Northwestern Memorial HealthCare
Clinical Schools & Programs

Institutional Catalog
July 1, 2022 – June 30, 2023

Northwestern Memorial HealthCare
NM Academy
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Northwestern Memorial HealthCare
NM Academy
2022 - 2023 Institutional Catalog
Revised: February 20, 2023
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Clinical Programs
Diagnostic Medical Sonography
Histotechnology
Medical Assisting
Nuclear Medicine Technology
Radiation Therapy
Radiography

Table of Contents

Welcome

It is a pleasure and a privilege to welcome you to the Northwestern Medicine community. In deciding to pursue your education at Northwestern Medicine, you have chosen an exceptional institution and a promising future.

As a student at Northwestern Medicine, you have an important role to play in the life of our institution. You are the fortunate beneficiary of the many contributions of those who have come before you and are now one of the caretakers of Northwestern Medicine's future. During your time here, I encourage you to take an active role in your education and strive for excellence in everything you do. Commit yourself to the service of others, be open to different ideas, and to the many different people and cultures our institution serves.

Take the time to reflect on your development and shape and refine your vision of who you are and who you want to become. The faculty, administrators, and staff are here for you and because of you. We will assist and support you throughout the course of your education. Building a strong professional reputation requires making consistent and thoughtful choices, do not be afraid to call on us for assistance.

We look forward to the great things we will do together as you embark on your career in health care!

About Northwestern Memorial HealthCare – History and Ownership

Northwestern Memorial HealthCare is a non-profit 501 (c) (3) organization and the corporate parent company for the Northwestern Medicine health system.

Northwestern Memorial HealthCare (NMHC) is part of an integrated academic health system dedicated to providing the most advanced care to the communities and patients we serve. Northwestern Memorial HealthCare's healthcare network consists of over 200 of locations throughout the Chicagoland area including 11 hospitals: Northwestern Memorial Hospital, Prentice Women's Hospital, NM Central DuPage Hospital, NM Delnor Hospital, NM Lake Forest Hospital, NM Kishwaukee Hospital, NM Valley West Hospital, NM Woodstock Hospital, NM McHenry Hospital, NM Huntley Hospital, and NM Palos Hospital. Anchored by Northwestern Memorial Hospital, the No. 1 hospital in Illinois and a top 10 hospital in the nation, many of the clinical specialties offered by NMHC have been ranked among the top in the nation by U.S. News & World Report.

Northwestern Memorial Hospital is the primary location of student instruction and was created on September 1, 1972 by the consolidation of two of Chicago's oldest established hospitals – Passavant Memorial (founded 1865) and Wesley Memorial (founded 1888). Bringing together these respected institutions created what was then the Midwest's largest private, non-profit hospital. For the past three and a half decades, Northwestern Memorial has continued to meet the ever-changing healthcare needs of the Chicago area, expanding facilities, adding clinical programs and providing service to the community. Our association with Northwestern University dates back more than a century, and as the primary teaching affiliate for the Feinberg School of Medicine, Northwestern Memorial is recognized as a leading hospital in advancing patient care, education and research.

Northwestern Memorial's predecessor hospitals had their roots in Chicago's Lutheran and Methodist Episcopal deaconess movement, spiritual communities of women organized during the 19th century to provide for the sick and needy. The formative years of our hospitals were marked by the struggles of these

unpaid secular groups in caring for patients, raising funds, managing real estate, and meeting the growing professional expectations of physicians. Yet both Passavant and Wesley would evolve from small charitable institutions to larger, better staffed hospitals that kept pace with modern medicine and the needs of the rapidly-growing city. By the turn of the century, hospitals were being transformed from refitted homes to increasingly modern facilities where not only could health be restored, but disease and injury scientifically diagnosed, studied and treated.

As hospital management transitioned from religious orders to active boards of lay trustees, the growing influence of medical school faculty, auxiliary groups and donors also helped determine Wesley and Passavant's organization, mission and future goals. Although not formally affiliated with a medical school, Passavant's staff included faculty from Northwestern and Rush, and operative clinics conducted by surgeon Christian Fenger, MD, brought future surgical giants to the hospital for invaluable postgraduate experience. The formation of Passavant's Woman's Aid Society (1897) and the Passavant Hospital Auxiliary (1904) were also critically important to the hospital's future. Wesley Hospital and Northwestern University shared a common Methodist heritage, with the hospital and medical school becoming affiliated in 1890 and occupying several buildings on South Dearborn between 24th and 25th Streets.

In 1914, philanthropist James Deering made a $1 million gift to Wesley Memorial to support free care and solidify the hospital's relationship with Northwestern University's medical school. Wesley agreed to join Northwestern University on its new North Side campus in 1924, but funding for construction of a new building was delayed until the 1930's. In the interim, Northwestern University offered Passavant Memorial an affiliation and site for a new hospital, which opened in 1929. Wesley Memorial's new facility was completed in 1941, and over the next thirty years the two institutions, located across the street from each other in the Streeterville community, served as the primary teaching hospitals for Northwestern University Medical School. Over time, the hospitals began collaborating on a number of clinical services and teaching programs, setting in motion plans for a long-contemplated merger. The process accelerated with the 1966 establishment of the McGaw Medical Center of Northwestern University, focused on joint purchasing, shared facilities, graduate medical education and development of a group practices, furthering joint planning efforts towards a unified medical center.

Passavant and Wesley responded by merging nursing schools, exchanging staff privileges, and combining clinical areas - culminating in the consolidation of the two hospitals on September 1, 1972. Other important additions included mergers with Prentice Women's Hospital and Maternity Center and the Stone Institute of Psychiatry (1975), and the opening of the Olson Critical Care Pavilion (1979). By the mid-1980s, our original inpatient facilities could no longer support technological advances and were prohibitively expensive to maintain. Extensive planning began for one of the nation's largest healthcare construction projects – designing a state-of-the-art facility to replace Passavant, Wesley and more than 20 scattered outpatient sites. In 1994, construction began on a new 2-million square foot facility on the block bordered by Fairbanks Court, St. Clair, Huron and Erie Streets. On May 1, 1999, the 17-story Feinberg Pavilion and 22-story Galter Pavilion opened. A model facility for healthcare providers, hundreds of local, national and international tour groups visit Northwestern Memorial Hospital each year.

Northwestern Memorial Hospital's reputation as one of the nation's leading academic medical centers continues as we develop additional world-class facilities and expanded clinical programs with our academic partner, Northwestern University's Feinberg School of Medicine. The former Passavant and Wesley sites were redeveloped as part of a comprehensive campus master plan in conjunction with Northwestern University. The Robert H. Lurie Medical Research Center has expanded biomedical research at the Feinberg School of Medicine and Prentice Women's Hospital, opened in late 2007, is a state-of-the-

art facility supporting patient-focused care in an environment of comfort, privacy and comprehensive care for patients, families and visitors. The medical campus underwent further development and, in 2019, Northwestern opened the Simpson Querrey building, the largest biomedical academic research building in the US.

Building on a history of compassionate care and clinical excellence, Northwestern Memorial is forging a stronger partnership with its campus partners to become one of the nation's great academic medical centers.

NMHC Mission, Vision, and Core Values

Whether directly providing patient care or supporting those who do, every Northwestern Medicine employee has an impact on the quality of the patient experience and the level of excellence we collectively achieve. This knowledge, expressed in our shared commitment to a single, patient-focused mission, unites us.

Mission

Northwestern Medicine is a premier integrated academic health system where the patient comes first.

- We are all caregivers or someone who supports a caregiver.
- We are here to improve the health of our community.
- We have an essential relationship with Northwestern University Feinberg School of Medicine.
- We integrate education and research to continually improve excellence in clinical practice.

Vision

To be a premier integrated academic health system that will serve a broad community and bring the best in medicine – including breakthrough treatments and clinical trials enhanced through our affiliation with Northwestern University Feinberg School of Medicine – to a growing number of patients close to where they live and work.

Values

Patients first: Putting our patients first in all that we do
Integrity: Adhering to an uncompromising code of ethics that emphasizes complete honesty and sincerity
Teamwork: Team success over personal success
Excellence: Continuously striving to be better

NMHC Clinical Schools & Programs Overview

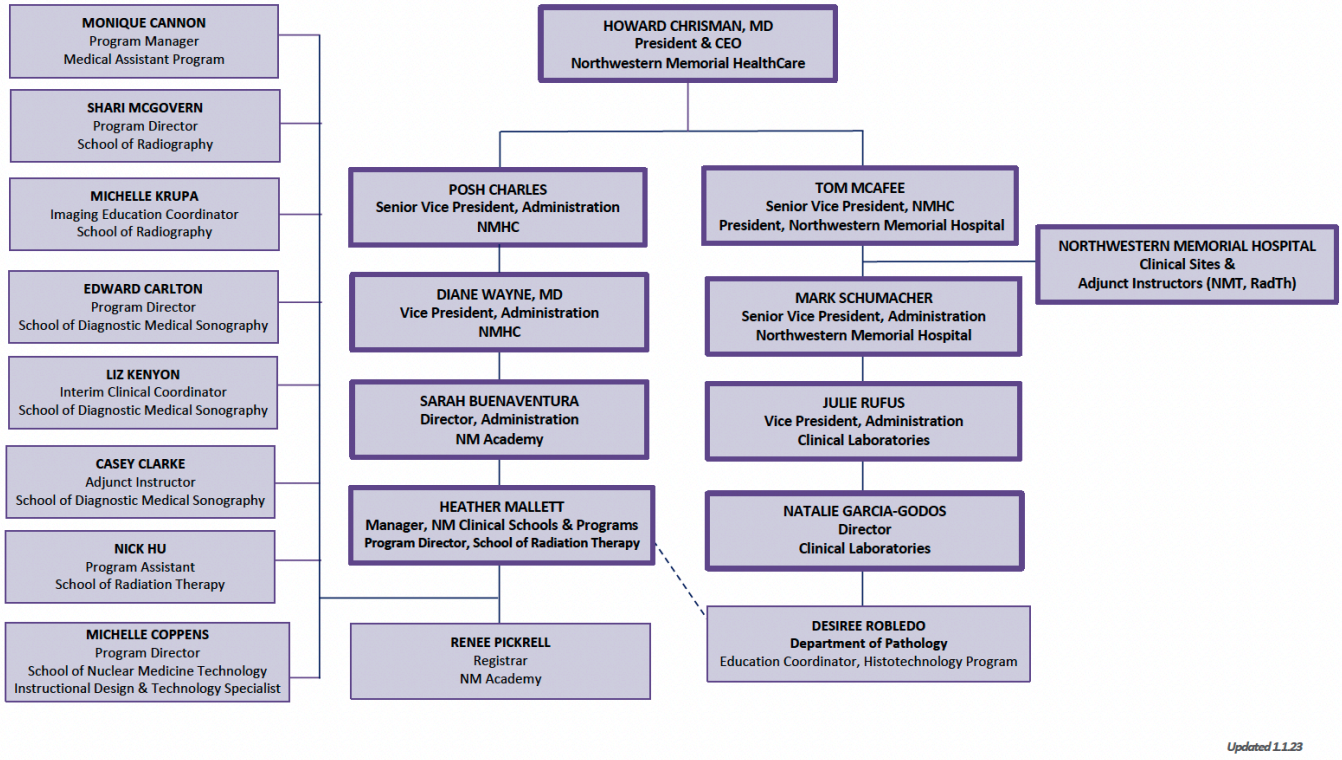
Northwestern Memorial HealthCare has been operating non-degree allied health programs since 2002 with the goal of improving the delivery of patient care and increasing patient access to high quality healthcare through the training and education of skilled healthcare professionals. The Northwestern Memorial HealthCare Clinical Programs in Diagnostic Medical Sonography, Medical Assisting, Nuclear Medicine Technology, Radiation Therapy, and Radiography are sponsored by Northwestern Memorial Hospital and administered by the NM Academy, a division of NMHC. The Histotechnology program is administered by the Department of Pathology.

The NMHC Clinical Schools & Programs are driven by the institution's patient-focused mission and dedicated to preparing students for excellence in their chosen career through enriching educational experiences and access to the delivery of exceptional healthcare.

NMHC Clinical Schools & Programs Mission Statement

The mission of the Northwestern Memorial HealthCare Clinical Schools & Programs is to educate the next generation of healthcare professionals in a collaborative, interdisciplinary learning environment that inspires compassion and a commitment to the highest quality care for the patients we serve.

The organizational chart for the NMHC Clinical Schools & Programs is provided below.



Accreditations and Approvals

Northwestern Memorial HealthCare is authorized by the Illinois Board of Higher Education to operate as a post-secondary educational institution in the state of Illinois through its Private Business and Vocational Schools and Degree Granting Divisions. The following programs are approved by the Private Business and Vocational Schools division: Diagnostic Medical Sonography, Medical Assistant, Nuclear Medicine Technology, Radiation Therapy, and Radiography. The following programs are approved by the Degree Granting division: Diagnostic Medical Sonography, Histotechnology, Nuclear Medicine Technology, Radiation Therapy, and Radiography.

IBHE
1 North Old State Capitol Plaza, Suite 333
Springfield, IL 62701-1377
(217) 782-2552
www.ibhe.org

Details regarding programmatic accreditation in the NM Clinical Schools & Programs can be found in the program-specific section of this institutional catalog.

NMHC Educational Facilities

Northwestern Memorial HealthCare (NMHC) is an integrated healthcare system consisting of various hospitals across the region and anchored by Northwestern Memorial Hospital, a premier academic medical center located in downtown Chicago. Program activities take place at Northwestern Memorial Hospital and the surrounding downtown medical campus (see map below) and various clinical rotation sites as outlined in the program-specific portion of this catalog. Each facility has state-of-the-art medical equipment, technology, and supplies appropriate for diverse patient needs and utilized by students under the supervision of a qualified practitioner.

Student Services

Orientation

All enrolled students will complete Northwestern Medicine's system-wide orientation prior to entering the clinical environment. System-wide orientation includes mandatory training in infection control, corporate compliance, cultural competency, fire safety, emergency management, hazardous materials, privacy and security, and other training as required by individual program. In addition to system-wide orientation, Program Directors will provide a program-specific orientation that allows students to become familiar with the individual program of study and helps students transition into the academic and clinical environment.

Library

Students have 24/7 remote access to NMHC's online library resources through the Health Learning Center (HLC), which includes a variety of licensed databases and over 750 full-text journals and e-books. Document delivery/interlibrary loan services are available for students who need access to additional non-subscription resources.

During orientation for each program, students are provided training about how to access the HLC's resources to enable the fullest access. In addition, each program has a variety of curricular resources specific to the profession; these resources are generally housed in the Program Director's office and students enrolled in the program have borrowing privileges.

Professional librarians are available to assist students with their library needs during the following hours:

Monday	Tuesday	Wednesday	Thursday	Friday
8a – 4:30p	8a – 4:30p	8a – 4:30p	8a – 4:30p	8a – 4:30p

Email Accounts

All enrolled students will be issued an NM email account for the duration of the program. All school-wide and program-specific correspondence will be via email through student NM accounts. Students are expected to check their NM email daily and respond promptly when indicated. NM email accounts should be reserved for program communication only and students are expected to exercise good judgement when communicating via email.

Student Advising & Tutoring

To ensure students are able to achieve their educational and professional goals, each program offers student advising and tutoring. The Program Director serves as the primary point of contact for student advising and tutoring, in collaboration with clinical/instructional faculty, NM Academy, and other resources to support student success. Additional information about student advising can be found in program-specific handbooks.

Clinical Uniform Apparel

Northwestern Memorial HealthCare will provide students with clinical uniform apparel.

Accessibility for Disabled Students

Northwestern Memorial HealthCare is dedicated to meeting the needs of all students and is able to coordinate services and reasonable accommodations to ensure accessibility by qualified individuals with disabilities. Please refer to the Accommodating Individuals with Disabilities policy located in this institutional catalog.

Employee Assistance Program

Personal counseling services are available through the Employee Assistance Program (EAP). The EAP is an NMH service that provides confidential support and referrals to students and staff who may have personal concerns that impair, or have the potential to impair, their health and wellbeing and/or their academic/work performance. Additional details regarding EAP services and access will be presented during system-wide orientation and are available on NMI. Services are available 24/7 and students can access EAP Resources in 3 ways:

EAP App	Search for and download "Spark by Perspectives"
Phone	Call (800) 456-6327 or (312) 926-0327
In Person	Call (800) 456-6327 to schedule an appointment

NM Interactive

NM Interactive (NMI) is the hospital's intranet and is an important source of information and institution updates. All institutional policies are accessible on NMI and are sustained and disseminated through extensive orientation, annual training, and regular communication. All students have full access to NM Interactive and are strongly encouraged to review institutional policies by logging into NMI and clicking on the "Policies and Procedures" tab.

Job Placement

A formal job placement service is not available and students are not guaranteed employment or salary after completion of their program of study. However, NMHC program faculty actively assist graduates with career placement through career development and planning activities. From time to time, program faculty are able to inform graduates of openings in the field and connect graduates with prospective employers. Each student is responsible for securing his or her own employment upon program completion.

Parking and Transportation

Students will be responsible for providing their own transportation to-and-from the hospital and assigned clinical facilities. Clinical rotation assignment schedules will not be modified to accommodate individual transportation needs.

For students who use the Metra, Northwestern Memorial Hospital provides shuttle buses to-and-from downtown train stations. For schedule information and tickets, you can visit US Bank on the second floor of Feinberg Pavilion. There is a fee associated with use of the shuttle service.

Student Discounts/ *Connections* Newsletter

NMHC offers discounted rates for various activities and services throughout the Chicagoland area. Discount coupons for employees and students can be obtained from the Human Resource department or via NM's monthly newsletter, *Connections*, which is distributed to all employees and students.

Dining and Retail

There are several dining facilities throughout the medical campus.

Galter/Feinberg Pavilions	Prentice Women's Hospital	Lavin Pavilion	Arkes Pavilion
Beatrix (1st floor)	Argo Tea (1st floor)	Stan's Donuts (1st floor)	Corner Bakery (1st floor)
Protein Bar (2nd floor)	Taste on 2 (2nd floor)	LYFE Kitchen (1st floor)	Gateway Newsstand (1st floor
Greek Kitchen (2nd floor)	Dunkin' Donuts (2nd floor)	Sweet Mandy B's (1st floor)	M Burger (1st floor)
Saigon Sisters (2nd floor)	Farmer's Fridge (1st floor)		Ramen-San (1st floor)
Panera Bread (1st and 2nd floor)	Starbucks (1st floor)		
Burrito Beach (2nd floor)			
Subway (2nd floor)			
Café L'Appetito (2nd floor)			
Pizza Kitchen (2nd floor)			
Starbucks (1st floor)			

Additional campus amenities include:
Ashland Addison Florist (Prentice, 1st floor)
Barbara's Bookstore (Galter, 1st floor)
Pulse Gift Shop (Galter, 2nd floor)
US Bank (Feinberg, 2nd floor)
Walgreens (Galter, 1st floor/Mezzanine)
Zen and Now Gifts (Prentice, 1st floor

Administrative Calendar Academic Year 2022-2023

There are two institutional terms per academic year. The first term is defined as the period between July 1 and December 31. The second term is defined as the period between January 1 and June 30. Schedules for each program may have different starting and ending dates for clinical rotations and didactic courses that are congruent with the time required to develop competency and deliver essential curricular components; please refer to each program's section in this catalog for program-specific academic calendars. On the following dates for the 2022-2023 academic year, students will not be scheduled for program activities and the administrative offices for the NMHC Clinical Schools & Programs will be closed.

Independence Day 2022	Monday, July 4
Labor Day 2022	Monday, September 5
Thanksgiving Day 2022	Thursday, November 24
Christmas Day (observed) 2022	Monday, December 26
New Year's Day (observed) 2023	Monday, January 2
Memorial Day 2023	Monday, May 29
Independence Day 2023	Tuesday, July 4
Labor Day 2023	Monday, September 4
Thanksgiving Day 2023	Thursday, November 23
Christmas Day 2023	Monday, December 25

Catalog Changes

The institutional catalog is intended to serve as a collection of institutional policies that define the expectations of students enrolled in our clinical programs. Enrolled students will also receive a program-specific handbook with policies that relate to their program of study. All students are expected to familiarize themselves with institutional and program policies and are encouraged to speak to their Program Director or Coordinator if additional clarification is needed. The regulations appearing in this catalog are those in effect at the most recent publication and are subject to change.

The institutional catalog and student handbooks are constantly evolving and reviewed and revised on an annual basis (and as needed) in a collaborative process involving representatives from a number of areas. In order to meet the needs of the sponsoring institution or clinical area or in order to maintain compliance with Accreditation Standards or other laws or regulations as relevant, it may be necessary to revise existing program policies or publish new policies. When policies are revised or added, all students will receive a written copy of the policy/addendum with an effective date and will acknowledge their receipt of the policy prior to implementation. New or revised policies will be discussed and students will have an opportunity to ask questions for clarification. By enrolling in the Northwestern Memorial HealthCare Clinical Schools & Programs, the student agrees to abide by the terms stated in the catalog and all program-specific policies.

Transferability of Credits

For non-affiliated students, the ability to transfer credits from Northwestern Memorial HealthCare to another educational institution towards an academic degree may be very limited and should be considered prior to executing an enrollment agreement. Students should contact any educational institution to which they may want to transfer credits earned at NMHC towards an academic degree to determine if such institution will accept credits earned at NMHC.

All students enrolled in the NMHC programs must complete the prescribed curriculum in its entirety in order to graduate. NMHC does not accept transfer credits for program-specific coursework earned at another educational institution.

Accepted students will receive a Transferability of Credits Disclosure with other onboarding materials prior to matriculation.

Licensure and Certification Disclosure

Rev. Academic year 2022-23

To better inform current and prospective students and to comply with federal disclosure requirements, Northwestern Memorial HealthCare provides information regarding whether completion of a program that leads to professional licensure meets educational requirements for licensure and/or certification in each U.S. state and territory. Please note that educational requirements for licensure and/or certification can sometimes vary considerably by state and may change over time.

Residential/On-Ground and Blended Programs

Employment in healthcare fields typically requires licensure and/or certification which may vary considerably across states and employers. Each NMHC program (residential and blended) meets the educational requirements for professional licensure and certification in the state of Illinois. NMHC has not determined whether or not its programs meet educational requirements for states or territories outside of Illinois. Students who are considering an academic program that may allow them to pursue

professional licensure in a state or territory outside of Illinois are strongly encouraged to check that state or territory's information and contact the appropriate licensing agency to seek information and additional guidance before beginning a program.

Prospective and current students should keep in mind that relocating during the course of a program to another state could impact whether that student can continue in the program and/or meet the eligibility requirements of that state. If enrolled students are considering relocating outside of the state of Illinois during their program, they should contact their program to check for authorization and licensure eligibility requirements. All enrolled students are required to update their information if relocating outside the state of Illinois by contacting the registrar. For enrolled students whose physical location has changed to another state since admission, the institution will provide direct notice via email within 14 calendar days if the institution has revised their determination of the program's sufficiency. Prospective students physically located outside the state of Illinois will be directly notified via email whether completion of the program would be sufficient to meet licensure or certification requirements.

NMHC is authorized to offer distance education coursework in the state of Illinois and prospective and current students should keep in mind that licensing and authorization requirements vary by state. For students enrolled in blended programs, relocating during the course of a program to another state could impact whether that student can continue in the course and meet the licensure eligibility requirements of that state. Students are advised to check licensure/certification requirements for states in which they may want to purse employment.

Additional licensure and certification information is provided in the program-specific sections of this catalog and program-specific handbooks.

Student Information

Students are expected to ensure that their contact information is current. The Registrar maintains student contact information as it appears on their enrollment agreement. Information provided by the student on the enrollment agreement is used to determine where students are physically located at the time of admission and students are required to notify the Registrar of updates to this information, including relocation during the course of their program.

Academic Credit and Clock Hours

Northwestern Memorial HealthCare does not award academic credit. Each program measures course activities in clock hours and converts to program credits in order calculate student grade point averages. A clock hour is equivalent to approximately 50 minutes of instruction or academic engagement within a 60-minute period of time.

Assignment of Credit Hours by Affiliated Universities

For students enrolled in the Diagnostic Medical Sonography, Histotechnology, Nuclear Medicine Technology, Radiation Therapy, and Radiography programs through affiliated colleges/universities, NMHC will provide verification of program coursework and completion to the affiliated college/university in which the student is enrolled. The documents provided to affiliate colleges/universities are intended as verification of the NHMC program experience. However, the NMHC programs do not assign academic credit for the work completed in its programs. Each affiliate university's method of assigning credit to the NMHC clinical programs' experience as well as the number of college credits ultimately awarded to each student are determined by each university independently from NMHC and according to the university's policies.

International Applicants

NMHC is not able to admit non-affiliated international students at this time and does not offer student visa sponsorship.

Instructional Language

At NMHC, all instruction occurs in English. NMHC does not offer English as a Second Language (ESL) instruction. Applicants whose native language is not English must provide evidence of English proficiency by submitting TOEFL examination results or other accepted documentation (see TOEFL policy).

Program-Specific Policies, Rules, and Regulations

In addition to the policies delineated in this institutional catalog, each program has a student handbook that articulates program-specific policies, rules, and regulations. Students are required to adhere to all institutional and program policies and all policies of the clinical affiliate to which they are assigned. Students will receive their program's student handbook prior to matriculation with comprehensive review during program orientation.

Program Delivery

The NMHC Clinical Schools & Programs may be offered in the traditional residential format or blended format, as detailed in the program-specific sections of this catalog. Courses may use a combination of instructional methods including: lecture, clinical education, simulation, laboratory sessions, and out-of-class assignments. Students enrolled in programs with a distance education component should also expect to interact with an online learning management system. Timely and regular attendance is an expectation for all enrolled students, regardless of delivery format, and is a core component of the professionalism expected of our graduates. Attendance policies are detailed in program-specific handbooks.

Residential Format

Students enrolled in programs with a residential delivery format are required to physically attend on-site classes and clinicals for the scheduled hours and complete outside preparation as required.

Hybrid/Blended Format

The Diagnostic Medical Sonography, Nuclear Medicine Technology, and Radiation Therapy programs have both residential and distance learning components and are, therefore, considered blended programs. Although these programs have some instruction, assessment, and assignments that are delivered using an online learning management system, students are required to physically attend on-site classes and clinicals for the scheduled hours and complete outside preparation as required. Students enrolled in programs with hybrid/blended courses are expected to be able to:

- Open files in standard file formats (MS office, PDFs, images)
- Create, save, organize, and maintain digital files
- Interact with a Learning Management System (LMS)
- Communicate electronically
- Perform web browsing and searching

Applicants for blended programs will complete an online learning readiness assessment to ensure they have the appropriate skills, technology, and abilities to succeed in the distance education components

of these programs. Experience with NMHC specific systems is not a condition of enrollment, and training for the NMHC Learning Management System is provided early in the student's educational program.

There are no additional fees for students enrolled in programs with distance education components.

NMHC is authorized to deliver distance education coursework in the state of Illinois. Students enrolled in blended programs who do not reside in the state of Illinois or, while enrolled, move to another state in which NMHC does not have approval to operate may have issues completing their program depending on state regulations. While blended programs that lead to professional licensure are authorized in the state of Illinois, this does not guarantee that the program will also satisfy the requirements for becoming licensed in the profession as defined by the applicable state licensing body in the state in which you plan to seek employment.

Technical support is available for faculty and students on-site and online 24 hours a day, 7 days a week through the Northwestern Medicine Service Center. Contact information for the Northwestern Medicine Service Center is below:

Phone: (312) 926 – HELP (4357)
Online: NMI → NM Service Center → Request Help IS

Learning Management System (LMS)

Instructure Canvas is the official LMS supported by the NMHC Clinical Schools and provides a platform for online activities that support course objectives. Canvas is scalable, allows different course formats, facilitates collaboration and assessment of learning through quizzes, exams, and other activities. Occasionally, courses may link to external content.

Canvas offers many features including: assignment submission, discussion boards, document management, grading, online calendar, online news and announcements, online quizzing, integration with Zoom/MS TEAMS, multimedia integration, data analysis and reporting, and device compatibility. Students enrolled in blended format programs will receive basic Canvas training during program orientation to assist them as they begin their respective program and related distance education courses.

The NMHC Clinical Schools & Programs' Canvas URL is: nmschools.instructure.com

Students and faculty have access to Instructure Canvas technical support from 6a – 6p through the resources listed below:

Phone: 800-203-6755
Online: support@instructure.com
Canvas: Global Menu – HELP button

Questions and issues related to Canvas may also be directed to the Instructional Design and Technology Specialist: michelle.coppens@nm.org

Technology Requirements

All students must have reliable internet connectivity and a computer (desktop or laptop) with the minimum systems requirements outlined below:

Hardware:

- 1.4 GHz Processor
- 13-inch or larger display with minimum 1024 x 768 resolution
- Wireless capability
- Built in or external speakers, microphone, and webcam

Operating System:

- Windows 8, 10
- Mac OS X 10.9 or higher

Browser:

- Latest version of Chrome, Internet Explorer 11 or higher, Safari 15 or higher, Edge 103 and 104, Firefox 103 and 104
    - Cookies must be enabled

Software:

- Latest version of Adobe Acrobat Reader
- Flash Player

*Students enrolled in blended programs must have access to appropriate software and technology to access course materials through Canvas. Click to see Canvas basic computer specifications.

Security and Integrity of Blended/Hybrid Courses

Dev. Academic year 2021-22

All members of our learning community share an interest in protecting the value, integrity, and credibility of the outcomes of program courses, regardless of delivery format. NMHC holds its students to high standards of academic integrity in all intellectual environments, including that of distance education. Students learning in a distance education setting are governed by the institution's Academic Integrity policy.

Instructure Canvas is the learning management system (LMS) supported by NMHC and provides a secure environment for content management and online activities that support course objectives. Canvas requires that all students be authenticated using their unique login and password to access distance education course content. By accessing any form of course assessment through Canvas, a student agrees that:

- He or she is the person registered in the course who has participated and will receive credit for the course.
- He or she will not receive unauthorized assistance from any other person or source during the assessment.
- Unauthorized sharing of information about an assessment with others is strictly prohibited and will result in disciplinary action, as outlined in the Academic Integrity policy.

Students will receive email invitations to their nm.org account to enroll in courses through a batch process run by the LMS administrators. Students are restricted to faculty-published information in courses for which they are enrolled. The privacy of online students' assessments and grades is maintained within the LMS. Course and user profile information is not visible to anyone without an account and authorized Canvas users cannot view student information.

Tuition and Financial Aid

Program tuition, fees, and estimated costs are outlined below:

Program	Application Fee	Tuition		Resource Fee	Additional Costs	Total Estimated Cost to Student (non-affiliate)
		Non-Affiliate	Affiliate			
Diagnostic Medical Sonography	$25	$9,000	*based on university tuition	$100	$1660	$10,785
Histotechnology	$0	N/A	*based on university tuition	$0	$375	Based on university tuition
Medical Assisting	$25	$1,000	N/A	$100	$40	$1,165
Nuclear Medicine Technology	$25	$7,500	*based on university tuition	$100	$780	$8,405
Radiation Therapy	$25	$8,000	*based on university tuition	$100	$1080	$9,205
Radiography	$25	$8,250	*based on university tuition	$100	$1075	$9,450

*Tuition for students enrolled in affiliated universities is based on and will be paid to the student's home institution.

Program tuition includes Northwestern Medicine clinical uniform apparel. Additional costs include textbooks, liability insurance, CPR certification, and program-specific supplies, unless otherwise indicated.

Additional expenses related to attending the program are the responsibility of the student and are not factored into the total costs above. Examples of such expenses may include, but are not limited to: health insurance, medical physical and immunizations, travel to-and-from clinical assignments, meals, and housing expenses.

Payments related to program enrollment should be made to the Registrar of the NM Clinical Schools, unless otherwise indicated, and program tuition is due prior to the beginning of classes, or by the dates outlined in the student's payment plan.

Financial Aid

Northwestern Memorial HealthCare is not eligible for participation in Title IV financial aid programs. Title IV funding is not available to students through Northwestern Memorial HealthCare.

Private Loans

If a student procures a private loan in the provision of educational services, NMHC is in no way involved with the agreement between the lender and the student. As such, all inquiries related to such loans should be directed to the private loan lender.

Payment Plans

Payment plans are available, which allow tuition charges to be paid in three partial installments as follows:

- Payment 1: 50% of tuition due on the 15th of the month preceding program start
- Payment 2: 25% of tuition due on the 15th of the first month of the program
- Payment 3: 25% of tuition due on the 15th of the second month of the program

Collections Policy
Students are responsible for meeting their financial obligations to the NMHC Clinical Schools and Programs. Tuition and fees must be paid in full, or according to a payment plan, in order for a student to progress in the program, obtain a transcript, graduate, receive a certificate, and be authorized to take their certification exam. We will work with students to develop payment plans to assist them in meeting their financial obligations to NMHC.

When a non-affiliated student account becomes delinquent, the following steps are taken in this order:

1. An overdue notice will be sent via email and a hold will be placed on your account. You are restricted from participating in courses for the subsequent term and the release of transcript and certificate is restricted.
2. A series of three-consecutive running letters over a three-week period is sent via email.
3. Following failure to resolve the account balance, the student will be terminated from the program.

Tuition payment for students enrolled through affiliated universities will be managed according to their home institution's policy.

Refund/Cancellation Policy
Non-affiliated students who confirm their enrollment by submitting a completed enrollment agreement and $250 tuition deposit may cancel the agreement by email notification within 3 business days of submission ("cancellation period") and receive a full $250 tuition deposit refund. After 3 business days, students who withdraw prior to the start of classes will receive a refund of all monies paid less a $100 processing fee. After the end of the cancellation period the student also has the right to withdraw from school at any time (see Program Withdrawal policy).

Non-affiliated students enrolled in the certificate program who withdraw/terminate enrollment after the start of classes will be refunded as follows:

# of weeks attended	% of full program tuition refunded
1-2 weeks	50%
3 weeks	25%
4 weeks	0%

For the purpose of determining the amount to be refunded to students who withdraw and are entitled tuition refund, the refund will be computed based on the student's last date of recorded attendance. If a student is owed a refund, all monies due will be refunded within 45 calendar days from the date of withdrawal determination.

Items of extra expense to a student such as instructional supplies, equipment, and fees are not considered in tuition refund computations.

Students enrolled in affiliated universities/colleges do not submit a tuition deposit and will be refunded according to their home institution's refund policy.

Students who are dismissed or suspended from the NMHC clinical programs will not be entitled to any refund.

Definitions:

- Last date of attendance is the last day a student had academically related activity, which may include projects, clinical experience, or examinations.
- Date of withdrawal determination is the date that an institution determined that a student was no longer in the school.
- Obligation period for which a student is charged is program length.

Admissions

NMHC seeks to admit individuals who have the capacity and determination to complete rigorous program requirements. The admissions process is designed to help students and program officials reach an informed decision about a student's likelihood of success. NMHC requires that all applicants to the NMHC Clinical Schools & Programs have, at minimum, a high school diploma, GED, or recognized equivalent. For programs requiring a college degree or enrollment at an affiliated college/university, an applicant may submit a copy of a post-secondary degree or transcripts in lieu of a copy of the high school diploma.

NMHC provides equal opportunities to all applicants and students and does not discriminate in the recruitment and admission of students or in the operation of any of its educational programs or activities. Applicants are considered for admission based on individual merit and equal opportunity to applicants and students is provided without regard to age, race, color, national origin, religion, culture, language, physical or mental disability, socioeconomic status, sex, sexual orientation gender identity or expression, marital status, parental status, military or veteran status, or source of income in the provision of educational services.

All students accepted into the NMHC clinical programs are required to undergo a criminal background check and 10 panel drug screen at the expense of NMHC prior to matriculation. Accepted students are made aware through their acceptance letter that their enrollment is conditional upon passing a criminal background check and drug screen. NMHC requires that criminal background checks are delivered by the screening provider directly to NMHC. NMHC will not accept background check reports from students. A criminal record may impact a student's ability to complete a program and gain certification or licensure and subsequent employment in the field for which they are trained. Students are encouraged to review criminal record concerns with the relevant Program Director prior to deciding to apply. NMHC reserves the right to rescind an offer of acceptance based on adverse information discovered during the criminal background check with final decisions adjudicated in partnership with the Division of Human Resources.

Program Admissions Requirements and Procedures

Each program establishes its own admissions requirements and application procedures. Please refer to the program-specific section of this catalog for specific requirements.

Blended Programs Admissions Requirements

Applicants for blended programs will complete an online learning readiness assessment to ensure they have the appropriate skills, technology, and abilities to succeed in the distance education components of these programs. A low assessment score is a strong indication that a student may face more

challenges than may be desired in a blended course. In these cases, assistance will be provided to students to overcome barriers and promote student success in the distance education setting. Only students who are deemed competent with online systems will be admitted into these programs. Experience with NMHC specific systems is not a condition of enrollment, and training for the NMHC Learning Management System is provided early in the student's educational program.

Late Enrollment

Northwestern Memorial HealthCare does not allow late enrollment.

Health Records

Admitted students are required to provide the following health and medical information:

- Physical exam
- Verified Immunization record
    - Vaccination or immunity to the following communicable diseases is required: measles, mumps, Rubella, Varicella, Tdap, COVID-19
    - All students will have an assessment of their Hepatitis B immunity; if no documentation of immunity is available, either titers or vaccines will be offered
- The seasonal influenza vaccine is required by December 1st for all students and will be provided at no cost during flu season
- 2-step TB test
- CPR certification (if indicated)
- Personal medical insurance
- For a student requesting accommodations – the student must provide documentation of their disability and how it limits their participation in program activities. Requests for accommodations should be made far enough in advance to allow staff to coordinate needed services.

TOEFL Policy

Students in the NMHC Clinical Schools & Programs must have a high level of English language aptitude. All applicants whose native language is not English must present evidence of proficiency in English in any one of the following forms:

- Transcript or diploma showing graduation from an accredited high school in the U.S. educational system.
- Baccalaureate degree (or higher) earned from an accredited U.S. institution of higher education.
- Satisfactory completion of the Test of English as a Foreign Language examination (TOEFL);
    - A total TOEFL iBT score of at least 88 on the internet-based version, with a minimum score of 18 in each of the four section scores (speaking, listening, writing, and reading) is required.
    - The TOEFL iBT test may be completed at a test center, or at home with the TOEFL iBT Home Edition
    - An official report of these scores must be received by the Registrar's Office prior to the application deadline date for the program to which the applicant has applied. To obtain information or to register to take the TOEFL, you may visit the TOEFL website at: http://toefl.org

The TOEFL policy does not apply to students applying to the Histotechnology and Medical Assisting program.

Professional Liability Insurance

Students enrolled in the NMHC Clinical Schools & Programs are required to purchase a professional liability insurance policy and maintain it for the duration of enrollment. Students are required to purchase Student Professional Liability Coverage to cover up to $1,000,000 per claim and up to $3,000,000 annual aggregate for all covered claims in the policy period. Students are responsible for the cost associated with obtaining and maintaining professional liability insurance and must provide evidence of coverage prior to participating in clinical assignments. Students making up clinical time must provide evidence of liability insurance coverage during makeup assignments. Coverage provided by the plan is limited only to the care participated in by students at the direction of the Program Director or designee, whether at NMHC or a clinical affiliate.

Enrollment Agreement

Students are required to sign an Enrollment Agreement prior to matriculation. Enrollment agreements will be provided with other onboarding materials prior to the first day of class.

Foreign Transcript Evaluation

All foreign transcripts and degrees must be evaluated and translated into U.S. equivalency by Educational Credential Evaluators (ECE), an independent evaluation provider. Applicants who have taken courses or obtained a degree at an institution outside the U.S. are required to submit with their application a full translation of the transcript into U.S. equivalency.

Statement of Confidentiality

Students enrolled in the NMHC Clinical Schools & Programs share the responsibility of maintaining the confidentiality of patient, hospital, and employee information that is made available to them during enrollment. Upon enrollment, students will sign a global confidentiality agreement that will be maintained in the student's file. Students are expected to strictly adhere to hospital policies and HIPAA regulations as they relate to all proprietary or confidential verbal, written, and electronic information.

Advanced Placement and Experiential Learning

NMHC does not accept hours or credit towards advanced placement or award credit for non-course activity, such as proficiency examinations, achievement tests, life experience, or experiential learning.

Non-Credit and Remedial Courses

The NMHC Clinical Schools & Programs do not offer non-credit or remedial courses.

Graduation Requirements

Certificates for each NMHC clinical program are awarded based on the successful completion of all program-specific graduation requirements. In order to graduate, a student must successfully complete all courses in the program with the minimum passing score (which may vary across programs), complete all required competencies, complete all hours in excess of PTO, and have paid all tuition and fees in full. Additional details regarding each program's graduation requirements can be found in the program-specific handbooks.

Surveys of Enrolled Students and Graduates

In order to evaluate course and program offerings, students will be asked to complete online surveys for each didactic course at the end of each term and an exit survey prior to program completion. All student

survey submissions are anonymous and confidential. Graduate feedback and job placement information will also be solicited through online surveys distributed after graduation. Survey data and comments will be compiled by the Program Director and presented to the relevant parties. The feedback collected will help enhance program and course offerings, assist with course revisions, and aid in curriculum planning.

Electronic Signatures

In order to increase the efficiency and effectiveness of NMHC Clinical Schools & Programs operations that require or request signatures to indicate approvals, attestations, or acknowledgment, NMHC may accept electronic signatures to replace previously required handwritten signatures on paper documents. Electronic signatures may be in the form of a scanned or digitized image of a handwritten signature or typed on a signature block.

To the fullest extent permitted by law, NMHC accepts electronic signatures as equivalent to handwritten signatures to signify agreement, attestation, or approval.

Course Syllabus

A written syllabus will be provided to each student for each didactic and clinical course at the onset of the course. The syllabus will provide the student with all pertinent information for the course including: course objectives, delivery format, instructional resources, course requirements, and grading information. The course instructor will provide a review and explanation of the syllabus content at the onset of the course. The student is responsible for understanding and adhering to the guidelines defined by the syllabus.

Employment During Program Enrollment

We encourage students to prioritize their education throughout the duration of the program, however we recognize that employment during the course of the program may be necessary for some. Employment should not interfere with student responsibilities; furthermore, class and clinical hours/rotations will not be adjusted or modified to meet a student's work schedule.
For students employed by the institution, credit cannot be awarded for clinical hours in which the student is acting as an employee.

Satisfactory Academic Progress (SAP)

The NMHC Clinical Schools & Programs require that all students maintain Satisfactory Academic Progress (SAP) in their program of study. Satisfactory Academic Progress standards consist of both qualitative and quantitative measures that ensure students are meeting minimum GPA requirements and progressing at a pace that allows the student to complete their program within the allotted timeframe. SAP is evaluated on a regular basis for each program and rules are applied uniformly to all students. Details about each program's SAP requirements and timing and frequency of SAP review are contained in the program-specific sections of this catalog and in the student handbook. In order to maintain Satisfactory Academic Progress, a student must meet at all times the minimum standards established by each program for both qualitative and quantitative measures.

Qualitative Measures of SAP – General Information

Qualitative measures consist of a student's grades, whether expressed numerically or with letter grades. All students must maintain cumulative (overall) and current (most recent term) grade point averages of 2.0 or better with satisfactory performance pace. A student's final grade for each course will conform to

the grade point system outlined below; however, individual programs and instructors may, at their discretion, establish their own grading scales and thresholds for passing. This is an accepted practice and a protected instructor right. While some programs may employ a 10-point scale (e.g. 90 – 100 = A; 80-90 = B), and some may employ a seven-point scale (e.g. 93-100 = A; 85 – 92 = B), others may design a grading system derived from an accumulation of points earned throughout a semester. Each program's grading scale is outlined in the program-specific portion of this catalog.

Grading and the Grade Point System

The NMHC Clinical Schools utilize a 4.0 grade point system, where a 4.0 = A. See the chart below:

Grade	Definition	Grade Points Per Term Hour
A	Excellent	4.0
B	Good	3.0
C	Satisfactory	2.0
D	*Unsatisfactory	1.0
F	Failure	0.0

*Under no circumstances may a program establish an unsatisfactory grade threshold lower than the institutional minimum of 70%.
**Programs may, at their discretion, subdivide each grade into categories indicating plus (+) or minus (-) performance for a given grade level on the grading scale (e.g. A-, B+, C+, etc.). Program-specific grading scales are outlined in the program-specific section of this catalog.

The following symbols are used in grading, but are not included in the computation of the grade point average:

Symbol	Description
P/F	Pass/Fail course grades are not calculated into the grade point average. Failed courses must be repeated and passed in order to graduate.
W*	Withdrawal – Utilized when a student withdraws from the program prior to the scheduled completion of a course or leaves the course due to an approved leave of absence. Any course with a "W" is not calculated into the grade point average.
I	Incomplete – May be used at the discretion of the instructor in cases in which the student is not able to complete the required work in the allocated time. In those cases, the student and course instructor will develop a written plan for extension to provide work by a certain date that falls within an acceptable period of time (no more than 1 month). Incomplete courses are not calculated into the grade point average. Once a grade is assigned to the course, that grade will be factored into the student's GPA. Any course with an "I" that is not satisfactorily completed within the period of time specified by the program will be changed to an "F".
R	Repeat – Due to the cohort structure of the programs, the ability to repeat coursework is extremely limited. If a program allows a student to repeat courses, an "R" will be recorded as the grade for the first attempt. Any course with an R is not calculated into the student's GPA however but will be included as attempted hours when calculating the student's Maximum Time Frame to Completion.

*W is a non-punitive grade and not included in the computation of a student's cumulative GPA. The clock/credit hours associated with any course for which a non-punitive grade is assigned are included as attempted hours when calculating the student's Maximum Time Frame to Completion.
The table below presents the minimum averages required for each program:

Program Name	Minimum Average Required
Diagnostic Medical Sonography	75% (clinical and didactic)
Histotechnology	70% (clinical and didactic)
Medical Assistant	70% (clinical and didactic)
Nuclear Medicine Technology	75% (clinical and didactic)
Radiation Therapy	78% didactic / 80% clinical
Radiography	77% (clinical and didactic)

In order to graduate, a student must successfully complete all courses in the program with the minimum passing score (which may vary across programs), complete all required competencies, and complete all hours in excess of PTO.

Quantitative Measures of SAP – General Information

The quantitative measure of SAP consists of a student's satisfactory completion of competencies and program hours, as measured by a rate-of-progress calculation (courses attempted/courses completed) to ensure all students progress at a rate that is consistent with completing their program in the allotted timeframe. Student progress against quantitative SAP standards is measured at least once a term. There are two institutional terms per academic year. The first term is defined as the period between July 1 and December 31. The second term is defined as the period between January 1 and June 30. Schedules for each program's rotations and educational activities may have different starting and ending dates from the institutional term dates and are included in the program-specific section of this catalog.

Students who do not make satisfactory academic progress as determined by either NMHC or the program will be placed on academic probation and provided with academic support and remediation plan to facilitate satisfactory academic progress and program completion. A pattern of unsatisfactory academic progress may result in dismissal. Students who have been dismissed for failure to meet SAP standards will be eligible to reapply for readmission (see Readmission of Dismissed Students Policy). No guarantee of admission will be made. Students who have been dismissed from the program are entitled to due process and should follow the procedure outlined in the program's Due Process/Grievance Policy.

Maximum Time to Complete Program

All students are expected to fulfill the requirements of their program within an acceptable period of time. The maximum time permitted for a student to complete their program of study is 150% of normal program length unless the students' specific program has identified a shorter time limit. Students who do not complete their program of study within the allotted time will be dismissed from the program on academic grounds and are not eligible for readmission. Time spent in any of the following situations/activities counts towards the maximum time to complete NMHC programs: courses for which

a grade of Incomplete or Failure was recorded, courses from which the student withdrew, repeated coursework, time in an NMHC-approved leave-of-absence.

Academic Probation

Academic probation is an official notice to a student of unsatisfactory academic performance or progress. Based on stated expectations and progress milestones, a program may determine at any point in a student's academic career that they are not in good academic standing. As determined by the program, the student may be placed on academic probation or dismissed from the program depending on the unmet expectation and its defined consequences. When placed on academic probation, students are provided written notification that outlines the reasons why the student has been placed on probation, the conditions of the academic probation, and the requirements the students must meet in order to be removed from academic probation. Probation status will continue until the student meets the requirements. Students on probation who do not meet the requirements outlined in their probationary document will be given the opportunity to withdraw from the program. If the student declines the option to withdraw, he or she will be dismissed from the program on academic grounds. Students who are placed on academic probation are entitled to due process and should follow the procedure outlined in the program's Due Process/Grievance Policy.

Grade Appeals

Students considering a grade appeal should understand that each faculty member has the academic freedom and responsibility to determine grades according to any method, chosen by the faculty member, that is professionally acceptable, communicated to everyone in the class, and applied to all students equally. However, prejudiced or capricious academic evaluation by a faculty member is a violation of a student's right and is valid ground for a grade appeal.

Any student who wishes to contest a course grade shall first attempt to resolve the matter with the instructor involved through informal means. In the event that the contested grade is not resolved through informal discussion, the student has the opportunity, without fear of penalty or retaliation, to pursue the formal grievance procedure as described in the institution's Due Process/Grievance policy.

Readmission of Dismissed Students

The student handbook identifies various instances in which students are subject to corrective action up to and including program dismissal. In certain instances, dismissed students have the opportunity to re-apply for readmission. Students who are eligible for readmission are required to re-apply to the program and will be evaluated using the program's standard admissions procedures.

Procedure:

Students who voluntarily withdraw from the program or are withdrawn for academic reasons, including failure to maintain Satisfactory Academic Progress (SAP), must follow the procedure below for consideration for reenrollment. Students withdrawn for disciplinary reasons will not be considered eligible for future program participation in any way.

Students who are eligible to re-apply for admission shall follow the procedure outlined below:

1. Dismissed students wishing to be considered for readmission must petition the admissions committee, in writing, and complete a program application for the following academic year.
2. The petition should include the reasons the individual should be granted consideration for reenrollment and must be sent to the Program Director no later than the application deadline for

the following academic year. The petition should also include strategies for probable success, what factors contributed to dismissal, intentions to maintain acceptable standing, and any additional indication of personal growth.

3. Upon receipt of the completed application and petition, the Program Director will gather with the admissions committee to consider the student's petition for approval.
4. If the petition is approved, the dismissed student will be evaluated based upon the same admissions standards as new applicants, also considering academic, clinical, and behavioral performance prior to the dismissal.
5. The Program Director will inform the student in writing of the interview panel's decision at the time final selection of applicants occurs.
6. The decision of the interview panel will be binding.
7. A previously dismissed student will only be admitted if space permits and relative to their ranking in comparison to new program applicants. No guarantee of readmission will be made.

Students who are readmitted into the program are required to pay additional tuition and must complete the curriculum that is operational at the time of their readmission. This will require that the student repeat previous coursework. A student may be readmitted to NMHC no more than one time.

Emergency Preparedness Policy

NMHC is committed to safeguarding the welfare of students, staff, and patients and to protecting the programs' essential functions of teaching and learning continuity during and after emergencies. The purpose of this policy is to ensure that the programs can effectively respond to and recover from an emergency through the appropriate use of resources, minimize the impact of emergencies on its constituents, and mitigate the long-term effects of an emergency on program operations and mission.

Upon enrollment and on an annual basis, students and staff complete the Emergency Preparedness training module located on the NMHC learning management system as a part of system-wide orientation. Compliance with training requirements are monitored by the Emergency Management Committee. The Emergency Preparedness training module covers the following topics: Emergency Management, Fire Safety, Hazardous Materials, Active Shooter, Bomb Threats, and Security Tips. Role specific training, means of egress and evacuation from areas in which program activities take place are reviewed with students during program orientation with refresher training provided as needed. In addition, student identification badges include emergency response numbers/codes for quick reference.

Security and the Emergency Management Department are responsible for the design, implementation, monitoring and evaluation of the NMHC Emergency Management Program. Because of the wide variety of activities and locations within NMHC, all departments/units are required to develop emergency action plans that are congruent with the NMHC Emergency Management Program.

Recognizing the impracticality of developing and maintaining plans for every possible emergency, this policy provides general guidelines for all emergency events as outlined below:

- An Emergency Management Committee will be appointed and convened to provide multidisciplinary guidance, oversight, risk assessment, and planning.
- Hospital leaders will participate in the development of an emergency response and comprehensive plan based on priorities identified through the hazard vulnerability/risk assessment, incident experience, local, state, and national trends and priorities. Emergency

response may include evacuation, lockdown, sheltering in place, and other actions depending on the nature of the risk as evaluated by the Emergency Management Committee.

- In the event that in-person instruction is temporarily discontinued, NM Academy leadership and program faculty will convene to determine strategies for restoring critical functions, achieving learning continuity, and timely program resumption after emergency. These strategies may include: collaborating with students in a virtual/distance learning environment (Microsoft Teams, Zoom), leveraging the existing learning management system, implementation of clinical simulations, and allowing for flexible scheduling and clinical make-up time in the event that a significant number of clinical days are missed.
- In the event that an emergency warrants the removal of students and staff from campus, division leadership will collaborate to ensure the timely and safe return of students and staff. In some instances, safe return to campus may require modifications to classroom and communal spaces, screening requirements, flexible scheduling and work arrangements, use of PPE while on-site, and reduced on-site capacity.

Although our priority is to restore program operations quickly, large scale emergencies that impact clinical rotations may result in delayed graduation to ensure students complete all clinical and didactic requirements.

NMHC maintains reliable primary and redundant communication capabilities for initial and ongoing system-wide communication with students, visitors, and staff during time of emergency through use of an Incident Command System (ICS). The Incident Commander is responsible for confirming an emergency and executing communication plans system-wide. On a local level, the Manager of the NM Clinical Schools, in collaboration with the Director and Vice President of Administration, is responsible for school- and staff-wide communications during and after emergencies.

All media communications are managed by the NMHC Media Relations Department (MRD). The NMHC MRD is the primary point of interface with all media and is responsible for providing members of the media with timely and accurate information. Therefore, all requests for information, interviews, comments or statements must be directed to the NMHC Director of Media Relations or a member of the MRD staff.

Phone numbers related to security and emergencies can be found below:

Service	Internal	External
Occupational Health	6-8282	(312) 926-8282
Medical Emergency	5-5555	(312) 695-5555
Security Services	2-2222 or 6-2311	(312) 926-2311
Risk Management	5-RISK	(312) 695-RISK
Environmental Services	6-2161	(312) 926-2161

Definitions:
Emergency – an event, whether expected or unexpected, that threatens the ability to conduct normal business operations.
Lockdown – locking all exterior doors to the facility
Shelter in place – remaining in a room/area indoors that can be locked or secured

Campus Security

It is the goal of NMHC to provide a safe environment for students, staff, patients, and visitors. Northwestern Memorial Hospital retains the services of a third-party security services operator to provide security for NMH and its corporate affiliates and coordinates with the Northwestern University police department and the Chicago Police Department when required.

Upon enrollment and on an annual basis, new students and staff are required to complete Annual Safety and Integrity Training. This training includes a section on Workplace Violence, Sexual Harassment, Discrimination, Threats or Violence, Weapons, and Verbal and Physical Violence. Role specific training is provided by the Program Director as a component of program orientation with refresher training provided as needed. Security tips and training are sent out regularly via email and Security in-services are conducted as requested.

The Director of Security Services oversees the ongoing assessment of risks using available resources and information (e.g, trends in security incidents, lost property records, etc.), facility inspections, rounds, observation, focused surveys, and review of national, state, and local trends and regulations. Issues identified via this assessment are communicated to appropriate management, the Environment of Care Committee, and/or the Emergency Management Committee for review and action as appropriate. Access to sensitive areas is controlled using automated access systems, security patrols, surveillance cameras, and secure doors as appropriate. Security system installation standards have been developed for consistency across all NMHC operations.

NMHC urges students to be aware of their surroundings, travel in groups when possible, avoid poorly lit areas, avoid using their cell phone while walking, keep the volume at a low level that allows you to maintain awareness when wearing headphones, and report any suspicious activity to security or school leadership. Security escorts are available for students and staff who wish to be escorted when walking on campus.

Weapons

Northwestern Memorial HealthCare is committed to providing a safe and secure environment for all of its patients, staff, students, and visitors. To the fullest extent permitted by law, NMHC maintains a weapons-free campus throughout its facilities. This means no person, unless authorized by law or specifically exempted by a federal or state law, is authorized to possess a weapon while in NMHC facilities or engaged in NMHC related activities. Any student found to be in violation of this policy is subject to corrective action up to and including program dismissal.

Infection Control

Upon enrollment, prior to students' first contact with patients, and on an annual basis, new students and staff are required to complete Infection Control and PPE training located on the NMHC learning management system. This training will provide instruction in precautionary and infection control measures for blood borne pathogens and other communicable diseases.

Standard Precautions will be followed to prevent and control the spread of infection to students, employees, patients, and visitors. Students will be provided with appropriate PPE (gloves, gown, goggles, etc.) to wear when they are likely to be in contact with a patient's bodily fluids, mucous membranes, or non-intact skin. Students should wash hands when soiled with any bodily substance,

between patient contacts, and after glove removal. Patients with communicable disease shall be cared for according to relevant transmission-based precautions (airborne, droplet, contact, etc.).

Communicable Diseases

To ensure the health and safety of patients, students, and staff are adequately safeguarded, all students are required to report any communicable disease(s) contracted in or out of the hospital clinical site immediately to the clinical supervisor and Program Director.

A communicable disease is defined as a disease that may be transmitted directly or indirectly from one individual to another. Examples include, but are not limited to, influenza and conjunctivitis. Students with a suspected or confirmed communicable disease will not be permitted to report to clinical areas or class, in order to ensure the health of others and compliance with infection control procedures. Upon confirmation, the student will not return until appropriate documentation clearing the student is submitted. No exceptions to this policy will be made.

For communicable disease exposure at clinical sites

The Department of Occupational Health is responsible for maintaining relevant health/medical documentation and ensuring that all criteria are met prior to clearing students for clinical assignments. If a student incurs an injury, illness, or exposure while at the clinical site, the student should be sent to the emergency department for treatment. Fees for services rendered by the emergency department will be charged to the student.

For communicable diseases acquired outside of school activities

The student must submit documentation from their personal physician (or local health department) clearing them to return to didactic and clinical assignments. The student is responsible for all charges related to medical evaluation and treatment.

Student Clinical Exposure to Blood or Bodily Fluids

This policy was designed to clarify the procedure to be followed in the event a student is accidentally exposed to blood or other bodily fluids during clinical assignments. This policy will apply to all students who may accidentally incur a significant percutaneous or mucosal exposure *(see definition below)* to blood or other bodily fluid, which may expose them to any of the hepatitis viruses, the Human Immunodeficiency Virus (HIV), and / or other blood-borne pathogens.

Procedure:

If a student is exposed to blood or body fluids, he/she does not go to the emergency department. The exposed student should:

1. Wash the affected area with soap and water. If mucous membranes are involved, flush with water.
2. Immediately notify the Program Director.
3. Occupational Health will obtain source patient blood results and evaluate the exposure.
4. Occupational Health will give the student instructions on care and follow-up required.
5. An incident report will be completed at the time of reporting the exposure. This incident report will be forwarded to relevant parties in accordance with hospital policy.

Blood and/or body fluid exposure is defined as any of the following:

- Percutaneous inoculation: needle stick or "sharps" injury
- Non-needle percutaneous exposure: open cuts and / abrasions
- Direct mucosal membrane contact: accidental splash
- Direct hand contact: with large amounts of blood and / or body fluids without glove protection. Hands may have small nicks or cuts which may allow a virus to enter through the skin.

Student Responsibilities:

- Minimizing the risk of infection transmission depends upon immunization and consistent use of **Standard Precautions**. Students are responsible for obtaining the necessary immunizations and using proper infection control precautions in situations where exposure to blood or body fluids may occur.
- If an accidental exposure occurs, immediately wash the area of exposure, and report the incident to the clinical instructor. The Program Director and clinical supervisor should be notified immediately of the exposure and an institutional incident report will be completed and submitted in accordance with hospital policy.
- Immediately report the exposure in accordance with the above procedure.
- Comply with follow-up care instructions and / or treatment prescribed.

Faculty Responsibilities:

- Program faculty members are expected to reinforce the use of standard precautions with students through education and practice.
- In the event an exposure is reported, Occupational Health will:
    1. Determine the extent of the exposure
    2. Ascertain the client's blood-borne pathogen status as soon as possible following the exposure. The Program Director will ensure completion of the Incident Report.

In the event the exposure took place at a clinical affiliate, the facility's policy regarding exposure will be followed.

Professionalism & Disruptive Clinical Behavior

Professionalism is the foundation of clinical practice and all students are expected to demonstrate conduct aligned with the core values of the institution and high standards of professional practice. Each student is governed by the NMHC Rules of Conduct, which can be found in the appendix of this handbook, and the standards of professional practice defined by their field's credentialing agency. It is the responsibility of the student to understand and comply with institutional and program policies and procedures and unprofessional, disruptive, discourteous, or otherwise inappropriate behavior will result in corrective action up to and including program dismissal, as outlined below for non-egregious behaviors:

1. After the first offense, the student will receive a verbal warning.
2. If a second offense occurs, the student will be issued a written warning and 5% deduction in the clinical course grade will result. The student will also have a formal meeting with the Program

Director and relevant staff to discuss the student's educational goals, opportunities for improvement, and the expectations and feasibility of continued enrollment.

3. If a third offense occurs, the student will be issued a second written warning and an additional 5% deduction in the clinical course grade will result.
4. Continued offenses may result in program dismissal.
5. Egregious offenses will result in suspension until an investigation is conducted

The clinical instructors and clinical supervisors are charged with overseeing students in clinical rotations and each clinical instructor may initiate corrective action for students who violate program/institutional policies.

Disruptive clinical behavior has the potential to impede or obstruct the maintenance of order, patient safety, student rights, and achievement of educational goals. The following instances generally result in program suspension and subsequent investigation:

- A rotation area requests that a student be removed for disruptive behavior.
- A rotation area requests that a student not return as a result of disruptive behavior.
- A patient lodges a formal complaint against a student.
- Grossly negligent behavior that jeopardizes patient safety.
- A clinical site requests to discontinue their affiliation with the program as a direct result of a student's behavior.
- A student's behavior adversely impacts a department's daily operations or the delivery of patient care.
- A student intimidates or harasses another student or staff member (*see also Human Resources Policy #04.0029, "Harassment").*

A suspended student may appeal the disciplinary action in accordance with program's Due Process Policy. In the event the suspension is upheld, the student will be required to make up all clinical hours and academic assignments missed during the suspension.

Egregious Policy Violations That May Result in Immediate Program Dismissal

Throughout this catalog and program handbooks, corrective action for noncompliance with program and institutional policies and procedures have been outlined. However, certain infractions are considered more severe in nature and may result in immediate suspension and/or program dismissal. Examples of infractions that warrant immediate program dismissal include:

- Any action that jeopardizes the life and/or safety of a patient, visitor, or other staff member.
- Harassment of any type, as outlined by Human Resources Policy 04.0029, or physical violence.
- Violation of HIPPA and/or patient confidentiality policies.
- Theft of hospital or someone's personal property.
- Reporting to class or clinical assignment in an intoxicated state or under the influence of illicit drugs *(see the "Drug, Alcohol, and Substance Use Policy")* or failure to comply with a request to undergo a Fitness-for-Duty evaluation if warranted, or a positive drug / alcohol screen result.
- Behavior that adversely impacts the learning environment and/or patient care environment, or the daily operation of the program, and/or the rights of other students.
- Cheating on a test or other assignment.

- Falsifying time records (yours or someone else's).
- Repeated (documented) use of profanity or other unprofessional behavior.
- Bringing firearms or other weapons onto hospital or other clinical affiliate property.
- Repeated (documented) incidences of non-compliance with program uniform requirements *(see "Uniform and Personal Appearance" Policy).*
- Non-compliance with NMHC's Rules for Personal Conduct.
- Receipt of a request by a clinical affiliate or assignment area that a student be removed for disruptive behavior.
- Highly offensive and/or aggressive acts.
- Actions that have the potential to create an unsafe or hostile environment for patients, families, or other staff.

This list is not exhaustive but is provided as an example; each situation will be handled on a case-by-case basis in partnership with department leadership.

In the event a student is suspended or dismissed from their program, they are entitled to due process in accordance with the program's Due Process Policy. If the dismissal is upheld, the student will not be eligible for tuition refund or re-application/enrollment into the program.

Academic Support and Remediation

We recognize that students may encounter academic difficulties while enrolled in the NM Clinical Programs. Remediation and support options are available in order to address student deficiencies in knowledge or skills. Remediation is not intended to allow students to progress in the curriculum with substandard knowledge of required course material, nor is it intended to provide students a path forward in the curriculum for which they are not adequately prepared.

Academic support or remediation may be requested by the student or initiated by the course instructor or Program Director when deficiencies in student performance become apparent. In either case, the student and course instructor and/or Program Director will meet to define the learning needs/gaps and design an academic support or remediation plan to assist the student in mastery of that material. Academic remediation plans may include repeat exams or quizzes, guided independent study, additional labs, tutoring, or other course work, as determined by the course instructor. The course instructor may also determine that a formal academic support plan is not indicated and recommend that the student pursue additional self-study and or improved examination preparation techniques.

A student requiring a formal remediation plan may not earn a grade higher than threshold grade for passing after satisfactory completion of the remediation plan. If the student does not complete remediation activities satisfactorily and/or demonstrate content mastery following remediation, the student may receive the original grade given. Students remediating coursework are required to meet weekly with the course instructor and/or Program Director to ensure progress is being made. Program officials may decide that academic probation is appropriate for students who demonstrate a pattern of unsatisfactory academic performance, for example, a failing score on three unit exams.

Although we provide substantial support to students, we are aware that graduates of our program are providing clinical care to patients which requires a high standard of competency. For this reason, we

expect that academic support and remediation plans are a partnership between committed faculty and motivated students.

Academic Integrity

NMHC is strongly committed to the promotion of high ethical standards, academic honesty, and personal integrity. Each student is responsible for producing his or her own work and all forms of academic misconduct are grounds for disciplinary action, including program dismissal.

Procedure:

1. If program officials or faculty determine a student has engaged in academic misconduct, the Program Director will investigate and findings will be presented to the Manager or Director of the NM Clinical Schools & Programs for review.
2. Appropriate disciplinary action will be determined by the Manager of the NM Clinical Schools & Programs, in consultation with the Program Director and any course-related faculty.
3. The student may appeal the disciplinary action through a formal grievance process, as outlined in the program's Grievance/Due Process Policy *(see Due Process Policy).*
4. Students removed from the program due to academic misconduct will not be considered eligible to re-apply for enrollment.

Definitions:

For the purpose of clarification, academic misconduct shall be defined as:

1. Cheating on a quiz, examination, or other assignment
2. Falsifying attendance records or swiping in or out for another student
3. Passing information about a test, quiz, or examination to a student absent the day of the exam
4. Plagiarism
5. Inappropriate/unauthorized collaboration
6. Removing any test materials from the school without the permission of the instructor or Program Director
7. Sharing passwords for hybrid/blended courses
8. Unexcused absences/not responding to program leadership
9. Violation of school policies regarding professionalism

Attendance

Timely and regular attendance is an expectation for all students enrolled in the NMHC Clinical Schools & Programs and is a core component of the professionalism expected of our graduates. To ensure student learning and successful completion of clinical and didactic requirements, all students will be held accountable for adhering to their program's schedule.

All programs have processes to allow for absences in cases of emergency, illness, personal time off and policies regarding tardiness and unexcused absences as outlined in the program-specific handbook.

Due Process/Grievance

The NM Academy recognizes the importance of providing an opportunity for students to appeal decisions made by program officials, faculty, and staff and is committed to maintaining an environment where students learn in an atmosphere of acceptance and mutual respect. This Due Process/Grievance procedure has been developed to facilitate communication in a time of conflict, fairly consider both sides of a disagreement, and resolve disputes in a timely and constructive manner.

Many issues and concerns can be resolved by open communications and through an informal process. Individuals are encouraged to achieve by informal means what they regard as a fair and reasonable resolution of their complaint.

In the event that the grievance is not resolved through informal discussion, the student has the opportunity, without fear of penalty or retaliation, to pursue the formal grievance procedure as described below.

Procedure:

1. To start the formal grievance process, the student must submit a written grievance to the Program Director within five business days of the decision or action giving rise to the grievance.
2. The Program Director will schedule a meeting to address the grievance with the student and relevant faculty within three business days of receipt of the written grievance.
3. If the issue is not satisfactorily resolved by the Program Director, the student shall submit a written request for a formal hearing before members of the program's Advisory Committee within three business days. A statement outlining the specific issues that most concern the student should be included in the written request.
4. Upon receipt of the written request for hearing, the Program Director will schedule a hearing before the program's Advisory Committee within five business days. A minimum of three Advisory Committee members, to include the Manager of the NM Clinical Programs, must be present at the scheduled hearing.
5. At the scheduled hearing, the student will be given an opportunity to present relevant information concerning the grievance, as well as call witnesses, if necessary.
6. The Manager of the Clinical Program will prepare a report summarizing the Advisory Committee's findings and inform the student, in writing, of the Advisory Committee's decision within three business days.
7. If the student is dissatisfied with the decision of the Advisory Committee, they may request a final appeal to the Director of NM Academy. The student shall submit a written request to the Director of the NM Academy within three business days of receiving the decision of the Advisory Committee.
8. The Director of NM Academy will schedule a meeting with the student within five business days of receipt of the written request. The decision of the Director of NM Academy will be final.

NM Academy will maintain a written record of all formal complaints and their disposition. If an individual program has a separate procedure regarding due process/grievance than outlined in this policy, that program's policy supersedes the procedure outlined above.

IBHE Complaints

Students who have attempted to file a complaint at the institutional level and were not successful may file a complaint with the Illinois Board of Higher Education using the online complaint system: http://complaints.ibhe.org. The address for IBHE is as follows:

IBHE
1 North Old State Capitol Plaza, Suite 333
Springfield, IL 62701-1377

(217) 782-2552
http://www.ibhe.org

Non-Discrimination

Northwestern Memorial HealthCare is a community of caregivers who welcome, respect, and serve all people without regard to age, race, color, national origin, religion, culture, language, physical or mental disability, socioeconomic status, sex, sexual orientation, gender identity or expression, and military or veteran status. Students are encouraged to report concerns regarding harassment or discrimination from any source, and may always do so without fear of retaliation.

See also *NMHC Policy: Harassment and Retaliation (#04.0029)*

Harassment

NMHC is committed to a workplace free of harassment and retaliation. Northwestern Medicine strongly disapproves of, and will not tolerate, any and all forms of harassment based on race, color, religion, age, sex, sexual orientation, gender identity, gender expression, marital status, national origin, disability, veteran status, or any other protected status. Offensive or harassing behavior does not reflect our organizational values of integrity, excellence, and teamwork and will not be tolerated.

Faculty, staff, and students share the responsibility of understanding and preventing harassment and retaliation. Northwestern Medicine expects all employees and students to be free to report concerns regarding harassment without fear of reprimand or retaliation.

See also *NMHC Policy: Harassment and Retaliation (#04.0029)*

Personal Possessions

Northwestern Memorial HealthCare and affiliated institutions are not responsible for loss of, or for damage to, any personal possessions that are brought to the Hospital, medical campus, or affiliated university. Valuable items should be left at home for safekeeping. Check with designated affiliate staff members regarding personal belongings storage space at external affiliation locations.

Accommodating Individuals with Disabilities

Northwestern Memorial HealthCare seeks to foster a culture of inclusiveness that welcomes people with disabilities and reflects the community it serves. It is NMHC's policy to comply with all federal, state, and local laws applicable to accommodating students with disabilities, including the Americans with Disabilities Act (ADA) and the Americans with Disabilities Amendments Act (ADAA).

It is the responsibility of the student to inform his/her Program Director if an accommodation is needed to perform essential functions. The student will be required to submit documentation from his or her medical provider regarding the student's limitations. All medical information received will be treated as confidential in accordance with NMHC policy and any applicable laws. Upon receiving a request for an accommodation, the Program Director will work with the qualified disabled individual to consider and, where appropriate, offer a reasonable accommodation for the known qualifying physical or mental limitations unless to do so would create undue hardship for NMHC.
Specific concerns pertaining to services for people with disabilities or any disability issue should be directed to the Manager of the NM Clinical Schools & Programs.
Definitions:

Disability: any physical or mental impairment that substantially limits one or more of the major life activities of an individual.

Disabled individual: a person who has such an impairment, has a record of such an impairment, or is regarded as having such an impairment.

Essential functions: Those duties that are fundamental to the performance of the job.

Qualified person with a disability: an individual with a disability who, with or without a reasonable accommodate, meets the academic and technical standards requisite for admission or participation in the institution's educational program or activity.

FERPA

NMHC respects the rights and privacy of its students and acknowledges the responsibility to maintain confidentiality of personally identifiable information. The Family Educational Rights and Privacy Act of 1974 (FERPA) is a federal law that affords students certain rights of access, privacy, and protection of education records. These rights include:

1. The right to inspect and review their education records within 45 days of the day the school receives a request for access. Students should submit to the registrar a written request that identifies the record(s) they wish to inspect. The registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If a request is submitted to a school official other than the registrar, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request an amendment of the student's educational records that the student believes is inaccurate, misleading, or otherwise in violation of the student's privacy rights. A student seeking an amendment should submit a written request to the individual responsible for the record specifically identifying, specifically identify the part of the record the student is requesting to have amended, and provide evidence as to why it is inaccurate, misleading, or in violation of the privacy rights of the student. If the school decides not to amend the record as requested by the student, the school will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to provide written consent before disclosures of personally identifiable information (PII) contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

FERPA permits the disclosure of PII from students' educational records, without obtaining prior written consent of the student:

- To school officials within NMHC whom the school has determined to have legitimate educational interests. A school official is a person employed by the school in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the school has contracted (such as an attorney, auditor, or collection agent); a person serving on the board of trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

- To officials of another school where the student seeks or intends to enroll.
- To accrediting organizations to carry out their accrediting functions.
- To comply with a judicial order or lawfully issued subpoena.
- To appropriate officials in connection with a health or safety emergency.
- To parents of a student regarding the student's violation of any Federal, State, or local law or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if the school determines the student committed a disciplinary violation and the student is under the age of 21.

Directory information may be made available to any person without the student's consent unless the students restricts the release of information as outlined below. The following is designated as directory information: the student's name, address, telephone number, email address, date and place of birth, field of study, school, classification, dates of attendance, degrees and awards received, the most recent previous educational agency or institution attended by the student, and other similar information. Students may restrict the release of directory information by submitting a written request to their Program Director. No element of directory information as defined above will be released for students who request nondisclosure except in situations required by law. The request to withhold directory information will remain in effect as long as the student continues to be enrolled, or until the student files a written request to their Program Director to discontinue the withholding. To continue nondisclosure of directory information after a student ceases to be enrolled, a written request for continuance must be filed with their Program Director during the student's last term of attendance.

THIRD PARTY ACCESS

Except in the case of dependent students, parents, spouses, and other family members do not have access to the records of students in postsecondary institutions. Program related communication is limited to the student, program officials, the NM Academy, and clinical sites as relevant. Students must provide written consent to disclose personally identifiable information to a third party.

Drug, Alcohol, & Substance Use

NMHC is committed to maintaining a safe and efficient environment for students, employees, patients, and visitors. Being under the influence of drugs and/or alcohol could seriously affect patient care, fellow students and employees, and adversely affect morale and productivity. As such, the unlawful manufacture, distribution, diversion, dispensing, possession, or being impaired in the workplace is prohibited.

Regardless of whether a drug is considered legal under state law, any drug that is not considered legal under Federal law is not permitted on the NM premises, and an individual who is in possession of such drug while on the premises or who is under the influence of such drug during program activities will be immediately dismissed. This policy does not prohibit individuals from the use and possession of prescribed medications unless such medications are otherwise not permitted on NM premises and/or impair the ability to perform essential functions. Violation of this policy will result in corrective action, up to and including program dismissal.

Students are required to adhere to Northwestern Medicine's "Rules for Personal Conduct" (see HR Policy 4.0022). Among the Rules for Personal Conduct are the following inappropriate forms of behavior, which may result in corrective action up to and including program dismissal:

1. Coming to school under the influence of intoxicants or un-prescribed drugs, or under the influence of prescribed drugs, including medical marijuana, using or possessing intoxicants while on NMHC property during program hours.
2. Refusing to be tested or to undergo testing procedures if the Program Director or individual in charge determines there is reason to believe than an individual may be under the influence of intoxicants or drugs, or using or possessing intoxicants or drugs while on NMHC property during program hours.
3. Testing positive on any test administered under NM's drug testing policies and practices.
4. An individual will be subject to a Fitness-For-Duty evaluation if the Program Director or individual in charge has reason to believe than a student is under the influence of alcohol or drugs or possessing drugs while on NM property during program ours and/or the student has impaired judgment or lacks physical capacity to satisfactorily perform program duties. Refer to *NMHC Health and Safety Policy 04.0222.*

If it is determined a Fitness-For-Duty evaluation is needed, the Program Director will:

- Take the student to a quiet and private area and express concern that the student does not appear to be able to perform his/her duties at this time and that the student is suspected to be under the influence of some substance.
- Depending on the student's condition, the presence of hospital security may be requested.
- The student will be referred to the Occupational Health Office for a Fitness-For-Duty evaluation *(see Human Resources Policy # 04.0224, Drug, Alcohol, and Substance Use)*
- The student will be sent home after the Program Director has arranged transportation with the student's relative, emergency contact individual, or other responsible adult.
- The Program Director will document the observed behavior, which will be maintained in the student's file.
- In the event a student refuses to comply with the drug and alcohol screen and/or the Fitness-For-Duty evaluation, he/she will be dismissed from the program.

Students who do not pass a Fitness-For-Duty evaluation and are found to be under the influence of substances not prescribed by a physician may face disciplinary action including program dismissal. As with all disciplinary action, the student has the right to appeal according the program's Due Process Policy.

Hospital-Issued Identification Badges

In order to provide a secure environment through the identification of individuals authorized to access the hospital environment, students must wear the identification badge provided by the hospital at all times while on hospital property during scheduled program hours. Your ID badge indicates your right to be on the premises and identifies you to both employees and patients. The ID badge must be worn above the waist in a visible location.

Identification badges are issued to all students during orientation without charge. Badges are the hospital's property and must be returned to the Program Director at the time of graduation. Identification badges must also be returned to the Program Director if students are suspended or dismissed.

The identification badge cannot be altered in any way after it has been issued. Alterations may void the badge and could be subject to a replacement fee. Prohibited alterations include:

- Covering any information on the badge
- Adding or altering any information on the badge

- Attaching pins, insignia, or other material to the badge

Students who require a new ID badge due to loss or damage must be issued a replacement badge at a cost of $25.00. The student is responsible for the cost of badge replacement.

Healthcare & Medical Coverage

In order to ensure the health and safety of patients, students, and faculty are adequately safeguarded, students must be 18 years of age or older and successfully pass a mandatory criminal background check and drug screen as a part of the onboarding process. Students must also provide proof of the following health and medical information:

- Physical exam
- Verified Immunization record
    - Vaccination or immunity to the following communicable diseases is required: measles, mumps, Rubella, Varicella, Tdap, COVID-19
    - All students will have an assessment of their Hepatitis B immunity; if no documentation of immunity is available, either titers or vaccines will be offered
- The seasonal influenza vaccine is required by December 1st for all students and will be provided at no cost during flu season
- 2-step TB test
- CPR certification (if indicated)
- Personal medical insurance
- For a student requesting accommodations – the student must provide documentation of their disability and how it limits their participation in program activities. Requests for accommodations should be made far enough in advance to allow staff to coordinate needed services.

Students are responsible for their own medical care and must maintain personal health insurance throughout the duration of the program. NMHC does not offer a student health insurance policy. Emergency medical care is available for students if it relates to injuries sustained while performing assigned activities. However, all students who receive medical care on the hospital's premises shall be responsible for the cost unless the law or hospital's policies indicate otherwise. For students enrolled in an academic affiliate, the cost of such care will be the responsibility of either the college or university, or the individual student according to that institution's policies.

If a student sustains an injury, illness, or exposure while at the clinical site, the student will be sent to the Emergency Department for treatment. All fees for services rendered by the Emergency Department will be charged to the student. Requirement of a physician's signature to return to the clinic will be at the discretion of the Program Director, and will be based on its implication to the student, patients, and staff. In some cases, hospital policy will determine the process the returning student must follow. Non-compliance could result in corrective action, up to and including dismissal from the program.

If you sustain an injury during clinical assignment, no matter how minor it seems, report it to your Program Director/manager. An incident report must be completed at that time. If relieved from duty as a result of injury, arrangements will be made to notify the Program Director.

Student health records will be maintained by Occupational Health. Student health records will not be reviewed or made available to program faculty.

Social Media

Students enrolled in the NMHC Clinical Schools & Programs are expected to adhere to high standards of professional practice and remain respectful in all forms of communication. This policy is intended to offer guiding principles for responsible interactions on social media platforms.

- Students are personally responsible for the content they publish on social media sites. Consider that what you publish will remain public for years to come, so be careful to protect your personal privacy and that of others
- Initiating a request for "friending" of current patients on social media websites is discouraged and students should generally not initiate friend requests except where a friendship pre-dates or post-dates the treatment relationship
- Students may not comment or discuss patients under their care in any postings. Disclosure of patients' Protected Health Information (PHI) as defined by NMHC Administrative Policy: Privacy and Confidentiality or any other information or image that could reasonably be expected to lead to the identification of a patient, as well as other protected information, is strictly prohibited. Even if an individual is not identified by name within the information you wish to use or disclose, if there is a reasonable bases to believe that the person could still be identified from that information, then its use or disclosure could constitute a violation of the Health Insurance Portability and Accountability (HIPAA) and NMHC Policy.
- Respect copyright and fair use laws
- If you are writing about NMHC, please be clear that you are speaking for yourself and not on behalf of NMHC or your hospital/facility.

This policy does not override the governance of personal conduct, confidentiality and private use as set forth in other NMHC policies, included but not limited to the *NMHC Administrative Policy: Privacy and Confidentiality*. NMHC's *Social Medial Policy (#0.10025)* is available on NMI.

Leave of Absence (LOA)

NMHC is committed to helping students achieve balance between their work, family, and personal lives and may grant a leave of absence to enrolled students for medical, military, or personal reasons. All requests for a LOA will be handled on a case-by-case basis.

In the event a student withdraws from the program due to an extended illness or pregnancy and has completed six months of successful training, he / she may take a leave of absence from the program and return the following year with the approval of the Program Director and without repeating the application process. Students returning to the program after a leave of absence may be required to repeat course work or clinical competency, as determined by the Program Director. Students who does not complete the initial six months of training will have to reapply to the program and, if accepted, repeat all course work.

Procedure:

1. Students seeking a leave of absence must submit a written request to the Program Director stating the reason for the request, along with the beginning and end dates of the requested leave of absence.
2. The Program Director will request additional information supporting the request for the leave of absence, including but not limited to:

a. Written medical statements from the student's physician
b. Copy of military orders

3. The Program Director will approve or deny requests based on the facts of each case, and approval may be for the full period requested or any portion thereof. In the event of a medical leave of absence request, the statement provided by the student's physician shall serve as the basis for granting the leave and its duration.
4. Students on a medical leave of absence must be cleared by their personal physician. Documentation from the student's physician will be required including any duty restriction if applicable, and date of return to program activities. No student on a medical LOA will be allowed to continue with any program coursework without a medical clearance.
5. Types of leave covered by this policy include:
    - Medical Leave of Absence
    - Military Leave of Absence
    - Personal Leave of Absence

Upon return from an approved LOA, every effort will be made to return the student to their previous assignment. A student returning from an LOA will not be permitted to enroll in classes already in progress and will have to wait until the necessary class is next offered to enroll. Prior to program completion, the student must successfully complete all academic and clinical courses *(see the Program Grading Scale Policy).*
Time spent in an approved LOA counts toward the maximum time allowed to complete NMHC programs. It is the student's responsibility to be aware of these limits for the program in which the student is enrolled.

Program Withdrawal

From time to time, circumstances may arise that make a student unable to continue enrollment. Withdrawal from the program is categorized in 3 classifications, each with distinct processes and documentation requirements, as outlined below.

Voluntary Withdrawal
Students who wish to voluntarily withdraw from their program of study must do so in writing to the Program Director.

Disciplinary Withdrawal
Students may be administratively withdrawn from their program of study for disciplinary reasons. All students are entitled to due process as outlined in the program's Due Process policy.

Academic Withdrawal
Students may be administratively withdrawn from their program of study for failure to meet academic expectations.

The NMHC programs pursue disciplinary and academic withdrawal only after a student has been given a reasonable period of warning and/or probation to address deficiencies, except in the case of egregious behavior. Disciplinary withdrawal may be recommended at any time for a student who demonstrates either a singular egregious behavior or is involved in one or more serious incidents inconsistent with the expectations for students of NMHC.

For the purpose of determining the amount to be refunded to students who withdraw and are entitled tuition refund, the date of the refund will be computed based on the student's last date of recorded attendance.

Uniform and Personal Appearance

The intent of this policy is to provide guidelines for maintaining a professional appearance, including uniform standards, grooming, personal hygiene, and overall appearance. All students must conform to the enforceable guidelines below at all times.

Uniform Requirements

- Hospital-issued scrub tops and bottoms.
- Garments should be neat, clean, wrinkle free, in good condition, and properly fitted.
- Comfortable, clean shoes (no sandals or open-toed shoes) and socks. Bare legs or feet are not permitted.
- Uniforms are to be worn at all times, including on class days.
- Identification badges must be clearly visible and above the waist with the picture and name portion facing the viewer.

Grooming Standards and Hygiene:

- Hair and facial hair should be kept trimmed and styled appropriately. Colored hair should be professional in appearance
- Fingernails should be clean, groomed, and at a length that does not hinder job performance. Healthcare workers and students providing direct patient care may not wear artificial nails or extenders.
- Perfume, cologne, body sprays, and scented lotion and aftershave are not permitted in clinical areas due to sensitivity of patients and colleagues.

Jewelry:

- Piercings should be restricted to ears. Direct patient caregivers, including students, should limit earrings to studs (dangling and hoop earrings are not permitted).
- Jewelry should be conservative and not interfere with equipment and/or patient care. Some areas may be more restrictive based on patient safety and infection control.
- Jewelry worn in pierced body parts (other than ears) must not be visible or detectable.

Miscellaneous:

- Tattoos should not be visible. If tattoos are unable to be covered, they should be appropriate for a healthcare setting.
- No hats/caps are to be worn during class or clinicals.
- The radiation dosimeter issued must be worn at all times while in the clinical education setting at the collar level.

Students who do not adhere to the guidelines above will be sent home with the corresponding hours deducted from their PTO bank. Noncompliance with the dress code policy may result in corrective action up to and including program dismissal. *(See Human Resources Policy #04.0033 Dress Code).*

Programs

Diagnostic Medical Sonography

Program Overview

The Northwestern Memorial HealthCare's School of Diagnostic Medical Sonography is a full-time hospital-based training program dedicated to preparing students for the clinical, theoretical, and professional aspects of a career in sonography. The program integrates didactic instruction through lecture and blended learning formats and clinical instruction through lab and competency-based training and evaluations. Delivery of compassionate and quality patient care is practiced through hands-on patient interactions. In the clinical rotation sites, students are taught with the most advanced technological and diagnostic equipment available.

The program is provided to students who possess a college degree, graduates of an accredited two-year patient care-related program, and to intending 4th year students who have completed the required undergraduate and prerequisite coursework at the following affiliated institutions: Benedictine University, Elmhurst University, Lewis University, and Roosevelt University.

Successful completion of the program requires that students complete all clinical and didactic courses with a 'C' or better, complete all required CAAHEP competencies, make-up all clinical time in excess of allotted PTO, and pay tuition and fees in full.

Certification/Credentialing

Upon successful completion of the program, students will be awarded a certificate of completion from Northwestern Medicine and are eligible for the national certification examinations in the areas of Sonography Principles and Instrumentation (SPI), Abdomen, and OB-GYN specialties through the ARDMS. Licensure is not required to practice as a Sonographer in the state of Illinois, however most employers require certification for employment. Certification and licensure requirements may vary by state.

Program Length

The NMHC Diagnostic Medical Sonography program provides a total of 2,371 hours of instruction over 72 instructional weeks of full-time study. Courses begin in early July and continue for 18 months, with graduation in December of the following year.

Program Delivery

The Diagnostic Medical Sonography program utilizes a blended format in that some courses, assessments, and assignments are delivered using an online learning management system.

Program Mission and Goals

The mission of the Diagnostic Medical Sonography Program at Northwestern Memorial Hospital is to provide a comprehensive education in order to prepare students to become entry-level sonographers. The program is structured to provide intellectual stimulation and learning through quality academic and clinical experiences and competency-based evaluation.

To support continued development and expansion of the entry-level abilities achieved, the goals of the Diagnostic Medical Sonography Program are as follows:

- To prepare competent entry-level general sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.
- To provide the medical community with individuals qualified to perform sonographic procedures.
- To instill in students a lifelong desire to achieve professional and academic excellence.
- To prepare students to provide quality patient care.
- To prepare students to contribute to their profession through a commitment to professional organizations and lifelong learning.

Admissions Requirements

The Diagnostic Medical Sonography Program has developed and implemented admissions policies and criteria that reflect the program's mission and are predictive of academic success, retention, and subsequent credentialing as outlined below:

Degree requirement

Candidates for admission must satisfy each of the following criteria by submission of official transcripts from all colleges and universities attended.

All applicants must possess a high school diploma or equivalent. Postsecondary education which, at minimum, meets one of the following with a cumulative GPA of no less than 2.5:

1. Bachelor's degree (science-related preferred) from an accredited college or university, or
2. Enrollment in an affiliated college/university 3 + 1.5 Bachelor's degree program, or
3. Graduate of an accredited two-year patient care-related program who are nationally certified and in good standing in their discipline prior to start of the DMS program.

Prerequisite course requirements*

The following six prerequisites at an accredited college or university are required with a grade of 'C' or better and prerequisite GPA of no less than 2.5:

Human Anatomy & Physiology I with lab
Human Anatomy & Physiology II with lab
College Algebra or higher
General Physics I
English Composition
Medical Terminology

No remedial coursework will be accepted for prerequisite course credit. Transfer credits from other diagnostic medical sonography programs will not be accepted for prerequisite course credit.

*Individuals may submit an application prior to degree or prerequisite coursework completion. Any courses being taken during spring semester prior to starting the program must have a midterm grade available by March 5th to allow for academic ranking of the applicant. Successful completion of the prerequisite requirements is required by June 1st. Until successful completion of prerequisite requirements, acceptance is considered conditional.

Other Requirements

3 NM Letter of Recommendation Forms

Personal Statement
Prerequisite Course & Degree Checklist
$25 application fee
TOEFL iBT exam result, if applicable
Foreign transcript evaluation from Educational Credential Evaluators, if applicable
Personal interview with Admissions Committee, if granted

Technical Standards
Technical standards are abilities and characteristics established by faculty and deemed necessary for a student to matriculate, remain in good standing, and achieve the competencies required for graduation. The Diagnostic Medical Sonography program therefore requires applicants to confirm their ability to comply with these Diagnostic Medical Sonography Technical Standards, with or without reasonable accommodation, as a condition of admission.

Admissions Procedures
A completed online application with supporting materials must be submitted by March 1 of the application year. To apply, prospective students should refer to the application instructions posted on the program's website. Diagnostic Medical Sonography Application Information

Student Selection
The NMHC Diagnostic Medical Sonography Program utilizes a holistic review approach to student selection that considers overall and prerequisite GPA, education, patient care experience, letters of recommendation, personal statement, and personal interview (if granted).

Programmatic Accreditation
The Diagnostic Medical Sonography program has been continuously accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS) since inception in 2004. CAAHEP promotes excellence in education and elevates the quality and safety of patient care through the accreditation of diagnostic medical sonography educational programs. Accreditation is granted to educational programs that meet or exceed the standards for accreditation, and the JRC-DMS conducts periodic on-site reviews of the program. The Diagnostic Medical Sonography program is accredited for a period of 10 years. The next scheduled review will take place in 2028.

CAAHEP
9355 113th Street N, #7709
Seminole, FL 33775
(727) 210-2350
www.caahep.org

JRC-DMS
6021 University Boulevard, Suite 500
Ellicott City, MD 21043
(443) 973-3251
www.jrcdms.org

Program Staff and Faculty
Edward Carlton, MSRS, RDMS, RVT
Program Director; Full-time
MS, Radiologic Sciences, 2017, Midwestern State University, BS, Diagnostic Medical Sonography, 2014, Grand Valley State University

Casey Clarke, BSRT, RT(R), RDMS, RDCS
Adjunct Faculty; Part-time
BSRT, Radiologic Technology, Sonography, 1991, University of Oklahoma

Liz Kenyon, BA, RDMS
Technical Coordinator, Interim Clinical Coordinator; Part-time
BA, Public Communication and Human Relations, 1997, Western Illinois University, Certificate, Diagnostic Medical Sonography, 2007, Northwestern Medicine.

Grading Scale

Letter Grade	Percentage
A	100% - 93%
B	92.9% - 84%
C	83.9% - 75%
F	< 75%

Satisfactory Academic Progress (SAP)

A student maintains SAP if their cumulative (overall) and current (most recent term) grade point averages are 2.0 or better. A student must also maintain a minimum average score of 75% in all clinical and didactic courses and achieve a final course grade of 75% in all clinical and didactic courses. Students must also adhere to the clinical competency plan per the course syllabi, maintain satisfactory performance pace (completion of all attempted courses) and comply with all institutional and program policies. Student performance against SAP standards will be monitored in an ongoing manner throughout clinical and didactic activities with evaluation at the end of each term. A grade for each course will be issued at the end of the term.

Academic Calendar and Curriculum Overview

Summer 1 Semester (July 11, 2022 - August 5, 2022)
Fundamentals of Sonography — 69 clock hours; 3 Credits

Fall 1 Semester (August 8, 2022 - December 23, 2022)
Pathophysiology* — 32 clock hours; 2 Credits
Patient Care and Management — 31 clock hours; 1 Credit
Sectional Anatomy for the Sonographer — 42 clock hours; 2 Credits
Abdominal Sonography — 73 clock hours; 4 Credits
Obstetrical/Gynecological Sonography — 50 clock hours; 3 Credits
Clinical Education I — 408 clock hours; 3 Credits
Holiday Break December 26, 2022 – January 2, 2023

Spring Semester (January 3, 2023 - May 5, 2023)
Principles of Ultrasound Physics I — 50 clock hours; 3 Credits
Obstetrical/Gynecological Pathology — 66 clock hours; 4 Credits
Abdominal Pathology — 50 clock hours; 3 Credits

Clinical Education II	432 clock hours; 3 Credits

Summer 2 Semester (May 8, 2023 - July 21, 2023)

Principles of Ultrasound Physics II	32 clock hours; 2 Credits
Introduction to Pediatric and Vascular Imaging	28 clock hours; 1 Credit
Clinical Education III	304 clock hours; 2 Credits

Fall 2 Semester (July 24, 2023 – December 1, 2023)

Ultrasound Image Critique	22 clock hours; 1 Credit
Specialty Sonography	42 clock hours; 2 Credits
Registry Review	32 clock hours; 2 Credits
Clinical Education IV	608 clock hours; 4 Credits

*Indicates hybrid/blended course

Definition of Program Credit Hour
Credit hours for the purpose of GPA calculation are determined according to the following equivalencies:

- For didactic courses, students earn 1 credit hour per 16 clock hours/semester
- For clinical courses, students earn 1 credit hour per 128 clock hours/semester

Clinical Sites

The primary site for clinical rotations is Northwestern Memorial Hospital and on-site physician offices. Students will also rotate through Palos Hospital, Palos Health South Campus (Orland Park), Central DuPage Hospital, and Northwestern Lake Forest Hospital.

Course Descriptions

FUNDAMENTALS OF SONOGRAPHY
Orientation to basic scanning techniques, instrumentation, acoustic energy, and anatomy and image identification. Students will learn to identify sonographic anatomy and acceptable image parameters and to correlate this information to specific procedures. Students will practice scan to achieve basic skills needed in the clinical setting. This course must be passed prior to continuing in the DMS program.

SECTIONAL ANATOMY FOR THE SONOGRAPHER
Study of human anatomy in the transverse, longitudinal, and coronal planes. Emphasis on the spatial relationships of organs in the abdomen, pelvis, thorax, and neck. Correlation of how these structures appear on ultrasound scans, computerized tomography, and MRI.

PATHOPHYSIOLOGY
This blended learning course is composed of online modules, in-class exams, and online testing. The course begins with an introduction to pathophysiology and a review of the body's defense systems and responses, including cellular adaptation, inflammation, and immunology. The course progresses to discussions of pathophysiologic disorders of body systems, including genetic, congenital, and neoplasia factors adding to the disease process.

PATIENT CARE AND MANAGEMENT
Introduction to the basics of nursing techniques, medical professionalism, and patient care. Topics covered include nursing procedures, medical emergencies, ethics, confidentiality, HIPAA, hospital safety, informed consent, conscious sedation, patient transfer, infection control, professional development and certification, body mechanics, and repetitive motion injury for sonographers.

ABDOMINAL SONOGRAPHY
Study of normal anatomy and sonographic appearances of abdominal structures and superficial structures. Normal variants, congenital anomalies, physiology, and related laboratory tests are covered. Sonographic methods used to visualize abdominal structures and organs. Includes laboratory section on basic scanning techniques.

OBSTETRICAL/GYNECOLOGICAL SONOGRAPHY
Study of obstetrical and gynecological anatomy. Clinical applications and sonographic methods used to visualize pelvic organs, the pregnant uterus, and related structures. Discussion of embryogenesis and the reproductive cycle. Study of normal sonographic patterns.

CLINICAL EDUCATION I
Application of sonographic scanning procedures in a hospital setting under the supervision of a qualified registered diagnostic medical sonographer. Emphasis on liver, GB, pancreas, gallbladder, obstetrics, and pelvic structures.

PRINCIPLES OF ULTRASOUND PHYSICS I
Introduction and study of the fundamental principles of diagnostic ultrasound physics. Study of acoustic energy and diagnostic ultrasound equipment instrumentation, artifacts and quality control.

ABDOMINAL PATHOLOGY
Study of abdominal anatomy, superficial parts pathologies, and sonographic patterns. Comparison of normal sonographic patterns with pathology appearances, physiology, differentials, and related organ involvement. Correlation of relevant laboratory data and clinical symptoms with pathologies. Discussion of pediatric pathologies.

OBSTETRICAL/GYNECOLOGICAL PATHOLOGY
Study of obstetrical and gynecological pathology. Instrumentation and techniques for optimization of sonographic obstetrical and gynecological images are reviewed. Comparison of normal sonographic patterns with pathology appearances, physiology, differentials, and correlation with lab tests and related organ involvement. Discussion and correlation of congenital abnormalities, causes, and sonographic appearances.

CLINICAL EDUCATION II
This course emphasizes clinical experience progression under the supervision of faculty, sonography staff, and clinical instructors. Continued practicum in the clinical applications of abdominal sonography, female pelvis, and obstetrical applications. Effective communication, operation of equipment, patient care, and technical skills developed.

PRINCIPLES OF ULTRASOUND PHYSICS II
Continuation of the study of principles of diagnostic ultrasound physics, including Doppler, artifacts, 3D, harmonic imaging, contrast agents, bioeffects and safety.

INTRODUCTION TO PEDIATRIC AND VASCULAR IMAGING
Discussion of pediatric and neonatal anatomy and imaging techniques. Newborn and pediatric pathologies are reviewed. Basic peripheral arterial, venous, and carotid artery anatomy and pathology are studied. Imaging techniques, protocols, spectral and color flow Doppler interrogation and interpretation are discussed. Peripheral venous and carotid imaging is performed in a laboratory setting.

CLINICAL EDUCATION III
The student begins to demonstrate full competency in various exams and advances toward more independent scanning under the supervision of sonography staff and clinical instructors. Emphasis remains on abdominal, small parts, and obstetrical-gynecological sonography. The student will have an opportunity to refine skills and increase self-confidence through progressively more independent scanning. Overview of hospital operations, including insurance, billing, reimbursement, continuous quality improvement (CQI), project development, Human Resources, accreditation, and licensing and certification.

SPECIALTY SONOGRAPHY
Study of abdominal, superficial parts, newborn, and invasive procedures. Areas studied include neonatal procedures, breast and prostate pathology, transplants, GI tract, soft tissues, musculoskeletal, and invasive procedures. Also presented is an introduction to imaging of the fetal MCA. Presentation of pathologic processes, sonographic appearances, and clinical history correlation.

ULTRASOUND IMAGE CRITIQUE
Study of image critique, technical factors, and sonographic interpretation principles. Review of sonographic terminology, image quality factors, scanning protocols and techniques, and sonographic appearances of abdominal, OB-GYN, and vascular structures. Interpretation of clinical history, pathologic sonograms, and Doppler data to obtain a diagnosis. Cases are presented to the class.

REGISTRY REVIEW
Comprehensive registry reviews for the ARDMS examinations. Practice exams and mock registries are an integral part of this review. Application process for national registry examinations is discussed.

CLINICAL EDUCATION IV
In this final period of clinical study, the student demonstrates full competency and progresses to full independence under the supervision of sonography staff and clinical instructors. Emphasis on accuracy and efficiency in pathology identification, diagnosis, and related organ involvement documentation. Rotations in the practice of peripheral vascular exams, pediatrics, breast imaging, invasive procedures, and other specialties within the field may be arranged.

Equipment List

Siemens S2000, S3000 Touch
Siemens Sequoia
Philip EPIQ
Philips iU22
Samsung WS80A
GE Voluson E10
GE Logiq P6
GE Voluson E10 OLED
Acuson Sequoia 512
Siemens Sonoline Antares
Sonosite Titan
Toshiba Aplio
Philips EPIQ 7G
Vianoix Corvascular
GE Logiq E9

The institutional catalog contains only a summary of Diagnostic Medical Sonography Program policies and procedures. Students should refer to the program-specific handbook for additional information.

Histotechnology

Program Overview

Northwestern Memorial HealthCare's Histotechnology program is a full-time hospital-based training program that prepares students for excellence in histotechnology by providing clinical and didactic instruction that enable students to build clinical competency and master the knowledge and skills required for clinical practice. The program instills a commitment to compassion and high-quality care through hands on, career relevant training, and access to the delivery of exemplary healthcare.

The program is provided to 4th year students who have completed the required undergraduate and prerequisite coursework at the affiliated institution of Roosevelt University.

Successful completion of the program requires that students complete all clinical and didactic courses with a 'C' or better, make-up all clinical time in excess of allotted PTO, and pay tuition and fees in full.

Certification/Credentialing

Upon successful completion of the program, students will be awarded a certificate of completion from Northwestern Medicine and are eligible to sit for the Histotechnologist (HTL) board certification exam through the American Society for Clinical Pathology (ASCP). Certification and licensure are not required to practice as a Histotechnologist in the state of Illinois. Certification and licensure requirements may vary by state.

Program Length

The NMHC Histotechnology program provides a total of 1,857 hours of instruction over 49 instructional weeks. Courses begin in late August and continue for 12 consecutive months, with graduation in August of the following year.

Program Delivery

The Histotechnology program utilizes a traditional, residential format.

Program Mission and Goals

The mission of the Histotechnology Program is to provide students with a state-of-the-art facility and an interdisciplinary environment that allows each student to master the theoretical and technical skills required to be a successful histotechnologist.

In support of the program's mission statement, the following goals have been developed:

- Program graduates will demonstrate fundamental knowledge and essential technical competencies required to perform histological procedures accurately and efficiently in the clinical setting.
- Program graduates will develop strong communication skills that result in an effective exchange of information and collaboration within a healthcare team.

- Program graduates will exercise the highest standards of ethical conduct and professional practice.

Admissions

The Histotechnology Program has developed and implemented admissions policies and criteria that reflect the program's mission and are predictive of academic success, retention, and subsequent credentialing as outlined below:

Requirement
Candidates for admission must satisfy each of the following criteria by submission of official transcripts.

Degree Requirement
All applicants must possess a high school diploma or equivalent. Post-secondary education through Roosevelt University's 3 + 1 Bachelor's degree program is required.

Prerequisite course requirements*
The following nine prerequisites are required with a grade of 'C' or better and prerequisite GPA of no less than 2.5

General Biology
General Chemistry I & II with lab
Organic Chemistry I
Microbiology

Immunology

College Algebra
Anatomy & Physiology I & II

No remedial coursework will be accepted for prerequisite course credit.
*Individuals may submit an application prior to degree or prerequisite coursework completion. As a part of the selection process, applicants must be prepared to demonstrate evidence that all admissions criteria can be satisfied prior to an offer of admission. Until successful completion of prerequisite requirements, acceptance is considered conditional

Other Requirements
1 letter of recommendation
Personal statement
Personal interview with Admissions Committee, if granted

Student Selection
The NMHC Histotechnology program utilizes a holistic review approach to student selection that considers overall and prerequisite GPA, education, patient care experience, letter of recommendation, personal statement, and personal interview (if granted).

Admissions Procedures

Students will apply using Roosevelt University's admissions process.

Programmatic Accreditation

The Histotechnology program is not programmatically accredited.

Program Staff and Faculty

Desiree Robledo, BS, HTL (ASCP)
Education Coordinator; Full-time
Certificate, Histotechnology, 2018, Northwestern Medicine, B.S. Allied Health, 2018, Roosevelt University

Grading Scale

Letter Grade	Percentage
A	100% - 90%
B	89.9% - 80%
C	79.9% - 70%
D	69.9% - 60%
F	< 60%

Satisfactory Academic Progress (SAP)

A student maintains SAP if their cumulative (overall) and current (most recent term) grade point averages are 2.0 or better. A student must also maintain a minimum average score of 70% in all clinical and didactic courses and achieve a achieve a final course grade of 70% in all clinical and didactic courses. Students must also adhere to the clinical competency plan per the course syllabi, maintain satisfactory performance pace (completion of all attempted courses) and comply with all institutional and program policies. Student performance against SAP standards will be monitored in an ongoing manner throughout clinical and didactic activities with evaluation at the end of each term. A grade for each course will be issued at the end of the term.

Academic Calendar and Curriculum Overview

Semester I (August 22, 2022 – February 10, 2023)

Introduction to Histotechnology	60 clock hours
Fixation/Gross Pathology	75 clock hours
Embedding/Processing (course extends into Semester II)	330.5 clock hours
Microtomy/Instrumentation (course extends into Semester II)	330.5 clock hours
Routine Staining/Quality Control	60 clock hours
Laboratory Management	60 clock hours
Microanatomy	75 clock hours

Winter Break- December 19, 2022 – January 2, 2022

Spring Break- March 20, 2023 – March 24, 2023

Semester II (February 13, 2023 – August 18, 2023)

Special Stains	150 clock hours
Electron Microscopy	30 clock hours
Immunohistochemistry	37.5 clock hours
Seminar – Education and Research	97.5 clock hours

Immunofluorescence/Enzymehistochemistry/In-Situ Hybridization	30 clock hours
Process Improvement	30 clock hours
Clinical Rotations	491 clock hours

Clinical Sites

Students will rotate in various areas throughout Northwestern Memorial Hospital.

Course Descriptions

ALH 334 INTRODUCTION TO HISTOTECHNOLOGY
This course introduces the students to: the principles and theories of histotechnology, departmental and hospital orientation, laboratory safety and regulatory requirements, laboratory math and chemistry, and the selection and operation of a laboratory information system (LIS) will also be discussed.

ALH 389 FIXATION/GROSS PATHOLOGY
This course includes an introduction to medical terminology applicable to histology. The students will learn gross room operations such as workflow, common surgical procedures and terminology, specimen dissection plans of various types of tissues, and basic grossing techniques and requirements. The course also covers current frozen section techniques, cryostat maintenance, and current operating procedures for frozen sections. The students will acquire intermediate to advanced knowledge in the theory of fixation with a focus on the varying types of fixatives used, action of simple and compound fixatives, factors affecting the quality of fixation, and compatibility between fixatives and stains.

ALH 336 EMBEDDING/PROCESSING
This course will instill students with: proper knowledge on how to embed various types of tissue, principles of tissue processing- automated, manual, and microwave/rapid, troubleshooting, reprocessing, maintenance, programming, and correct selection of programs for tissue type will be discussed in depth with case studies. There will be a focus on embedding techniques and different infiltrating media. Principles and theories regarding decalcification will also be discussed.

ALH 337 MICROTOMY/INSTRUMENTATION
This course covers the basic principles of microtomy applicable to both paraffin and frozen sections and techniques necessary to provide quality microscopic slides. There will be a focus on the varying types of microtomes, blades, water baths, slides, troubleshooting and different paraffin section cutting. This course is very lab centered as the student will learn to cut various types of tissue, learns ribboning, cutting different thicknesses, smoothing sections, cutting difficult tissue, cutting levels, recuts, controls and more. The student will become familiar with various instruments and their maintenance used in the day to day histology laboratory.

ALH 338 ROUTINE STAINING/QUALITY CONTROL
This course presents the theories and principles of hematoxylin and eosin (H&E) staining. There will be a focus on the properties of these dyes, varying methods of staining, troubleshooting, different types of hematoxylins and eosins and quality assurance. Students will learn to: operate, program, do scheduled maintenance on H&E stainers, manually coverslip slides along with maintenance and operation of coverslipping machines. Different mounting mediums, refractive indexes, slide thickness, and solvents for mounting media, along with coverslipping troubleshooting will also be discussed.

ALH 333 LABORATORY MANAGEMENT
This course covers laboratory management and educational methodologies. It includes management and motivational theories, communication skills, regulatory and accreditation requirements, budget and strategic planning, curriculum design and examination instruction. There is a focus on performance improvement, critical pathways, human resource management, financial management, training, management styles, team building skills, dynamics of health care and laboratory, communications, ethics, selection of laboratory computer systems and government regulations and standards.

ALH 390 MICROANATOMY
This course covers the study of microscopic structures of normal and abnormal human tissues and organs. It will focus on the relationship between structure and function, along with slide review and tissue identification.

ALH 377 SPECIAL STAINS
This course studies the theory underlying the principles and techniques of special staining as applied to microscopic identification of connective tissue, muscle, neurological tissues, carbohydrates, lipids, proteins, blood elements, pigments and minerals. The clinical significance of these stains in diagnoses will be discussed. The student will perform a majority of stains by hand learning about all of the reagents involved, alternatives, and safety and storage. They will become proficient in using current automated staining platforms, performing quality assurance checks of stained tissue, and providing maintenance to the equipment.

ALH 376 ELECTRON MICROSCOPY
This course encompasses the theory, fundamental operating principles, and specimen preparation techniques of the electron microscope. The student will learn the use of the instrument, specimen preparation, ultramicrotomy and basic techniques needed to prepare biological and non-biological samples for electron microscopy.

ALH 375 IMMUNOHISTOCHEMISTRY
A comprehensive course that focuses on the fundamentals of immunohistochemistry as applied to the theory and practical techniques in histopathology. The students will apply basic knowledge of immunology to the development of immunohistochemistry protocols and techniques. Emphasis will be placed on the clinical significance of diagnostic and prognostic indicators used in immunohistochemistry techniques, troubleshooting, and validation of new antibodies.

ALH 379 SEMINAR- EDUCATION AND RESEARCH
This course will introduce the basic language and concepts of empirical research with emphasis on the applicability of research methodology in the area of clinical laboratory sciences. Students will analyze current scientific publications for research questions, hypothesis, study design and statistical analysis and the application of proper scientific formats in the clinical laboratory professions. Curriculum will include a blend of lectures, group work, presentations by guest researchers and development of a group research poster and paper.

ALH 391 IMMUNOFLUORESCENCE/ENZYMEHISTOCHEMISTRY/IN-SITU HYBRIDIZATION
This course focuses on the fundamentals and practice of Immunofluorescence, enzymehistochemistry and in-situ hybridization. The students acquire basic knowledge on specimen preparation, development of reagents, various methods and visualization of final results.

ALH 378 PROCESS IMPROVEMENT (SELF STUDY)
This is a self- study course. This course combines the student's knowledge and experience from the program. The students will conduct a process improvement project in the laboratory where they will be required to work collaboratively in the design, implementation, and presentation of what they believe should be redeveloped.

ALH 357 CLINICAL ROTATIONS
Students rotate through various areas of Surgical and Anatomic Pathology laboratories.

Equipment List

Microtome Leica RM 2235, 2135, 2255
Embedding system Sakura
Paraffin dispenser TBS
Tissue processor Leica ASP300
Tissue processor Peloris
Tissue processor Sakura VIP IV, VI
Tissue processor Excelsior AS
Milestone Histos5
Histosmate
Flotation bath Boekel
Flotation bath Cardinal Health
Stainer Leica ST5020
Stainer Sakura XT
Coverslipper Leica CV5030
Coverslipper Sakura g2
Para Trimmer Shandon
Microtome
Sanyo Labcool fridge
Reese Scientific fridge
Lindberg Blue Oven
Fisher Scientific Oven
Water bath
Cyrostat
Microscope
Ventana XT, Bertha, Baby
LEICA Dory, Ariel, Gus Gus
Talboys Vortex Mixer
Mopec Grossing Station

The institutional catalog contains only a summary of Histotechnology Program policies and procedures. Students should refer to the program-specific handbook for additional information.

Medical Assistant

Program Overview

The Medical Assistant program is a part-time, 10-month program that provides 9 months of didactic instruction followed by a 160-hour externship. The curriculum is designed to blend classroom, laboratory, and clinical learning to ensure graduates have the scope and breadth of knowledge required of entry-level medical assistants. The externship ensures exposure to all aspects of clinical operations that enables graduates to function as professionals in various areas across the healthcare system including medical offices, hospitals, and outpatient clinics.

The program is provided to individuals with a high school diploma (or equivalent) or higher.

Successful completion of the program requires that students complete all didactic courses and externship with 'C' or better, all program hours, and pay tuition and fees in full.

Certification/Credentialing

Upon successful completion of the program, students will be awarded a certificate of completion from Northwestern Medicine and will be eligible for the Registered Medical Assistant (RMA) certification examination through the American Medical Technologists (AMT). Certification is not required to practice as a Medical Assistant in the state of Illinois, however some employers may require certification for employment. Certification requirements may vary by state.

Program Length

The NMHC Medical Assistant program provides a total of 865 hours over 40 instructional weeks. Courses begin in September and continue for 10 consecutive months, with graduation in July of the following year.

Program Delivery

The Medical Assistant program utilizes a traditional, residential format.

Program Mission and Goals

The mission of the Medical Assistant program is to meet the growing needs of patients through the training and development of medical assistants who embody Northwestern Medicine's Patients First mission.

In support of the program's mission, the following goals have been established:

- Graduates will perform competently as entry-level medical assistants.
- Graduates will employ effective communication skills.
- Graduates will develop and utilize critical thinking skills.
- Graduates will demonstrate high standards of patient care and ethical, professional practice.
- The program will meet the needs of the community by producing qualified, competent entry-level medical assistants.

Admissions

The Medical Assisting program has developed and implemented admissions policies and criteria that reflect the program's mission and are predictive of academic success, retention, and subsequent credentialing as outlined below:

Degree requirement

Candidates for admission must satisfy each of the following criteria by submission of official transcripts.

All applicants must possess a high school diploma or equivalent (GED) with a high school GPA of no less than 2.0

Prerequisite course requirements

None

Other Requirements

Applicants must pass ACCUPLACER examination
1 NM Letter of Recommendation Form
Personal statement
$25 application fee
Interview with Admissions Committee, if granted

Admissions Procedures

A completed online application with supporting materials must be submitted by June 30 of the application year. To apply, prospective students should refer to the application instructions posted on the program's website. Medical Assistant Program Application Information

Student Selection

The NMHC Medical Assistant program utilizes a holistic review approach to student selection that considers GPA, education, ACCUPLACER exam results, letters of recommendation, personal statement, and personal interview (if granted).

Programmatic Accreditation

The Medical Assistant program is not programmatically accredited.

Program Staff and Faculty

Monique Cannon, MsM, AHI, RMA (AMT)
Program Manager; Full-time
MsM, Strategic Management, 2013, Indiana Wesleyan University, BA, Business Administration, 2010, Trine University, Medical Assistant Certificate, 1993, Aristotle Medical College, RMA Certification, 1993, AMT, Allied Health Instructor, 2000, AMT

Grading Scale

Letter Grade	Percentage
A	100% - 90%
B	89.9% - 80%
C	79.9% - 70%
D	69.9% - 60%
F	< 60%

Satisfactory Academic Progress (SAP)

A student maintains SAP if their cumulative (overall) and current (most recent term) grade point averages are 2.0 or better. A student must also achieve a final course grade of 70% in all didactic courses and a grade of PASS in all clinical courses throughout each term, adhere to the clinical competency plan per the course syllabi, maintain satisfactory performance pace (completion of all attempted courses), and comply with all institutional and program policies. Student performance will be monitored in an ongoing manner throughout clinical and didactic activities with evaluation at the end of each term. A grade for each course will be issued at the end of the term.

Academic Calendar and Curriculum Overview

Semester I (September 6, 2022 – January 31, 2023)

Introduction to Medical Assisting, Medical Terminology, and Medical Law and Ethics	75 clock hours
Integumentary, Sensory, and Nervous Systems, and Patient Care	85 clock hours

Musculoskeletal System and Human Relations	85 clock hours
Clinical and Administrative Procedures I, and Pharmacology	45 clock hours
Cardiopulmonary System, Electrocardiography, CPR, and First Aid	90 clock hours

Winter Break- December 19, 2022- January 2, 2023 **Spring Break- March 20, 2023- March 24, 2023**

Semester II (February 1, 2023 – June 30, 2023)

Urinary and Digestive Systems	80 clock hours
Endocrine and Reproductive Systems	70 clock hours
Respiratory System and Clinical Procedures II	80 clock hours
Administrative Procedures II and Career Development	95 clock hours
Externship	160 clock hours

Clinical Sites

The Medical Assistant program utilizes various clinical sites across the Northwestern Medicine system and students may be placed at externship sites up to 50 miles away from the downtown campus.

Course Descriptions

MA 101 INTRODUCTION TO MEDICAL ASSISTING, MEDICAL TERMINOLOGY, AND MEDICAL LAW AND ETHICS

This course provides an introduction to medical assisting- describing the current employment outlook for medical assisting. Included is a discussion of the history of medical assisting, healthcare safety, standard precautions, and protection, medical terminology, and a complete understanding of medical law and ethics in the field of medical assisting.

MA 102 INTEGUMENTARY, SENSORY, AND NERVOUS SYSTEMS, AND PATIENT CARE

This course will provide basics of human anatomy & physiology to the integumentary, sensory, and nervous systems. The course will also introduce common human diseases and treatment processes as a means to establish proper patient care in medical assisting. Students will learn the importance of patient care and communication in the healthcare field, implementation and evaluation of patient education, understand the importance of teaching plan development, and understand and demonstrate cultural considerations in patient care.

MA 103 MUSCULOSKELETAL SYSTEM AND HUMAN RELATIONS

This course will provide basic human anatomy & physiology to the muscular, and skeletal systems. The course will also provide the student with the human relation skills to accommodate the work ethics in medical assisting, patient care, and diagnostic testing. The student will identify competencies in human development, nutrition, and human relations. Emphasis will be placed on methods of improving customer service, patient education, and demonstrating an understanding of core competencies.

MA 104 CLINICAL AND ADMINISTRATIVE PROCEDURES I, AND PHARMACOLOGY

This course will provide the student knowledge of all clinical procedures for medical assisting. The student will learn medical practice standard precautions and perform disinfection/sterilization techniques, obtain vital signs, obtain patient history, and formulate chief complaints, assist provide with specialty examinations. The student will also learn specialty procedures, including but not limited to minor surgery. The student will administer oral and parenteral medication. Emphasis will be placed on the production of quality patient care, education, and communication. Laboratory exercises will

demonstrate student competency. The student will perform math and metric conversions for proper medication administration, and the proper use of the Physician's Desk Reference (PDR).
The student will also gain knowledge in medical office administrative procedures, and how to begin to navigate electronic health systems, perform billing and collection processes, produce insurance claims, and apply scheduling principles, while maintaining inventory of equipment and supplies. The student will also learn to perform basic computer skills for front office procedures. The student will identify competencies in pharmacology with the identification of drug classification, usual dose, side effects and contraindications of the top most commonly used medication. The student will perform math and metric conversions for proper medication administration, and the proper use of the Physician's Desk Reference (PDR). Emphasis will be placed on methods of improving customer service, patient education, and demonstrating an understanding of core competencies.

MA 105 CARDIOPULMONARY SYSTEM, ELECTROCARDIOGRAPHY, CPR, AND FIRST AID
This course introduces the basic anatomy & physiology of the cardiopulmonary system. Topics include describing common diseases, symptoms, and etiologies as they apply to the system. The student will also identify diagnostic and treatment modalities as they relate to the body system. The student will identify with cardiac testing: electrocardiogram & holter monitoring. The student will perform electrocardiogram & holter monitoring for diagnostic recommendations and patient care. The students will learn CPR & First aid and will be trained and certified during this course.

MA 106 URINARY AND DIGESTIVE SYSTEMS
This course will provide students with knowledge to the urinary and digestive systems. The course will introduce the urinary and digestive systems and their structures, and identify common diseases, symptoms, and etiologies as they apply to each system. The student will learn and perform diagnostic treatment modalities as they relate to each body system, and apply a system of diet and nutrition according to the body system function.

MA 107 ENDOCRINE AND REPRODUCTIVE SYSTEMS
This course will provide student knowledge to the endocrine and reproductive systems. The course will introduce the body systems and their structures and functions. Describe common diseases, symptoms, and etiologies as they apply to each system. The student will identify diagnostic and treatment modalities as they relate to each body system. The student will demonstrate the system and proper diet and nutrition, and identify categories of patients that require special diets or diet modifications.

MA 108 RESPIRATORY SYSTEM AND CLINICAL PROCEDURES II
This course is designed as a continuation of MA 104. Course focus will be on continued knowledge clinical procedures in medical assisting. The student will also learn the respiratory system and its structure and functions, describe common diseases, symptoms, and etiologies as they apply to the system. The student will also learn the application of diet and nutrition.

MA 109 ADMINISTRATIVE PROCEDURES II AND CAREER DEVELOPMENT
The student will complete the knowledge in medical office administrative procedures, and how to receive a course in the EHR system (EPIC). The students will learn by hands on training various methods that ensure navigation in the electronic health systems, participate and view billing and collection processes, the process for insurance claims, and apply scheduling principles. The student will undergo career development training and professionalism in the workplace (healthcare). The students will also learn and demonstrate resume writing skills, gain knowledge of interviewing techniques, and proper communication during and after interviewing.

MA 110 EXTERNSHIP

Upon completion of the 9-month didact portion of the program. The student is required to complete a 160-hour externship in an NMH or outside affiliate healthcare facility. The student will be partnered with a preceptor to help oversee and navigate through the externship successfully. The student will be required to demonstrate clinical and administrative competencies in medical assisting. In addition, the students will be assigned to a team of licensed and skilled healthcare professionals to ensure master clinical competencies in medical assisting procedures. Upon completion of the required hours, the student will receive a pass or fail grade to determine graduate states from the program and certification eligibility.

Equipment List

Students enrolled in the NM Medical Assistant program receive hands-on clinical training utilizing the following lab equipment:

- EKG machines
- Centrifuge
- Autoclave
- Working sink
- Refrigerator
- Examination table
- Mayo stands
- Eye wash station
- Scales (adult and pediatric)
- Model skeleton
- Microscopes and slides
- Simulation arms and venipuncture supplies
- Sphygmomanometers (manual and electronic)
- Blood pressure cuffs
- Stethoscopes
- Otoscope
- Thermometers (oral, aural and temporal)
- Ophthalmoscope
- Glucometers
- Eye chart
- Ishihara book
- Speculum
- Forceps
- Instruments for examination and minor procedures
- Ambulatory aids (wheelchair, walkers, canes, crutches, gait belt)
- Suture and staple removal kits
- Suturing material
- Hemoccult supplies
- Strep throat swabs
- Ear irrigation devices and supplies
- Medication administration supplies
- Wound care supplies
- Casting supplies
- Cotton swabs and balls
- Blood evacuation tubes
- Reagent strips for urinalysis
- Laboratory specimen handling supplies and collection equipment
- Syringes, alcohol wipes, surgical scrub, Band-Aids, gauze
- Tape measures
- Sterile field equipment
- PPE supplies
- Gowns, gloves (sterile and nonsterile)
- Drapes
- PDR
- ICD coding
- Biohazard sharp containers
- Emergency response equipment
- CPR, AED, and fire extinguisher
- Electronic health records and practice management software (EPIC)
- Administrative supplies

The institutional catalog contains only a summary of Medical Assistant Program policies and procedures. Students should refer to the program-specific handbook for additional information.

Nuclear Medicine Technology

Program Overview

The Northwestern Memorial Hospital School of Nuclear Medicine Technology is a full-time hospital-based training program dedicated to preparing students for excellence in nuclear medicine technology and instilling compassion and a commitment to the highest quality patient care through interdisciplinary learning experiences and access to the delivery of exemplary healthcare. The program integrates clinical and didactic instruction that allows students to build clinical competency and master the knowledge and skills required for clinical practice.

The program is provided to students who possess a college degree and to intending 4th year students who have completed the required undergraduate and prerequisite coursework at the following affiliated institutions: Benedictine University, Elmhurst University, Lewis University, North Central College, Roosevelt University, University of Saint Francis and University of Wisconsin-La Crosse.
Successful completion of the program requires that students complete all clinical and didactic courses with a 'C' or better, complete all NMTCB/ARRT required competencies, make-up all clinical time in excess of allotted PTO, and pay tuition and fees in full.

Certification/Credentialing

Upon successful completion of the program, students will be awarded a certificate of completion from Northwestern Medicine and will be eligible for the national certification examinations in Nuclear Medicine and Computed Tomography through the NMTCB and the Nuclear Medicine certification exam through the ARRT. Once nationally certified in nuclear medicine, students are eligible for Illinois state licensure through IEMA, which is required to practice as a Nuclear Medicine Technologist in the state of Illinois. State licensure requirements may vary by state.

Program Length

The NMHC Nuclear Medicine Technology program provides a total of 1,669 hours of instruction over 53 instructional weeks. Courses begin in August and continue for 13 months, with graduation in August of the following year.

Program Delivery

The Nuclear Medicine Technology program utilizes a blended format in that some courses, assessments, and assignments are delivered using an online learning management system.

Program Mission and Goals

The mission of the Nuclear Medicine Technology program is to provide high-quality academic instruction, with Patients First clinical experiences, and ongoing professional development for the next generation of nuclear medicine technologists.

In support of the program's mission statement, the following goals have been developed:

- Program graduates will demonstrate clinical competence.
- Program graduates will develop communication skills that result in an effective exchange of information and collaboration.
- Program graduates will apply critical thinking skills during clinical practice.
- Program graduates will demonstrate high standards of ethical conduct and professionalism.
- The program will prepare students for excellence in nuclear medicine careers.

Admissions

The Nuclear Medicine Technology program has developed and implemented admissions policies and criteria that reflect the program's mission and are predictive of academic success, retention, and subsequent credentialing as outlined below:

Degree requirement

Candidates for admission must satisfy each of the following criteria by submission of official transcripts from all colleges and universities attended.

All applicants must possess a high school diploma or equivalent and postsecondary education which, at a minimum, meets one of the following with a cumulative GPA of no less than 2.5:

1. Bachelor's degree (science-related preferred) from an accredited college or university, or
2. Enrollment in an affiliated college/university 3 + 1 Bachelor's degree program

Prerequisite course requirements+

The following nine prerequisites at an accredited college or university are required with a grade of 'C' or better and prerequisite GPA for science courses must be no less than 2.5:

Human Anatomy & Physiology I with lab*
Human Anatomy & Physiology II with lab*
General Chemistry I with lab*
General Chemistry II with lab*
General Physics I*

General Physics II*
College Algebra or higher*
Statistics*
Written Communication

No remedial coursework will be accepted for prerequisite course credit. No nuclear medicine specific credits from other programs will be accepted for prerequisite course credit.

**Course work must be completed within 7 years of application*

+Individuals may submit an application prior to degree or prerequisite coursework completion. As a part of the selection process, applicants must be prepared to demonstrate evidence that all admissions criteria can be satisfied prior to an offer of admission. Until successful completion of prerequisite requirements, acceptance is considered conditional

Technical Standards

Technical standards are abilities and characteristics established by faculty and deemed necessary for a student to matriculate, remain in good standing, and achieve the competencies required for graduation. The Nuclear Medicine Technology program therefore requires applicants to confirm their ability to comply with these Nuclear Medicine Technology Technical Standards, with or without reasonable accommodation, as a condition of admission.

Other Requirements

3 NM Letter of Recommendation Forms
Personal Statement
Prerequisite Course & Degree Checklist
$25 application fee
TOEFL iBT exam result, if applicable

Foreign transcript evaluation from Educational Credential Evaluators, if applicable
Personal interview with Admissions Committee, if granted

Admissions Procedures

A completed online application with supporting materials must be submitted by February 1 of the application year. To apply, prospective students should refer to the application instructions posted on the program's website. Nuclear Medicine Technology Program Application Information

Student Selection

The NMHC Nuclear Medicine Technology program utilizes a holistic review approach to student selection that considers overall and prerequisite GPA, education, patient care experience, letters of recommendation, personal statement, and personal interview (if granted).

Programmatic Accreditation

The Nuclear Medicine Technology program has been continuously accredited by the Joint Review Committee for Educational Programs in Nuclear Medicine Technology (JRCNMT) since inception in 2002. The JRCNMT promotes excellence in education and elevates the quality and safety of patient care through the accreditation of nuclear medicine technology educational programs. Accreditation is granted to educational programs that meet or exceed the standards of accreditation and the JRCNMT conducts periodic on-site reviews of the program. The Nuclear Medicine Technology is accredited for a period of 7 years. The next scheduled review will take place in the third quarter of 2027.

JRCNMT
820 W. Danforth Rd., #B1
Edmond, OK 73003
(405) 285-0546

Program Staff and Faculty

Michelle Coppens, MHA, CNMT, PET, RT (CT)
Program Director; Full-time
MHA, Healthcare Administration, 2020, Capella University; Certificate, Nuclear Medicine Technology, 2011, Northwestern Medicine; B.S., Biological Sciences, 2010, Illinois State University

Scott Leonard, MS, CNMT
Medical Physicist IV and Adjunct Instructor; Part-time
MS, Medical Physics, 2006, Rush University, Certificate, Nuclear Medicine Technology, 1991; B.H.S., Nuclear Medicine, 1991, University of Missouri, Columbia, MO

Dena Abdelhameed, PharmD, RPh, BCNP
Nuclear Pharmacist and Adjunct Instructor; Part-time
Doctor of Pharmacy, 2013, University of Wisconsin-Madison

Dani Hjelm, MHP, CNMT
Health Physicist III and Adjunct Instructor; Part-time
MHP, Radiation Health Physics, 2019, Oregon State University; Certificate, Nuclear Medicine Technology, 2009, Northwestern Medicine; B.S., Biology, 2008, North Central College

Heather Mallett, MBA, RT (T)
Program Director, Radiation Therapy Program and Adjunct Instructor; Part-time
MBA, Finance, 2014, DePaul University; Certificate, Radiation Therapy, 2007, Northwestern Medicine, BA, Biology, 2006, University of Iowa

Grading Scale

Letter Grade	Percentage
A	100% - 93
B	92.9% - 84
C	83.9% - 75
F	< 75%

Satisfactory Academic Progress (SAP)

A student maintains SAP if their cumulative (overall) and current (most recent term) grade point averages are 2.0 or better. A student must also maintain a minimum average score of 75% in all clinical and didactic courses and achieve a final course grade of 75% in all clinical and didactic courses. Students must also adhere to the clinical competency plan per the course syllabi, maintain satisfactory performance pace (completion of all attempted courses) and comply with all institutional and program policies. Student performance against SAP standards will be monitored in an ongoing manner throughout clinical and didactic activities with evaluation at the end of each term. A grade for each course will be issued at the end of the term.

Academic Calendar and Curriculum Overview

Fall/Winter Semester (August 9, 2022 – February 10, 2023)

Diagnostic Nuclear Imaging Clinical Practicum I	672 clock hours; 4 Credits
Clinical Nuclear Medicine Procedures I	40.5 clock hours; 4 Credits
Management and Methods of Patient Care I	39 clock hours; 3 Credits
Radiation Safety and Protection	22 clock hours; 2 Credits
Radiation Physics and Instrumentation	34.5 clock hours; 3 Credits
Clinical Correlation – Pathology*	27 clock hours; 2 Credits

HOLIDAY BREAK DECEMBER 26, 2022 – JANUARY 2, 2023

Spring/Summer Semester (February 13, 2023 – August 17, 2023)

Diagnostic Nuclear Imaging Clinical Practicum II	648 clock hours; 4 Credits
Clinical Nuclear Medicine Procedures II	37.5 clock hours; 3 Credits
Management and Methods of Patient Care II	19.5 clock hours; 1 Credit
Radionuclide Chemistry and Radiopharmacy	34.5 clock hours; 3 Credits
Radiation Detection and Instrumentation	36 clock hours; 3 Credits
Computed Tomography and Cross-Sectional Anatomy	28.5 clock hours; 2 Credits
Radiation Biology	15 clock hours; 1 Credit
Medical Terminology*	15 clock hours; 1 Credit

*Indicates hybrid/blended course

Definition of Program Credit Hour
Credit hours for the purpose of GPA calculation are determined according to the following equivalencies:

- For didactic courses, students earn 1 credit hour per 10 clock hours/semester
- For clinical courses, students earn 1 credit hour per 150 clock hours/semester

Clinical Sites

The primary site of student rotations is Northwestern Memorial Hospital. Students will also rotate through Lurie Children's Hospital, located on the downtown medical campus. Students will also rotate through off-site locations including NM Central DuPage Hospital and NM Lake Forest Hospital.

Course Descriptions

MEDICAL TERMINOLOGY (NMT 401)
This blended course includes both on-site and distance learning components designed to introduce students to medical terminology. Students will learn anatomical terms, the study of root words, prefixes and suffixes within medical vocabulary. The course provides students with the medical terminology associated with different body systems, radiology and laboratory procedures

MANAGEMENT AND METHODS OF PATIENT CARE I AND II (NMT 407 & NMT 408)
This course introduces students to concepts and applications centering patient care, such as body mechanics, phlebotomy, vital signs and other basic healthcare needs. Focus is placed on basic measures necessary to provide quality patient care. This course will also cover medical ethics and medical and legal considerations within healthcare. Emphasis will also be applied to various allied health operational issues such as accreditation, billing, and reimbursement. Students will also have the opportunity to participate in written and oral research projects related to Nuclear Medicine Technology.

CLINICAL CORRELATION – PATHOLOGY (NMT 402)
This is a hybrid course that introduces the student to the science of pathology. The basic principles of pathology will be presented with an emphasis on understanding the mechanism of development of the disease process. Cellular adaptation, inflammation, immunology, body systems, and neoplasia will be presented.

RADIATION SAFETY AND PROTECTION (NMT 405)
The purpose of this course is to provide students with information regarding institutional, state, and federal regulations regarding radiation exposure, disposal of sources, and radiation-producing equipment. Topics covered in this course include: public and occupational dose limits, radiation detection, and radioactivity. Principles of ALARA and reducing radiation exposure will be emphasized throughout.

CLINICAL NUCLEAR MEDICINE PROCEDURES I AND II (NMT 409 & NMT 410)
This course provides students with the theory and techniques of clinical procedures used in nuclear medicine imaging. Areas of emphasis include patient care, imaging techniques, use and identification of radiopharmaceuticals, adjunct pharmaceuticals and computer post-processing techniques. The course will include imaging techniques for general nuclear medicine, nuclear cardiology, PET/CT and bone mineral density.

DIAGNOSTIC NUCLEAR IMAGING CLINICAL PRACTICUM I AND II (NMT 411 & 412)
This course allows for students to perform a wide variety of nuclear medicine procedures, including in-vivo, in-vitro, diagnostic and therapeutic treatments in multiple clinical settings under direct supervision of qualified medical professionals. Within this course students will develop clinical competence in nuclear medicine procedures, computed tomography procedures, radiopharmacy techniques, radiation safety techniques and imaging analysis.

RADIATION PHYSICS AND INSTRUMENTATION (NMT 413)
This course provides a study of atomic and nuclear structure, radioactive decay modes, mathematics of decay, production of electromagnetic and charged particles, and interaction of ionizing radiation with matter. The course will also introduce students to different types of radiation detectors, such as gas filled, scintillation and semiconductors.

RADIONUCLIDE CHEMISTRY AND RADIOPHARMACY (NMT 406)
This course provides a study of the chemical, physical and biological properties of radiopharmaceuticals used in diagnosis and therapy. Emphasis will be placed on the production, preparation and calculation of radiopharmaceuticals including quality control and radiation safety.

RADIATION DETECTION AND INSTRUMENTATION (NMT 414)
This course evaluates the maintenance and function of instrumentation used in nuclear medicine imaging and in the laboratory. This course exclusively covers SPECT, SPECT/CT, PET and PET/CT operations and performance. Different types of quality assurance for these systems is covered especially flood field uniformity, bar phantom imaging, resolution, sensitivity, linearity, scatter determination, dead time corrections and CT attenuation accuracy. Emphasis is placed on the operation and maintenance of computer hardware. The course also evaluates data collection, analysis and processing used in clinical imaging.

COMPUTED TOMOGRAPHY AND CROSS-SECTIONAL ANATOMY (NMT 404)
This course introduces the fundamental concepts and principles of computed tomography (CT) technology and its role in medical imaging. Content within the course will cover equipment, instrumentation, data acquisition, image processing, reconstruction and image quality of computed tomography. Emphasis of the course will be placed on patient considerations, safety and radiation protection. Students will also learn to identify anatomical structures in cross sectional anatomy of the head, neck, thorax, abdomen and pelvis.

RADIATION BIOLOGY (NMT 403)
This course provides fundamental knowledge of the effects of radiation exposure on biologic systems. Emphasis is placed on the radiation interaction on a cellular level, including the formation of free radicals, chromosome breakage, and repair mechanisms. Cell survival curves, acute radiation syndromes, somatic and genetic effects, and in utero exposure will also be presented.

Equipment List

2 Siemens Biograph Vision PET/CT
1 Siemens Biograph PET/MRI
2 Siemens Symbia Intevo SPECT/CT
1 Siemens Symbia TruePoint SPECT/CT
4 Siemens Symbia EVO SPECT Cameras
2 Siemens Dual-Head E.cam Cameras
2 Hologic Densitometers
2 Computer Processing Workstations
1 USP 825 Radiopharmacy
1 Uptake Probe

3 Well Counting Systems
12 Dose Calibrators
1 Cutie Pie
11 Survey Meters
1 Autogamma Camera

The institutional catalog contains only a summary of Nuclear Medicine Technology program policies and procedures. Students should refer to the program-specific handbook for additional information.

Radiation Therapy

Program Overview

Northwestern Memorial HealthCare's Radiation Therapy program is a full-time hospital-based training program that prepares students for excellence in radiation therapy by providing clinical and didactic instruction that enables students to build clinical competency and master the knowledge and skills required for clinical practice. The program instills a commitment to compassion and high-quality care through hands on, career relevant training, and access to the delivery of exemplary healthcare.

The program is provided to students who possess a college degree and to intending 4th year students who have completed the required undergraduate and prerequisite coursework at the following affiliated institutions: Benedictine University, Elmhurst University, Lewis University, North Central College, and Roosevelt University.

Successful completion of the program requires that students complete all clinical and didactic courses with a 'C' or better, complete all ARRT required competencies, makeup all clinical time in excess of allotted PTO, and pay tuition and fees in full.

Certification/Credentialing

Upon successful completion of the program, students will be awarded a certificate of completion from Northwestern Medicine and are eligible for the national certification examination in Radiation Therapy through the ARRT. Once nationally certified by the ARRT, students are eligible for Illinois state licensure through IEMA, which is required to practice as a Radiation Therapist in the state of Illinois. State licensure requirements may vary by state.

Program Length

The NMHC Radiation Therapy program provides a total of 2,030 hours of instruction over 58 instructional weeks. Courses begin in early July and continue for 14 months, with graduation in August the following year.

Program Delivery

The Radiation Therapy program utilizes a blended format in that some courses, assessments, and assignments are delivered using an online learning management system.

Program Mission and Goals

The mission of the School of Radiation Therapy sponsored by Northwestern Memorial Hospital is to provide expert instruction, patient-centered clinical training, and ongoing professional development to the next generation of radiation therapists.

In support of the program's mission statement, the following goals have been developed:

- Students/graduates will demonstrate clinical competence.
- Students/graduates will develop communication skills that result in an effective exchange of information and collaboration.
- Students/graduates will apply critical thinking and problem-solving skills in clinical practice.
- Students/graduates will demonstrate high standards of professional practice.
- The program will meet the needs of the community by preparing students for excellence in radiation therapy careers.

Admissions

The Radiation Therapy Program welcomes students from all backgrounds and is dedicated to providing equal opportunity to applicants. The program does not discriminate in the recruitment and admission of students or in the operation of its educational programs or activities. Applicants are considered for admission based on individual merit and without regard to age, race, color, national origin, religion, culture, language, physical or mental disability, socioeconomic status, sex, sexual orientation, gender identity or expression, marital status, parental status, military or veteran status, or source f income in the provision of educational services.

The Radiation Therapy Program has developed and implemented admissions policies and criteria that reflect the program's mission and are predictive of academic success, retention, and subsequent credentialing as outlined below:

Degree requirement

Candidates for admission must satisfy each of the following criteria by submission of official transcripts from all colleges and universities attended.

All applicants must possess a high school diploma or equivalent and postsecondary education which, at minimum, meets one of the following with a cumulative GPA of no less than 2.5:

1. Bachelor's degree (science-related preferred) from an accredited college or university, or
2. Enrollment in an affiliated college/university 3 + 1 Bachelor's degree program, or
3. Graduate of a 2-year JRCERT Radiologic Technology program, registered by ARRT prior to the start of the program with AS degree or higher

Prerequisite course requirements+

The following nine prerequisites at an accredited college or university are required with a grade of 'C' or better and prerequisite GPA of no less than 2.5:

Human Anatomy & Physiology I with lab*
Human Physiology & Physiology II with lab*
Precalculus or higher*
General Physics I with lab*
General Physics II with lab*
Written Communication
Verbal Communication
Research Methodology++
Computer Science+++

No remedial coursework will be accepted for prerequisite course credit. No radiation therapy specific credits from other programs will be accepted for prerequisite course credit.
**Course work must be completed within 7 years of application*

+Individuals may submit an application prior to degree or prerequisite coursework completion. As a part of the selection process, applicants must be prepared to demonstrate evidence that all admissions criteria can be satisfied prior to an offer of admission. Until successful completion of prerequisite requirements, acceptance is considered conditional.
++ Students may submit a course description with content that includes research process and protocols, data interpretation, literature review, and application/synthesis of results in the form of a research paper.
+++ Students may submit a course description with content that indicates computer literacy.

Technical Standards
Technical standards are abilities and characteristics established by faculty and deemed necessary for a student to matriculate, remain in good standing, and achieve the competencies required for graduation. The Radiation Therapy program therefore requires applicants to confirm their ability to comply with these Radiation Therapy Technical Standards, with or without reasonable accommodation, as a condition of admission.

Other Requirements
3 NM Letter of Recommendation Forms
Personal statement
Prerequisite Course & Degree Checklist
$25 application fee
TOEFL iBT exam results, if applicable
Foreign transcript evaluation from Educational Credential Evaluators, if applicable
Personal interview with Admissions Committee, if granted

Admissions Procedures
A completed online application with supporting materials must be submitted by February 1 of the application year. To apply, prospective students should refer to the application instructions posted on the program's website. Radiation Therapy Program Application Information

Student Selection
The NMHC Radiation Therapy program utilizes a holistic review approach to student selection that considers overall and prerequisite GPA, education, patient care experience, letters of recommendation, personal statement, and personal interview (if granted).

Programmatic Accreditation
The Radiation Therapy program has been continuously accredited by the Joint Review Committee for Education in Radiologic Technology (JRCERT) since inception in 2003. The JRCERT promotes excellence in education and elevates the quality and safety of patient care through the accreditation of radiologic technology educational programs. Accreditation is granted to educational programs that meet or exceed the standards for accreditation and the JRCERT conducts periodic on-site reviews of the program. The Radiation Therapy program is accredited for a period of 8 years. The next scheduled review will take place in the second quarter of 2030.

JRCERT
20 N. Wacker Drive, Suite 2850
Chicago, IL 60606-3182
(312) 704-5300
https://www.jrcert.org

Program Staff and Faculty

Heather Mallett, MBA, R.T.(T)
Program Director; Full-time
MBA, Finance, 2014, DePaul University; Certificate, Radiation Therapy, 2007, Northwestern Medicine, BA, Biology, 2006, University of Iowa

Natasha Murphy, MS, CMD
Manager, Medical Dosimetry and Adjunct Instructor; Part-time
MS, Medical Dosimetry, 2016, Southern Illinois University, BS, Radiological Health Sciences, 2008, Purdue University

Matthew Mielke, MS, CMD, R.T.(T)
Physics I and Adjunct Instructor; Part-time
MS, Medical Dosimetry, 2020, Southern Illinois University, BS, Radiation Therapy, 2018, North Central College, Certificate, Radiation Therapy, 2018, Northwestern Medicine.

Dani Hjelm, MHP, CNMT
Health Physicist III and Adjunct Instructor; Part-time
MS Health Physics, 2019, Oregon State University, BS, Biology, 2008, North Central College, Certificate, Nuclear Medicine Technology, 2009, Northwestern Medicine

Grading Scale

Academic Grading Scale			Clinical Grading Scale		
Letter Grade	**Percentage**	**Grade Points**	**Letter Grade**	**Percentage**	**Grade Points**
A+	100 – 98%	4.3	A	100 – 95%	4.0
A	97.9 – 93%	4.0	B	94.9 – 87%	3.0
A-	92.9 – 92%	3.7	C	86.9 – 80%	2.0
B+	91.9 – 90%	3.3	F	< 80%	0
B	89.9 – 87%	3.0			
B-	86.9 – 85%	2.7			
C+	84.9 – 83%	2.3			
C	82.9 – 78%	2.0			
F	< 78%	0			

Satisfactory Academic Progress (SAP)

A student maintains SAP if their cumulative (overall) and current (most recent term) grade point averages are 2.0 or better. A student must also maintain a minimum average score of 78% in all didactic courses and an 80% in all clinical courses and achieve a final course grade of 78% in all didactic courses and 80% in all clinical courses. Students must also adhere to the clinical competency plan per the course syllabi, maintain satisfactory performance pace (completion of all attempted courses), and comply with all institutional and program policies. Student performance against SAP standards will be monitored in an ongoing manner throughout clinical and didactic activities with evaluation at the end of each term. A grade for each course will be issued at the end of the term.

Academic Calendar and Curriculum Overview

Summer Semester (July 5, 2022 - August 26, 2022)

Medical Terminology (pass/fail)*	18 clock hours; 1 Credit
Patient Care	36 clock hours; 3 Credits
Medical Imaging	27 clock hours; 2 Credits
Introduction to Radiologic Technology	18 clock hours; 1 Credit
Introduction to Radiation Therapy (pass/fail)	36 clock hours; 3 Credits
Introduction to Clinical Education (pass/fail)	140 clock hours; 1 Credit

Fall Semester (August 29, 2022 – December 23, 2022)

Principles and Practice of Radiation Therapy I	48 clock hours; 4 Credits
Technical Radiation Therapy I	58 clock hours; 4 Credits
Radiation Safety (Fall/Spring)	22 clock hours; 1 Credit
Pathology*	26 clock hours; 2 Credits
Radiation Therapy Physics I (Fall/Spring)	36 clock hours; 3 Credits
Clinical Practicum I	408 clock hours; 4 Credits

Holiday Break December 26, 2022 – January 2, 2023

Spring Semester (January 3, 2023 – April 21, 2023)

Radiation Safety (Fall/Spring)	22 clock hours; 1 Credit
Technical Radiation Therapy II	57 clock hours; 4 Credits
Principles and Practice of Radiation Therapy II	24 clock hours; 2 Credits
Radiation Therapy Physics I/II (Spring/Summer)	36 clock hours; 3 Credits
Radiation Biology	16 clock hours; 1 Credit
Quality Assurance and Healthcare Operations	27 clock hours; 2 Credit
Clinical Practicum II	384 clock hours; 4 Credits

Summer Semester (April 24, 2023 – August 17, 2023)

Principles and Practice of Radiation Therapy III	21 clock hours; 1 Credit
Radiation Therapy Physics II (Spring/Summer)	36 clock hours; 3 Credits
Advanced Imaging in Radiation Therapy	14 clock hours; 1 Credit
Registry Review Seminar (pass/fail)	34 clock hours; 2 Credit
Clinical Practicum III	544 clock hours; 5 Credits

*Indicates hybrid/blended course

Definition of Program Credit Hour

Credit hours for the purpose of GPA calculation are determined according to the following equivalencies:

- For didactic courses, students earn 1 credit hour per 12 clock hours/semester
- For clinical courses, students earn 1 credit hour per 95 clock hours/semester

Clinical Sites

The primary site of clinical rotations is Northwestern Memorial Hospital. Students will also rotate through Rush University Medical center. Students may choose to complete an elective rotation through Northwestern Medicine Lake Forest and Grayslake Hospitals.

INTRODUCTION TO RADIATION THERAPY (RTT 400)
This orientation course introduces the student to the field of radiation therapy and provides the foundational knowledge and skills required for entry into the clinical environment. The course will also provide an overview of clinical practices within NMH and its affiliates. Additional topics include basic safety procedures, the radiation therapy path of care, radiation therapy equipment overview, and professional expectations of the student in clinical practice.

MEDICAL TERMINOLOGY (RTT 401)
This is a hybrid course consisting of online and in class learning activities, quizzes, and exams. Course content is designed to introduce principles of medical word building to help students develop the extensive medical vocabulary used in health care. Students receive a thorough grounding in basic medical terminology through a study of root words, prefixes, and suffixes. Anatomical, physiological, and pathologic terminology are covered.

INTRODUCTION TO RADIOLOGIC TECHNOLOGY (RTT 402)
This course introduces students to the radiologic sciences with emphasis on x-ray production, image formation and manipulation, and the technical aspects of radiography equipment. Basic radiation safety concepts will be presented.

PATIENT CARE (RTT 403)
Course content provides students with the knowledge and skills needed to assess and evaluate a patient throughout a course of radiation therapy treatment and emphasizes acute and chronic radiation-induced toxicities and their management. This course will also present topics including: infection control, body mechanics, medical law and ethics, age specific competency, and emergency care. Students will also examine concepts related to death, grief, communication, and diversity.

MEDICAL IMAGING (RTT 404)
This course introduces students to various imaging modalities and focuses on radiographic and cross-sectional anatomy and its application in radiation therapy. Content includes topographic, radiographic and cross-sectional anatomy of the brain, head and neck, thorax, abdomen, pelvis, and extremities.

PATHOLOGY (RTT 409)
This is a hybrid course that introduces the student to the science of pathology. The basic principles of pathology will be presented with an emphasis on understanding disease processes. Cellular adaptation, inflammation, immunology, genetic disorders, body systems, and neoplasia will be presented.

PRINCIPLES AND PRACTICE OF RADIATION THERAPY I (RTT 406)
This course is the first of a three-part series and provides an overview of cancer and related treatment modalities with an emphasis on the specialty of radiation therapy. Students will be introduced to the theoretical and practical aspects of radiation therapy. Topics include the evolution of radiation therapy and equipment, imaging, special procedures, particle therapy, and the lymphatic system. An overview of CT and radiation biology will also be presented.

PRINCIPLES AND PRACTICE OF RADIATION THERAPY II (RTT 413)
This course is the second of a three-part series and content is designed to develop understanding of the oncologic disease process and treatment for various malignancies. For each malignancy, students will

examine epidemiology, etiology, presenting symptoms, detection and diagnosis, patterns of spread, treatment options with an emphasis on radiation therapy, and prognosis. The radiation therapist's responsibility in the path of care will be examined.

PRINCIPLES AND PRACTICE OF RADIATION THERAPY III (RTT 417)
This course is the third of a three-part series and continues to develop understanding of the oncologic disease process and treatment for various malignancies. For each malignancy, students will examine epidemiology, etiology, presenting symptoms, detection and diagnosis, patterns of spread, treatment options with an emphasis on radiation therapy, and prognosis. The radiation therapist's responsibility in the path of care will be examined.

TECHNICAL RADIATION THERAPY I (RTT 407)
This course presents technical aspects of radiation therapy with emphasis placed on simulation and treatment procedures, dose distributions, photon and electron beam characteristics, and treatment-related calculations for various anatomic sites.

TECHNICAL RADIATION THERAPY II (RTT 412)
This course focuses on the epidemiology, etiology, clinical presentation, diagnostic work-up, treatment strategies, radiation therapy simulation and treatment, radiation-induced toxicities, and prognosis for various anatomic sites.

RADIATION SAFETY (RTT 411)
The purpose of this course is to provide students with information regarding institutional, state, and federal regulations regarding radiation exposure, disposal of sources, and radiation-producing equipment. Topics covered in this course include: public and occupational dose limits, radiation detection, and radioactivity. Principles of ALARA and reducing radiation exposure will be emphasized throughout.

ADVANCED IMAGING IN RADIATION THERAPY (RTT 418)
This course is designed to provide an overview of computed tomography and magnetic resonance imaging with an emphasis on CT and MRI physics & instrumentation, image production and manipulation, radiation safety, contrast media, and patient considerations. This course will also provide students with a review of cross- sectional anatomy of the brain, head and neck, thorax, abdomen, and pelvis.

QUALITY ASSURANCE AND HEALTHCARE OPERATIONS (RTT 414)
This course will focus on the evolution of quality management (QM) programs and continuing quality improvement in radiation oncology. A comprehensive overview of linear accelerator and CT QA will be presented. Topics covered in this course include: the radiation therapist's role in fostering a culture of safety, daily, monthly and annual quality assurance procedures for linear accelerators and CT simulators, record keeping, and linear accelerator acceptance and commissioning. Regulatory agencies, information systems, and legal issues related to quality assurance will also be presented. This course also examines the US healthcare system and provides an overview of healthcare operations with emphasis on insurance, billing, reimbursement, continuous quality improvement (CQI), project management, Human Resources, accreditation, and licensing and certification.

RADIATION BIOLOGY (RTT 415)
This course provides fundamental knowledge of the effects of radiation exposure on biologic systems. Emphasis is placed on the radiation interaction on a cellular level, including the formation of free

radicals, chromosome breakage, and repair mechanisms. Cell survival curves, acute radiation syndromes, somatic and genetic effects, and in utero exposure will also be presented.

RADIATION THERAPY PHYSICS I (RTT 408)
This course is designed to introduce students to the physics of ionizing radiation. Topics include fundamental concepts of general physics and discussion of electromagnetic radiation, x-ray interaction with matter, x-ray production, radioactivity, treatment units, and treatment related calculations.

RADIATION THERAPY PHYSICS II (RTT 419)
This course is a continuation of Radiation Therapy Physics I. Topics include discussion of dose distribution, electron beam dosimetry, brachytherapy, shielding, and radiation protection.

REGISTRY REVIEW SEMINAR (RTT 420)
This course is designed to prepare students for the ARRT certification examination in Radiation Therapy. Students will be given a series of comprehensive examinations, lectures, and test taking strategies.

INTRODUCTION TO CLINICAL EDUCATION (RTT 405)
This course is designed to introduce students to clinical education through a series of positioning and imaging laboratory sessions and immersion into the clinical setting.

CLINICAL PRACTICUM I (RTT 410)
This course allows students to perform a wide variety of radiation therapy procedures in various clinical settings under the direct supervision of qualified medical professionals. Students will build basic technical skills and begin to develop competency in various clinical procedures. Students will be required to achieve progress toward ARRT required clinical competency requirements throughout the duration of this course.

CLINICAL PRACTICUM II (RTT 416)
This course allows students to perform a wide variety of radiation therapy procedures in various clinical settings under the direct supervision of qualified medical professionals. Students will build more advanced technical skills and continue to develop competency in various clinical, patient care, and dosimetric procedures. Students will be required to achieve continued progress toward ARRT required clinical competency requirements throughout the duration of this course.

CLINICAL PRACTICUM III (RTT 421)
This course allows students to perform a wide variety of radiation therapy procedures in various clinical settings under the direct supervision of qualified medical professionals. Throughout the course students will achieve the advanced knowledge and skills required for entry into the field. Students are required to complete all remaining ARRT required competencies during this course.

Equipment List

Varian True Beam Linear accelerator with on-board imaging, PitchPerfect (6 DoF), and surface tracking via CRAD
Elekta Agility, Versa, and Infinity linear accelerators with on-board imaging, Hexapod, and surface tracking via CRAD
ViewRay MRIdian MR-Guided Linac
Leksell Gamma Knife Icon
BrainLab/ExacTrac IGRT

Philips CT Simulators
BSD 500 Hyperthermia Unit
Elekta Flexitron Remote Afterloader
Pinnacle treatment planning system
MOSAIQ record and verify system
EPIC EMR system

The institutional catalog contains only a summary of Radiation Therapy Program policies and procedures. Students should refer to the program-specific handbook for additional information.

Radiography

Program Overview

Northwestern Memorial HealthCare's Radiography program is a full-time hospital-based training program that prepares students for the clinical, theoretical, and professional aspects of a career in the Radiologic Sciences. Learning how to deliver compassionate and quality patient care is also emphasized. In the clinical rotation sites, students are taught with the most advanced technological and diagnostic equipment available.

The program is provided to students who possess a college degree and to intending 3rd – 4th year students who have completed the required undergraduate and prerequisite coursework at the following affiliated institutions: Lewis University, Roosevelt University, and University of St. Francis.

Successful completion of the program requires that students complete all clinical and didactic courses with a 'C' or better, complete all ARRT required competencies, make-up all clinical time in excess of allotted PTO, and pay tuition and fees in full.

Certification/Credentialing

Upon successful completion of the program, students will be awarded a certificate of completion from Northwestern Medicine and are eligible for the national certification examination in Radiography through the ARRT. Once nationally certified by the ARRT, students are eligible for Illinois state licensure through IEMA, which is required to practice as a Radiographer in the state of Illinois. State licensure requirements may vary by state.

Program Length

The NMHC Radiography provides 2,502 hours of instruction over 84 instructional weeks. Courses begin in mid-September and continue for 21 months, with graduation in June.

Program Delivery

The Radiography program utilizes a traditional, residential format.

Program Mission and Goals

The mission of the Radiography Program is to prepare graduates for careers in radiography by providing the technical, clinical, and professional foundation needed to function as effective members of the health care team. Graduates will embody the Patients First philosophy of Northwestern Medicine.

In support of the program's mission statement, the following goals have been developed:

- Program graduates will perform competently as entry-level radiographers.
- Program graduates will employ effective communication skills.
- Program graduates will develop and utilize critical thinking skills.
- Program graduates will demonstrate high standards of patient care and ethical, professional practice.
- The program will meet the needs of the community by producing qualified, competent radiographers.

Admissions

The Radiography Program has developed and implemented admissions policies and criteria that reflect the program's mission and are predictive of academic success, retention, and subsequent credentialing as outlined below:

Degree requirement

Candidates for admission must satisfy each of the following criteria by submission of official transcripts from all colleges and universities attended.

All applicants must possess a high school diploma or equivalent and post-secondary education which, at a minimum, meets one of the following with a cumulative GPA of no less than 2.7:

1. Associate's degree from an accredited college or university, or
2. Enrollment in an affiliated college/university 2 + 2 Bachelor's degree program

Prerequisite course requirements+

The following six prerequisites at an accredited college or university are required with a grade of 'C' or better and prerequisite GPA of no less than 2.7:

Human Anatomy & Physiology I with lab*	Medical Terminology*
Human Anatomy & Physiology II with lab*	Written Communication
College Algebra or Statistics*	Oral Communication

No remedial coursework will be accepted for prerequisite course credit. No radiography-specific credits from other programs will be accepted for prerequisite course credit.

**Course work must be completed within 7 years of application*

+Individuals may submit an application prior to degree or prerequisite coursework completion. As a part of the selection process, applicants must be prepared to demonstrate evidence that all admissions criteria can be satisfied prior to an offer of admission. All required courses must be successfully completed by August 31st. Until successful completion of prerequisite requirements, acceptance is considered conditional

Technical Standards

Technical standards are abilities and characteristics established by faculty and deemed necessary for a student to matriculate, remain in good standing, and achieve the competencies required for graduation. The Radiography program therefore requires applicants to confirm their ability to comply with these

Radiography Technical Standards, with or without reasonable accommodation, as a condition of admission.

Other Requirements
3 NM Letter of Recommendation Forms
Personal Statement
Prerequisite Course & Degree Checklist
$25 application fee
TOEFL iBT exam result, if applicable
Foreign transcript evaluation from Educational Credential Evaluators, if applicable
Personal interview with Admissions Committee, if granted

Student Selection
The NMHC Radiography program utilizes a holistic review approach to student selection that considers overall and prerequisite GPA, education, patient care experience, letters of recommendation, personal statement, and personal interview (if granted).

Admissions Procedures
A completed application with supporting materials must be submitted by March 1 of the application year. To apply, prospective students should refer to the application instructions posted on the program's website. Radiography Application Information

Programmatic Accreditation
The Radiography program has been continuously accredited by the Joint Review Committee for Education in Radiologic Technology (JRCERT) since inception in 2007. The JRCERT promotes excellence in education and elevates the quality and safety of patient care through the accreditation of radiologic technology educational programs. Accreditation is granted to educational programs that meet or exceed the standards for accreditation and the JRCERT conducts periodic on-site reviews of the program. The Radiography program is accredited for a period of 8 years. The next scheduled review will take place in the second quarter of 2027.

JRCERT
20 N. Wacker Drive, Suite 2850
Chicago, IL 60606-3182
(312) 704-5300
https://www.jrcert.org

Program Staff and Faculty
Shari McGovern, MA, R.T.(R)
Program Director; Full-time
MA, Adult Education and Training, 2010, University of Phoenix; BS, Radiologic Science, 2007, Midwestern State University, Associate's, Radiologic Technology, 1999, South Suburban College

Michelle Krupa, MS, R.T.(R)
Imaging Education Coordinator; Full-time
MS, Healthcare Administration, 2020, University of St. Francis; BS, Healthcare Administration, 2016; AAS, Radiology, 2004

Grading Scale

Letter Grade	Percentage
A	100% - 94
B	93.9% - 85
C	84.9% - 77
D	76.9% - 65
F	< 65%

Satisfactory Academic Progress (SAP)

A student maintains SAP if their cumulative (overall) and current (most recent term) grade point averages are 2.0 or better. A student must also maintain a minimum average score of 77% in all clinical and didactic courses and achieve a final course grade of 77% in all clinical and didactic courses. Students must also adhere to the clinical competency plan per the course syllabi, maintain satisfactory performance pace (completion of all attempted courses), and comply with all institutional and program policies. Student performance against SAP standards will be monitored in an ongoing manner throughout clinical and didactic activities with evaluation at the end of each term. A grade for each course will be issued at the end of the term.

Academic Calendar and Curriculum Overview

Fall Quarter (September 19, 2022 - December 16, 2022)

Introduction to Radiography & Medical Imaging	39 clock hours; 3 Credits
Patient Care in Medical Imaging	36 clock hours; 3 Credits
Radiographic Procedures I	39 clock hours/20 lab; 4 Credits
Imaging Principles I	52 clock hours; 5 Credits
Radiography Clinical I	144 clock hours; 1 Credit

Fall Quarter break December 19, 2022 – January 2, 2023

Winter Quarter (January 3, 2023 – March 17, 2023)

Imaging Principles II	48 clock hours; 4 Credits
Radiographic Procedures II	36 clock hours/18 lab; 4 Credits
Fluoroscopic Procedures I	18 clock hours; 1 Credit
Radiography Clinical II	192 clock hours; 2 Credits

Winter Quarter break March 20 – 24, 2023

Spring Quarter (March 27, 2023 – June 9, 2023)

Radiographic Procedures III	36 clock hours/18 lab; 4 Credits
Fluoroscopic Procedures II	18 clock hours; 1 Credit
Imaging Modalities & Equipment	36 clock hours; 3 Credits
Radiation Biology & Protection	36 clock hours; 3 Credits
Radiography Clinical III	192 clock hours; 2 Credits

Spring Quarter break June 12 - 16, 2023

Summer Quarter (June 19, 2023 – September 8, 2023)

Introduction to CT & Sectional Anatomy	24 clock hours; 2 Credits
Radiation Physics	36 clock hours; 3 Credits
Radiographic Procedures IV	36 clock hours/18 lab; 4 Credits
Radiography Clinical IV	288 clock hours; 3 Credits

Summer Quarter break September 11 - 15, 2023

Fall Quarter (September 18, 2023 – December 15, 2023)

Radiographic Procedures V	36 clock hours/18 lab; 4 Credits
Medical Law & Ethics	18 clock hours; 1 Credit
Operational Issues in the Healthcare Environment	18 clock hours; 1 Credit
Radiography Clinical V	288 clock hours; 3 Credits

Fall Quarter break December 18, 2023 – January 2, 2024

Winter Quarter (January 3, 2024 – March 15, 2024)

ARRT Review	72 clock hours; 7 Credits
Radiographic Pathology	24 clock hours; 2 Credits
Radiography Clinical VI	288 clock hours; 3 Credits

Winter Quarter break March 18 – 22, 2024

Spring Quarter (March 25, 2024 – June 6, 2024)

ARRT Review	72 clock hours; 7 Credits
Radiography Clinical VII	288 clock hours; 3 Credits

Definition of Program Credit Hour

Credit hours for the purpose of GPA calculation are determined according to the following equivalencies:

- For didactic courses, students earn 1 credit hour per 10 clock hours/semester
- For laboratory courses, students earn 1 credit hour per 15 clock hours/semester
- For clinical courses, students earn 1 credit hour per 96 clock hours/semester

Clinical Sites

Students will rotate through Northwestern Memorial Hospital and affiliated institutions located on the downtown medical campus including Shirley Ryan AbilityLab, Lurie Children's Hospital, and NM Streeterville and River North Immediate Care Clinics. Students will also rotate through off-site locations including Central DuPage Hospital, Palos Health, Palos Health South, and Lakeview Immediate Care Clinic.

Course Descriptions

INTRODUCTION TO RADIOGRAPHY & MEDICAL IMAGING (RAD 101)
This course provides an introduction to the art and science of radiography and medical imaging. Included is a discussion of the history of radiology, basic radiation safety and protection, imaging terminology, and an introduction to exposure factors and image formation.

PATIENT CARE IN MEDICAL IMAGING (RAD 102)
This course will present patient care techniques related to the medical imaging environment. Topics presented include sterile and aseptic technique, standard precautions, venipuncture, patient transfer, care of medical equipment, infection control, patient communication, and monitoring & recording of vital signs.

IMAGING PRINCIPLES I (RAD 104)
Examines the factors controlling and influencing the production of radiographic images. Exercises will be incorporated to demonstrate application of theoretical principles and concepts. Topics include beam filtration, beam restriction, computed and digital image receptors and image formation, technical factor selection and manipulation, and radiographic grids. Emphasis will be placed on methods of improving radiographic image quality, while emphasizing patient and technologist radiation protection.

IMAGING PRINCIPLES II (RAD 204)
This course is designed as a continuation of RAD 104. Course focus will be on continued knowledge development of the factors governing and influencing the production of the quality radiographic images. Topics include technique charts and technique adjustments for pathology, quality assurance (QA) and quality control (QC), causes of poor image quality, and improvement of sub-optimal images. Additional content will include the x-ray tube, the anode heel effect and line focus principle and analog image receptors. The terminal factor competency exam will be administered at the end of the course.

RADIATION PHYSICS (RAD 107)
This course introduces the basic concepts of physics and emphasizes the fundamentals of x-ray generation. Topics include atomic structure, the structure of matter, ionization, magnetism & electromagnetism, electrodynamics, the control and production of high voltage and rectification, x-ray tubes, x-ray circuits, and the production & characteristics of ionizing radiation.

MEDICAL LAW & ETHICS (RAD 108)
This course examines the medicolegal issues in patient care and medical imaging. Professional ethics and ethical dilemmas will also be included. Additional topics include confidentiality, HIPPA, the elements of informed consent, and the legal system. The imaging Standard of Care, and elements of a negligence suit are included in this course.

OPERATIONAL ISSUES IN THE HEALTHCARE ENVIRONMENT (RAD 109)
This course covers a variety of topics related to the operational aspects of medical imaging facilities. Issues presented address continuous quality improvement, human resources and employment law, finance and budgeting. Discussion will also center on topics related to healthcare delivery, hospital organization, and reimbursement / payment options for healthcare services.

RADIOGRAPHIC PROCEDURES I (RAD 105)
Examines the radiographic anatomy and positioning skills required to perform radiographic procedures of the human body. Specific areas presented include positioning and procedures of the chest and abdomen. Emphasis will be placed on the production of quality images while minimizing radiation exposure to the patient. Laboratory exercises will demonstrate the application of theoretical principles and concepts, while reinforcing didactic lecture content. Commonly-encountered pathological conditions of the abdomen and respiratory system will be examined.

RADIOGRAPHIC PROCEDURES II (RAD 205)
Examines radiographic anatomy and positioning skills required to perform radiographic procedures of the upper extremity. Emphasis will be placed on the production of quality images while minimizing radiation exposure to the patient. Laboratory exercises will demonstrate the application of theoretical principles and concepts and reinforce didactic lecture content. Commonly-encountered pathological conditions of the skeletal system will be examined.

RADIOGRAPHIC PROCEDURES III (RAD 206)
Presents radiographic anatomy and positioning skills required to perform radiographic procedures of the lower extremities and pelvic girdle. Emphasis will be placed on the production of quality images while minimizing radiation exposure to the patient. Laboratory exercises will demonstrate the application of theoretical principles and concepts and reinforce didactic lecture content. Commonly-encountered pathological conditions will be examined.

RADIOGRAPHIC PROCEDURES IV (RAD 215)
Presents the radiographic anatomy and positioning skills required to perform radiographic procedures of the bony thorax and spinal column. Emphasis will be placed on the production of quality images while minimizing radiation exposure to the patient. Laboratory exercises will demonstrate the application of theoretical principles and concepts and reinforce didactic lecture content. Commonly-encountered pathological conditions will be examined.

RADIOGRAPHIC PROCEDURES V (RAD 216)
Presents the radiographic anatomy and positioning skills required to perform radiographic procedures of the cranium and related examinations. Emphasis will be placed on the production of quality images while minimizing radiation exposure to the patient. Laboratory exercises will demonstrate the application of theoretical principles and concepts and reinforce didactic lecture content. Commonly-encountered pathological conditions will be examined.

RADIATION BIOLOGY & PROTECTION (RAD 210)
This course provides instruction on the principles of interaction between radiation and human cells. Cellular and biological response to irradiation are presented including acute and chronic effects of exposure. Other topics include: radiation detection and measurement, patient and personnel protection, calculating dose equivalencies, agencies and regulations, and cellular anatomy.

IMAGING MODALITIES & EQUIPMENT (RAD 211)
This course is designed to provide an in-depth look at the equipment utilized in imaging and the advanced modalities. Topics include: radiography quality assurance (QA) and quality control (QC), image intensified fluoroscopy, specialized imaging equipment and film sensitometry. An overview of the advanced modalities including mammography, interventional radiology, nuclear medicine and bone mineral densitometry are included.

INTRODUCTION TO CT & SECTIONAL ANATOMY (RAD 207)
This course is designed to present an overview of CT Scanning, CT equipment, and cross-sectional anatomy. Specific topics include CT physics & instrumentation, image production, and cross-sectional anatomy of the head, neck, thorax, abdomen and pelvis. Emphasis will be placed on patient imaging considerations, patient safety, and radiation protection.

FLUOROSCOPIC PROCEDURES I (RAD 218)
Routine fluoroscopic procedures will be the focus of this course. Procedures of the upper and lower gastrointestinal systems are presented along with radiographic anatomy and positioning. Emphasis will be placed on obtaining quality images while reducing patient radiation exposure. Personnel and patient radiation safety measures are also be included.

FLUOROSCOPIC PROCEDURES II (RAD 219)
Routine fluoroscopic procedures of the biliary, reproductive and urinary systems are presented along with arthrography and myelography. Emphasis will be placed on obtaining diagnostic-quality images while reducing patient radiation exposure. Personnel radiation safety measures will also be included.

RADIOGRAPHIC PATHOLOGY (RAD 220)
Commonly-encountered pathological conditions will be discussed as they present radiographically. Emphasis will include appropriate technical factor adjustments to compensate for additive and destructive disease processes.

ARRT REVIEW (RAD 212)
This course is offered during the final two quarters of the program and is designed to review the materials presented throughout the curriculum. The intent of this course is to prepare the student for the radiography certification examination administered by the American Registry of Radiologic Technologists (ARRT).

RADIOGRAPHY CLINICAL I (RAD 301)
This is the first of a sequence of seven clinical courses designed to introduce students to the hospital clinical setting and provides an opportunity for students to participate in and observe radiographic procedures. Students will complete general patient care competencies during this course and begin completing clinical competencies related to the chest and abdomen. In addition to ancillary support areas, students will rotate through various aspects of the radiology department. Students will perform under direct supervision until procedural competencies have been successfully completed.

RADIOGRAPHY CLINICAL II (RAD 302)
This course is designed as a continuation of RAD 301. During this course, students will continue to rotate through various areas of the radiology department and begin completing additional clinical competencies related to routine contrast procedures, mobile examinations, upper extremities, and operating room procedures. Students will begin surgical suite rotations. Students will perform under direct supervision until procedural competencies have been successfully completed.

RADIOGRAPHY CLINICAL III (RAD 303)
Designed as a continuation of RAD 302, students will continue to perform under direct supervision until clinical competencies have been completed. Additional clinical competencies will be obtained on routine upper and lower extremities procedures. Students will continue to perform routine and mobile procedures.

RADIOGRAPHY CLINICAL IV (RAD 304)
Students will continue to rotate through various areas of the radiology department. Students will perform procedures under direct supervision until clinical competency is attained. Additional clinical competencies will be obtained on routine pelvis girdle, bony thorax, and spine procedures. Participants will continue obtaining clinical competencies during clinical rotations.

RADIOGRAPHY CLINICAL V (RAD 305)
Students will continue clinical rotations with a focus on completing clinical procedural competencies related to the spine, skull, facial bones, and trauma. Students begin rotating through special procedures remaining under direct supervision at all times. Students will begin modality (observation) rotations during this course.

RADIOGRAPHY CLINICAL VI (RAD 306)
This course continues to provide a hospital setting in which students continue to develop proficiency levels in skills introduced in previous Radiographic Procedures courses and practiced in previous clinical radiography courses. Students will also rotate through modalities in order to gain knowledge of other aspects of medical imaging. Execution of radiographic procedures will be conducted under direct and indirect supervision.

RADIOGRAPHY CLINICAL VII (RAD 307)
Students must complete any remaining clinical procedural and general patient care competencies during this clinical course. Students will be rotated through areas where competencies are still needed. The focus of this clinical course will be for students to further develop their clinical skills in preparation for an entry-level position as a radiographer upon program completion.

Equipment List

Carestream DR 7500 x 6
Carestream DRX – Evolution x 4
Carestream DRX – Evolution Plus x 8
Carestream DRX – Revolution x 11
Carestream DRX – Revolution Plus x 3
Siemens Luminos Agile Max
Siemens Luminos DRF Max x 2
Siemens Luminos Axiom DRF
Carestream DX Revolution Portables x 3
Hologic Fluoroscan Mini C-Arm x 5
GE OEC 9900 Elite C-Arms x 12
GE Elite CFD C-Arms x 9
Medtronic O-Arms x 2
Stryker Mobius AIRO
Philips FD20 Hybrid OR's x 2
GE OEC 3D

The institutional catalog contains only a summary of Radiography program policies and procedures. Students should refer to the program-specific handbook for additional information.

Affiliated Colleges and Universities

The NMHC clinical programs have academic affiliations with the institutions below:

Diagnostic Medical Sonography Program	Benedictine University, Elmhurst University, North Central College, Lewis University, Roosevelt University
Histotechnology Program	Roosevelt University
Nuclear Medicine Technology Program	Benedictine University, Elmhurst University, Lewis University, North Central College, Roosevelt University, University of St. Francis, University of Wisconsin-La Crosse
Radiation Therapy Program	Benedictine University, Elmhurst University, Lewis University, North Central College, Roosevelt University
Radiography Program	Lewis University, Roosevelt University, University of St. Francis

Faculty Directory

Name	Title	Email Address	Phone Number
Edward Carlton (FT)	Program Director, Diagnostic Medical Sonography	Edward.Carlton@nm.org	312-926-1196
Casey Clarke (PT)	Adjunct Faculty, Diagnostic Medical Sonography	cclarke@nm.org	312-926-3284
Liz Kenyon (PT)	Interim Clinical Coordinator, Diagnostic Medical Sonography	Elizabeth.Kenyon@nm.org	312-926-3556
Shari McGovern (FT)	Program Director, Radiography	Shari.mcgovern@nm.org	312-694-2425
Michelle Krupa (FT)	Imaging Ed Coordinator, Radiography	Michelle.Krupa@nm.org	312-926-8187
Monique Cannon (FT)	Program Manager, Medical Assistant	Monique.Cannon@nm.org	312-694-2426
Michelle Coppens (FT)	Program Director, Nuclear Medicine	Michelle.Coppens@nm.org	312-926-4461
Heather Mallett (FT)	Program Director, Radiation Therapy	Heather.Mallett@nm.org	312-926-2733
Desiree Robledo (FT)	Education Coordinator, Histotechnology	Desiree.Robledo@nm.org	312-926-9046
Dani Hjelm (PT)	Adjunct Instructor	Danielle.Kleehammer@nm.org	312-926-1836
Scott Leonard (PT)	Adjunct Instructor	Scott.Leonard@nm.org	312-926-0411
Matt Mielke (PT)	Adjunct Instructor	Matthew.Mielke@nm.org	312-926-5052
Natasha Murphy (PT)	Adjunct Instructor	Natasha.Murphy@nm.org	312-472-0045
Dena Abdelhameed (PT)	Adjunct Instructor	Dena.Abdelhameed@nm.org	312-694-0943

Administrative Directory

Name	Title	Email Address	Phone Number
Heather Mallett	Faculty/Manager, NM Clinical Schools & Programs	Heather.Mallett@nm.org	312-926-2733
Sarah Buenaventura	Director, Administration NM Academy	slowell@nm.org	312-926-1061
Renee Pickrell	Registrar, NM Clinical Schools & Programs	Renee.Pickrell@nm.org	312-926-2215
Diane Wayne	Vice President, Administration, NMHC	Diane.Wayne@nm.org	312-926-5546
Michelle Coppens	Faculty/Instructional Design & Technology Specialist	Michelle.Coppens@nm.org	312-926-4461
Nick Hu	Program Assistant, School of Radiation Therapy	Nick.Hu@nm.org	

APPENDIX

Transferability of Credits Disclosure

The ability to transfer credits from Northwestern Memorial HealthCare to another educational institution may be very limited and should be considered prior to executing an enrollment agreement. Students should contact any educational institution to which they may want to transfer credits earned at NMHC towards an academic degree to determine if such institution will accept credits earned at NMHC. Students who have completed coursework at NMHC and go on to enroll in another educational institution that does not accept NMHC credits may be required to repeat courses previously taken at NMHC.

NMHC does not accept transfer credits for program-specific coursework earned at another educational institution.

Student Signature

Date

Student Success Data

Diagnostic Medical Sonography Consumer Information for reporting period – July 1, 2020 – June 30, 2021

Enrollment Information

Students admitted in the program as of July 1, 2020	6
Additional students admitted into Diagnostic Medical Sonography program during the 12-month reporting period	6
Number of students admitted into the program	12
Number of students enrolled in the program during the 12-month reporting period who transferred out of the program and into another program	0
Number of students enrolled in the program during the 12-month reporting period who withdrew from the program	1
Number of students who enrolled in the program during the 12-month reporting period and are still enrolled	0

Job Placement and Certification Information

Number of students placed in the Diagnostic Medical Sonography field	6
Number of students placed in a related field	0
Number of students placed out of field	0
Number of students not available for placement and not employed	0
Number of students who took a state licensing or professional certification exam	6
Number of students who passed a state licensing or professional certification exam	6
Number of graduates who obtained in-field employment without assistance	3
Average salary for program graduates	$59,352

Histotechnology Consumer Information for reporting period – July 1, 2020 – June 30, 2021

Enrollment Information

Students admitted in the program as of July 1, 2020	4
Additional students admitted into Histotechnology program during the 12-month reporting period	4
Number of students admitted into the program	8
Number of students enrolled in the program during the 12-month reporting period who transferred out of the program and into another program	0
Number of students enrolled in the program during the 12-month reporting period who withdrew from the program	0
Number of students who enrolled in the program during the 12-month reporting period and are still enrolled	4

Job Placement and Certification Information

Number of students placed in the Histotechnology field	4
Number of students placed in a related field	0
Number of students placed out of field	0
Number of students not available for placement and not employed	0
Number of students who took a state licensing or professional certification exam	1
Number of students who passed a state licensing or professional certification exam	1
Number of graduates who obtained in-field employment without assistance	0
Average salary for program graduates	$59,280

Medical Assistant Consumer Information for reporting period – July 1, 2020 – June 30, 2021

Enrollment Information

Students admitted in the program as of July 1, 2020	8
Additional students admitted into Medical Assistant program during the 12-month reporting period	6
Number of students admitted into the program	14
Number of students enrolled in the program during the 12-month reporting period who transferred out of the program and into another program	0
Number of students enrolled in the program during the 12-month reporting period who withdrew from the program	2
Number of students who enrolled in the program during the 12-month reporting period and are still enrolled	0

Job Placement and Certification Information

Number of students placed in the Medical Assistant field	11
Number of students placed in a related field	1
Number of students placed out of field	0
Number of students not available for placement and not employed	0
Number of students who took a state licensing or professional certification exam	11
Number of students who passed a state licensing or professional certification exam	11
Number of graduates who obtained in-field employment without assistance	0
Average salary for program graduates	$39,000

Nuclear Medicine Technology Consumer Information for reporting period – July 1, 2020 – June 30, 2021

Enrollment Information

Students admitted in the program as of July 1, 2020	7
Additional students admitted into Nuclear Medicine Technology program during the 12-month reporting period	8
Number of students admitted into the program	15
Number of students enrolled in the program during the 12-month reporting period who transferred out of the program and into another program	0
Number of students enrolled in the program during the 12-month reporting period who withdrew from the program	1
Number of students who enrolled in the program during the 12-month reporting period and are still enrolled	0

Job Placement and Certification Information

Number of students placed in the Nuclear Medicine Technology field	7
Number of students placed in a related field	0
Number of students placed out of field	0
Number of students not available for placement and not employed	0
Number of students who took a state licensing or professional certification exam	7
Number of students who passed a state licensing or professional certification exam	7
Number of graduates who obtained in-field employment without assistance	1
Average salary for program graduates	$65,000

Radiation Therapy Consumer Information for reporting period – July 1, 2020 – June 30, 2021

Enrollment Information

Students admitted in the program as of July 1, 2020	6
Additional students admitted into Radiation Therapy program during the 12-month reporting period	6
Number of students admitted into the program	12
Number of students enrolled in the program during the 12-month reporting period who transferred out of the program and into another program	0
Number of students enrolled in the program during the 12-month reporting period who withdrew from the program	0
Number of students who enrolled in the program during the 12-month reporting period and are still enrolled	0

Job Placement and Certification Information

Number of students placed in the Radiation Therapy field	6
Number of students placed in a related field	0
Number of students placed out of field	0
Number of students not available for placement and not employed	0
Number of students who took a state licensing or professional certification exam	6
Number of students who passed a state licensing or professional certification exam	6
Number of graduates who obtained in-field employment without assistance	1
Average salary for program graduates	$70,720

Radiography Consumer Information for reporting period – July 1, 2020 – June 30, 2021

Enrollment Information

Students admitted in the program as of July 1, 2020	10
Additional students admitted into Radiography program during the 12-month reporting period	12
Number of students admitted into the program	22
Number of students enrolled in the program during the 12-month reporting period who transferred out of the program and into another program	0
Number of students enrolled in the program during the 12-month reporting period who withdrew from the program	0
Number of students who enrolled in the program during the 12-month reporting period and are still enrolled	12

Job Placement and Certification Information

Number of students placed in the Radiography field	10
Number of students placed in a related field	0
Number of students placed out of field	0
Number of students not available for placement and not employed	0
Number of students who took a state licensing or professional certification exam	10
Number of students who passed a state licensing or professional certification exam	10
Number of graduates who obtained in-field employment without assistance	10
Average salary for program graduates	$54,638

Diagnostic Medical Sonography Program Technical Standards

Applicants must perform medical procedures with accuracy and precision. The nature of the work is such that speed, safety and accuracy are essential skills. While failure to perform these essential functions may not prevent individuals from practicing in the clinical setting, lack of any or all of these abilities may prove challenging to the work experience and may compromise patient safety or the diagnostic value of procedures.

In order to be considered for admission, applicants must be able to, with or without reasonable accommodation, demonstrate the ability to meet the following technical standards which are considered essential functions and skills of the profession.

COGNITIVE DOMAIN

- Read, comprehend and record technical and medical information accurately and efficiently.
- Read and interpret patient records and clinical paperwork in both written and electronic formats.
- Observe patients up to 15 feet away during procedures.
- Observe patients via television monitor.
- Organize and perform the individual steps in a sonographic procedure in a logical, expedient sequence.
- Measure, calculate, analyze, and integrate information obtained during the exam to provide diagnostic information to the reading physician.
- Provide quality patient care at all times through patient observation and comprehension of patient records.
- Assess patient condition and formulate appropriate action plans according to patient abilities and limitations.
- Adapt to changing environments, display flexibility, and effectively function in an environment of unexpected situations inherent to clinical practice.
- Rapidly respond to emergency signals and alarms.
- Integrate training from several sources to problem solve in a quick, accurate, and highly coordinated manner.
- Follow written and oral instructions from physicians and coworkers.
- Provide written and oral summary of diagnostic findings to the physician.
- Evaluate images and formulate corrective actions as necessary to improve diagnostic quality and patient positioning.
- Multitask and complete tasks and assignments to meet established deadlines.
- Differentiate anatomical structures on sonographic images.
- Differentiate color distinctions in the sonographic exam.
- Transfer knowledge gained from one patient to another, one room to another, or one clinical site to another.

- Process and interpret feedback, both verbal and written, from supervising sonographers and physicians and use it to modify and improve clinical performance.
- Apply didactic theory to the clinical environment to determine proper exam parameters in an expedient manner.
- Explain the steps involved in performing complex tasks and protocols.
- Interpret and apply professional ethical standards.

PSYCHOMOTOR DOMAIN

- Respond to patients' needs, communicated in an average tone, from as far away as 15 feet.
- Consistently discern a variety of signals on imaging equipment, phones and patient care devices.
- Assist patients to and from exam tables, wheelchairs, and stretchers.
- Manipulate equipment in both the department and portable ultrasound devices. This includes pushing, pulling, raising, lowering, and adjusting equipment to achieve desired outcomes.
- Manually position patients and align the sound beam to anatomical structures.
- Stand and / or walk unassisted for up to eight hours a day.
- Move independently about the department, hospital, clinical facility and / or patient rooms in an expedient manner.
- Perform essential job-related functions including button manipulation on equipment, switches, keyboards, and foot pedals.
- Lift more than 50 pounds routinely.
- Manipulate equipment with both hands, wrists and shoulders independently.
- Perform and monitor patient vital signs including blood pressure, pulse and respiratory rates.

AFFECTIVE DOMAIN

- React calmly and effectively in stressful environments.
- Communicate with patients, doctors and other personnel clearly and effectively in the English language using appropriate medical terminology.
- Understand and respond to non-verbal communication.
- React and respond quickly and safely to emergency situations.
- Communicate with patients in a manner displaying compassion and empathy.
- Monitor and adapt one's own behavior based on feedback from instructors and clinical staff in order to demonstrate a commitment to professional practice.
- Effectively use verbal and non-verbal methods of communication when interacting with patients.
- Demonstrate sensitivity towards individuals from diverse backgrounds.

Nuclear Medicine Technology Program Technical Standards

Applicants must perform medical procedures with accuracy and precision. The nature of the work is such that speed, safety and accuracy are essential skills. While failure to perform these essential functions may not prevent individuals from practicing in the clinical setting, lack of any or all of these abilities may prove challenging to the work experience and may compromise patient safety or the diagnostic value of procedures.

In order to be considered for admission, applicants must be able to, with or without reasonable accommodation, demonstrate the ability to meet the following technical standards which are considered essential functions and skills of the profession.

COGNITIVE DOMAIN

- Read and comprehend technical and medical information
- Read and interpret patient records and clinical paperwork in both written and electronic formats.
- Observe patients up to 15 feet away during procedures.
- Prioritize and perform tasks related to patient care and technical procedures in a logical, expedient sequence.
- Measure, calculate, reason, analyze, integrate and synthesize information from various modalities to provide effective patient care.
- Assess patient condition and formulate appropriate action plans according to patient abilities and limitations.
- Adapt to changing environments, display flexibility, and effectively function in an environment of unexpected situations inherent to clinical practice.
- Rapidly respond to emergency signals and alarms.
- Integrate training from several sources to problem solve in a quick, accurate, and highly coordinated manner.
- Follow written and oral instructions from physicians and coworkers.
- Evaluate images and formulate corrective actions as necessary to improve diagnostic quality and patient positioning.
- Multitask and complete tasks and assignments to meet established deadlines.
- Differentiate anatomical structures on images.
- Transfer knowledge gained from one patient to another, one room to another, or one clinical site to another.
- Process and interpret feedback, both verbal and written, from supervising technologists and use it to modify and improve clinical performance.
- Perform calculations to determine proper exam parameters in an expedient manner by applying didactic theory to the clinical environment.
- Explain the steps involved in performing complex tasks.
- Interpret and apply professional ethical standards.

PSYCHOMOTOR DOMAIN

- Respond to patients' needs, communicated in an average tone, from as far away as 15 feet.
- Consistently discern a variety of signals on imaging equipment, phones and patient care devices.
- Assist patients to and from exam tables, wheelchairs, and stretchers.
- Manipulate equipment in both the department and portable devices. This includes pushing, pulling, raising, lowering, and adjusting equipment to achieve desired outcomes.
- Manually position patients and align anatomical structures.
- Stand and / or walk unassisted for up to eight hours a day.
- Move independently about the department, hospital, clinical facility and / or patient rooms in an expedient manner.
- Perform essential job-related functions including button manipulation on equipment, switches, keyboards, and foot pedals.
- Perform and monitor patient vital signs including blood pressure, pulse and respiratory rates.

AFFECTIVE DOMAIN

- React calmly and effectively in stressful environments.
- Communicate with patients, doctors and other personnel clearly and effectively in the English language using appropriate medical terminology.
- Understand and respond to non-verbal communication.
- React and respond quickly and safely to emergency situations.
- Communicate with patients in a manner displaying compassion and empathy.
- Monitor and adapt one's own behavior based on feedback from instructors and clinical staff in order to demonstrate a commitment to professional practice.
- Effectively use verbal and non-verbal methods of communication when interacting with patients.
- Demonstrate sensitivity towards individuals from diverse backgrounds.

Radiation Therapy Program Technical Standards

Applicants must perform medical procedures with accuracy and precision. The nature of the work is such that speed, safety and accuracy are essential skills. While failure to perform these essential functions may not prevent individuals from practicing in the clinical setting, lack of any or all of these abilities may prove challenging to the work experience and may compromise patient safety or the therapeutic value of procedures.

In order to be considered for admission, applicants must be able to, with or without reasonable accommodation, demonstrate the ability to meet the following technical standards which are considered essential functions and skills of the profession.

COGNITIVE DOMAIN

- Read and comprehend technical and medical information
- Read and interpret patient records and clinical paperwork in both written and electronic formats.
- Observe patients up to 15 feet away during procedures.
- Observe patients via television monitor.
- Prioritize and perform tasks related to patient care and technical procedures in a logical, expedient sequence.
- Measure, calculate, reason, analyze, integrate and synthesize information from various modalities to provide effective patient care.
- Assess patient condition and formulate appropriate action plans according to patient abilities and limitations.
- Adapt to changing environments, display flexibility, and effectively function in an environment of unexpected situations inherent to clinical practice.
- Rapidly respond to emergency signals and alarms.
- Integrate training from several sources to problem solve in a quick, accurate, and highly coordinated manner.
- Follow written and oral instructions from physicians and coworkers.
- Evaluate images and formulate corrective actions as necessary to improve diagnostic quality and patient positioning.
- Multitask and complete tasks and assignments to meet established deadlines.
- Differentiate anatomical structures on radiographic images.
- Transfer knowledge gained from one patient to another, one room to another, or one clinical site to another.
- Process and interpret feedback, both verbal and written, from supervising technologists and use it to modify and improve clinical performance.
- Perform calculations to determine proper exam parameters in an expedient manner by applying didactic theory to the clinical environment.

- Explain the steps involved in performing complex tasks.
- Interpret and apply professional ethical standards.

PSYCHOMOTOR DOMAIN

- Respond to patients' needs, communicated in an average tone, from as far away as 15 feet.
- Consistently discern a variety of signals on imaging equipment, phones and patient care devices.
- Assist patients to and from exam tables, wheelchairs, and stretchers.
- Manipulate simulation and treatment equipment within the department and additional clinical sites.
- Manually position patients and align anatomical structures to the beam.
- Stand and / or walk unassisted for up to eight hours a day.
- Move independently about the department, hospital, clinical facility and / or patient rooms in an expedient manner.
- Perform essential job-related functions including button manipulation on equipment, switches, keyboards, and foot pedals.
- Perform and monitor patient vital signs including blood pressure, pulse and respiratory rates.

AFFECTIVE DOMAIN

- React calmly and effectively in stressful environments.
- Communicate with patients, doctors and other personnel clearly and effectively in the English language using appropriate medical terminology.
- Understand and respond to non-verbal communication.
- React and respond quickly and safely to emergency situations.
- Communicate with patients in a manner displaying compassion and empathy.
- Monitor and adapt one's own behavior based on feedback from instructors and clinical staff in order to demonstrate a commitment to professional practice.
- Effectively use verbal and non-verbal methods of communication when interacting with patients.
- Demonstrate sensitivity towards individuals from diverse backgrounds.

Radiography Program Technical Standards

Applicants must perform medical procedures with accuracy and precision. The nature of the work is such that speed, safety and accuracy are essential skills. While failure to perform these essential functions may not prevent individuals from practicing in the clinical setting, lack of any or all of these abilities may prove challenging to the work experience and may compromise patient safety or the diagnostic value of procedures.

In order to be considered for admission, applicants must be able to, with or without reasonable accommodation, demonstrate the ability to meet the following technical standards, which are considered essential functions and skills of the profession.

COGNITIVE DOMAIN

- Read and comprehend technical, and medical information, and interpret patient records in both written and electronic formats.
- Visually observe and monitor patients from up to 15 feet away during procedures while assessing patient condition and formulating corrective action plans to accommodate patient limitations and needs.
- Prioritize and perform tasks related to patient care and technical procedures in a logical, expedient sequence.
- Adapt to changing environments, display flexibility, and effectively function in an environment of unexpected situations inherent to clinical practice, and rapidly respond to emergency signals and alarms.
- Integrate training from several sources to problem solve in a quick, accurate, and highly coordinated manner.
- Follow written and oral instructions from physicians and coworkers.
- Evaluate images and formulate corrective actions as necessary to improve diagnostic quality and patient positioning.
- Multitask and complete tasks and assignments to meet established deadlines.
- Differentiate anatomical structures on radiographic images and visually assess image quality.
- Process and interpret feedback, both verbal and written, from supervising technologists and use it to modify and improve clinical performance.
- Perform calculations in an expedient manner to determine proper exam parameters by applying didactic theory to the clinical environment.
- Interpret and apply professional ethical standards to clinical practice.

PSYCHOMOTOR DOMAIN

- Respond to patients' needs, verbally communicated in an average tone, from as far away as 15 feet.
- Consistently discern a variety of signals on imaging equipment, phones and patient care devices.
- Assist patients to and from exam tables, wheelchairs, and stretchers.

- Manipulate equipment in both the imaging department and portable x-ray devices. This includes pushing, pulling, raising, lowering, and adjusting equipment to achieve desired outcomes.
- Manually position patients of both genders to properly align anatomical structures to the beam.
- Stand and / or walk unassisted for up to eight hours a day.
- Perform essential job-related functions including button manipulation on equipment, switches, keyboards, touch screens, and foot pedals.
- Perform and monitor patient vital signs including blood pressure, pulse and respiratory rates.

AFFECTIVE DOMAIN

- React calmly and effectively in stressful environments.
- Communicate with patients, doctors and other personnel clearly and effectively in the English language using appropriate medical terminology.
- Understand and respond to non-verbal communication.
- React and respond quickly and safely to emergency situations.
- Communicate with patients in a manner that conveys compassion and empathy using both verbal and non-verbal methods of communication.
- Monitor and adapt one's own behavior based on feedback from instructors and clinical staff in order to demonstrate a commitment to professional practice.
- Demonstrate sensitivity towards individuals from diverse backgrounds.

Northwestern Medicine®

HUMAN RESOURCES POLICY

Department/Category: **EMPLOYEE RELATIONS**	Page **1 of 7**	Policy # **HR 04.0022** Version: **5.0**
Title: **RULES FOR PERSONAL CONDUCT**	Review of: **10/16/2019**	Effective Date: **01/03/2020** Next Review: **01/03/2022**

SCOPE: Applies to entities indicated below as well as their subsidiaries and affiliates

☒ **NM – Northwestern Memorial Hospital**	☒ **NM – Lake Forest Hospital**
☒ **NM – Northwestern Medical Group**	☒ **NM – Central DuPage Hospital**
☒ **NM – Regional Medical Group**	☒ **NM – Delnor Hospital**
☒ **NM – Kishwaukee Hospital**	☒ **NM – Valley West Hospital**
☒ **NM – Marianjoy Rehabilitation**	☐ **NM – Home Health & Hospice**
☐ **NM – Palos Community Hospital**	☒ **NM – System Functions / NMHC Employees**
☒ **NM – Huntley Hospital** / ☒ **NM – McHenry Hospital** / ☒ **NM – Woodstock Hospital**	
☐ **NM – Other **See "Scope/Persons/Areas Affected" Section below****	

I. PURPOSE:

A. It shall be the policy of Northwestern Memorial HealthCare ("NMHC") to establish the highest standards of personal conduct to serve the best interests of NMHC and its patients, visitors, staff and hospital employees. The rules listed in this policy are designed to provide guidance as to the expectations of NMHC regarding employee conduct.

B. The rules set forth in this policy are not all-inclusive, but are intended to serve as a guide to the types of conduct which may result in discipline. It is expected that all employees will consistently demonstrate adherence to NMHC's values and mission. Those who, in the opinion of NMHC management, fail to meet these standards will be subject to disciplinary action up to and including discharge. Individual departments may develop their own performance standards based on departmental or unit operating needs, provided such standards are not inconsistent with corporate-wide standards, and are communicated to all department members.

C. Whenever this policy refers to Northwestern Memorial HealthCare premises or property, it includes all buildings and adjacent sidewalks, walkways, parking lots and non-work areas owned, leased or controlled by Northwestern Memorial HealthCare, its subsidiaries and affiliates.

II. POLICY STATEMENT:

A. The following are examples of types of conduct that demonstrate disregard for NMHC's mission of Patients First and may lead to corrective action. Depending on NMHC's assessment of the individual circumstances, this corrective action may range from verbal counseling to discharge.

1. Leaving a department or assigned work area during work hours without authorization from the person in charge, except for normal personal time.

2. Absence and/or excessive absence, tardiness and/or excessive tardiness. This includes leaving work early and overstaying authorized lunch and break times. Working unauthorized time, including overtime, is prohibited except in emergency situations.
3. Failure to carry out assigned duties and responsibilities, including refusal to work overtime, except where prohibited by law, or take call without a reasonable explanation.
4. Smoking and use of tobacco and smoking products, including but not limited to e-cigarettes, in unauthorized areas. This includes but is not limited to campus buildings, grounds and parking lots. (See also II.B.4 in this policy regarding cannabis.)
5. Failure to properly display or wear the required identification badge at all times while on Northwestern Memorial HealthCare premises, providing another person with use of one's own identification badge, or using another employee's identification badge.
6. Failure to comply with policies regarding the use of lockers and locker rooms.
7. Operating or using equipment, materials, or supplies in an unsafe, careless or wasteful manner, or operating or using equipment not assigned to you.
8. Soliciting or accepting tips, gifts, or donations from patients, visitors, vendors or physicians in violation of Administrative Policy #01.0007, Integrated Code of Ethics, and Administrative Policy #01.007B, Professional Integrity Handbook. (Also refer to Conflict of Interest Policy, #01.0011).
9. Failure to observe appropriate standards of dress, uniform policies, and hygiene; including, subject to applicable law, wearing of non-professional badges, pins, buttons or other paraphernalia.
10. Unauthorized or personal use and/or possession of NMHC supplies or equipment or unauthorized conduct of personal business or enterprise, including promoting or selling any article or products in work or patient care areas during the employee's working time and the working time of the employee to whom articles or products are being promoted or sold.
11. Substandard or unsatisfactory work performance that fails to meet job or departmental standards. Failure to consistently demonstrate appropriate behaviors aligned with the patient satisfaction and service expectations of the organization. Failure to demonstrate NMHC values and utilize quality-associated tools such as Patient Centered Care Model, use of the AIDET(sm) communication model, or I-CARE model.
12. Use of personal electronic devices (including but not limited to cell phones, smartphones and personal pagers) or non-business-related electronic media, including internet sites, social media and other apps, during working time and/or in any patient-care area is prohibited except for authorized work-related use. Personal electronic devices, internet sites, social media and other apps may be used while on authorized breaks and not in patient-care areas, so long as such use is consistent with all applicable NM polices including non-harassment and non-discrimination policies.
13. Failure to follow safety protocols/policies and/or failure to wear or use proper safety equipment, including, without limitation, failure to follow hand-hygiene protocol.
14. Failure to perform obligations under Northwestern Memorial HealthCare's Integrated Code of Ethics. (See also II.B.30 in this policy.)

B. The following types of conduct are more serious, demonstrating intentional disregard for NMHC's Patients First mission. They may generally lead to discharge even on the first offense.

1. Sleeping, preparing to sleep or being in a sleep-like position in any work, patient care or public hospital space at any time is prohibited. However, an employee with authorization from a person in charge may rest or sleep while on break in a designated non-patient care, non-public hospital space during non-working periods. An employee who is on-call may

use, with authorization, an appropriate on-call room. Exceptions may be made by an employee's manager for special health reasons in non-patient care, non-public space.

2. Disobeying instructions, procedures or policies, whether through neglect, procrastination or deliberate disobedience. Deliberately refusing to obey the orders or instructions of a manager, person in charge, or security officer.
3. Concealing another employee's misconduct or inadequate performance, falsifying evidence or testimony, or failing to cooperate in the investigation of such misconduct or inadequate performance.
4. Coming to work or being at work under the influence of intoxicants (including alcohol or cannabis) or unprescribed narcotics or drugs, being under the influence of prescribed drugs in dosages higher than those prescribed, using or possessing intoxicants (including alcohol or cannabis) or unprescribed narcotics or drugs while on NMHC property or on work time, or reporting to work in a condition unfit for performing work. Being under the influence of any cannabis products (including marijuana) during work hours or while on call, or use of medical cannabis on NMHC premises or while on call regardless of whether an individual may lawfully possess and use cannabis products is also prohibited.
5. Refusing to be tested or to undergo testing procedures if a manager or person in charge determines there is reason to believe that an employee is under the influence of intoxicants or unprescribed narcotics or drugs, or using or possessing intoxicants or unprescribed narcotics or drugs while on NMHC property or on work time. Refusing to undergo a safety assessment if a manager or person in charge determines there is reason to believe that an employee is not safe to provide patient care.
6. Testing positive on any tests administered under NMHC's drug testing policies, subject to the employee being offered a reasonable opportunity to contest the basis of the determination.
7. Selling or offering for sale, distributing, sharing, trading or otherwise making available to others any narcotics, other unprescribed drugs, cannabis products (including marijuana), or drug paraphernalia on NMHC premises.
8. Forging, altering, falsifying, omitting material, or information from a document, authorization, record, system, or time card, whether hard copy or electronic, or any written or electronic notation (including signing "in" or "out" for another employee or permitting another employee to use one's own identification card or keycard).
9. Unauthorized possession or concealing of firearms or other weapons while on NMHC property.
10. Jeopardizing the health or safety of employees, patients, visitors, physicians or other persons affiliated with Northwestern Memorial HealthCare through conduct such as neglect of duty, failing to properly perform assignments, assault or violation of safety rules.
11. Failing to report to the employee's immediate manager the conviction for a criminal charge or a plea of guilty or "no lo contendre" to any criminal charge (excluding minor traffic violations unless employee drives hospital vehicles).
12. Failure by an employee to report to his/her manager or director that the employee's professional license has been placed on probation, come under suspension, has been revoked, or has otherwise been subject to disciplinary action. Failure to timely renew required licenses or certifications.
13. Fighting, horseplay, any kind of unconsented physical contact (even when no injuries result), gambling (including participation in unauthorized lotteries), disorderly conduct, engaging in any illegal or inappropriate activity on NMHC property or during work time.
14. Mistreatment or neglect of a patient, including without limitation the use of obscene or abusive language or gestures.

15. Interfering with or delaying the work of other employees.
16. Taking breaks in patient rooms or public areas during working time, and/or watching television in patient rooms at any time.
17. Mishandling, destroying, defacing or abusing property that belongs to Northwestern Memorial HealthCare, employees, patients, visitors, vendors, physicians or other persons affiliated with NMHC. Stealing property and/or the unauthorized personal use or possession of property belonging to NMHC, other employees, patients, visitors, vendors, physicians or other persons affiliated with NMHC.
18. Absence for two consecutively scheduled workdays or any absence without making proper notification to the employee's manager, in accordance with department call-in procedures. Absence for two consecutive scheduled workdays without proper notification may be considered a voluntary resignation.
19. Harassment of any kind, including without limitation sexual harassment of an employee, patient, visitor, vendor, physician, intern, nonemployee directly performing services for NMHC (such as a contractor or consultant), or other person affiliated with Northwestern Memorial HealthCare. Engaging in discrimination with respect to any individual on the basis of the individual's race, color, national origin, sex, age, religion, disability, sexual orientation or any other status protected by law.
20. Misappropriation of NMHC assets, funds, property, or time compensated by Northwestern Memorial HealthCare. Misusing NMHC funds, accepting NMHC funds under false pretenses, including but not limited to, PTO, sick or vacation pay, disability and workers' compensation payments. Failure to notify NMHC of overpayments or mispayments and/or failure to make prompt repayment of such overpayments or mispayments.
21. Working at other employment that may create any situation, action or omission which reasonably may be expected to affect independent judgment with respect to the conduct of Northwestern Memorial HealthCare business, or any other violation of General Administration Policy #01.0011, Conflict of Interest. If in doubt whether a conflict exists, it should be reported to management.
22. Misusing confidential information, including protected health information ("PHI") about employees, patients, their families, physicians, or other individuals associated with Northwestern Memorial HealthCare, or proprietary information (i.e., not in the public domain) relating to the medical and business affairs of NMHC, and/or failure to maintain strict confidentiality regarding such information. Misuse includes, without limitation, accessing confidential information for other than legitimate business reasons, disclosing confidential information to unauthorized individuals, attaching PHI to Disciplinary or Corrective Action Reports, grievance and appeal forms, or other employment-related documents. Please refer to privacy and confidentiality policies for definition of protected health information.
23. Making false or misleading statements, either oral or written, which reasonably may have an adverse impact on the reputation or operation of Northwestern Memorial HealthCare or any of its subsidiaries or affiliates.
24. Making audio/video/photographic recordings of work activities with personal electronic communication devices, including but not limited to recording intellectual property, recording conversations between co-workers, conversations with patients, and/or meeting proceedings without the knowledge of the other party(ies) and without permission from management, or recording the images of patients or visitors without the patient's or visitor's written consent.
25. Discourteous, insulting, threatening, intimidating or coercive behavior toward other employees, patients, visitors, vendors, physicians or other persons affiliated with Northwestern Memorial HealthCare. Using obscene or abusive language or gestures.

Non-constructive criticism addressed to its recipient in such a way as to intimidate, belittle, or impute stupidity or incompetence.

26. Violating safety rules including, but not limited to, failure to comply with the Fire and Service Disruption Plan, failure to promptly report an accident, job-related injury, communicable disease or other illness, or creating a safety hazard or contributing to unsanitary conditions.
27. Removal of any Northwestern Memorial HealthCare property without authorization (including without limitation, equipment, supplies, records, damaged goods, scrap material and packages) from NMHC premises or concealing such material on NMHC premises. Failure to submit to and/or cooperate with a security officer or member of Northwestern Memorial HealthCare management in an inspection of materials, equipment, (including such things as lockers, desks and file cabinets), packages, vehicles, or personal affects brought onto, stored on, or removed from NMHC premises.
28. Posting or distribution of inflammatory or offensive material on Northwestern Memorial HealthCare premises or electronic sites.
29. Exclusion from or sanction by any federal or state health care reimbursement program. Failure to report to the employee's immediate manager any sanction or exclusion from any federal health care reimbursement program, including but not limited to Medicare, Medicaid, Tricare, and the Veteran's Administration; or any investigation by any governmental agency in connection with a federal health care reimbursement program.
30. Sufficiently serious or willful disregard for Northwestern Memorial's Integrated Code of Ethics. (See II.A.14 above)
31. Retaliation against an employee for reporting harassment, discrimination, wrongdoing, or violations of any law, regulation or policy, or exercising rights granted under any local, state, or federal law.

III. SCOPE/PERSONS/AREAS AFFECTED:

This policy applies to all regular and temporary, full-time, part-time and casual employees of Northwestern Memorial HealthCare exclusive of any subsidiaries, affiliates, or operating units that have enacted separate policies as approved by NMHC for the subjects covered herein.

IV. DEFINITIONS:

N/A

V. MODIFICATIONS:

This Policy creates no rights, contractual or otherwise. Statements of policy contained herein are not made for the purpose of inducing any person to become or remain an employee of NMHC, and should not be considered "promises" or as granting "property" rights. NMHC may add to, subtract from and/or modify this Policy at any time without notice. Nothing contained in this Policy impairs the right of an employee or NMHC to terminate the employment relationship at will.

VI. RESPONSIBILITIES:

It is the responsibility of all NM employees to understand and comply with the provisions of this policy, and to consult their management or HR if they have questions.

VII. POLICY UPDATE SCHEDULE:

This policy is reviewed or updated every two (2) years or more often as appropriate.