and how to apply these tools to achieve a specific effect in photographic digital images. The course will also introduce you to the principles of framing, composing and balance.

Sketching and Drawing

This workshop guides you through the basics of sketching and drawing, featuring the fundamentals of proportions, tones, human figures, nature, and freehand perspective. It emphasizes on the development of visual memory and helps you to develop your own sketching style.

Arabic Calligraphy

This is a beginner's course in the art of calligraphy. It traces the history of Arabic letters and will introduce you to the use of pens and inks, to the Arabic letter proportions, strokes, ornaments, and families of Arabic calligraphic alphabets: Kufi, Roqaa, Naskh, Thuluth, and Diwani.

Acting

This course is an introduction to different fundamental techniques used in the creation of a character. It emphasizes on relaxation, concentration, and development of a role through sensorial and emotional memories. You will improvise and do monologues as exercises in this introductory course.

Business

Kick-start Your Business

This applied course will provide you with insight into the entrepreneurial concepts and resources needed to create your own business. The course acts as a bridge between theory and the real-life application of business principles. It starts by defining startups and SMEs and will introduce you to the ecosystem that supports and funds entrepreneurship.

Digital Marketing

This full Digital Marketing training program covers an overview of digital marketing, social media strategy & advertising (Facebook, Instagram, Twitter, LinkedIn, YouTube), SEO essentials, Google AdWords, email marketing, digital tips & tools, blogging, and an overview of inbound marketing and Google analytics.

Lifestyle

Oenology

In this exciting course you will learn about wine making throughout the world, different grape varieties, wine ageing, and matching wine with food. Wine tasting included!

Sustainable Living

This course will give you an introduction to sustainable living and the environment. Topics that will be covered include the following: the impact of waste on the environment, sustainable shopping, recycling and sorting at home, water and energy conservation among others.

Internet Safety for Kids

This seminar is for parents who want to keep their kids/grandkids safe on the internet, and will deal with such topics as: why our children need to use the internet, on-line games, on-line relationships, appropriate content, to name but a few.

Mastering Sous Vide Cooking

This is a specialized course aimed at professionals and experienced students about how to master the cooking technique Sous Vide that utilizes precise temperature control to deliver consistent, restaurant-quality results. Sous vide, which means "under vacuum" in French, refers to the process of vacuumsealing food, then cooking it to a very precise temperature in a water bath. This technique produces results that are impossible to achieve through any other cooking method.

Humanities

Brain Boosting - ENCEFAL

This course offers a unique opportunity to stimulate your cognitive functions, to improve your concentration and your memory. With the scientific and innovative method ENCEFAL, this course will provide expert knowledge, so you can benefit from a healthier mind. This course is only offered in French.

Health

Daily Nutrition

This course will give you basic knowledge on everything related to nutrition and health, focusing on the importance of food intake and the health consequences of bad nutritional habits. It will also provide you with the needed information to plan your daily food intake in order to avoid diseases such as hypertension, diabetes or dyslipidemia.



+961 9 600 000 | usek.edu.lb
P.O. Box 446 Jounieh, Lebanon

