



1982

# Virginia Commonwealth University Graduate Bulletin

Virginia Commonwealth University

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Virginia  
Commonwealth  
University

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Richmond, Virginia

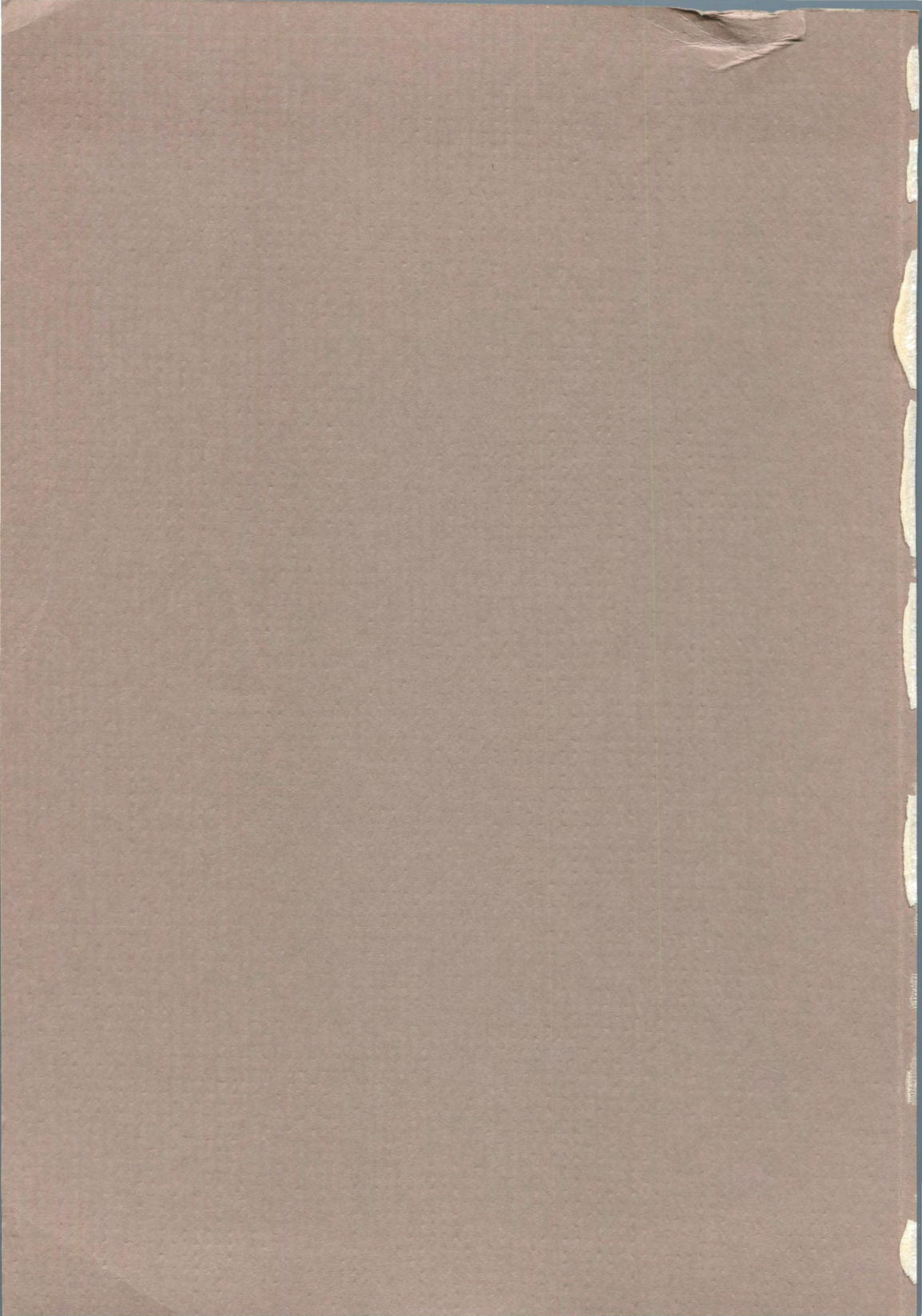
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1982-83

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Graduate Bulletin

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**Virginia Commonwealth University  
Graduate Bulletin**

**1982-1983**



**Volume LVII**

**July 1982**

**Number 3**

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The Board of Visitors, the administration, and the faculty of Virginia Commonwealth University are committed to a policy of equal opportunity in education without regard to race, creed, sex, national origin, age, or physical handicap.

### LIMITATIONS ON BULLETIN PROVISIONS

All rules and regulations set forth in this bulletin will apply until further notice. The university reserves the right to make changes in courses of study, fees, rules, and regulations governing the conduct of the work in all schools and programs, faculty and staff, and classification of students whenever university authorities deem it expedient or wise to do so.

## 1982–1983 University Calendar

### 1982

#### July

- 9 —Last day for summer degree candidates to submit graduation applications to their advisors for August degrees

#### August

- 9 —Final date for oral defense of graduate theses for August completion of degrees
- 20 —Summer sessions end
- 21 —Official date of August diploma
- 23-25 —MCV orientation and registration
- 23-27 —Orientation and advising for all day students—Academic Campus
- 24 —Faculty meeting at 8:30 am—Academic Campus  
—Faculty meeting at 3:30 pm—MCV Campus
- 24-25 —Evening studies registration
- 25-27 —Registration for all day students—Academic Campus
- 26 —Classes begin at 8 am—MCV Campus
- 26-Sept. 3—Add/drop and late registration—MCV Campus
- 30 —Classes begin at 8 am—Academic Campus
- 30-Sept. 3—Add/drop and late registration—Academic Campus

#### September

- 6 —Labor day holiday
- 24 —Last day for fall degree candidates to submit graduation applications to their advisors for December degrees
- 28 —Last day for undergraduate students to submit work for removal of incompletes from spring semester or summer session—Academic Campus

#### October

- 16 —Graduate Record Examination\*

\* Test dates do not apply in New York State

- 22 —Last day to drop a course with a mark of “W”—both Campuses
- 23 —Graduate Management Admissions Test
- 27-Nov. 5 —Advising and advance registration for continuing day students for spring semester

### November

- 1-Dec.10 —Advance mail registration—Evening studies
- 24 —Thanksgiving holiday begins at 5 pm
- 29 —Thanksgiving holiday ends at 8 am

### December

- 10 —Last day of classes for fall semester—both campuses
- 11 —Graduate Record Examination
- 13 —Final date for oral defense of graduate theses for December completion of degrees
- 13-17 —Final examinations for fall semester—MCV Campus
- 13-18 —Final examinations for fall semester—Evening studies
- 13-21 —Final examinations for fall semester—Academic Campus
- 21 —Christmas vacation begins at 5 pm
- 27 —Official date of December diploma
- Winter intersession classes begin

### 1983

#### January

- 4-5 —Evening studies registration
- 4-6 —Orientation and advising for all day students—Academic Campus
- 6 —Registration for all day students—Academic Campus
- Orientation and registration for new students—MCV Campus
- 10 —Classes begin at 8 am
- 10-14 —Add/drop and late registration for all students
- 21 —Last day for spring degree candidates to submit graduation applications to their advisors for May degrees
- 29 —Graduate Management Admissions Test

#### February

- 5 —Graduate Record Examination\*
- 8 —Last day for undergraduate students to submit work for removal of incompletes from fall semester
- 28 —Summer advance registration begins

#### March

- 4 —Last day to drop a course with a mark of “W”—both campuses
- 5 —Spring vacation begins at noon—both campuses
- 14 —Spring vacation ends at 8 am—both campuses
- 17-25 —Advising and registration for continuing students for fall semester
- 19 —Graduate Admissions Management Test

#### April

- 23 —Graduate Record Examination\*
- 26 —Last day of classes for spring semester—Academic Campus
- 27 —Study day
- 28-May 6 —Final examinations for spring semester—Academic Campus
- 29 —Last day of classes for spring semester—MCV Campus

**May**

- 2 —Final date for oral defense of graduate theses for May graduation
- 2-6 —Final examinations for spring semester—MCV Campus
- 2-7 —Final examinations for spring semester—Evening studies
- 14 —Commencement Day (includes August and December graduates)
- 16 —Summer sessions begin

**June**

- 11 —Graduate Record Examination
- 18 —Graduate Management Admissions Test

**July**

- 8 —Last day for summer degree candidates to submit graduation applications to their advisors for August degrees

**August**

- 12 —Summer sessions end

1982	<p><b>JULY</b> S M T W T F S                   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p><b>AUGUST</b> S M T W T F S   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p><b>SEPTEMBER</b> S M T W T F S                   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>	<p><b>OCTOBER</b> S M T W T F S                   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p><b>NOVEMBER</b> S M T W T F S   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>	<p><b>DECEMBER</b> S M T W T F S                   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>
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	<p><b>JULY</b> S M T W T F S   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p><b>AUGUST</b> S M T W T F S   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p><b>SEPTEMBER</b> S M T W T F S                   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>	<p><b>OCTOBER</b> S M T W T F S   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p><b>NOVEMBER</b> S M T W T F S                   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>	<p><b>DECEMBER</b> S M T W T F S                   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>



## 1983–1984 University Calendar

### 1983

#### July

- 8 —Last day for summer degree candidates to submit graduation applications to their advisors for August degrees

#### August

- 8 —Final date for oral defense of graduate theses for August completion of degrees
- 12 —Summer sessions end
- 20 —Official date of August diploma
- 22-24 —MCV orientation and registration
- 22-26 —Orientation and advising for all day students—Academic Campus
- 23 —Faculty meeting at 8:30 am—Academic Campus  
—Faculty meeting at 3:30 pm—MCV Campus
- 23-24 —Evening studies registration
- 24-26 —Registration for all day students—Academic Campus
- 25 —Classes begin at 8 am—MCV Campus
- 25-Sept. 2—Add/drop and late registration—MCV Campus
- 29 —Classes begin at 8 am—Academic Campus
- 29-Sept. 2—Add/drop and late registration—Academic Campus

#### September

- 5 —Labor day holiday
- 23 —Last day for fall degree candidates to submit graduation applications to their advisors for December degrees
- 27 —Last day for undergraduate students to submit work for removal of incompletes from spring semester or summer session—Academic Campus

#### October

- 21 —Last day to drop a course with a mark of “W”—both campuses
- 26-Nov. 4—Advising and advance registration for continuing day students for spring semester

31-Dec. 9 —Advance mail registration—Evening studies

### November

- 23 —Thanksgiving holiday begins at 5 pm  
28 —Thanksgiving holiday ends at 8 am

### December

- 9 —Last day of day classes for fall semester—both campuses  
12 —Final date for oral defense of graduate theses for December completion of degrees  
12-16 —Final examinations for fall semester—MCV Campus  
12-17 —Final examinations for fall semester—Evening studies  
12-20 —Final examinations for fall semester—Academic Campus  
20 —Christmas vacation begins at 5 pm  
26 —Official date of December diploma  
—Winter intersession classes begin

## 1984

### January

- 3-4 —Evening studies registration  
3-5 —Orientation and advising for all day students—Academic Campus  
5 —Registration for all day students—Academic Campus  
—Orientation and registration for new students—MCV Campus  
9 —Classes begin at 8 am  
9-13 —Add/drop and late registration for all students  
20 —Last day for spring degree candidates to submit graduation applications to their advisors for May degrees

### February

- 7 —Last day for undergraduate students to submit work for removal of incompletes from fall semester  
27 —Summer advance registration begins

### March

- 2 —Last day to drop a course with a mark of “W”—both campuses  
3 —Spring vacation begins at noon—both campuses  
12 —Spring vacation ends at 8 am—both campuses  
15-23 —Advising and registration for continuing students for fall semester

### April

- 24 —Last day of classes for spring semester—Academic Campus  
25 —Study day  
26-May 4 —Final examinations for spring semester—Academic Campus  
27 —Last day of classes for spring semester—MCV Campus  
30 —Final date for oral defense of graduate theses for May graduation  
30-May 4 —Final examinations for spring semester—MCV Campus  
30-May 5 —Final examinations for spring semester—Evening studies

### May

- 12 —Commencement day (includes August and December graduates)  
14 —Summer sessions begin

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**July**

6 —Last day for summer degree candidates to submit graduation applications to their advisors for August degrees

**August**

10 —Summer sessions end

# Part I—Virginia Commonwealth University

## THE UNIVERSITY

Virginia Commonwealth University is an urban institution of higher education located in the heart of Richmond, Virginia. It is comprised of two campuses: the Medical College of Virginia Campus is located east of the financial, governmental, and shopping area of downtown Richmond; the Academic Campus is two miles west in a residential area that dates from the nineteenth century. This area is called the Fan District, so named because the streets separate from each other as they move westward. The Fan is bounded on the east by the Academic Campus and on the west by the Boulevard, on which is located, among other things, the Virginia Museum of Fine Arts and the Virginia Historical Society.

Virginia Commonwealth University was created in 1968 by a merger of the Medical College of Virginia and Richmond Professional Institute. VCU traces its founding date to 1838, the year in which the older of the two institutions, the Medical College of Virginia, was created as the medical department of Hampden-Sydney College. This department became an independent institution in 1854. The Academic Campus was the former Richmond Professional Institute (RPI) which began in September, 1917, as the Richmond School of Social Work and Public Health.

Today the total university enrollment is more than 20,000. The university has four teaching hospitals, a School of Graduate Studies, and 12 academic schools (Allied Health Professions, Arts, Basic Sciences, Business, Community and Public Affairs, Dentistry, Education, Humanities and Sciences, Medicine, Nursing, Pharmacy, and Social Work) which offer 60 undergraduate programs, 63 master's degree programs, and 21 doctoral degrees. The university has a diverse student body. Persons of all ages pursue their education at VCU and come from every segment of society. Forty-four states and 27 foreign countries are represented in the university's student body.

The university is a member of the American Council on Education, the American Association of State Colleges and Universities, the Council of Graduate Schools in the United States, the Association of Urban Universities, Oak Ridge Associated Universities, the Association of University Evening Colleges, the National Association of College and University Summer Sessions, and the Association of Virginia Colleges. The university is also a member of the National Association of State Universities and Land Grant Colleges, a body consisting of 139 institutions whose memberships are based on being major graduate and research institutions. VCU is

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fully accredited by the Southern Association of Colleges and Schools, the regional accrediting agency for institutions of higher education in the Southern area of the United States.

### THE MISSION OF VIRGINIA COMMONWEALTH UNIVERSITY<sup>1</sup>

Virginia Commonwealth University is a comprehensive, urban, public university whose mission is to provide a fertile and stimulating environment for teaching, learning, research, and service; to promote the pursuit of knowledge; and to disseminate professional skills. Characteristic of comprehensive universities, its thrust is toward the education of citizens who need the solid values and proven strengths of the past as well as knowledge of future alternatives in dealing with society's increasingly urban-influenced problems, wherever these problems may exist. The university's mission includes the provision of:

A scholarly climate which will inspire in the student a lifelong commitment to learning and service which will develop in the student competence and motivation to work toward the realization of individual and community potential, and which will set for the student an example of excellence.

An environment of educational excellence which values diversity and enables faculty to pursue their work in accordance with the highest standards and to serve as exemplary role models.

Educational services for the adjacent urban community through flexible scheduling and for adults and professionals in adjacent regions through continuing education programs.

Educational services away from the metropolis for selected programs so that graduates are prepared to serve the commonwealth in diverse locales.

Research and educational activities in all disciplines to develop and communicate new knowledge, to improve the quality of life, and to promote the best use and general understanding of human and environmental resources.

The recognition of the imaginative power

of the arts and humanities in reflecting the problems and aspirations of society; and the providing of opportunities to emphasize the value of the arts and humanities for oneself and for society through public exhibitions and performances.

Comprehensive health care services which meet patient and community needs and which provide an optimal environment both for education and training of health care professionals and for innovative studies on improving health care delivery.

The establishment of the university as a planning and resource center which, drawing upon the unique resources of a major urban area, is devoted to the solution of problems confronting Virginia's communities; to the identification of emerging social needs; and to the planning required for orderly future growth and development.

### SCHOOL OF GRADUATE STUDIES

#### Administrative Officers

JOHN J. SALLEY, D.D.S., Ph.D., D.Sc.

Vice-President for Research and

Dean of Graduate Studies

JOHN H. McGRATH, B.A., M.A., Ph.D.

Associate Dean of Graduate Studies

GEORGE C. CANAVOS, B.S., M.S., Ph.D.

Assistant Dean of Graduate Studies

WILLIAM L. DEWEY, B.S., M.S., Ph.D.

Assistant Dean of Graduate Studies

WILLIAM R. STEWART, B.F.A., M.Ed., D.Ed.

Assistant Dean of Graduate Studies

Graduate programs are administered by the individual departments and schools throughout the university with assistance from the School of Graduate Studies. Major coordination of the various degree programs is performed by the University Graduate Council, comprised of two elected faculty members from each of the 12 schools as well as two representatives elected from the academic council. Graduate student members from each of the two campuses also have membership on the council, which is chaired by the dean of the School of Graduate Studies. Members of the University Graduate Council for 1982-1983 are

Moustafa Abdelsamad—Business

Diane Bernard—Social Work

Kenneth Campbell—Arts

Philip Coleman—Basic Sciences

Sam Craver—Education

Marilyn Erickson—Humanities and Sciences

<sup>1</sup>As approved by the Board of Visitors, March 17, 1977.

Mario Escobar—Medicine  
 David Farmer—Community and Public Affairs  
 Curtis Hall—Deans' Representative  
 JoAnne Henry—Nursing  
 Charles Hepler—Pharmacy  
 Robert Janke—Arts  
 Alan Kaplan—Medicine  
 Kent Palcanis—Dentistry  
 Otto Payton—Allied Health Professions  
 John Povlishock—Basic Sciences  
 Pratip Raychowdhury—Humanities and Sciences  
 Richard Rezba—Education  
 Alvin Schexnider—Community and Public Affairs  
 Margaret Spaulding—Nursing  
 James Stubbins—Pharmacy  
 Daniel Watts—Deans' Representative  
 Joseph Witteman—Dentistry  
 Claire Wompierki—Social Work  
 Robley Wood—Business  
 Robert Young—Allied Health Professions  
 Scott Brockenborough—Student Member  
 Mark Katz—Student Member  
 Paula Larivee—Student Member  
 Joan Offerle—Student Member

The following graduate degree programs are offered at the university:

### **Doctor of Philosophy**

Anatomy  
 Orthopaedic Physical Therapy  
 Art History<sup>2</sup>  
 Biochemistry  
 Biophysics  
 Biostatistics  
 Business<sup>3</sup>  
 Chemistry  
 Health Services Organization  
 and Research<sup>2</sup>  
 Human Genetics  
 Microbiology and Immunology  
 Pathology  
 Pharmaceutical Chemistry  
 Pharmacology  
 Pharmacy and Pharmaceutics  
 Physiology  
 Neurophysiologic Physical Therapy  
 Psychology  
 Clinical  
 Counseling  
 General  
 Social Policy and Social Work  
 Urban Services<sup>3</sup>

### **Doctorate in Public Administration<sup>3</sup>**

<sup>2</sup>To begin fall 1983 subject to final approval of the State Council of Higher Education for Virginia.

### **Master of Accountancy**

### **Master of Art Education**

### **Master of Arts**

Art History  
 Historical  
 Museum Studies  
 Economics  
 English/English Education

### **Master of Business Administration**

### **Master of Education**

Administration and Supervision  
 Adult Education  
 Counselor Education  
 Distributive Education  
 Elementary Education  
 Mathematics Education  
 Reading  
 Special Education  
 Emotionally Disturbed  
 Learning Disabilities  
 Mentally Retarded  
 Early Childhood Handicapped<sup>3</sup>

### **Master of Fine Arts**

Crafts  
 Ceramics  
 Furniture Design  
 Glassworking  
 Jewelry or Metalworking  
 Textiles  
 Creative Writing<sup>3</sup>  
 Design  
 Interior Environments  
 Photography/Film  
 Visual Communications  
 Painting and Printmaking  
 Sculpture  
 Theatre  
 Acting  
 Costume Design  
 Directing  
 Dramaturgy  
 Stage Design/Technical Theatre  
 Theatre Education

### **Master of Health Administration**

### **Master of Interdisciplinary Studies**

### **Master of Music**

Applied Music, including synthesizer

<sup>3</sup>To begin fall 1982, subject to final approval of the State Council of Higher Education for Virginia.

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Church Music  
Composition—Theory  
Conducting  
Education  
Music History and Literature  
Piano Pedagogy

### **Master of Music Education**

### **Master of Public Administration**

### **Master of Science**

Administration of Justice  
Anatomy  
Biochemistry  
Biology  
Biophysics  
Biostatistics  
Business  
    Business Education  
    Economics  
    Finance  
    Information Systems  
    International Business  
    Management  
    Marketing  
    Personnel and Industrial Relations  
    Quantitative Methods  
    Real Estate and Urban Land  
    Development  
    Risk Management and Insurance  
Chemistry  
Gerontology  
Human Genetics  
Mass Communications  
Mathematical Sciences  
    Applied Mathematics  
    Computer Science  
    Mathematics  
    Statistics  
Medical Technology  
Microbiology and Immunology  
Nursing  
    Community Health Nursing  
    Community Health Nursing—Family  
    Nurse Practitioner  
    Maternal and Infant Nursing  
    Maternal and Infant Nursing—Obstetric-  
    Gynecologic Nurse Practitioner  
    Medical-Surgical Nursing  
    Nursing of Children  
    Nursing of Children—Pediatric Nurse  
    Practitioner

Nursing Services Administration  
Psychiatric-Mental Health  
Occupational Therapy  
Pathology  
Pharmaceutical Chemistry  
Pharmacology  
Pharmacy and Pharmaceutics  
Physical Education  
Physical Therapy  
Physiology  
Psychology  
    Clinical  
    Counseling  
    General  
Recreation  
Rehabilitation Counseling  
Sociology

### **Master of Science in Nurse Anesthesia**

### **Master of Science in Occupational Therapy** Basic Professional

### **Master of Social Work**

### **Master of Taxation**

**Master of Urban and Regional Planning**  
Community Services Planning  
Health Planning  
Land Use and Environment Planning  
Urban and Regional Economic Develop-  
ment

## **OFF-CAMPUS GRADUATE INSTRUCTION**

As a comprehensive educational institution, the university is dedicated to serving the needs of Virginians by providing off-campus graduate credit instruction at various locations throughout the state. Such instruction, encompassing many graduate courses, is offered in response to an expression of need from various locales. The majority of off-campus instruction, however, is offered within the region of the Capital Consortium for Continuing Higher Education, which consists of the Richmond-Petersburg area and surrounding counties.

Off-campus instruction features the same course work that is available on campus, and off-campus courses are fully degree-applicable within the normal admission standards of the various schools of the university.

For additional information on off-campus

credit instruction, write or call the Coordinator for Off-Campus Credit Instruction, Division of Continuing Studies and Public Service, 901 West Franklin Street, Room 105, Richmond, VA 23284, (804) 257-6032.

## ACADEMIC RESOURCES

### Libraries

University Library Services includes James Branch Cabell Library on the Academic Campus, Tompkins McCaw Library on the MCV Campus, and Outreach Services, which is responsible for several learning resource centers and media services on both campuses. Collections include 600,000 volumes and 8,550 periodicals.

The James Branch Cabell Library on the Academic Campus is open to all students and faculty of the university. The hours are 7:30 am to midnight, Monday through Friday, 9 am to 9 pm Saturday, and 1 pm to midnight Sunday. Separate holiday and intercession schedules are as posted. In addition to growing reference and research collections of printed materials, the library supports specialized curricular and research needs with substantial microform holdings, music scores, disc recordings and cassettes, media materials in the University Curriculum Laboratory and Learning Resource Centers, and lends assistance with film and television production in the audiovisual department. The library is also a partial depository for United States and Virginia government publications. Reference staff offer computer-assisted literature searches to graduate students and faculty, a course in library resources, and bibliographic instruction for classes at the request of faculty. The staff of the collection development department welcomes suggestions from graduate students and faculty for book purchases and journal subscriptions. The periodicals services department maintains current and back issues of journals as well as reserve books and articles. Graduate students may obtain a browsing pass to the closed stack current periodicals area by applying at the periodicals reading room desk. Reading tables and lounge chairs as well as photo copy machines are available in this area and elsewhere in the library. The Cabell Library also provides lockers on the fourth

floor for graduate students and faculty. Other services include group study rooms, typewriter rooms, and a study room containing equipment to aid the visually handicapped.

The Tompkins-McCaw Library, located on the MCV Campus, contains a major research collection that is particularly strong in the health sciences. It is open from 8 am to 11 pm five days a week, with shorter weekend hours. Complete sets of all major indices in the biomedical and health science fields are also part of the reference collection.

Of particular note is the reference service of the libraries. Reference staff offer computer-produced literature searches, providing patrons with bibliographies on specific biomedical and health-related topics. Staff members welcome and encourage patrons to ask questions about the difficult-to-find materials which may be needed to complete research projects successfully.

Some professional collections are housed in individual schools. Students should consult department chairmen for information concerning such collections.

In addition to their own collections, the libraries inter-library loan departments can obtain materials readily from other colleges and universities in Virginia, from outside the state, or from the Library of Congress. The Virginia State Library and the main branch of the Richmond Public Library are both within walking distance of the university. These two institutions provide access to an additional one million volumes.

### Research

While Virginia Commonwealth University is one of the leaders in teaching among the institutions of higher education in the state, it is also an institution which commits a significant portion of its resources to research and scholarly activities. VCU is fully committed to the proposition that a broad-based program of research investigations enhances the teaching mission of the university while, at the same time, it improves the quality of services provided to the community. During the fiscal year ending on June 30, 1981, the university received more than \$28.7 million in sponsored program support from a vari-



ety of federal agencies, private organizations, philanthropy, and endowment income. The extensive and diverse nature of the university's research programs are directly related to the excellence of the faculty on both campuses. Prospective graduate students can anticipate working in a lively intellectual environment. Many faculty of the university who are directly involved in graduate education programs are recognized nationally and internationally in their fields of endeavor.

**Computing and Information Resources**

The Department of Academic Computing provides staff support and facilities for faculty, staff, and students of the university in using computers for instruction, research, and certain community service activities. Individual consultation is available as are scheduled short courses and "guest lecturer" appearances in classes. Information is provided to users by a Users Guide, Miniguides, and a newsletter, as well as other more permanent forms of documentation.

Computing hardware available for Academic Computing use includes two IBM System/370 Model 168 CPUs, an H-P3000, and an XDS Sigma-6. In addition to the usual terminal devices, graphics output and optical scanner input are available.

Academic computing is part of the Department of Computing and Information Resources which includes administrative data processing and the administration of the Consolidated Computer Center.

The computing resources are widely used in the academic program of the university and are accessible to students at all levels. The computers operate 24 hours a day throughout the year with access areas open for use approximately 12 hours a day during the week and on weekends.

**Statistical Consultation Resources**

Professional statisticians who are faculty members in biostatistics, mathematical sciences, business, and other departments or schools hold membership in the university's Institute of Statistics, an organization whose objectives are to coordinate statistical consultation in support of faculty research, notably in statistical design and analysis, regardless of the field of application; to

serve as a professional resource for teaching programs in statistics and for those involving statistics; and to develop pure and applied research in statistical theory and methodology.

VCU's Institute of Statistics has 22 members and 12 associate members.

**GRADUATE TUITION AND STUDENT FEES**

Tuition and student fees shown are for 1982-83 and are subject to change.

**Graduate Tuition**

State Resident:	
Full-time . . . . .	\$1,300
Part-time . . . . .	\$73 per credit hour
Out of State:	
Full-time . . . . .	\$2,400
Part-time . . . . .	\$134 per credit hour
Summer Session—Academic Campus	
State Resident:	
Full-time . . . . .	\$530
Part-time . . . . .	\$73 per credit hour
Out of State:	
Full-time . . . . .	\$800
Part-time . . . . .	\$134 per credit hour
Summer Session—Health Sciences Campus	
State Resident:	
Full-time . . . . .	\$530
Part-time . . . . .	\$73 per credit hour
Out of State:	
Full-time . . . . .	\$800
Part-time . . . . .	\$134 per credit hour
Patient Counseling	
Resident . . . . .	\$370
Nonresident . . . . .	\$700

**Other Fees**

General—All Students

Application Fee (non-refundable) .	\$10
Late Registration Fee . . . . .	\$10
Diploma Fee . . . . .	\$16
Health Fee . . . . .	\$92

Campus Fees

School of the Arts

Comprehensive Fee	
Full-time . . . . .	\$100
Part-time . . . . .	\$50

**Music Majors**

3 credit private lessons . . . . .	\$ 225
2 credit private lessons . . . . .	\$ 168
1 credit private lesson . . . . .	\$ 84

**Summer**

Full-time . . . . .	\$6
Part-time . . . . .	\$1 per credit hour

**Academic Campus—Activities**

Full-time . . . . .	\$14
Part-time . . . . .	\$1 per credit hour

**Academic Campus—Consolidated**

Full-time . . . . .	\$210
Part-time . . . . .	\$9 per credit hour

Evening College . . . . . \$7 per credit hour

**Summer**

Full-time . . . . .	\$45
Part-time . . . . .	\$5 per credit hour

**MCV Campus Consolidated**

Full-time . . . . .	\$210
Part-time . . . . .	\$9 per credit hour

**Summer**

Full-time . . . . .	\$45
Part-time . . . . .	\$5 per credit hour

MCV Government Fee . . . . . \$22

Room Plans . . . . . \$1,120 to \$1,500

Meal Plans . . . . . \$940 to \$970

### **Part-Time and Overload Graduate Study Fees**

Graduate students registered for nine or more semester hours will be charged full tuition and fees. The part-time tuition rate will be paid by students registered for fewer than nine semester hours. Students registering for more than the maximum 16 hour load will be required to pay per credit hour fees for all hours over 16.

### **State Residence**

The law affecting residence in Virginia is as follows: "No person shall be entitled to the admission privileges, or the reduced tuition charges, or any other privileges accorded only to domiciliaries, residents or citizens of Virginia, in the state institutions of higher

learning unless such person is and has been domiciled in Virginia for a period of at least one year prior to the commencement of the term, semester, or quarter for which any such privilege or reduced tuition charge is sought, provided that the governing board of such institutions may set up additional requirements for admitting students." Student applications for Virginia residency are processed through the University Office of Enrollment Services.

### **Refunds and Rebates**

Full- or part-time students who are admitted to a graduate program and who withdraw in good standing shall be entitled to a refund of a portion of tuition, room, and board fees for the semester in which they are currently enrolled. All other fees are non-refundable.

### **Request for Refund**

Requests for refunds must be made in writing to the Office of Student Accounting, 327 West Main Street, Richmond, VA 23284, and will be considered on the basis of the following policy statement governing the refund of tuition, room, and board and other fees except the student activities fee.

1. Students whose registration is canceled prior to the end of the add/drop-late registration period\* will be entitled to a full refund of tuition and fees. Room fees, except for the \$50 deposit, will be refunded in full during this period.
2. Full-time students reducing their academic status to part-time or part-time students reducing their academic course load before the end of the add/drop-late registration period will be entitled to a full refund of tuition and applicable fees on that portion dropped.
3. Students will be entitled to a refund of 50 percent of tuition, room, and applicable fees upon withdrawal after the add/drop-late registration period and before the end of the **FOURTH FRIDAY FOLLOWING THE FIRST OFFICIAL DATE OF THE SEMESTER**. Full-time students reducing their

\*September 3rd—end of add/drop-late registration period

academic course load to part-time or part-time students reducing their academic course load after the add/drop-late registration period will be entitled to a 50 percent refund of tuition and applicable fees on that portion dropped. NO AMOUNT WILL BE REFUNDED FOR WITHDRAWAL AFTER THE FOURTH FRIDAY FOLLOWING THE FIRST DAY OF THE SEMESTER.<sup>5</sup>

4. A full refund of board plan fees will be made if withdrawal from the board plan is made prior to the first official board plan day. However, students withdrawing from the university will be granted a pro rata refund based on a weekly computation throughout the term, less a \$50 administrative charge.
5. Students will not be entitled to a refund of room fees if they voluntarily withdraw from the university residence halls but remain registered for any course(s) at the university unless clearance is granted through the Office of the Dean of Student Affairs. Students will not be granted refunds unless they have completed the withdrawal procedures.

The actual date of withdrawal will be certified by the Office of Enrollment Services, Registration, and refund, when appropriate, will be computed based on that certified date. Non-attendance of classes without having completed the withdrawal procedure does not constitute grounds for refund. Refund processing can take from six to eight weeks. Exceptions to this refund policy are made only in rare instances. Written application for an exception must be filed in the office of Student Accounting and will be forwarded to the Office of Academic Affairs for approval.

#### **Delinquent Accounts**

The university will not issue a degree, transcript, or grade report to any student who has not paid all charges in full. Students whose accounts are not paid in full may not be admitted to final examinations at the end of semesters.

#### **STUDENT FINANCIAL ASSISTANCE**

The university operates two financial aid offices to provide financial advising, general and specific information, and application forms. Students are required to use the appropriate campus office to resolve any financial problem: 327 West Main Street (Flowers Building), Richmond, VA 23284, (804) 786-5241, for the Academic Campus; or Box 244, MCV Station (Bear Hall), Richmond, VA 23298, (804) 786-0524, for the MCV Campus.

#### **Application and Programs**

The university requires the submission of the College Scholarship Service's national application—FINANCIAL AID FORM. This form can be acquired from any college or high school or directly from the Financial Aid Office. Additionally, the university's designed application—UNIVERSITY AID FORM—must be submitted to the Financial Aid Office. This form can be acquired directly from the Financial Aid Offices at the university.

Any financial aid received from the following programs is a result of the analysis of both forms. This includes students who apply for only a Guaranteed Student Loan. All financial assistance is expected to be severely reduced based on recent federal changes. Early application is essential for consideration and receipt of financial assistance.

#### **Guaranteed Student Loan Program**

Loans from this program are available to all students who may or may not be eligible for other forms of financial assistance. Financial need is a criteria for determining eligibility.

Graduate students may borrow up to \$5,000 per year for full-time study. Half-time students may borrow up to \$2,500 per year. These loans are available to all students who are U.S. citizens or permanent residents, are admitted or are enrolled in good academic standing, and are not in default for prior loans. Loans are interest free while the student is enrolled at least half-time. Repayment is not required until six months after the student graduates or terminates attendance. Students may take as long as ten

<sup>5</sup>September 24th—fourth Friday following the first day of the semester

years to repay the principal at a nine percent annual interest rate. Students should contact their local bank for information about this loan program. For students who cannot acquire loans from their banks, the university can assist in the acquisition of loans from the Virginia Educational Loan Authority (VELA). Application forms for these loans are available in the Financial Aid Offices.

### **Campus Based Aid Programs**

Awards from these programs are made by the Financial Aid Office using the Financial Aid Form completed by the student. All awards are based upon the student's financial need.

### **National Direct Student Loans**

This joint federal and university program provides low interest loans for students. The awards range from \$200 to \$5,000 per year. The repayment period commences after graduation or withdrawal from the university. Loans may be repaid over a ten-year period at five percent interest. Students are reminded that prior to graduation, or at their withdrawal from the university, it is mandatory that they receive an "exit interview," which is conducted by the Office of Student Aid Accounting, 327 West Main Street (804) 786-2301.

### **College Work-Study Program**

This joint federal and university program permits students to work for the university or a local non-profit agency. Students receiving this award are placed by the Financial Aid Office.

### **Fellowships, Assistantships, and Stipends**

The university awards fellowships, assistantships, or other stipends, including a variety of special health professions and nursing awards, to qualified students. These awards may be based on financial need or other selection criteria. For more information, inquiries should be made directly to the school or department in which the student intends to enroll.

### **Resident Assistants**

Part-time employment as part of the University residence education program is

available to graduate students admitted for full-time study. In general, 20 hours of service per week is required and enrollment in the course Methods for Resident Hall Assistants is expected. Compensation for employment is room and board, and reimbursement for limited telephone service. Interested persons should contact the residence education office directly. A personal interview will be required. Selection is usually completed by mid-March.

## **VETERAN SERVICES**

### **GI Bill Education Training**

Veterans who served on active duty for more than 180 continuous days, any part of which occurred after January 31, 1955, but before January 1, 1977, and who (a) were released under conditions other than dishonorable, (b) were discharged for a service-connected disability, or (c) continue on active duty are eligible under the Veterans Readjustment Benefits Act of 1966, as amended. Also eligible are those individuals who contracted with the Armed Forces and were enlisted in or assigned to a reserve unit prior to January 1, 1977, and who as a result of this enlistment or assignment, served on active duty for more than 180 days, any part of which began within 12 months after January 1, 1977 and who were discharged from active duty under conditions other than dishonorable.

### **Contributory Educational Assistance Program (For Veterans and Servicepersons Entering Active Duty on or after January 1, 1977)**

Veterans who served and servicepersons currently serving who (a) first entered active duty after December 31, 1976, and (b) were released under conditions other than dishonorable or continue on active duty but have completed their first obligated period of service (or six years of active duty, whichever comes first), and (c) have satisfactorily contributed to the program. (Satisfactory contribution consists of the monthly deduction of \$50 to \$75 from military pay, up to a maximum of \$2,700, for deposit in the special training fund.)

For further information please contact the Office of Veteran Services in the Flowers

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Building, 327 West Main Street, Richmond, VA 23284, (804) 786-2371.

### V.A. Education Benefits

To receive educational benefits, the veteran student must comply with the following procedures:

1. Veteran students must request certification each semester and each summer session from the Office of Veteran Services located at 327 West Main Street, room 102.
2. Veteran students withdrawing from VCU or dropping a course must notify the Office of Enrollment Services and the Office of Veteran Services.
3. Benefits will not be awarded for courses taken on an audit basis. Also, if the veteran student is repeating a course or taking a course with no credits, this must be brought to the attention of the Office of Veteran Services.
4. All courses taken must apply to a degree program. These courses may include elective courses and prerequisite courses as well as the required courses.
5. It is the veteran student's responsibility to see that the transcripts are evaluated to determine the number of transfer credits accepted by the university and to have this information submitted to the Office of Veteran Services for transmittal to the V.A. Regional Office.

### ADMISSIONS

The university is fully committed to equal opportunity in its graduate education programs and thus considers all applicants without regard to race, creed, sex, or national origin. Likewise, while Virginia Commonwealth University is a state-aided institution, applications are not limited to those who are residents of Virginia; however, priority is extended to applicants in some programs who are legal residents of the state. Many graduate courses are offered during the evening and weekend in order to serve the varied needs of diverse student groups.

### Admission Requirements

General admission requirements for grad-

uate study in the university are as follows: (1) graduation from an accredited college or university or its equivalent; (2) except in very unusual cases, a minimum undergraduate GPA of 2.7 on a 4.0 scale for at least the last two years of undergraduate work; (3) satisfactory scores from a standardized test commonly used and deemed appropriate for the particular discipline; (4) three letters of recommendation; (5) applicant's written statement of intent for pursuing graduate studies in a particular discipline; and (6) such additional requirements as may be established by individual programs and schools. These may include personal interviews, auditions, submission of a portfolio, or other materials.

### Types of Admissions

Students may be admitted to graduate studies under one of the following classifications:

1. Candidate or prospective candidate for degree: Students who meet all requirements for admission to a degree program, and who have been recommended by the department or school in which they propose to study, may be admitted as candidates or prospective candidates for a graduate degree.
2. Provisional status: Students who have not fully met the requirements of the program or school to which admission is sought may be granted admission with a provisional status as prospective candidates for a degree. Such students must have as their initial objective the removal of provisional conditions to achieve advancement to regular status. Provisional students who do not meet the necessary continuance standards (within a specified period of time) will be dropped from the degree program. Provisional admission is a probationary status; the requirements for advancement to regular status are specified in the provisional admission letter. Remedial courses do not count towards a graduate degree.
3. Non-degree status: Students without advanced degree objectives or students who wish to take graduate courses without formal admission to a degree

program are classified as “special students.” In courses where enrollment is limited, first priority is given to students admitted to the program, followed by other graduate degree-seeking students at VCU. Special students are not exempted from any prerequisites which may be specified for a course. In addition, successful completion of courses as a special student does not necessarily guarantee admission to the program. This status serves two groups of students:

- a. Those students interested only in enrolling in graduate courses for self-improvement.
- b. Those students interested primarily in certification credit without degree objectives either preceding or following a graduate degree program.

Students applying for regular candidate admission status after taking courses as non-degree seeking (special) students will not be allowed to apply more than six credits earned as special students toward the degree if accepted to a program. Satisfactory performance as non-degree seeking (special) students does not assure admission as regular degree-seeking students. There is no limit to the number of hours non-degree seeking (special) students can take in pursuing self-improvement.

### **Application**

Application forms and materials may be obtained from the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284. There is a \$10 non-refundable application fee which must accompany the application. This fee will not be credited toward tuition payment. Some schools require special fees, as indicated in individual sections of this bulletin.

An application cannot be given final consideration until all required credentials have been received. These include the following: (1) two official transcripts, or the equivalent, from each college or university previously attended, (2) three letters of recommendation, and (3) report of scores achieved on the Graduate Record Examination or other entrance examinations required by the par-

ticular department or school. The credentials above should be considered as minimal. Section II of this bulletin includes detailed information concerning admission requirements to specific programs and schools.

### **Entrance Examinations**

To supplement other evidence of preparation for graduate work, the Graduate Council has stated that all programs at VCU must consider in their admissions the scores from a standardized test commonly used and deemed appropriate for a given discipline. Common examinations used at VCU are the Graduate Record Examination (GRE), the Graduate Management Admissions Test (GMAT), the Law School Admissions Test (LSAT) and the Miller Analogies Test (MAT). These examinations will not replace other records of achievement as a basis for admission to the Graduate School, but they will offer additional evidence concerning the qualifications of students desiring to undertake graduate work.

### **Application Procedures**

Completed applications should be submitted to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284. Completed applications and supporting materials are reviewed by the faculty of the program and final notification of acceptance is made by the appropriate university office. Admission to a graduate program may be contingent upon the successful completion of undergraduate courses, degree, or other prerequisites that may be specified by the program or school. Remedial courses will not apply toward a graduate degree. Applications and supporting materials should be received within the deadlines specified throughout this bulletin. Late applications will be considered when possible, but may require provisional admission.

### **INTERNATIONAL STUDENTS**

The university subscribes to the intent and purpose of the Mutual Educational and Cultural Act, the regulations of which permit international students to become a part

of the university community until their stated degree objectives are met.

In order for the university to qualify with the United States government as a place of training for international students, the university is obligated to determine: (1) that applicants have the necessary ability and educational backgrounds to benefit from their experiences at this institution; (2) that their proficiency in English is sufficient to carry a full program of graduate study through submission of a satisfactory score on the Test of English as a Foreign Language (TOEFL); and (3) that they have all the funds necessary for their expenses for the entire period of their stay without resorting to employment while in the United States. The university normally has no financial resources for foreign students.

Foreign students who do not hold permanent resident visas cannot qualify as residents of Virginia and must pay the non-resident tuition charges. It is required that all tuition and other university fees be paid prior to, but no later than, the semester registration period in which students wish to enroll.

Once foreign nationals have been admitted, they are treated as any other student except for the immigration and naturalization rules and regulations which take precedence over university rules. The university cannot register foreign nationals until the Immigration and Naturalization Service officially gives its approval.

The university has a foreign student advisor who must meet with all foreign students upon their arrival at the university to prepare the necessary forms needed by foreign nationals to maintain correct visa status with the United States government.

Foreign students residing outside the United States should allow six months between application for admission and actual matriculation at the university.

### **MULTIPLE ADMISSIONS**

Students may not be admitted to degree-seeking status in more than one graduate program without petitioning and receiving written permission from the graduate committee of the school and the dean of the School of Graduate Studies.

### **ADMISSIONS APPEAL**

Applicants denied admission may petition in writing to the dean of the School of Graduate Studies for review of admissions decisions made by individual programs.

### **READMISSION AFTER ACADEMIC SUSPENSION**

Students suspended for academic reasons from any graduate program may not apply for readmission to any graduate program until two academic years have elapsed from the date of suspension.

### **UNDERGRADUATE STUDENTS**

VCU undergraduates may enroll in 500 level courses with approval of their advisors and consent of the program offering the courses. Highly qualified undergraduates approaching their last semester of study may apply for admission to a graduate program. If accepted, they may enroll in two graduate courses during the last semester of undergraduate study. Their total load should not exceed 16 hours of combined credit.

### **GENERAL ACADEMIC REGULATIONS**

Exceptions to graduate policies must be approved by the University Graduate Council.

### **Advising Program**

Students are responsible for the proper completion of their academic programs. They should be familiar with the university bulletin, including general academic regulations presented by individual schools and departments. The offices of the deans and department chairmen, in cooperation with the advisors and faculty, endeavor to follow each student's academic progress, and students are encouraged to seek counsel whenever there is a need. If advisors are unable to resolve problems satisfactorily, they will refer students for further advice as is deemed appropriate and necessary. In order to aid advising, students have the responsibility to keep a current mailing address on file with the Office of Enrollment Services, as well as the school and department in which they are enrolled.

Appeals for exceptions to graduate school

policies are to be made in writing by students to their graduate chairmen. chairmen will forward their recommendations along with copies of the appeals to the dean of the School of Graduate Studies who represents the University Graduate Council.

### **Student Load**

Student load is the total number of credits for which students are enrolled in any semester. Students are classified as “full-time” during any semester in which they are enrolled for nine or more credits. Students are classified as “part-time” during any semester in which they are enrolled for eight credits or less.

Degree-seeking students may be either a “full-time” or “part-time”.

The maximum number of credits for which students may enroll in any semester without special permission is 16. More than 16 credits is an overload. Permission to enroll for more than 16 credits will be granted upon the written recommendation of the department chairman for degree-seeking students and the written permission of the dean of the School of Graduate Studies.

### **Attendance and Continuance Policies**

Any person involved in any form of study at the university which involves use of university facilities, laboratories/studios, libraries, or who is supervised by or consults regularly with a faculty member concerning graduate work on a project, work of art, thesis or dissertation, must formally register for a course while engaged in these activities. A graduate student who has completed course requirements for a degree must register for a minimum of one semester hour each semester until the degree is awarded. An individual school may require more than one hour as part of its continuous registration policy.

Once admitted to a degree program, a graduate student is expected to enroll each semester. A student admitted to a program or track not requiring a project, work of art, thesis, or dissertation, must register for at least three semester hours each calendar year.

Students may request a leave of absence

from a program through written appeal to advisors. The advisor will forward the request with recommendation attached to the graduate dean who will respond for the university. Students who do not register for courses for more than one calendar year and who have not been granted a leave of absence, must reapply for admission to the university and to the graduate degree program.

Instructors are responsible for clearly informing the student in writing of the attendance requirement for each course and the consequences of poor attendance. A student must abide by the requirements as announced in each separate class even though the requirements may vary widely among courses.

### **Cancellation of Registration**

A cancellation of registration must be made prior to the first day of classes by notifying in writing the Office of Enrollment Services, Registration. Refunds will be issued in accordance with procedures set forth under Refunds in the Expenses and Financial Aid section of this bulletin.

### **Withdrawal from the University**

To officially withdraw from the university, a student must submit a complete Official Withdrawal Form to the Office of Enrollment Services before the end of the eighth week of classes. The Official Withdrawal Form is obtained from the Office of Enrollment Services, Registration, 901 West Franklin Street. Failure to complete this form may result in the assignment of failing grades in all or some of the courses.

The student’s permanent academic record will indicate a grade of “Withdrawn” (W) for all courses in which student was enrolled.

### **HEALTH-RELATED WITHDRAWALS**

While graduate students are expected to work toward completion of their degrees without interruption, health-related problems may necessitate withdrawal from the university.

1. Health-related withdrawals must be approved in writing by the dean of the



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School of Graduate Studies upon recommendation of the student's department chairman.

2. The student must furnish the department chairman a written request for permission to withdraw for health reasons together with a statement from a physician indicating the nature and severity of the condition, when the student should stop attending classes, and the estimated date of return to school.
3. In the event that the student's health problem poses a danger to the student, to patients, or to others with whom the student may come in contact and the student is unable or refuses to initiate steps to withdraw as stated in Item 2 above, administrative withdrawal of the student may be made by the dean of the School of Graduate Studies upon consultation with the appropriate faculty and a qualified physician.
4. If it is the decision of the dean to grant the withdrawal, the student will receive written notice stipulating conditions and time limits.
5. All tuition refunds or adjustments will be made in accord with university policy as stated in the *VCU Graduate Bulletin*.
6. Because curricular and course content changes may occur and a student's progress toward a degree may be adversely affected due to an extended absence, specific time periods may be imposed by individual schools with respect to the length of time allowed for absence from school. If there is a delay in return beyond the allotted time period without written consent of the dean of graduate studies, the student may petition for return with advanced standing. The petition will be processed according to regularly established procedures of the school.
7. Prior to return to school, the student must submit to the dean of the School of Graduate Studies a statement from a physician. This statement should document that the condition which necessitated the withdrawal has been corrected to a point where the student can successfully complete all curriculum requirements with reasonable accom-

modation, including classroom, laboratory, clinical, and field work experiences.

8. After the decision to readmit the student is made, the dean of graduate studies will inform the student in writing as to when class attendance may be resumed. The student will be required to meet curricular requirements as specified by the dean.

### Change of Discipline

Students wishing to change to a graduate discipline outside their present school should obtain appropriate new application forms from the Office of Enrollment Services. Generally they will have to submit new applications to the new program with all material required of new applicants. The dean of graduate studies will work with the administrators of the two disciplines to facilitate the admission process for students who are eligible.

### Transfer Credit

Generally, a maximum of one third of the hours required for a master's degree may be transferred from another VCU program or outside institution and applied toward that degree. A maximum of 25 percent of course work other than research applied toward all doctoral programs at VCU may be transferred from another VCU program or outside institution if not previously applied toward another degree. Acceptance of transfer credit is made at the school level. (Various schools may have more stringent requirements.)

All transfer work must be at the "A" or "B" grade level from an accredited institution or university. "Credit" or "pass" grades can be accepted only if approved by petitioning the School Graduate Advisory Committee or equivalent. Students must be in good standing both at Virginia Commonwealth University and at the institution from which the credits were earned. Some programs will not accept for transfer credits earned as a non-admitted special graduate student. The university will not accept for transfer course credit which does not apply to a graduate degree at the offering institution.

## CHANGE IN REGISTRATION

Once students have registered for classes, changes in that registration may be made only during the following periods:

### During Add/Drop Period

During the first week of classes students may either add or drop courses from their class schedules with approval of their advisors. Changes in registration will be allowed during the first week of classes according to the following procedure:

1. Complete the Add/Drop Form at the designated area and obtain a copy of the form for record purposes. Courses dropped during the add/drop period do not become part of the permanent academic record.
2. A change from "Audit" to "Credit" or "Credit" to "Audit" may be affected only during the add/drop period.

### After Add/Drop Period

After a course has met for the first week, that course may not be added by students. Courses may not be dropped after the eighth week of classes. See the calendar in this bulletin for exact dates. Courses may be dropped only in accordance with the following procedures:

1. After the first week of classes and until the end of the eighth week of classes, drop forms may be obtained only in the Office of Enrollment Services, Registration, and must be filed with that office before the drop is official. Students should retain a copy of the drop form for record purposes.
2. Courses dropped after the first week of classes and before the end of the eighth week of classes will become a part of the permanent academic record and will indicate a mark of "withdrawal" (W).
3. Students who do not complete drop forms when ceasing to attend a class will be assigned failing grades.

## Residence

For all Ph.D. programs, a period of residence of at least two consecutive semesters is required. Residency is defined as at least

nine credits per semester. The specific requirements for residency will be detailed by the individual programs.

## DEGREE REQUIREMENTS

The minimum course requirements, rules of admission to degree candidacy, language requirements, theses or dissertation requirements, comprehensive examinations, transfer of credits, and the like, are spelled out for each program in Section II of this bulletin. Many schools, programs, and departments print special brochures, student manuals, and program guides which may be requested from the appropriate dean or program director.

### Thesis/Dissertation Examinations

General regulations applying to thesis/dissertation committees and competency examinations are as follows:

A graduate advisory committee shall be appointed for each candidate for a master's degree from whom there is a requirement to produce a thesis or its equivalent in the form of a research project, performance, exhibit, or other production. The committee will coordinate and supervise the preparation of the thesis or its equivalent. The committee shall have a minimum of three faculty, one of whom should be from a department, program, or area of specialization other than that in which the candidate is enrolled. The chairman of the committee will be designated as the candidate's faculty advisor. Master's candidates for whom a thesis or its equivalent is not required will have an advisor, but not necessarily a committee, appointed by mechanisms determined by the department.

A graduate dissertation committee shall be appointed for each doctoral candidate. The committee will have a minimum of five faculty members, including a chairman, who will serve as the candidate's faculty advisor, and at least one but preferably two members from other than the discipline of the candidate.

Upon satisfactory completion of all program requirements for admission to candidacy, the doctoral matriculant will take written and/or oral preliminary candidacy examinations administered by the student's

major department or school. Successful completion of the examinations shall entitle the student to advance to doctoral degree candidacy status. The candidate is then allowed to proceed with the research and preparation of the dissertation and any other doctoral degree requirements designated by the granting department.

In the event of failure the student may be permitted to retake one time the preliminary candidacy examinations upon approval of the appropriate graduate program committee.

All research thesis and dissertation credits taken as part of the final project (thesis/dissertation/project) for awarding a graduate degree are to be graded each semester either "P" or "F". There is no limit to the number of these credits a student may take while pursuing completion of the degree as long as the student receives a grade of "P" for each credit. An individual department may terminate a student who does not progress satisfactorily as indicated by an "F" grade in research, thesis/dissertation course work.

### **Graduation Requirements**

Candidates for degrees are eligible for graduation upon completion of all requirements in effect at the time of the first registration, provided the students are continuously enrolled and provided the requirements are met within the time limit specified by the school or program. Students failing to satisfy the time requirement and who are readmitted to a program shall satisfy requirements in effect at the time of reacceptance into the degree program.

All degrees are conferred by the VCU Board of Visitors upon recommendation of the graduate faculty. Degrees are granted at the close of the semester or summer session in which the students complete their work. Degrees will not be granted unless all financial obligations have been resolved with the university's accounting office. No degrees will be conferred unless students make formal application for graduation. Application forms may be obtained from the Office of Enrollment Services, Academic Records. Some schools require additional forms

which must be cleared through the dean's office of the school in question.

Graduation applications must be submitted by students to their advisors or deans no later than the dates indicated in the calendars appearing in the front of this bulletin. Students should schedule conferences with their advisors well ahead of the deadline and should note that the application requires, in addition, the approval of the department chairman, or the school director of graduate studies, and the dean. Students may not use the same credits for two master's degrees.

A minimum of one-half of the required courses in a program and submitted for graduation will be those designated as exclusively for graduate students. The grade-point average for graduation must be based on all graduate courses attempted.

In addition to the specific requirements listed by departments, the following general requirements must be met for graduation.

Degree applicants:

1. Must apply for graduation by the dates specified in the University Calendar.
2. Must have achieved an overall grade point average of 3.0 ("B").
3. Will receive no graduate credit for courses in which a grade of less than "C" is given.
4. Must not have more than six semester hours of graduate courses with a grade of "C." Students who receive a grade of "C" or below on more than six semester hours will be reviewed for possible academic termination by their graduate program faculty.
5. Must show acceptable professional behavior to be retained in a graduate program.

The total number of semester credits required for graduation depends upon the major. Specific information may be found under the degree program descriptions.

### **Reapplying for Graduation**

Candidates who do not graduate at the end of the semester for which they have made application must reapply.

### **Time Limit for Completion of Degree Requirements**

The time limit for a graduate degree will

not extend beyond a period of seven years, which, at the master's level includes five years with two possible one-year extensions which may be granted, upon petition, by the dean of the School of Graduate Studies..

All work applied toward the degree, including that transferred from other institutions, shall not be older than seven years at the time the required didactic courses have been completed.

## GRADING SYSTEM

### Grade Reports

An official university grade report will be mailed each semester and at the end of the Summer Sessions to the student's mailing address as designated on the registration form. Students may change their official address by submitting a written request to the Office of the Enrollment Services, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

### Repeated Courses

Students receiving grades below 'B' shall repeat a course only upon the advice of their program directors. Both the original grade and the repeat grade shall be included in the calculation of the G.P.A.

### Grade Review Procedure

If a student thinks that a grade is inaccurate, the situation should be discussed with the faculty member. This will allow the faculty member to explain how the final grade was determined and, if an error is detected, to submit a change of grade.

If the student still thinks that the grade was unfairly assigned, a written appeal should be submitted to the department chairman. Upon receipt of the written appeal, the department chairman shall provide the student with a copy and explanation of the Grade Review Procedure, and shall ensure that the requirements of the Grade Review Procedure have been met. In cases concerning grades awarded for the fall semester, the written appeal must be submitted to the department chairman no later than 30 calendar days after the beginning of the following spring semester. In cases concerning grades awarded for the spring semester or summer sessions, the written appeal must be submit-

ted no later than 30 calendar days after the beginning of the following fall semester.

## GRADES

Work quality is measured by the four-point grade system with the following equivalents:

Grade Symbol and meaning	Grade Point Value per Semester Credit
A	4.0
B	3.0
C	2.0
D	1.0
F	0.0
I = Incomplete (temporary mark)	—
P = Pass	—
AU = Audit	—
W = Withdrawn	0.0
PR = Progress	—
CO = Continued	—
NC = Grade assigned for continuing enrollment	—
NG = Administrative grade assigned when no grade submitted by the instructor.	—
CR = Grade assigned for successful completion of credit by examination	—

The above scale is known as the four-point grading system since four is the highest grade point assigned. A grade of "C", except in designated courses, is considered to be unacceptable for graduate students.

The number of grade points earned is computed by multiplying the grade-point value for the letter grade by the number of semester credits for the course. As an example, a student receiving an "A" (i.e. 4 grade points) in a 3 credit course receives 12 grade points.

Grades noted by "—" for grade-point value are not considered in the computation of hours attempted, hours earned, grade points earned, or grade-point-average.

The grades of accepted transfer courses are not included in the computation of the VCU grade-point average. The minimum grade-point average required for graduation is listed in the individual school and program sections. Graduate students are not designated as special honors graduates on transcript or diploma upon completion of their program.

No graduate student shall be awarded degree credit for remedial work. Students advised to take any level course for remedial work shall be notified in writing that the

course credit shall not apply to the degree they are pursuing. Other bodies may rule later, should the student wish to apply the credit to some other degree. Credit applied toward one degree may not be applied toward any other degree at VCU.

**Grade of Audit (AU)**

Class size permitting, students may register for courses on an audit basis. Auditing a course means that students enroll in a course but do not receive academic credit. Students who register on an audit basis are subject to the attendance regulations of that class and may receive an administrative withdrawal for non-attendance. Students who register for audit may be subject to other course requirements at the discretion of the instructor. Audit students are charged the regular rate of tuition and fees.

**Grade of Continued (CO)**

The grade of "CO" may be assigned as an interim grade for those courses which run over several grade reporting periods. The "CO" indicates that the course is not expected to be completed in a single semester and that students must re-register for the course. Upon completion of the course a final grade will be assigned to the current semester and the previous "CO" grade(s) will remain. This grade may be assigned only in courses approved for such grading.

**Grade of Incomplete (I)**

If, because of circumstances beyond their control, students are unable to meet all the requirements of a course by the end of a semester, the mark of incomplete ("I") may be given. The award of a mark of "I" requires an understanding between instructor and student as to when and how the course will be completed. This understanding must be recorded on an Incomplete Grade Assignment Form which is submitted with the final course grade. The maximum time limit for submission of all course work necessary for removal of an "Incomplete" is the end of the last day of classes of the next semester following the semester (or summer session) in which the "Incomplete" was incurred. At that time an unremoved grade of "In-

complete" is automatically changed to a failing grade. An extension of the time limit is possible but must be approved, prior to the expiration date stated above, by the instructor and the dean of the school through which the course is offered. Written approval indicating the new time limit must be filed with the Office of Enrollment Services by the dean.

**Grade of Pass (P)**

This grade is awarded for certain courses to denote satisfactory completion of requirements. Courses assigned the grade of "P" will not be computed into the grade point average.

**Grade of Progress (PR)**

The grade of "Progress" may be used only in courses designated by the University Graduate Council. "PR" is assigned as an interim grade for courses which are not completed at the time final grades are to be submitted. A grade of "PR" will not be included in the calculation of the grade point average (GPA). The grade of "PR" must be removed within the time limit set for the degree.

**Grade of Withdrawn (W)**

The grade of "W" indicates that the student has officially withdrawn from a course or has been dropped for non-attendance. No student who has officially withdrawn from a course or has been dropped for non-attendance may attend subsequent meetings of the course.

**TRANSCRIPTS**

Copies of the permanent academic record or student record folders will not be released from the Office of Enrollment Services, Academic Records, except in very special instances and in conformity with legal requirements.

Official transcripts of a student's academic record will be issued only by the Office of Enrollment Services, Academic Records, upon written request of the student.

A charge of one dollar shall be made for each transcript.

Transcripts given directly to students do

not carry the university seal and are not official. The seal is attached when the transcript is mailed directly from the university to the receiving party.

## STUDENT SERVICES

### Graduate Student Society

With the encouragement and cooperation of the dean of the School of Graduate Studies and the dean of student affairs, a group of concerned graduate students formed, in the fall of 1980, a university Graduate Student Society. The society is committed to sensitizing the community of scholars to particular needs of graduate students such as housing, library privileges, health care, and intra-campus transportation. As a service to graduate students, the society sponsors social and academic events which serve to introduce graduate students to peers in other disciplines. Each year the society sponsors an orientation program for new graduate students. Current officers of the society are

Mark Katz, Department of Gerontology—Chairman and Graduate Council Representative

Paula Larivee, Department of Biology—Vice Chairman and Graduate Council Representative

Joan Offerle, Department of Psychology—Vice Chairman and Graduate Council Representative

Kim Lubman, School of Business—Treasurer

Terry Woodworth, Department of Microbiology—Newsletter Editor

Scott Brokenbrough, Department of Physiology—Graduate Council Representative

Roger Brown, School of Social Work—Member-at-Large

Susan Halloran, Department of Biochemistry—Member-at-Large

Students wishing further information should contact the director of student activities or any of the Graduate Student Society officers listed above.

### Housing

Requests for housing information should be addressed to the Coordinator of University Housing, 915 West Franklin Street, Vir-

ginia Commonwealth University, Richmond, VA 23284. Information about housing off campus may also be obtained through this office. In general, most graduate students live off campus because of VCU's limited amount of available student housing.

### Health Services and Insurance

The Student Health Service on the MCV Campus is supported by a health service fee required of all health sciences students. A program of prepared medical care is provided. The service is located on the first floor of South Hospital, 786-0206. The Student Health Service on the Academic Campus is supported by a health service fee required of all resident hall students. Other full-time students are invited to subscribe by paying the fee prior to the end of the first week of classes. The service is located at 711 West Main Street, Apartment 103.

The university is not responsible for accidents occurring to students in connection with class, laboratory, shop, field work, athletics, student activity, travel, or other activities. However, the university makes available to students an approved insurance program providing benefits at group rates. For a brochure, write to the Office of Student Accounting, 327 West Main Street, Richmond, VA 23284, (804) 786-2228.

### Counseling

University Counseling Services (UCS) provides a wide range of services that meet the personal, social, vocational, and educational needs of students. The goal of the UCS staff is to promote positive growth and self-understanding by students as well as to assist students who are experiencing stress or crisis in their daily living. Besides individual and group counseling, the UCS staff offers a number of programs and workshops designed to meet specific needs of students. Some typical offerings include career development, test and math anxiety management, and the teaching of communication skills. Services are free except for a small fee for occasional testing. University Counseling Services is available to both day and evening students. The hours for service at the academic campus office are 8 am to 8 pm

daily except Friday when UCS closes at 4:30 pm. The hours for service on the MCV Campus office are 8 am to 4:30 pm daily except on Tuesdays when the office is open until 8 pm. Semester break, spring break, and summer hours are 8 am to 4:30 pm Monday through Friday. All contacts and information are kept strictly confidential. Students can make an appointment on the Academic Campus by calling 257-1647 or visiting at 913 West Franklin Street. On the MCV Campus they can call 786-3964 or visit the office at 101 Bear Hall at Tenth and Leigh Streets.

### Placement Services

The primary function of the Office of Placement Services is to assist students of all disciplines and all degree and class levels to find suitable employment.

Counselors are available to alumni and regularly enrolled students for consultation about the formulation of career directions, specific career opportunities, and planning a job search. Through the Campus Interview program, representatives of business, industry, government, and education visit the campus each year to interview students and to discuss a diversity of employment opportunities. In addition, representatives of various universities schedule interviews with graduating students interested in pursuing advanced studies in graduate or professional disciplines. The Office of Placement Services also receives listings of full-time career opportunities from many organizations that do not participate in the Campus Interview Program.

The office maintains a career resource library containing career information, information about graduate study opportunities, and an employer resource library containing employer information and data. The office also provides job listings for currently enrolled students who are seeking part-time, temporary, or vacation employment.

All graduate students are urged strongly to register formally with the Office of Placement Services located at the Ginter House, 901 West Franklin Street, Richmond VA 23284, (804) 257-1645.

### Campus Gymnasiums

Academic Campus recreational facilities include two gymnasiums, swimming pool, weight room, gymnastics room, and dance room. For specific hours call 358-0259. The MCV Campus gymnasium includes a gymnasium for basketball and indoor tennis, recreational room, and weight room. Graduate students are also eligible for participation in 22 intramural sports activities on either campus. For specific information, call the Directors of Intramural Sports (Academic Campus: 257-1285; MCV Campus: 786-0437)

### Postal Service

The university operates two branches of the United States Postal Service. Mail destined for the Academic Campus should be addressed to the respective department, Virginia Commonwealth University, 901 West Franklin Street, Richmond, VA 23284. Mail destined for the MCV Campus should be addressed to the respective department Virginia Commonwealth University, MCV Station, PO Box Number, Richmond, VA 23298.

Window service is provided on the Academic Campus at 920 West Franklin Street Monday through Friday, 8 am to 4:30 pm and on the MCV Campus at 1000 East Marshall Street, from 8 am to 5 pm.

### Organizations

More than 145 student clubs and organizations exist on campus, reflecting the social, recreational, educational, political, or religious interests of the student body. Various types of organizations include fraternities and sororities, departmental professional and interest groups, service-oriented groups, and numerous special interest organizations representing a wide variety of activities and interests.

A list of registered student organizations, policies affecting these groups, and information and materials necessary to form new organizations are available in the Office of Student Activities.

### Student Identification Cards

Students should carry their graduate I.D.

cards with them at all times and be ready to show them to any authorized university official who might request their identification. Students may obtain or validate their I.D. cards during registration. The cards are required for numerous university functions, including borrowing books from the library. Any student who loses an I.D. card should apply to the Office of Enrollment Services, Registration, for a replacement. There will be a charge for replacement.

### Automobiles

Limited on-campus parking is available to students at a cost of \$.75 per day on a first-come first-serve basis. Students may apply for evening parking in university lots at the parking office at 920 West Franklin Street.

Extremely limited off-campus parking results in the recommendation that resident hall students should not attempt to bring their automobiles to Richmond. Unauthorized automobiles parked improperly on campus will be removed at the owner's risk and expense.

### RULES AND REGULATIONS

Each member of the university community has certain responsibilities, rights, and privileges. These are stated in some detail in the *Virginia Commonwealth University Rules and Procedures*, and all students are responsible for being familiar with provisions of this document. The Rules and Procedures are printed in the campus calendar and are also available at the Office of Student Life. This document also provides for the process whereby disciplinary action, including separation from the university, may be taken *against a member* of the university community as a result of behavior which is in violation of the prohibited conduct as stated in the Rules and Procedures. In addition to those standards of conduct described in the *Virginia Commonwealth University Rules and Procedures* and the Medical College of Virginia Honor Code, which applies to all students enrolled on the MCV Campus, a student enrolled at the university may be dismissed from the school in which enrolled for failure to meet prescribed academic program requirements.

### IDENTIFICATION OF SYMBOLS FOR COURSE LISTINGS

I	a course given in the first semester
II	a course given in the second semester
I,II	a course given in each semester
I and II	a course continued through two semesters
S	a course given in summer sessions

### COURSE INTERPRETATION

A single number listing for a course, such as Business 648, indicates that it is a one-semester course and may be offered each semester or only one semester each year.

Courses listed with a double number, such as Theatre 603, 604 and designated as semester courses, consist of two one-semester courses, either semester of which may be taken without the other.

Courses listed with a double number, such as Speech 601-602 and designated as a continuous course, consist of two one-semester courses, the first of which can be taken without the second, but the second of which cannot be taken without the successful completion of the first.

The university reserves the right to withdraw any course or program.

### COURSE NUMBERING

All schools and programs within this university use the following course numbering system.

- All course numbers consist of three digits (XXX).
- The first digit relates to the course level as follows:
  - 0XX **Noncredit Courses.** Such courses are offered to assist students to make up deficiencies in previous training or to improve certain basic skills prior to full-time enrollment in undergraduate credit courses.
  - 1XX **Undergraduate, Lower Level.** Courses with these numbers are offered primarily for undergraduate students and may not be used for graduate credit, although graduate students may be required to register for courses at this level to gain a



necessary foundation for other course work.

- c. 3XX **Undergraduate, Upper Level.** Courses offered for advanced undergraduates and usually constitute the major portion of specific program work leading to the baccalaureate degree.

A course designated with an asterisk (\*4XX) in the undergraduate bulletin indicates that the course has been approved by the offering department and the School of Graduate Studies as applicable to certain graduate degrees for select graduate students. Such students must have their department and dean's approval to register for a limited number of such courses.

- d. 5XX **Introductory Graduate Courses.** Graduate students enroll for credit in these courses through the normal graduate advising system. Departments may limit the number of 500 level courses applicable to a graduate degree program. Advanced undergraduates may enroll in these courses for credit with consent of the offering department. Credit is applicable toward only one degree.

**First Year, First Professional (Medicine and Dentistry).** Courses normally open to students enrolled in the M.D. and D.D.S. programs. Cer-

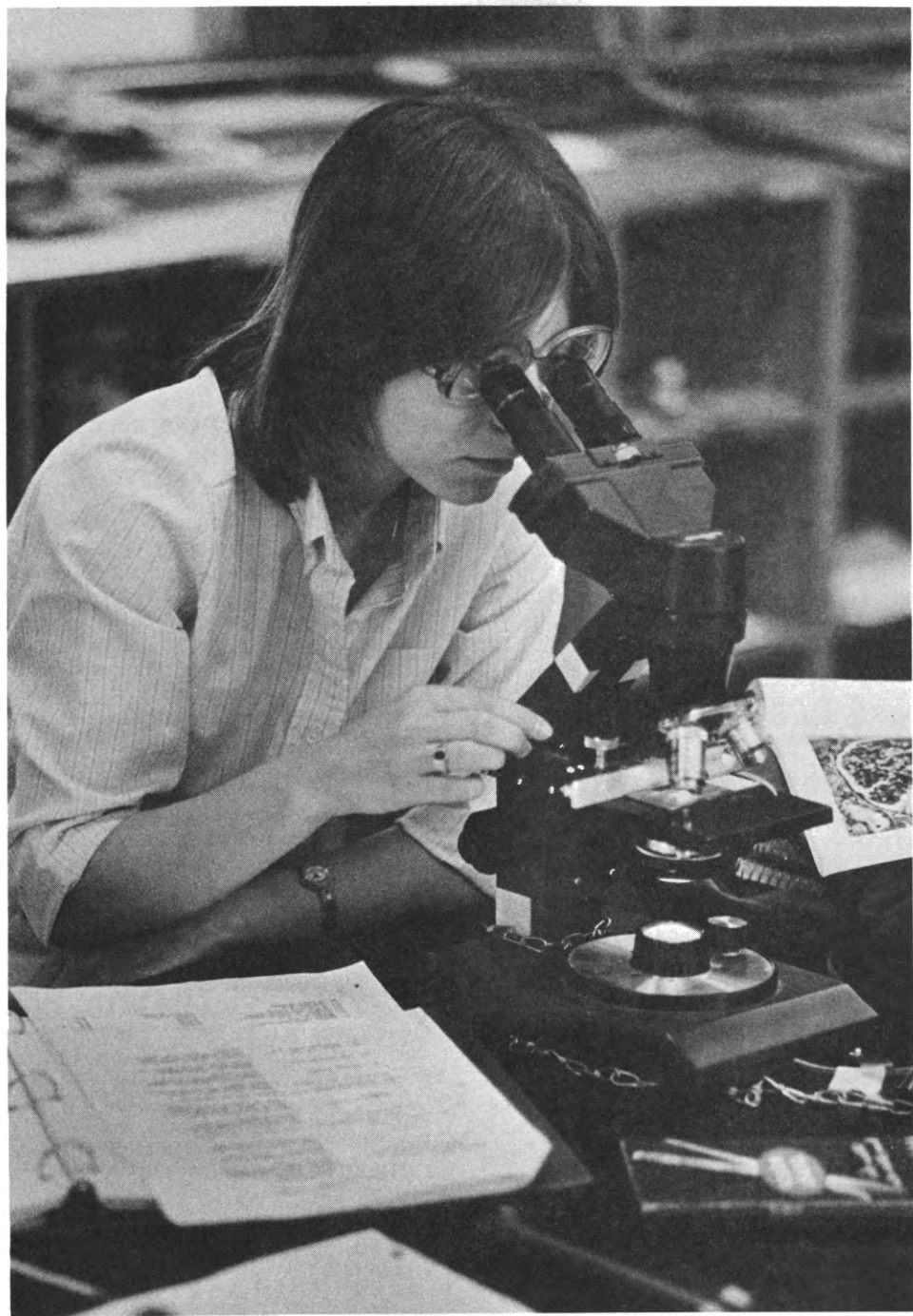
tain courses of this group may be designated by the department and approved by the Graduate Council for graduate credit.

**Fifth Year Professional Baccalaureate (Pharmacy).** Courses offered for pharmacy majors in the fifth year of the professional baccalaureate program. Certain of these courses may be designated by the department and approved by the Graduate Council for graduate credit.

- e. 6XX **Graduate Courses.** Graduate students enroll for credit in these courses through the normal graduate advising system.

7XX **Second Year, First Professional (Medicine, Dentistry and Pharmacy).** Courses normally open only to students enrolled in the M.D., D.D.S., and Pharm.D. programs. Certain courses of this group may be designated by the department and approved by the Graduate Council for graduate credit.

7XX **Third and Fourth Year, First Professional (Medicine and Dentistry).** Courses normally open only to students enrolled in the M.D. and D.D.S. programs. Certain courses of this group may be designated by the department and approved by the Graduate Council for graduate credit.



## PART II—College of Humanities and Sciences

### ADMINISTRATIVE OFFICERS

ELSKE v.P. SMITH, B.S., M.S., Ph.D.  
Dean  
WILLIAM A. GLYNN, B.S., M.S., Ph.D.  
Associate Dean  
JOHN H. BORGARD, A.B., M.A., Ph.D.  
Assistant Dean  
William A. Dobbie, B.A., M.A., M.S., Ed.D.  
Assistant Dean  
DAVID W. HARTMAN, B.A., M.A., Ph.D.  
Assistant Dean  
RAPHAEL M. OTTENBRITE, B.S., M.S., Ph.D.  
Coordinator of Graduate Studies

### SCHOOL OF MASS COMMUNICATIONS

George T. Crutchfield, B.S., M.S.  
Director

The College of Humanities and Sciences was organized in 1966 (then the School of Arts and Sciences) as a combination of several existing departments at Richmond Professional Institute: biology, chemistry, English, foreign languages, and history and political science. The Departments of Philosophy and Religious Studies, Mathematical Sciences, Physics, Psychology, Sociology and Anthropology, and Political Science were developed or added subsequently. Arts and Sciences began its first graduate programs in 1969 with the master's programs in psychology and sociology. Master's programs in biology and

mathematical sciences and a doctoral program in clinical psychology were added in 1971. A master's program in English/English education was begun in 1974 cooperatively between the Department of English and the Division of Teacher Education of the School of Education. The graduate program in chemistry, a cooperative venture between the Departments of Chemistry on the Academic Campus and Pharmaceutical Chemistry on the MCV Campus, was administratively transferred to the School of Arts and Sciences in 1974. A master's degree in mass communications was begun in 1976, and a doctoral program in social policy and social work was begun in 1978 cooperatively between the Department of Sociology and Anthropology and the School of Social Work.

In July 1981, the School of Arts and Sciences and the Department of Mass Communications were reorganized into the College of Humanities and Sciences and the School of Mass Communications.

### GRADUATE PROGRAMS IN THE COLLEGE OF HUMANITIES AND SCIENCES

The College of Humanities and Sciences offers the following graduate degree programs:

- M. A. in English/English Education  
(with the School of Education)
- M. S. in biology
- M. S. and Ph.D. in chemistry
- M. S. in mass communications  
(through the School of Mass  
Communications)
- M. S. in mathematical sciences
- M. S. and Ph.D. in psychology
- M. S. in sociology

In addition to these degree programs the College of Humanities and Sciences offers selected graduate courses in the Departments of Foreign Languages, History and Geography, Philosophy and Religious Studies, Physics, and Political Science, but does not offer graduate degree programs in these departments.

### REQUIREMENTS FOR ADMISSION

Persons seeking admission to any of the graduate programs in Humanities and Sciences (1) should have a bachelor's degree in the discipline in which application for graduate study is made or, in some programs as noted, a bachelor's degree in some other appropriate area; (2) should submit Graduate Record Examination scores (some departments require the scores on the advanced GRE within the discipline); and (3) should have submitted letters of recommendation which comment on the applicant's ability to undertake graduate study in the specified area.

All applications will be considered in terms of the specific requirements for admission noted in the description of the individual programs and of the applicants' ability to perform satisfactorily in the program for which they have applied. The judgment of that ability will be based on the supporting material submitted with the application. Some graduate programs must limit enrollment to a fixed number of the best-qualified applicants. Final action on admission is taken by the dean of the School of Graduate Studies in consultation with the College of Humanities and Sciences and the department concerned.

Persons applying for admission to any of the graduate programs listed above must follow the procedures for graduate admission listed in Part I of this bulletin. All

Humanities and Sciences disciplines require the Graduate Record Examination. Note that some also require the appropriate advanced section of this examination.

Applicants whose applications reach the university after July 1 for the fall semester and after November 15 for the spring semester may not have their applications processed in time for registration. The applicant whose application arrives late may be considered for admission as a special student, but there is no guarantee that the special student will be accepted later into a degree program. For special psychology deadlines see the Department of Psychology section of this bulletin.

### REGISTRATION

Although most students register for the first semester, which begins in August, they may arrange to begin graduate work during the spring semester except for the programs in clinical and counseling psychology.

### SCHOLARSHIPS, ASSISTANTSHIPS, AND FELLOWSHIPS

See departmental listings.

### THE STUDENT ADVISOR AND THE GRADUATE COMMITTEE

All departments offering graduate degrees in the College of Humanities and Sciences provide graduate students with advising either through a single advisor, the student's graduate committee, or a departmental graduate committee. For details students should consult the departmental director of graduate studies or the departmental chairman.

Students are required to submit in advance of the date when they expect to receive a degree a Graduation Application Form and a Degree Completion Form (Form 3.1) to the dean of the College of Humanities and Sciences. Deadlines for the submission of the Graduation Application Form are listed in the calendar at the front of this bulletin; deadlines for submission of the Degree Completion Form will be posted in the departments; for departmental deadlines the student should consult the departmental advisor. Individual departments may require additional forms.

**REQUIREMENTS FOR GRADUATE DEGREES**

1. Full-time graduate status shall consist of a minimum of nine and a maximum of 16 credits per semester. No more than 12 semester credits may be earned in a summer semester.
2. Graduate students are required to maintain an overall grade point average of 3.0 ("B"). (See item 4 below.) Students who do not maintain a "B" average during the course of their program may be dropped from the program at any time on recommendation of the appropriate department committee to the dean. If students earn less than a "B" on 20 percent or more of all attempted credits, their graduate status must be reviewed for continuation by the appropriate department committee.
3. At least half of the credits required in the students' program must be those designated as exclusively for graduate students; that is, those at the 600 level or above.
4. Graduate students must have earned an overall grade point average of 3.0 ("B") in order to receive a degree.

In addition to these requirements and those set forth in Part I of this bulletin, students must meet the requirements for specific degrees set forth in the departmental listings. Students should also consult the **Continuous Enrollment Policy** stated in Part I of this bulletin.

**School of Mass Communications**

**FACULTY**

- Arnold, Edmund C. *Professor* B.A., Michigan State University; media graphics.  
 Crutchfield, George T. *Professor and Director* M.S., Florida State University; communications theory.  
 Deppa, Joan *Assistant Professor* Ph.D., Michigan State University; economics of the media.  
 Fair, Charles A. *Associate Professor* Ph.D., Ohio University; writing and reporting.  
 Turpin, William H. *Professor* Ph.D., University of North Carolina; media management.  
 White, David Manning *Professor* Ph.D., University of Iowa; communications theory and popular culture.

The School of Mass Communications offers a program leading to a Master of Science degree in mass communications. The program offers candidates three tracks through which individualized programs may be developed appropriate to these professional goals:

Track One: preparation for a career as a middle- or upper-level executive of one of the mass media.

Track Two: advanced preparation, or updating of proficiency, as a professional journalist in reporting and writing of urban affairs.

Track Three: preparation for teachers of scholastic journalism or for those who act as scholastic advisers and sponsors.

The program, with the cooperation of appropriate departments and schools within the university, includes interdisciplinary study in business management, the social sciences, and education. Students are encouraged to take course work in other appropriate areas that relate specifically to their interests and to the university's concern for social problems.

**ADMISSION REQUIREMENTS**

The program is open to graduates of colleges and universities accredited by the appropriate regional accrediting agency. Although the type of undergraduate degree is not critical to selection, each of the three tracks has requirements that must be satisfied through approved undergraduate curricula or the equivalent.

In addition to the general requirements for admission to graduate programs in the School of Graduate Studies and the College of Humanities and Sciences (Part I of this bulletin), the following requirements represent the minimum acceptable standards for admission:

1. A baccalaureate degree in an area appropriate to the mass communications degree program, with a grade point average that indicates the applicant's ability to pursue graduate work successfully.
2. Acceptable scores on the Graduate Record Examination.
3. Three recommendations from persons who are qualified to give information

concerning the applicant's probable success in graduate school.

4. In the media management and the professional journalist tracks, at least one course in basic statistics. Applicants who do not meet this requirement may enroll in an undergraduate statistics course at VCU during the first semester.
5. In the media management and the professional journalist tracks, one year of economics is required. Applicants who do not meet this requirement may enroll in ECO 201-202 or 611.
6. At least three acceptable journalistic writing courses or MAC 501 and MAC 502 for admission to the professional track; one course in journalistic writing or MAC 501 for admission to the media management track. Evidence of professional competence may be substituted for these requirements.

An acceptable course in communications law is required for the media management and the professional journalist tracks, and a course in some aspect of media management is required for the management track. The law requirement may be fulfilled by enrollment in MAC 408 as an approved elective. Communications law will be included in several of the journalism education track courses. A candidate in the management track may fulfill the management requirement by enrollment in one of the school's management courses as an approved elective.

A letter detailing career goals and how the M.S. degree program in mass communications applies to those goals should accompany the application for admission.

In addition to these minimum acceptable standards for admission, other prerequisites may be required, depending on the background and goals of the individual candidate. Holders of non-journalism/mass communications baccalaureate degrees who are considering the program should contact the school's coordinator of graduate studies for additional information.

Provisional admission may be granted where deficiencies exist, in these areas:

1. Where an applicant does not have acceptable prerequisites. These should be

completed early in the program, ideally before a candidate starts taking 600 level program courses. Except in rare cases, the prerequisites *must* be completed by the time the student has completed nine hours of graduate credit.

2. Where an applicant has marginal GRE scores. Provisional, admission status will be reviewed by the Admissions Committee after the student has completed nine hours of graduate work.

After 12 hours of graduate work, the school Graduate Program Committee will consider admitting the student to candidacy, based on his/her performance. If a student is not approved for candidacy, the student may: (1) appeal to the Graduate Program Committee; (2) be advised of what further requirements could lead to acceptance; or (3) be dropped from the program. The school will request the dean to approve admission to candidacy or to support dropping the student.

## DEGREE REQUIREMENTS

The master's program requires a minimum of 33 to 35 hours beyond the baccalaureate degree. A minimum of 12 credits submitted for the graduate program must be in an area or areas other than mass communications. Two courses (6-8 credits) at the 400 level may be used as approved electives in a candidate's program.

The journalism education track is non-thesis. Candidates for this track would be required to complete a minimum of 20 credit hours in mass communications and 15 hours in education. This ratio would be altered for candidates who have an undergraduate degree or professional experience in journalism-mass communications.

Completion of a formal thesis will be an option in the media management and professional journalist tracks. Students in these tracks will be required to take 27 hours of course work in either option, including a minimum of 15 in mass communications and 12 in approved electives. The remaining six hours will be taken under this arrangement:

1. In the thesis option, a three-hour approved graduate elective *course is required*, plus a three-hour thesis course. Candidates

in this option will be tested covering course work and thesis defense.

2. In the non-thesis option, two additional three-hour approved graduate elective courses are required, followed by comprehensive written and oral examinations. Electives in any of the three tracks will be approved in the interest of the candidates' individual needs.

For all candidates, a three-member examination/thesis committee will be formed, usually in the first full-time semester or equivalent, with a chairman and one member from the School of Mass Communications and a third member from another appropriate department or school within the university. The committee chairman, in collaboration with the other members, will be responsible for advising students and will arrange for the written and oral examinations.

A maximum of six semester hours of graduate course work may be transferred, upon recommendation of the graduate committee.

Candidates are expected to indicate, at the beginning of their first semester either full-time or part-time, the track they intend to pursue.

Candidates in either the media management or professional journalist track must take the three program core requirements, usually in this order:

- MAC 611 Research Methods
- MAC 612 Mass Communications Theory
- MAC 613 Mass Media and Society

For the media management track, the candidate must also take:

- MAC 617 Media Analysis
- MAC 618 Economics of the Media
- BUS 607 Financial Accounting
- BUS 620 Financial Concepts of Management
- BUS 633 Issues in Labor Relations
- BUS 640 Management Theory and Practice

For the professional journalist track, the candidate must take, in addition to the three core courses, these mass communications courses:

- MAC 614 Media-Governmental Relations
- MAC 615 Urban Affairs Reporting

Candidates in the journalism education track must take these mass communications

courses, unless some courses have been waived because of undergraduate degree or professional experience:

- MAC 501 Journalistic Writing
- MAC 502 Editing the News
- MAC 519 Journalism in the Schools
- MAC 603 High School Yearbooks
- MAC 612 Mass Communications Theory
- MAC 613 Mass Media and Society
- MAC 604 Broadcasting in High Schools, may be taken as an elective.

Prospective high school teachers would have to take School of Education foundation courses, to be determined. Experienced teachers would take education courses from the following list:

- EDU 534 Photography in Instruction
- EDU 615 Curriculum Development
- ENG-EDU 636 Teaching of Communication
- ENG-EDU 643 Teaching Basic Writing Skills
- EDU 660 Research Methods in Education
- EDU 681 Investigations and Trends in Teaching
- EDU 700 Externship

A joint curriculum Advisory Committee established by the School of Mass Communications and the Division of Teacher Education of the School of Education maintains continuous communication between the two units on advising matters.

## GRADUATE COURSES IN MASS COMMUNICATIONS (MAC)

**501 Journalistic Writing** Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisite: school permission. A concentrated course in journalistic writing, including news, features, sports, columns, and editorials. Typing skill required. See School of Mass Communications for details.

**502 Editing the News.** Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisite: school permission. A concentrated course in editing for journalistic publications. Course will include copy editing, headline writing, publications page makeup and design, and editorial decision-making.

**519 Journalism in the Schools.** Semester course; 3 lecture hours. 3 credits. Study of school newspapers, magazines, and yearbooks; problems relating to staff selection, content of publications, copy layout, advertising, and business phases.

**523 Advanced Public Relations.** Semester course; 3 lecture hours. 3 credits. Prerequisites: MAC 323 or permis-

sion of instructor. Application of public relations theory and methods to case studies; specialized writing for the various media. Case analyses will include budgeting, researching issues and audiences, measuring survey results, and conducting campaigns and special events.

**603 Scholastic Yearbooks.** Semester course; 3 lecture hours. 3 credits. Prerequisite: school permission. The organization, staffing, content, illustration use, production techniques, typography, style, theme, advertising and business functions of a scholastic yearbook. The role of the yearbook adviser will be emphasized.

**604 Broadcasting in High Schools.** Semester course; 3 lecture hours. 3 credits. Prerequisite: school permission. An examination of radio and television as student media in high schools. Broadcasting principles, directing and producing high school broadcast programs, using basic broadcast equipment. Emphasis is upon the role of the adviser-teacher.

**611 Research Methods in Mass Communications.** Semester course; 3 lecture hours. 3 credits. Fundamentals of mass communications research techniques (content analysis, survey research, experimental design, historiography), including an overview of computer applications, statistics, theory development, and trends in the published literature.

**612 Mass Communications Theory.** Semester course; 3 seminar hours. 3 credits. Nature, function, and application of mass communications theory; structure, content, and effects of media systems; social and technological events accounted for by a generalized theory of mass communications.

**613 Mass Media and Society.** Semester course; 3 seminar hours. 3 credits. A study of the mass media of the United States, with special attention to their historical development and their impact on other institutions. Consideration of ethical and legal aspects of the media, and problems such as access, control, and accountability.

**614 Media-Governmental Relations.** Semester course; 3 seminar hours. 3 credits. Study of the interaction between the media and the government, and the role of the press in the governmental process as a disseminator, opinion-maker, and adversary.

**615 Urban Affairs Reporting.** Semester course; 3 seminar hours. 3 credits. In-depth examination of current urban problems such as air pollution, transportation, inner-city redevelopment, ghetto life, ecology, and metropolitan government.

**617 Media Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 611. An examination of a mass medium through design and execution of a research project using one of the traditional research techniques of the field. Students will have major and minor projects for systematic study of a medium.

**618 The Economics of the Media.** Semester course; 3 seminar hours. 3 credits. Prerequisites: MAC 611 and 617. Advanced work in media research, especially from an economic viewpoint. Students working on individual

basis will design and execute a major problem involving some economic aspect of a mass medium.

**692 Independent Study.** Semester course; 1-3 credits per semester. Prerequisite: permission of instructor and director of graduate studies. A maximum of three credits may be submitted toward the master's degree.

**699 Thesis.** 1-3 credits. May be repeated, but a maximum of three credits may be submitted toward the master's degree.

## Department of Biology

### FACULTY

Blem, Charles R. *Professor* Ph.D., University of Illinois; physiological ecology of terrestrial vertebrates, ornithology.

Brown, Russell V. *Professor* Ph.D., Iowa State University; vertebrate biochemical genetics, molecular pathology.

Chinnici, Joseph P. *Associate Professor* Ph.D., University of Virginia; genetics, genetic resistance to toxins.

Conway, Carolyn M. *Assistant Professor* Ph.D., University of Miami; developmental biology, teratology.

Farnham, Candace J. M. *Assistant Professor* Ph.D., University of Florida; cell biology, electron microscopy, cytochemistry.

Fine, Michael L. *Assistant Professor* Ph.D., University of Rhode Island; vertebrate neuroethology, fish communication.

Fisher, Robert W. *Associate Professor* Ph.D., Syracuse University; developmental biology, nitrogen fixation.

Gates, James E. *Associate Professor* Ph.D., University of Missouri, microbiology.

Giebel, Peter E. *Assistant Professor* Ph.D., University of North Carolina; cell physiology, medical mycology.

Jeffrey, Jackson E. *Associate Professor* Ph.D., Medical College of Virginia; protein polymorphism.

Johnson, Miles F. *Professor* Ph.D., University of Minnesota; angiosperm systematics.

Kimbrough, T. Daniel *Associate Professor* Ph.D., Auburn University; animal physiology, physiology of gastrointestinal serotonin.

Llewellyn, Gerald C. *Associate Professor* Ph.D., Purdue University; biotoxins and metals.

McCowen, Sara M. *Assistant Professor* Ph.D., Virginia Commonwealth University; microbial physiology and genetics.

Mills, Richard R. *Professor* Ph.D., Virginia Polytechnic Institute and State University; insect physiology.

Pagels, John F. *Associate Professor* Ph.D., Tulane University; mammalogy, vertebrate natural history.

Reynolds, John D. *Associate Professor* Ph.D., University of South Carolina; plant embryology.

Scanlan, Michael J. *Assistant Professor* Ph.D., University of Minnesota; plant community ecology.

Seidenberg, Arthur J. *Associate Professor* Ph.D., University of Illinois; parasitology, invertebrate ecology.



Smock, Leonard A. *Assistant Professor* Ph.D., University of North Carolina at Chapel Hill; aquatic ecology.

Stewart, Jennifer K. *Assistant Professor* Ph.D., Emory University; endocrine physiology.

Webb, Stanley R. *Associate Professor* Ph.D., Purdue University; virology.

Weinstein, Michael P. *Assistant Professor* Ph.D., Florida State University; estuarine ecology, fishes.

The Department of Biology offers programs leading to a Master of Science degree.

Areas of specialization are environmental biology, systematic biology, developmental biology, behavioral biology, cellular biology, molecular biology, aquatic biology, and comparative physiology.<sup>1</sup>

In addition to the graduate courses offered by the Department of Biology, a graduate student may enroll with departmental permission in graduate courses offered at the Medical College of Virginia Campus in the Departments of Anatomy, Biochemistry, Biophysics, Biostatistics, Human Genetics, Microbiology, Pharmacology, and Physiology.

### ADMISSION REQUIREMENTS

In addition to the general requirements for admission to graduate programs in the School of Graduate Studies (Part I of this bulletin) and the College of Humanities and Sciences, the following requirements of the Department of Biology represent the minimum acceptable standards for admission:

1. Thirty semester credits in undergraduate biology.
2. Two years of college chemistry, including organic chemistry.
3. One year of college mathematics.
4. One year of college physics.
5. Three letters of recommendation pertaining to the student's potential ability as a graduate student in biology.
6. Graduate Record Examination scores, including those of the advanced biology examination.

Provisional admission may be granted when deficiencies exist. These deficiencies

must be removed by the end of the first year of residence, at which time the student's application will be re-examined. Courses which are remedial or designed to remove deficiencies will not be accepted for credit toward the fulfillment of the course requirements for the master's degree.

### DEGREE REQUIREMENTS

Thesis Degree candidates are required to take a minimum of 32 semester hours of credit (half of which must be designated as courses exclusively for graduate students, that is, at the 600 level or above) which must include a minimum of two and a maximum of four credit hours in seminar, a minimum of six credit hours in research and thesis (Only six credit hours in research can be counted for the degree.), and a minimum of four lecture courses under three different faculty members, exclusive of research and thesis, seminar, and problems courses. All graduate students must take STA 543 at their earliest possible opportunity. STA 544 or its equivalent is strongly recommended. Students entering the program with a statistics background equivalent to STA 543 may have this requirement waived with the permission of the chairman of the Department of Biology. Problems courses may be used as elective but only six credit hours may apply toward the degree requirement and only three credit hours of any one course number may be taken. A maximum of six graduate credit hours of work taken at other institutions may be transferred if they meet departmental approval. Each student will be required to pass a final examination which will cover course content and research.

Continuous enrollment in the graduate program is required. Interruption in continuous enrollment for any reason will require that students reapply to the Department of Biology's Graduate Admissions Committee.

### GRADUATE MINOR IN BIOLOGY

A minimum of nine semester hours excluding seminar and limited to no more than one problems course (3 credits).

<sup>1</sup>Students interested in pursuing a Master of Science degree in human physiology should consult the Department of Physiology at the Medical College of Virginia Campus of Virginia Commonwealth University.

## GRADUATE COURSES IN BIOLOGY (BIO)

**507 Aquatic Microbiology.** Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisite: BIO 303 and BIO 307 or equivalents. This course will involve a practical approach to the methods used to culture, identify, and enumerate specific microorganisms which affect the cycling of elements in aquatic systems and those which affect or indicate water quality.

**514 Advanced Aquatic Ecology.** Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisite: BIO 307 or equivalent. Prerequisite or co-requisite: BIO 317 or equivalent. An advanced quantitative and analytical approach to the study of aquatic ecosystems, stressing current ecological theories and research with application to ecosystems modeling, systems analysis, fish, and aquatic resource management; laboratory experimentation, individual experimentation, individual student research, and presentations will be required.

**525 Advanced Functional Anatomy.** Semester course; 3 lecture and 4 laboratory hours. 5 credits. Prerequisite: BIO 205 or equivalent or permission of instructor. A study of the anatomy and kinesiology of the human body using prosected specimens and the dissected cadaver. Emphasis is placed upon the study of the extremities, particularly the hand. Intended primarily for students in the Department of Occupational Therapy.

**529 Advanced Functional Neuroanatomy.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: BIO 525 or permission of instructor. A study of the morphological and functional aspects of the central and peripheral nervous systems of the human body with particular emphasis on motor activity.

**539 Advanced Human Physiology.** Semester course; 4 lecture and 2 laboratory hours. 5 credits. Prerequisites: BIO 206, or equivalent, and permission of the instructor. Intended primarily for graduate students in the School of Nursing; may be taken by others with permission. This course will present physiology from a feedback control-systems point of view as a common theme for the various organ systems; it will then examine various pathophysiological situations as logical cause-and-effect relationships resulting from perturbations in the normal physiological homeostatic mechanisms. The weekly laboratory/demonstration periods will employ both "hands on" and demonstration types of exercises in order to reiterate and to strengthen points made in the lecture portion of the course.

**562 Comparative Morphology of Vascular Plants.** Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: six credits in botany or permission of instructor. A study of the relationships between the various taxa of the Tracheophytes, based upon examination and comparison of organ development.

**570,571 Selected Topics in Botany.** Semester courses; 3 lecture hours. 3,3 credits. Prerequisites: BIO 319 and 320 or permission of instructor. Selected topics and in-depth study in a specific area of botany. See Schedule of Classes for specific topic(s) and prerequisites.

**575 Physiology of the Cell.** Semester course; 3 lecture

and 3 laboratory hours. 4 credits. Prerequisites: CHE 301, 301L, 302, 302L, and at least one of the following biology courses: BIO 302, 303, 311, 375, or equivalents. A study of the physiological principles of cellular function in bacterial, plant, and animal cells. The lecture topics include gases, electrolytes, radiations, temperature, membrane transport, bioelectricity, and cell movements. The laboratory will stress investigative techniques.

**591 Topics in Biology.** Semester course; variable credit. Maximum 3 credits per semester. An in-depth study of a selected topic in biology. See Schedule of Classes for specific topic(s) and prerequisites.

**607-608 Topics in Genetics and Molecular Biology.** Semester courses; 1, 2, or 3 credits. Studies of particular areas in genetics and molecular biology. Concurrent sections may be offered.

**609, 610 Problems in Biology.** Semester courses; credits and hours to be arranged. A course designed to provide an opportunity for independent research in any area of biology outside the graduate student thesis area. Determination of the amount of credit and permission of instructor, advisor, and department chairman must be obtained prior to registration for this course.

**611-612 Topics in Systematics.** Semester courses; 3, 3 credits. Studies of particular areas in systematic biology. Concurrent sections may be offered.

**613-614 Topics in Environmental Biology.** Semester courses; 3, 3 credits. Studies of particular areas in environmental biology. Concurrent sections may be offered.

**615-616 Topics in Developmental and Behavioral Biology.** Semester courses; 3, 3 credits. Studies of particular areas in developmental and behavioral biology. Concurrent sections may be offered.

**617-618 Topics in Physiology.** Semester courses; 3, 3 credits. Studies of particular areas in physiology. Concurrent sections may be offered.

**619 Aquatic Entomology.** Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: BIO 309. A taxonomic and ecological study of aquatic insects (both freshwater and marine) with emphasis upon the immature stages, life histories, and distributional responses to different aquatic habitats.

**620 Mycotoxins.** Semester course; 3 lecture hours. Prerequisite: mycology or equivalent. A lecture course with some field and laboratory study involving fungal toxins, their biological and chemical properties, and their occurrence in feed and foods. Particular emphasis will be placed on the aflatoxins and their effects on plant and animal systems. Control measures will be discussed.

**624 Plant Systematics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 410 or a course in plant taxonomy. A lecture course in plant systematics. A study of experimental methods for solving taxonomic and systematic problems in the vascular plants.

**626 Physiological Ecology.** Semester course; 3 lecture and 4 laboratory hours. 4 credits. Prerequisite: BIO 317

## 32 College of Humanities and Sciences

or 414 or equivalent. Studies of the physiological adjustments and adaptations made by organisms in response to their environment.

**627 Animal Behavior.** Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisites: BIO 311 and 317 or permission of instructor. The study of physiological and environmental factors in the patterns and mechanisms of animal behavior.

**680 Algal Ecology.** Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisite: BIO 414/514 or permission of instructor. An ecological approach to the study of freshwater and marine algae. The identification, morphology, life cycles, and culture of major algae divisions. Review of recent literature and discussion of selected topics in algae and behavioral biology. Concurrent sections may be offered.

**682 Marine Biology.** Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 414/514 or permission of instructor. A lecture, field, and laboratory course concerned with the working principles of biological oceanography and estuarine ecology. A study of selected marine faunal and floral communities and their interactions, particularly as they influence man and the environment.

**690 Research Seminar.** Semester course; 1 credit. Independent reading and study in selected areas of biology leading to an oral presentation by students. May be repeated for credit.

**692 Independent Study.** Semester course; credits and hours to be arranged. A course designed to provide an opportunity for independent research in any area of biology outside the graduate student thesis area. Determination of the amount of credit and permission of instructor, advisor, and department chairman must be obtained prior to registration for this course.

**698 Thesis.** Semester course; credits and hours to be arranged. Independent research by students in areas of systematics, environmental, developmental, behavioral, cellular, and molecular biology, and comparative physiology.

## Department of Chemistry

### FACULTY

Bass, Robert G. *Professor* Ph.D., University of Virginia; organic chemistry.

Hawkrige, Fred M. *Professor* Ph.D., University of Kentucky; analytical chemistry.

Kobos, Robert K. *Assistant Professor* Ph.D., State University of New York at Buffalo; analytical chemistry, bioanalytical chemistry.

Melson, Gordon A. *Professor* Ph.D., Sheffield University (England); inorganic chemistry.

Ottenbrite, Raphael M. *Professor* Ph.D., University of Windsor; organic chemistry, polymer chemistry.

Shillady, Donald D. *Associate Professor* Ph.D., University of Virginia; physical chemistry, quantum chemistry.

Silvers, Stuart J. *Associate Professor* Ph.D., Yale University; physical chemistry, molecular spectroscopy.

Snedden, Albert T. *Assistant Professor* Ph.D., Brandeis University; organic chemistry, synthesis and natural products.

Stump, Billy L. *Professor* Ph.D., University of Tennessee; physical chemistry, polymer chemistry.

Terner, James *Assistant Professor* Ph.D., University of California at Los Angeles; physical chemistry, biophysics, resonance raman spectroscopy.

Topich, Joseph A. *Assistant Professor* Ph.D., Case Western Reserve University; inorganic chemistry, molybdenum coordination complexes.

Vallarino, Lidia M. *Professor* Ph.D., University of Milano, Italy; inorganic chemistry.

Winters, Lawrence J. *Professor and Chairman* Ph.D., Kansas University; organic chemistry.

The Department of Chemistry offers programs leading to the Master of Science and Doctor of Philosophy degrees. The programs provide opportunities for concentrated study in either analytical, inorganic, organic, or physical chemistry. A plan of study is worked out for each student to insure a sound basis for research. In keeping with the university's commitment as an urban institution, the department also offers part-time programs leading to these degrees.

### ADMISSION REQUIREMENTS

In addition to the general requirements for admission to graduate programs in the School of Graduate Studies (Part I of this bulletin) and the College of Humanities and Sciences, students are expected to have a bachelor's degree from an accredited college or university with 30 semester credits in chemistry. Admission on a special basis is possible for a student temporarily lacking this expected chemistry background. Acceptance is based upon undergraduate performance, satisfactory scores on the Graduate Record Examination and letters of recommendation.

Graduate students in the Department of Chemistry may receive financial support via teaching or research assistantships or fellowships. Admission forms for graduate study and applications for fellowships and assistantships are available on request by writing to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

### DEGREE REQUIREMENTS

Entering graduate students are required to

take proficiency examinations in analytical, inorganic, organic, and physical chemistry. These examinations are at the level of sound undergraduate courses and are offered preceding the start of the school's fall semester and after the end of the spring semester. These are used to evaluate the student's strengths and weaknesses, and the student's program is planned accordingly. The proficiency examinations may be repeated and must be completed by the end of the third semester of study.

Students preparing for the M.S. degree must demonstrate competency in analytical, inorganic, organic, and physical chemistry. New students who do well on the proficiency examinations may, by decision of the chemistry faculty, be considered to have demonstrated the necessary competency. The M.S. student is expected to earn a minimum of 18 semester credits in graduate courses in chemistry, not including credit for seminar, and 12 semester credits in research. The credit hours must include a course selected from each of the four areas: Analytical, Chemistry 532 Advanced Analytical Chemistry, Chemistry 630 Electroanalytical Chemistry; Inorganic, Chemistry 620 Advanced Inorganic Chemistry I, Chemistry 621 Advanced Inorganic Chemistry II; Organic, Chemistry 504 Advanced Organic Chemistry I, Chemistry 604 Advanced Organic Chemistry II, Chemistry 605 Physical Organic Chemistry, Chemistry 606 Methods of Structural Determination in Organic Chemistry; Physical, Chemistry 510 Atomic and Molecular Structure, Chemistry 610 Applied Quantum Chemistry, Chemistry 615 Chemical Thermodynamics, Chemistry 616 Chemical Kinetics.

Additional graduate courses to be taken will be determined in consultation with the faculty research advisor and the faculty of the Department of Chemistry. Graduate students may elect to take courses offered on the MCV Campus. Among the courses taught at MCV of interest to chemistry students are organic pharmaceutical chemistry, stereochemistry, heterocyclic chemistry, general biochemistry, circuit design and analysis, and X-ray crystallography. The School of Basic Sciences section of this bulletin should be consulted for other courses. Students are expected to participate

in the department's seminar program each semester and present at least two formal talks in the seminar program. An acceptable research thesis and a final oral examination on the thesis are required. Full-time students should complete these degree requirements in two years.

Students seeking the Ph.D. degree must demonstrate competency in analytical, inorganic, organic, and physical chemistry. The students who do exceptionally well in the proficiency examinations may, by decision of the chemistry faculty, be considered to have demonstrated the necessary competency. The proficiency examinations may be repeated and must be completed by the end of the second year of study.

Students preparing for the Ph.D. degree must have a minimum of 24 credits in graduate courses not including credit for seminar or research. The credits must include a course selected from each of the four areas listed above. Other graduate courses to be taken will be determined in consultation with the faculty research advisor and the faculty of the Department of Chemistry. Students are expected to participate in the department's seminar program and present at least three formal talks in the seminar program. In addition to course work and seminar, the Ph.D. requires a minimum of 30 credits in CHE 697 (directed research), and the total of all credits must be at least 60. A reading knowledge of an approved foreign language is also required.

The student is required to complete a written and oral comprehensive examination in his major field to become a Ph.D. candidate. The oral comprehensive examination includes the presentation and defense of the proposed dissertation research. The student must conduct a substantial original investigation under the supervision of his advisor and prepare a dissertation reporting the results of the research and analyzing its significance in relation to existing scientific knowledge. An oral defense of the dissertation will be held. Full-time students should complete the degree requirements in about four years.

Additional information and a more detailed description of the graduate program may be obtained from the Department of Chemistry.

**GRADUATE COURSES IN CHEMISTRY (CHE)**

**504 Advanced Organic Chemistry I.** Semester course; 3 lecture hours. 3 credits. An integrated study of certain free radical and ionic reaction mechanisms with emphasis on electronic effects and stereochemical consequences of these reactions. Classical vs. nonclassical carbonium ions and the Hammett equation are discussed.

**510 Atomic and Molecular Structure.** Semester course; 3 lecture hours. 3 credits. Qualitative and quantum mechanical treatment of atoms and molecules. Approximate and semiempirical calculations as well as experimental methods for the determination of molecular structure are discussed.

**532 Advanced Analytical Chemistry.** Semester course; 3 lecture hours. 3 credits. Theories and principles involved in analytical techniques such as spectrometry, electrochemical analysis, titrations in nonaqueous solvents, and chromatography.

**550 Introduction to Polymer Chemistry.** Semester course; 3 lecture hours. 3 credits. A study of macromolecular compounds which includes: classifications, methods of preparation, mechanisms, stereochemistry, and applications. Physical characterizations, such as structure and property correlations, kinetics, thermodynamics, and molecular weight determinations are emphasized.

**591 Topics in Chemistry.** Semester course; variable credit, 1-6 credits per semester; maximum total of nine credits for all topics courses. An in-depth study of a selected topic in chemistry. See Schedule of Classes for specific topic(s) and prerequisites.

**604 Advanced Organic Chemistry II.** Semester course; 3 lecture hours. 3 credits. An integrated study of the mechanism and stereochemistry of organic reactions and their application to organic synthesis. Emphasis is placed on addition and condensation reactions, carbanions, carbenes, and other reactive intermediates.

**605 Physical Organic Chemistry.** Semester course; 3 lecture hours. 3 credits. The theory and application of physical methods in the study of the behavior of organic compounds. Topics covered include homogeneous kinetics, equilibria, acid-base catalysis, and the quantitative correlation of structure and reactivity as they apply to the understanding of the mechanisms of organic reactions.

**606 Methods of Structural Determination in Organic Chemistry.** Semester course; 3 lecture hours. 3 credits. Lecture and laboratory problems illustrating the application of instrumental analytical techniques for the solving of organic structural problems.

**607 Organic Synthesis of Natural Products.** Semester course; 3 lecture hours. 3 credits. Prerequisite: CHE 604 or permission of instructor. A study of the criteria for, applications of reactions to, and design of, complex organic syntheses, including functional group protection and control of stereochemistry.

**610 Applied Quantum Chemistry.** Semester course; 3 lecture hours. 3 credits. Prerequisite: CHE 410 or 510 (Atomic and Molecular Structure). Quantum mechanics applied to chemical problems in UV, IR, and NMR spectroscopy and the electronic structures of atoms and molecules; development of the self-consistent field equations.

**611 Molecular Spectroscopy.** Semester course; 3 lecture hours. 3 credits. Prerequisite: CHE 410. This course treats the interaction of radiation and molecules; the rotation, vibration, and electronic motion of molecules; molecular spectra and recent developments in laser spectroscopy.

**615 Chemical Thermodynamics.** Semester course; 3 lecture hours. 3 credits. The study of the laws of thermodynamics and their application to pure phases, solutions, and changes in state.

**616 Chemical Kinetics.** Semester course; 3 lecture hours. 3 credits. A study of the rates and mechanisms of chemical reactions, reaction rate theory, kinetic theory of gases, and theories of catalysis.

**620 Advanced Inorganic Chemistry I.** Semester course; 3 lecture hours; 3 credits. The application of modern physical techniques for the determination of the symmetry, molecular structure, bonding and reaction mechanisms of inorganic compounds.

**621 Advanced Inorganic Chemistry II.** Semester course; 3 lecture hours. 3 credits. Prerequisite: CHE 620 or permission of instructor. A coordinated study of synthetic methods, stereochemistry, and reaction mechanisms, including catalysis of inorganic, organometallic, and bioinorganic compounds.

**630 Electroanalytical Chemistry.** Semester course; 3 lecture hours. 3 credits. Prerequisite: CHE 532 or permission of instructor. The theory, application, and instrumentation of current techniques in electroanalytical chemistry is presented.

**690 Research Seminar.** Semester course; 1 credit. In addition to reports that are presented by students, staff, and visiting lecturers, current problems and developments in chemistry are discussed. May be repeated for credit.

**691 Special Topics.** Semester course; 1-4 credits. Prerequisite: approval of department chairman. Lecture, tutorial studies, and/or library assignments in selected areas of advanced study not available in other courses or as part of the research training. May be repeated for credit.

**697 Directed Research.** Semester course; 1-12 credits. Research leading to the M.S. and Ph.D. degree. May be repeated for credit.

## Department of English and Division of Teacher Education

For information on the master's program in the Department of English and the Division

of Teacher Education see Interdisciplinary and Cooperatively Offered Graduate Degrees in the index.

## Mass Communications

See School of Mass Communications on page 26.

## Department of Mathematical Sciences

### FACULTY

Allan, Richard E. *Associate Professor* Ph.D., George Peabody College; numerical analysis.

Ames, James E., IV *Assistant Professor* Ph.D., Duke University; computer science.

Bauer, David F. *Associate Professor* Ph.D., University of Connecticut; probability and statistics.

Berglund, John F. *Associate Professor* Ph.D., Tulane University; topological algebra and harmonic analysis.

Deveney, James K. *Associate Professor* Ph.D., Florida State University; commutative algebra.

Farley, Reuben W. *Professor* Ph.D., University of Tennessee; topological algebra.

Glynn, William A. *Professor* Ph.D., Oklahoma State University; topology.

Ha, Cu D. *Assistant Professor* Ph.D., University of Wisconsin, Madison; operations research.

Haver, William E. *Associate Professor and Chairman* Ph.D., State University of New York, Binghamton; geometric topology.

Henry, Neil W. *Associate Professor* (Sociology and Anthropology)<sup>2</sup> Ph.D., Columbia University; multivariate statistics and mathematical social sciences.

Jacqmin, Nancy E. *Assistant Professor* Ph.D., Stanford University; operations research.

Koutrouvelis, Ioannis A. *Assistant Professor* Ph.D., State University of New York at Buffalo; probability and statistics.

Lohr, C. Michael *Associate Professor* Ed.D., University of Virginia; mathematical education.

Mandeli, John P. *Assistant Professor* Ph.D., Cornell University; experimental design and applied statistics.

Minton, Paul D. *Professor* (Biostatistics; Director, Institute of Statistics)<sup>2</sup> Ph.D., North Carolina State University; distribution theory and applications in medical research.

Morris, J. Richard *Associate Professor* Ph.D., University of Alabama; topology.

Parker, Lorraine *Assistant Professor* Ph.D., University of Wales, Great Britain; computer science.

Rabung, John R. *Associate Professor* Ph.D., Washington State University; number theory.

Raychowdhury, Pratip N. *Professor* Ph.D., George Washington University; applied mathematics and mathematical physics.

Schedler, David A. *Associate Professor* Ph.D., George Washington University; topology.

Schmeelk, John F. *Assistant Professor* Ph.D., George Washington University; applied mathematics.

Scott, Larry *Assistant Professor* Ph.D., Kansas State University; applied statistics.

Seidel, Steven R. *Assistant Professor* Ph.D., University of Iowa; computer science.

Tucker, John R. *Assistant Professor* Ph.D., George Washington University; applied mathematics.

Wood, James A. *Associate Professor* Ph.D., University of Virginia; functional analysis.

The Department of Mathematical Sciences offers a program leading to a Master of Science degree with several possible areas of specialization including: applied mathematics, computer science, mathematics, statistics, statistical computing, applied computational mathematics, discrete structures, and others.

The department also offers the Master of Education in mathematics education and the Mathematical Sciences Certificate in computer science.

### ADMISSION REQUIREMENTS

In addition to the general requirements for admission to graduate programs in the School of Graduate Studies (Part I of this bulletin) and the College of Humanities and Sciences, the following represent the minimum acceptable standards for admission:

1. Thirty semester credits in undergraduate mathematical sciences or related areas of which at least 18 semester credits must represent upper-level courses.
2. Three letters of recommendation pertaining to the student's potential ability as a graduate student in mathematical sciences.
3. Graduate Record Examination scores, including those of the advanced examination in one of the mathematical sciences.

Provisional admission may be granted when deficiencies exist. These deficiencies must be removed by the end of the first year of residence, or its part-time equivalent, at which time the student's application will be re-examined. Courses which are remedial or

<sup>2</sup>Department in parentheses indicates joint appointment.

designed to remove deficiencies will not be accepted for credit toward the fulfillment of the course requirements for the master's degree.

### DEGREE REQUIREMENTS

The program offers maximum flexibility by allowing each student, in consultation with his or her graduate committee, to design a course of study which will best develop competence in those areas most relevant to his/her scholarly and professional objectives. This program consists of a minimum of 30 semester credits of which at least half must be at the 600 level. Each student will select either the thesis or non-thesis option. The student who elects the non-thesis option must pass a written examination and may be asked to take an oral examination.

### PROGRAM LEADING TO THE MASTER OF SCIENCE DEGREE IN MATHEMATICAL SCIENCES

#### Non-Thesis Option

	<i>Credits</i>
Mathematical Sciences . . . . .	21
(Including both semesters of a 600 level sequence)	
Mathematical Sciences of Allied Field <sup>3</sup> . . . . .	6-9
Research Seminar Credits <sup>4</sup> . . . . .	2-4
Directed Research Credits <sup>4</sup> . . . . .	0-2
	30

#### Thesis Option

Mathematical Sciences . . . . .	18
(Including both semesters of a 600-level sequence)	
Mathematical Sciences or Allied Field <sup>3</sup> . . . . .	6-9
Thesis Credits . . . . .	3-6
Seminar Credits <sup>4</sup> . . . . .	1-3
Specialized Study Credits <sup>4</sup> . . . . .	0-2
	30

**Other Postbaccalaureate Programs in Mathematical Sciences.** For students who hold bachelor's degrees in appropriate areas, the Department of Mathematical Sciences offers the following alternative postbaccalaureate degree programs.

<sup>3</sup>To be approved by the department's Graduate Affairs Committee.

<sup>4</sup>The student who chooses the non-thesis option may receive a *maximum* total of four credits for 690 Research Seminar and 697 Directed Research. The student who chooses the thesis option usually will not take directed research, but is not prohibited from doing so. In the thesis option a total of seven credits for thesis, research seminar, and directed research is the maximum credit permitted.

**Master of Education in Mathematics Education.** For information about the graduate program in mathematics education, see the School of Education section of this bulletin.

**Mathematical Sciences Certificate in Computer Science.** The Department of Mathematical Sciences offers a certification program in computer science for students who have received bachelor's degrees in other areas and wish to undertake a study of computer science. This program, while placing major concentration on computer science, also requires the student to gain exposure to other mathematical sciences. Students who gain certification through the program are well suited for many professional opportunities available in the scientific community and with government agencies. Further, the certification process is designed to allow interested students to prepare for graduate study in computer science.

Students seeking more information or wishing to enter the certificate program should contact the chairman of the Department of Mathematical Sciences (804) 257-1319.

### GRADUATE COURSES IN MATHEMATICS (MAT)

**505 Modern Geometry.** Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 307. Co-requisite: MAT 310. Topics in Euclidean, projective, and non-Euclidean geometries from a modern viewpoint.

**507-508 Analysis I, II.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisites: MAT 211, 307, and 310 or permission of instructor. Theoretical aspects of calculus, sequences, limits, continuity, infinite series, series of functions, integration, differential geometry.

**509-510 General Topology I, II.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: MAT 211. Foundations and fundamental concepts of point-set topology. Topological spaces, convergence, connected sets, compactness, product spaces, quotient spaces, function spaces, separation properties, metrization theorems, mappings, compactification.

**511 Applied Linear Algebra.** Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 301 and 310. The algebra of matrices, the theory of finite dimensional vector spaces, and the basic results concerning eigenvectors and eigenvalues, with particular attention to applications.

**512 Applied Complex Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 507 or 517. The algebra and geometry of complex number, analytic functions, integration, series, contour integration,

potential theory, techniques of solving various partial differential equations; applications to electromagnetism and solid mechanics.

**621 Boundary Value Problems.** Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 517-518. Survey of boundary value problems, approximate analytic solutions such as Galerkin's method and the Ritz method; application to heat transfer, fluid mechanics, and potential theory.

**631 Topics in Algebra.** semester course; 3 lecture hours. 3 credits. May be taken twice for credit. Prerequisites: MAT 601, 602, or permission of instructor. A detailed study of one or more areas of modern algebra. Possible areas include: finite groups, infinite abelian groups, semigroups, non-commutative rings, and transcendental field extensions.

**690 Research Seminar.** Semester course; 1 credit. Prerequisite: graduate standing. Discussions of topics in the mathematical sciences as stimulated by independent reading in selected areas and at least one oral presentation by each student. May be taken more than once for credit.

**697 Directed Research.** Semester course; 1 credit. Prerequisite: graduate standing. Supervised individual research and study in an area not covered in the present curriculum or in one which significantly extends present coverage. Research culminates with an oral presentation to the department and submission of a written version of this presentation to the supervising faculty member. May be taken more than once for credit.

**698-699 Thesis.** Continuous course; 1-3 credits per course. Credits and hours to be arranged. Prerequisite: graduate standing. Independent research culminating in the writing of the required thesis as described.

## GRADUATE COURSES IN COMPUTER SCIENCE (CSC)

**500 Computer Methods for Research.** Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: one year of college mathematics. Introduction to programming in several computer languages including FORTRAN IV. Survey of applications packages such as SAS and SPSS. Each student's assignment will include applications programs in his major field. Not applicable toward M.S. degree in mathematical sciences.

**501 Data Structures.** Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 202, 301, and 311. Basic concepts of data, list structures, strings, and arrays. Representation of trees and graphs. Storage systems and methods of storage allocation and collection. Multi-linked structures. Symbol tables, search techniques, and sorting techniques. Formal specification of data structures.

**503 Programming Languages.** Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 202, 301, and 311. Formal definition of programming languages including specification of syntax and semantics. Precedence, infix, prefix, and postfix notation. Global properties of algorithmic languages. Sub-routines, co-

rutines, and tasks. List processing, string manipulation, data description, and simulation languages. Run-time representation of program and data structures.

**504 Compiler Construction.** Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 501 and 503. Review of program language structures, translation, loading, execution, and storage allocation. Compilation of simple expressions and statements. Organization of a compiler. Use of compiler writing languages and bootstrapping.

**505 Computer Organization.** Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 311 and 312. Basic digital circuits. Boolean algebra and combinational logic, data representation and transfer, and digital arithmetic. Digital storage and accessing, control function, input-output facilities, system organization, and reliability. Description and simulation techniques. Features needed for multiprogramming, multiprocessing, and real time systems. Other advanced topics and alternate organizations.

**511 Computer Graphics.** Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 302 or 401, or permission of instructor. Mathematical techniques for picture development and transformation, curve and surface approximation and projections, graphical languages and data structures and their implementation, graphical systems (hardware and software).

**554 Applications of Computers in the Teaching of Mathematics I.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: a college calculus course or permission of instructor. Introduction to computers and programming using the language, BASIC. Applications of the computer in algebra, geometry, trigonometry, statistics, and calculus. Not applicable toward M.S. degree in mathematical sciences.

**555 Applications of Computers in the Teaching of Mathematics II.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: CSC 554. Continuing study of computer applications in the BASIC language to typical mathematical problems arising in practical settings. The most commonly encountered difficulties in solving scientific problems are discussed. Not applicable toward M.S. degree in mathematical sciences.

**601 Systems Programming.** Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 501 and 505. A study of concepts and techniques of systems programming. Hardware concepts and technologies. I/O programming and interrupt processing.

**602 Operating Systems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: CSC 601. A study of modern operating systems. Resource management including: processor management, memory management, device management, and information management. Multiprogramming, multiprocessing, timesharing, real time, and related concepts. System performance evaluation. Security.

**615 Topics in Numerical Analysis.** Semester course; 3 lecture hours. 3 credits. May be taken *twice for credit*. Prerequisites: MAT 515-516, CSC 201, and permission of instructor. Special topics in computer methods



analytic continuation, conformal mapping, with particular attention to applications.

**515 Numerical Analysis I.** Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 301 and CSC 201. Solution of equations, interpolation and approximations, numerical differentiation and integration, and numerical solution of initial value problems in ordinary differential equations. Selected algorithms will be programmed for solution on computers.

**516 Numerical Analysis II.** Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 310 and 515. The solution of linear systems by direct and iterative methods, matrix inversion, the evaluation of determinants, and the calculation of eigenvalues and eigenvectors of matrices. Application to boundary value problems in ordinary differential equations. Introduction to the numerical solution of partial differential equations. Selected algorithms will be programmed for solution on computers.

**517-518 Methods of Applied Mathematics.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: MAT 301. Vector analysis, matrices, complex analysis, special functions, Legendre and Hermite polynomials. Fourier series, Laplace transforms, integral equation, partial differential equations, boundary-value, and initial-value problems.

**520 Game Theory and Linear Programming.** Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 310. The mathematical basis of game theory and linear programming. Matrix games, linear inequalities and convexity, the minimax theorems in linear programming, computational methods, and applications.

**521 Introduction to Algebraic Number Theory.** Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 401. Introduction to algebraic numbers and algebraic number fields with emphasis on quadratic and cyclotomic fields. Units, primes, unique factorization.

**525 Introduction to Combinatorial Mathematics.** Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 211, 310, or permission of instructor. Introduction to the problems and methods of solution in the enumeration, existence, and construction of some discrete mathematical structures. Discussion of generating functions, recurrence relations, Ramsey's theorem, matching theory, combinatorial designs, latin squares, and linear coding theory.

**527-528 Mathematical Foundations of Operation Research.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisites: CSC 201, MAT 309, 310 (second semester), or equivalent; STA 403 strongly recommended for second semester. Introduction to the mathematical foundations of deterministic and stochastic operations research, including the simplex method for linear programming, nonlinear optimization, dynamic programming, and some stochastic models. Real world applications will be discussed throughout.

**530 The Development of Modern Mathematics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: 17 credits at the 200 level or above in the mathematical sciences. A descriptive survey of modern mathematics:

its development, rationale, and influence. A concise review of the history of mathematics will be followed by the study of several major ideas relevant to present-day mathematics. Subjects will vary, but will usually include the following: the advent of pure abstraction; difficulties in the logical foundations of mathematics; the impact of mathematics on twentieth century science; and the computer revolution.

**601-602 Abstract Algebra I, II.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: MAT 401. A study of algebraic structures (including groups, rings, and fields), Galois theory, homomorphisms, subalgebras, direct products, direct decompositions, subdirect decompositions, free algebras, varieties of algebras.

**603-604 Advanced Probability Theory.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisites: MAT 508 and STA 503 or 513 or BIS 545. A measure-theoretic approach to the theory of probability. Borel sets, probability measures, and random variables. Special topics include characteristic functions, modes of convergence, and elements of stochastic processes.

**607-608 Real Analysis I, II.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: MAT 508. The real number system, Lebesgue measure, functions of bounded variation, differentiation and integration, the  $L$  spaces, introduction to Banach and Hilbert spaces, general measure theory, and the Lebesgue-Stieltjes integral.

**609 Topics in Topology.** Semester course; 3 lecture hours. 3 credits. May be taken twice for credit. Prerequisites: MAT 509-510 and permission of instructor. Special topics in topology selected from such subjects as advanced general topology, algebraic topology, topological algebra, and differential topology.

**611-612 Complex Analysis I, II.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: MAT 508. Elementary functions, analyticity, Cauchy's theorem and integral formula, Taylor and Laurent series, poles, residues, analytic continuation, Riemann surfaces, periodic functions, conformal mapping, and applications.

**617-618 Applied Mathematics I, II.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisites: MAT 517 and 518. Partial differential equations; equations of Helmholtz, Laplace, and Poisson; the diffusion equation, integral transforms, Green's function methods, calculus of variation, eigenvalues and eigenfunctions by variational methods, integral equations, Fredholm and Volterra equations, and Fredholm and Hilbert-Schmidt theories.

**619 Operational Methods.** Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 508. Transform methods applied to existence theory, explicit solutions to problems of mathematical physics, distributions of Schwartz and Gelfand-Silov; kernel theorems of Schwartz, mathematical framework of quantum field theory.

**620 Theory of Partial Differential Equations.** Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 301 and 508. Classification of partial differential equations; elliptic, hyperbolic, and parabolic equations;

for numerical analysis selected from such subjects as analysis of numerical methods for solving ordinary differential equations; elliptic, hyperbolic, and parabolic partial differential equations; solutions of large linear systems by iterative methods.

**621 Computer Linguistics and Automata.** Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 301 and either 504 or ENG 549 or permission of instructor. Languages and their representation, grammars, finite automata, turing machines, and operations on languages.

**691 Special Topics in Computer Science.** Semester course; 3 lecture hours. 3 credits. Prerequisites: at least one graduate level computer science course pertaining to the topic area, and permission of instructor. Selected topics in computer science from such areas as data base management, communications, advanced computer architecture, analysis of algorithms, program correctness, computational complexity. May be taken more than once for credit.

## GRADUATE COURSES IN STATISTICS (STA)

**503 Introduction to Stochastic Processes.** Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 307 and 309. A continuation of topics given in MAT 309. An elementary introduction to stochastic processes and their applications, including Markov chains and Poisson processes.

**513-514 Mathematical Statistics.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: MAT 307. Probability, discrete and continuous distributions, moment generating functions, limit theorems, estimation, decision theory and testing hypotheses, relationships in a set of random variables, linear models, and design.

**523 Nonparametric Statistical Methods.** Semester course; 3 lecture hours. 3 credits. Prerequisites: any two semesters of statistics or permission of instructor. Estimation and hypothesis testing when the form of the underlying distribution is unknown. One-, two-, and k-sample problems. Test of randomness, Kolmogorov-Smirnov tests, analysis of contingency tables, and coefficients of association.

**533 Applied Linear Regression.** Semester course; 3 lecture hours. 3 credits. Prerequisites: any two semesters of statistics and one semester of calculus. An introduction to the concepts and methods of regression analysis, including simple linear regression and correlation, multiple regression and correlation. Application of the multiple regression model to the analysis of variance.

**543-544 Statistical Methods.** Continuous course; 2 lecture and 1 laboratory hour. 3-3 credits. Prerequisites: any two semesters of statistics or permission of instructor. Statistical methods including analysis of variance, regression, correlation, and distribution free methods. Includes use of statistical packages.

**613-614 Stochastic Processes.** Continuous course; 3 lecture hours. 3-3 credits. Prerequisites: MAT 508, and STA 514 or BIS 545. Introduction to the theory and ap-

plications of stochastic processes. Random walks, Markov processes, queuing theory, renewal theory, birth-death and diffusion processes. Time series, spectral analysis, filter, auto correlation. (Offered in conjunction with the biostatistics department.)

**623 Discrete Multivariate Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisite: STA 543, BIS 511, or permission of instructor. Methods for the analysis of contingency tables. Emphasis on social and biomedical applications of the general log-linear model.

**691 Special Topics in Statistics.** Semester course; 1-3 lecture hours. 1-3 credits. Prerequisite: permission of instructor. A detailed study of selected topics in statistics. May be repeated for a maximum of six credits.

## Department of Psychology

### FACULTY

- Auerbach, Stephen M. *Associate Professor* Ph.D., Florida State University; stress and crisis intervention; health psychology-behavioral medicine.
- Bailey, Kent C. *Professor and Director of the Doctoral Program in Clinical Psychology* Ph.D., West Virginia University; individual tests of intelligence, psychotherapy research methodology.
- Buczek, Teresa *Assistant Professor* Ph.D., Bowling Green State University; psychology of women, family therapy.
- Cooke, Christine J. *Assistant Professor* Ph.D., Memphis State University; behavioral medicine and health maintenance.
- Corazzini, Jack G. *Associate Professor* Ph.D., University of Notre Dame; college counseling.
- Erickson, Marilyn T. *Professor* Ph.D., University of Washington; child psychopathology; assessment, etiology, and treatment.
- Farrell, Albert D. *Assistant Professor* Ph.D., Purdue University; behavioral assessment; experimental design.
- Forsyth, Donelson R. *Assistant Professor* Ph.D., University of Florida; social psychology; attitudes and social identity, group processes.
- Hamm, Robert J. *Associate Professor and Director of the Doctoral Program in General-Experimental Psychology* Ph.D., Southern Illinois University; operant conditioning, stress reactions, animal behavior.
- Hartnett, John J. *Associate Professor* Ph.D., Wayne State University; social-industrial psychology, attitudes, job satisfaction, selection, classification.
- Hawkes, Glenn R. *Professor* Ph.D., University of Virginia; sensation and perception, parapsychology.
- Hill, John P. *Professor and Chairman* Ph.D., Harvard University; psychosocial consequences of pubertal status; family and peer relations in early adolescence.
- Hooke, James F. *Assistant Professor* Ph.D., University of Nebraska; neuropsychological evaluation, objective assessment of personality.
- Hornbuckle, Phyllis A. *Associate Professor* Ph.D., Emory University; biopsychology, motivation, emotion, animal behavior.

- Huebner, Lois A. *Assistant Professor* Ph.D., Colorado State University; the prevention of psychopathology.
- Kallman, William M. *Associate Professor* Ph.D., University of Georgia; behavioral assessment and therapy, psychophysiology.
- Kiesler, Donald J. *Professor* Ph.D., University of Illinois; communication approaches to psychotherapy, personality.
- Leahey, Thomas H. *Associate Professor* Ph.D., University of Illinois, cognitive development, reasoning and memory.
- McCullough, James P. *Associate Professor* Ph.D., University of Georgia; behavior therapy, psychophysiology of psychotherapy.
- McGovern, Thomas V. *Associate Professor* Ph.D., Southern Illinois University group therapy; adult development, ethnics.
- Mahoney, John M. *Associate Professor* Ph.D., State University of New York-Buffalo; social psychology, values, personality, aesthetics, political psychology.
- Myers, Barbara J. *Assistant Professor* Ph.D., Temple University; infancy and early childhood.
- Olsho, Lynn W. *Assistant Professor* Ph.D., Loyola University of Chicago; developmental perceptual processes.
- Parham, Iris A. *Associate Professor* Ph.D., University of Southern California; psychology of aging, developmental psychology.
- Porter, Joseph H. *Associate Professor* Ph.D., University of Georgia; biopsychology, motivation, behavioral pharmacology, animal behavior.
- Spencer, Nancy J. *Associate Professor* Ph.D., Pennsylvania State University; cognitive psychology, psycholinguistics.
- Stolberg, Arnold L. *Assistant Professor* Ph.D., University of South Florida; community clinical psychology.
- Strong, Stanley R. *Professor* Ph.D., University of Minnesota; social processes in counseling psychology.
- Tipton, Robert M. *Professor and Director of the Doctoral Program in Counseling Psychology* Ph.D., University of Missouri; personality and ability testing, counseling and psychotherapy.
- Worthington, Everett L. *Assistant Professor* Ph.D., University of Missouri; behavioral self control, theories and methods of counseling.

**Emeritus Professors:** William D. Groman; Edwin R. Thomas

**Associate Clinical Professors:** Finch, Resnick

**Assistant Clinical Professors:** Biskin, Browne; Crowe; Fagan; Hirschman; Johnson; Keeney; Kitkauskay; Lira; Macurik; Master; McLaughlin; Montgomery; Morgan; Moss; Norwood; Peck; Peed; Robinson; Shenoy; Sitarz; Taylor

The Department of Psychology offers instruction in clinical, counseling, and general psychology leading to the Master of Science and Doctor of Philosophy degrees. The doctoral programs in clinical and counseling psychology have been fully accredited by the American Psychological Association.

The clinical psychology program prepares students for research and service in the

clinical area. The counseling psychology program prepares students for research and service in the counseling area. Students in either clinical or counseling psychology may elect courses in education as well as psychology that will make it possible to become certified as a school psychologist.

The program in general psychology prepares students for either basic or applied-research in physiological, developmental, and social psychology.

All three doctoral programs provide opportunities for selected students who are interested in college teaching to obtain special training and experience in that activity. All three master's programs prepare students for additional graduate study as well as for work in related areas. The Psychological Services Center, operated by the department, is located on campus and serves as a clinical practicum facility.

An outstanding collection of current journals and books in psychology is housed in the James Branch Cabell Library on the Academic Campus and in the Tompkins-McCaw Library on the MCV Campus.

Teaching assistantships are available. The amount of the stipend is dependent upon the amount of service required.

## ADMISSION REQUIREMENTS

In addition to the general requirements for admission to the graduate programs in the School of Graduate Studies (Part I of this bulletin) and the College of Humanities and Sciences, the following requirements represent the minimum acceptable standards for admission:

1. Graduation with a bachelor's degree from an accredited college or university, but not necessarily with a major in psychology.
2. Eighteen semester hours of undergraduate course work in psychology is the minimum but *not* the optimal number of hours for an applicant to be considered for admission. Included must be each of the following courses: general psychology, applied statistics, and experimental psychology. Exceptionally well qualified applicants with less than a major in psychology, or ap-

plicants whose undergraduate work is considered outdated by the admissions committee, may be advised to complete some additional undergraduate courses at the beginning of their graduate study program.

3. An undergraduate record indicating superior academic potential.
4. Satisfactory performance on the Graduate Record Examination, including the special psychology examination.
5. Three letters of recommendation from previous instructors.
6. A personal interview may be required at the discretion of the department.

Application forms for admission to graduate study, application forms for assistantships, and brochures describing the special programs of interest as noted above are available on request from the department. Applications should be filed early to permit review and to insure consideration.

The number of students who can be admitted is limited by the facilities and staff available. All students will be notified of the decision made. In the areas of clinical and counseling psychology, where the number of applicants is many times greater than the number that can be admitted, the screening process may begin as early as January 1. First offers of admission are made on April 1 and, by June 1, after other offers to alternates have been made and final acceptances by students have been received, admissions to clinical and counseling psychology may be closed. Clinical and counseling psychology applications that are not completed by March 1 may not reach the department in time to be considered. Because most of the openings must be reserved for beginning graduate students, relatively few applicants who already possess master's degrees can be admitted. In other areas of psychology where the number of applicants is not as large and the number of openings is larger, applications may be completed and processed up to July 1 for regular registration, but after that date for special registration only.

Transfer credits for graduate work at other institutions will be evaluated after the completion of nine semester hours in the department.

## DEGREE REQUIREMENTS

All students are required to complete the core curriculum of 13 credits, which includes a course in either the biological basis of behavior or sensation and perception; a course in either learning or cognitive processes; and courses in applied statistics, experimental design, and professional problems. Additional courses will be chosen in consultation with an advisor appropriate to the student's field of interest.

Candidates must complete all requirements for a degree within a seven-year period from the date of admission to the program.

Students are required to pass a comprehensive examination at the master's level and a preliminary examination at the doctoral level.

Receipt of two grades of "C" or lower in courses, or grades of "C" or lower in more than six credits of psychology courses, constitutes automatic dismissal of a student from the program.

The residence requirement for the master's degree is 18 hours, nine in each of two consecutive semesters. Completion of the program usually requires three or four semesters.

Students are obligated to request, in writing from their program committees, continuation of study beyond the master's degree. Application from a student for continuation beyond the master's level will be evaluated by the appropriate program committee after completion of all requirements for the master's degree. The recommendation of the program committee will then be reviewed for the department by the graduate committee. The faculty will be notified of the decision and given the opportunity to review.

The residence requirement for the doctoral degree is an additional 18 hours, nine in each of two consecutive semesters following completion of the master's degree. Completion of the entire program usually requires three to four years in the general program, and four to five years in the clinical or counseling programs, including the internship year.

With the consent of the program committee, doctoral students may design a minor

consisting of courses in departments other than psychology or courses in an area of psychology other than major.

Practicum and internships will be required whenever these additional skills are consistent with the major emphasis of the student's program. Practicum credit will vary depending on the program. Internship will be without credit.

Before undertaking the dissertation a doctoral candidate must demonstrate either a reading knowledge in one foreign language or proficiency in computer programming. Credits for courses taken to prepare for or to satisfy the language or programming requirement do not count as course credits toward the degree.

All Master of Science candidates are required to complete a thesis and to defend it successfully in an oral examination. A dissertation requiring the planning, completion, and defense of an original research project is an integral part of the doctoral program.

The minimal requirements specified for a graduate degree may not meet licensing standards in various states. Information on current Virginia laws regulating the practice of psychology may be obtained from the Department of Psychology.

## GRADUATE COURSES IN PSYCHOLOGY (PSY)

**601 Behavior Therapy.** Semester course; 3 lecture hours. 3 credits. Prerequisites: graduate standing in psychology and permission of instructor. Group and individual approaches in these general areas will be emphasized: observational techniques; counterconditioning and extinction procedures; techniques of positive and negative control; self-control procedures; use of modeling and roleplaying as change techniques; behavioral feedback and cueing procedures.

**602/Gerontology 602 Psychology of Aging.** Semester course; 3 seminar hours. 3 credits. Prerequisite: permission of instructor. Psychological adjustment in old age; special emphasis on personality, cognitive, and emotional development; life-crises associated with the aging process.

**603 Developmental Processes.** Semester course; 3 lecture hours. 3 credits. Cognitive, social, personality, and behavioral development across the life span is considered, with special attention to theories of development.

**604 Social Psychology of Business and Industry.** Semester course; 3 lecture hours. 3 credits. The theme is

the influence of organizational structure on behavior. Topics will include motivation, attitudes, job satisfaction, morale, leadership, and supervision.

**605 Social Development.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: PSY 603 or permission of instructor. The development of social relations, focusing primarily on infancy and childhood, but also considering adulthood and aging. Attachment, parent-child interaction, peers, siblings, aggression, sex-roles, cultural determinants, deprivation and remediation, social cognition, adulthood changes, parenthood. Critical evaluation of theory and current research.

**606 Theory and Measurement of Interests.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Major theories of the development of interests. Theoretical and research foundations of the principal inventories of occupational interests. Administration, analysis, reporting, and application in counseling.

**607 Advanced Educational Psychology.** Semester course; 3 lecture hours. 3 credits. Application of the principles of psychology to the teaching-learning process. Discussion will focus on the comprehensive development of individual learning experiences and educational programs from the point of view of the educator and the administrator.

**608 Individual Tests of Intelligence.** Semester course; 3 lecture hours. 3 credits. Prerequisites: graduate standing in psychology and permission of chairman of the department. The administration, scoring, interpretation, and research foundations of the major individual tests of intelligence, with emphasis on the Wechsler scales and the Stanford-Binet.

**609 Design of Psychological Experiments.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. The application of analysis of variance, randomization tests, analysis of ranks, and chi square to designs involving random groups, matched groups, repeated treatment, and repeated measurement, where the dependent variable is behavioral.

**610 Attitude Theory and Research.** Semester course; 3 lecture hours. 3 credits. Theory and research in attitudes. Attitude formation and change, including cognitive consistency, learning and reinforcement, social judgment, and functional theories.

**611 Contemporary Developments in Counseling Psychology.** Semester course; 3 seminar hours. 3 credits. Prerequisite: permission of instructor. Contemporary issues, problems, and research related to the practice of counseling psychology; their importance in developing a professional identity and sensitivity to major developments in the field; history, present status, and future directions in the field of counseling psychology.

**612 Research Methods in Developmental Psychology.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: PSY 627. Research designs, methods, and problems specific to developmental psychology. Cross-sectional, longitudinal, and sequential strategies. Statistical issues, multivariate statistics, and choice of statistical designs appropriate for developmental

research questions. Computer skills in organizing and analyzing data. Grant-writing and scientific reporting.

**613 Cognitive Development.** Semester course; 3 lecture-discussion hours. 3 credits. Prerequisite: graduate standing in psychology or permission of instructor. The development of the intellectual processes, including reasoning, memory, imagery, and knowledge. Special attention will be given to theories of cognitive growth. Although the focus will be on child cognitive developments, consideration of life-span issues will be included.

**614 Infant Growth and Development.** Semester course; 3 seminar hours. 3 credits. Prerequisite: PSY 603 or permission of instructor. Sensory and behavioral capacities of the infant; cognitive, social, and emotional development in the first two years of life, with emphasis on the effects of early experience on function later in life. Consideration of the special problems associated with infant research and intervention programs.

**615/Gerontology 615 Aging and Mental Disorders.** Semester course; 3 lecture-seminar hours. 3 credits. Review of theoretical and empirical research on the psychological disorders and problems of late life. Topics include the etiology of disorders, mental health services, methods of evaluating psychological status, drugs and health issues, and successful intervention approaches with the elderly.

**616 Psychopathology.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Clinical and experimental contributions to the field of psychopathology, with particular attention to the roles of learning and motivation in the development of behavior disorders.

**617 Sensation and Perception.** Semester course; 3 lecture hours. 3 credits. The major phenomena of vision, audition, olfaction, gustation, and the skin senses. Psychophysics and the effects of sensory deficits. The relationship of variations in environmental energy to the psychological reactions of sensing and perceiving.

**618 Seminar in Personality.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. A detailed exploration of various approaches in personality. Contemporary issues in personality theory.

**619 Seminar in Learning.** Semester course; 3 lecture-seminar hours. 3 credits. The major problem areas, methodology, and theories of learning are reviewed. Included are measurement techniques, drive and reinforcement, conditioning, memory, and other cognitive processes.

**621 Seminar in Motivation.** Semester course; 3 lecture hours. 3 credits. A survey of some theoretical views of motivation., Biological, cultural personality, and learning theories of motivation will be covered. Theoretical positions will be related to current empirical findings.

**622 Physiological Correlates of Emotion.** Semester course; 3 lecture-seminar hours. 3 credits. Research and theories of emotion emphasizing physiological bases, with special attention to neurological and endocrine systems. Application to psychological functioning.

**623 Counseling and Psychotherapy.** Semester course; 3

lecture hours. 3 credits. Prerequisite: permission of instructor. Exploration of major trends in psychotherapeutic techniques and current research. Principles of therapy applied to personal, social, vocational, and educational problems.

**624 Group Counseling and Psychotherapy.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: permission of instructor. Historical perspective. Basic dynamics and processes of therapeutic groups. Role and technique of the group facilitator. Examination of different theoretical approaches.

**625 Career Counseling: Theory and Practice.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: permission of instructor. Review of major theories and current research in career development. Techniques of career counseling for individuals and groups. Emphasis on late adolescent, adult, and pre-retirement populations.

**626 Single-Case Experimental Design for the Clinical Research-Practitioner.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: permission of instructor. Review of single-case design models that have utility for clinicians in evaluating their practice. Emphases will be placed on the historical development of the field and on the main experimental design issues that are relevant to the conduct of single-case research.

**627 Statistics in Psychological Research.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Applications of descriptive and inferential statistics including significance testing and parameter estimation in empirical and experimental research on human and animal behavior.

**628 Cognitive Processes.** Semester course; 3 lecture-seminar hours. 3 credits. Theory and research in complex human behavior such as speech perception, memory, language structure and function, problem solving, decision making, and information processing.

**629 Biological Basis of Behavior.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: an undergraduate course in physiological psychology or permission of instructor. Theory and current experimental research on the physiological and neurological concomitants of behavioral variables.

**630 Social Psychology.** Semester course; 3 lecture-seminar hours. 3 credits. Topics includes attitudes, social influence processes, person perception, affiliation and attraction, group processes, cultural influences on behavior, and conformity.

**631 Seminar in Psycholinguistics.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: permission of instructor. Theory and hypotheses regarding cognitive processes based on studies of language behavior. Language structure as related to its human functions. Language acquisition and the developing brain. Comparison of language to other systems which represent and communicate.

**632 Research Methods in Social Psychology.** Semester course; 3 lecture hours. 3 credits. prerequisites: PSY 627 and 630. Epistemological, methodological, technical, and ethical problems encountered during the scientific

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study of social psychological phenomena. Emphasizes practical experience in theory development, hypothesis derivation, research planning, data collection, reduction and analysis, and dissemination strategies.

**633 Group Dynamics.** Semester course; 3 lecture-seminar hours. 3 credits. Theoretical explanations and empirical research related to group formation, development, performance, and dissolution. Topics include obedience, conformity, group productivity, and leadership.

**634 Attribution Theory and Research.** Semester course; 3 seminar hours. 3 credits. Prerequisite: PSY 630 and permission of instructor. How the perceiver uses behavioral data to make inferences concerning the causes of actions and events. Examines theoretical perspectives, current empirical findings, and the implications of attributions for interpersonal relations, psychological adjustment, and self-processes.

**635 Social Psychometrics.** Semester course; 3 seminar hours. 3 credits. Prerequisites: PSY 627 and 630 or permission of instructor. Examination of principles, strategies, and methodology of measurement of individual differences in social psychology and personality. Emphasis on creation of research instruments by a combination of the rigorous formation of concepts and practical techniques of attitude and personality measurement. The use of computer statistical packages will aid in development of concrete skills in applied psychometrics.

**638 The Evolution of Psychological Systems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: core course in student's area of specialization or permission of instructor. A survey of the development and present state of various psychological systems. Current meta-theoretical and systematic issues in psychology.

**639 Research Methods in Biopsychology.** Semester course; 1 lecture and 4 laboratory hours. 3 credits. Prerequisite: permission of instructor. Methodological, technical, and ethical problems in biopsychology. Examples are design and use of circuits in behavioral sciences, stereotaxic surgery, histology, drug procedures, research design, data collection procedures, and data analysis.

**641/Gerontology 641 Survey of Psychological Assessment and Treatment of the Older Adult.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: permission of instructor. Review of major treatment strategies and techniques for work with the older adult client. Emphasis on individual, group and para-professional delivery systems. Crisis intervention, consultation, and program evaluation approaches will also be presented.

**642/Gerontology 642 Practicum in Geropsychology.** Semester course; one half day per credit. 1-3 credits. Prerequisites: PSY 615/GTY 615, PSY 641/GTY 641, and permission of instructor. (PSY 641/GTY 641 may be taken as co-requisite.) A series of training experiences designed to facilitate progressively greater degrees of skills in working with the older adult. Practicum sites will rotate among several community agencies which serve the older adult. Careful supervision and evaluation of the student is provided. May not be

counted in minimal total credits for Ph.D. in clinical or counseling psychology.

**643 Principles of Psychological Measurement.** Semester course; 1 lecture hour. 1 credit. Prerequisite: graduate standing in psychology or permission of instructor. Basic psychometric concepts to prepare the student for subsequent evaluation instruments. Origins and logic of testing, criteria for judging tests, standardization and reliability, and validity and principles of test development and construction.

**644 Assessment of Human Intelligence.** Semester course; 1 lecture and 2 laboratory hours. 2 credits. Prerequisite: graduate standing in clinical psychology or permission of clinical program committee and instructor. Theory and administration of intelligence tests. Laboratory requires supervised administration, scoring, interpretation, and written reports of individually administered tests of intelligence.

**645 Assessment of Psychopathology.** Semester course; 3 lecture hours. 3 credits. Prerequisites: graduate standing in clinical psychology or permission of Clinical Psychology Program Committee and instructor. Use of objective and projective tests in assessment of psychopathology with special emphasis on the clinical interpretation of the Minnesota Multiphasic Personality Inventory (MMPI), and the administration and clinical interpretation of the Rorschach and Thematic Apperception Test (TAT). Emphasis is also placed on integrative report writing.

**646 Projective Techniques.** Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing in clinical psychology or permission of clinical program committee and instructor. Projective devices for the assessment of personality. Supervised administration, scoring, interpretation, and written reports of individually administered projective personality tests.

**647 Neuropsychological Assessment.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: graduate standing in psychology and permission of instructor. Psychological assessment of brain-behavior relationships in the context of neurological or neurosurgical problems. Emphasis is on current modifications of Halstead's tests and on the Reitan-Indiana Neuropsychological Battery for younger children. Laboratory requires supervised administration, scoring, and interpretations of neuropsychological test batteries.

**649 Clinical Assessment of Child Disorders.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisites: PSY 643, 644, and graduate standing in clinical psychology or permission of clinical program committee and instructor. Administration and interpretation of intellectual and personality assessment instruments for children. Laboratory requires supervised administration, scoring, interpretation, and written reports of these assessment instruments.

**650 Advanced Child Psychopathology.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Principal childhood behavioral abnormalities: mental retardation, psychosis, learning disabilities, speech and language problems, school-related behavioral problems, neurosis, psychosomatic

disorders, and juvenile delinquency. Genetic, prenatal, somatic disorders, and juvenile delinquency. Genetic, prenatal, perinatal, postnatal, and social-psychological factors related to etiology. Integration of assessment and treatment methods.

**666 Crisis Intervention: Theory, Research, and Practice.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: graduate standing in psychology or permission of instructor. Review of the development of the concept of psychological crisis and of intervention programs in a range of areas such as sexual assault, natural disasters, telephone hotlines, and medical emergencies. Relevant theory and data from community psychology, laboratory and applied research, sociology, and psychiatry will be considered.

**668 Interpersonal Psychotherapy: Social Psychological Analysis.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: permission of instructor. Analysis of counseling and psychotherapy as interpersonal influence processes. Applications of social psychological theories and research to the process of therapeutic change; identification of key aspects of the change process and of how these aspects are embodied in current approaches and techniques of counseling and psychotherapy. Emphasis on experimental methods of studying change processes.

**669 Interpersonal Psychotherapy: Communications Analysis.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: permission of instructor. Theory and research in nonverbal communication. Communication theories of psychotherapy and a communication analysis of key concepts in psychotherapy.

**670 Seminar in Gestalt Therapy.** Semester course; 3 seminar hours. 3 credits. Prerequisite: permission of instructor. Philosophical basis, historical background, theoretical formulation, techniques, and application of Gestalt therapy. Students will have the opportunity to practice and observe the techniques.

**671 Readings and Research.** Semester course; 1-3 credits. Prerequisite: written permission of instructor. Individual study leading to the investigation of a particular problem in systematic fashion under the supervision of a member of the faculty. May be repeated for a maximum of nine credits.

**675 Current Problems in Psychology.** Semester course; 1 lecture hour. 1 credit. A discussion of some of the current problems of interest to psychologists with particular emphasis on scientific publication, professional organizations, and ethics.

**690 Research Seminar.** Semester course; 3 lecture hours. 3 credits. An intensive investigation of a specialized research area. Examples include delayed response problems in primates, systematic desensitization in the treatment of phobias, effects of drugs on avoidance learning. Emphasis on techniques and organization of past empirical findings and theoretical formulations. May be repeated for credit.

**691 Special Topics.** Semester course; 3 lecture-seminar hours. 3 credits. Prerequisite: permission of instructor. Theory, research, and techniques in specialized topics of

current interest are presented. May be repeated for credit.

**693 Counseling Practicum.** Semester course; one half day per credit. 1-3 credits. A series of training experiences designed to facilitate progressively greater degrees of skill development in counseling psychology. Available only to graduate students in counseling psychology approved by the counseling program committee. May be repeated for a maximum of 10 credits.

**694 Clinical Practicum.** Semester course; one half day per credit. 1-3 credits. The graduate student in clinical psychology is given an opportunity to apply and practice interviews and diagnostic and therapeutic skills with clients requiring psychological services. Careful supervision and evaluation of the student is provided. The practicum may be located in a clinic on campus or in a hospital or other agency off campus. Available only to graduate students in clinical psychology approved by the clinical program committee. May be repeated for a maximum of 12 credits.

**696 Internship.** No credit. Prerequisite: approval of the director of the program involved. The internship is a one-year, full-time assignment, under supervision, to an agency approved by the student's program committee.

**798 M.S. Thesis.** 1-6 credits. May be repeated.

**898 Doctoral Dissertation.** 1-12 credits. May be repeated.

## Department of Sociology and Anthropology

### FACULTY

Bookin, Hedy *Assistant Professor* Ph.D., Harvard University; criminology, juvenile delinquency.

Dennis, Rutledge M. *Associate Professor* Ph.D., Washington State University; complex organizations, social stratification.

Diana, Lewis *Professor* Ph.D., University of Pittsburgh; sociology of the family, human sexuality.

Franks, David D. *Associate Professor* Ph.D., University of Minnesota; social psychology, sociology of mental health.

Henry, Neil W. *Associate Professor* Ph.D., Columbia University; social statistics, mathematical models.

Honnold, Julie A. *Associate Professor* Ph.D., University of Denver; environmental sociology, sociology of leisure.

Johnson, Daniel M. *Professor and Chairman* Ph.D., University of Missouri; social indicators, social policy, and demography.

Levin, Paula F. *Assistant Professor* Ph.D., University of California-San Diego; cultural and psychological anthropology, education and anthropology.

Marolla, Joseph A. *Associate Professor* Ph.D., University of Denver; social psychology and a sociology of education.

McGrath, John H., III *Professor* Ph.D., Rutgers University; juvenile delinquency, medical sociology.

Nelson, Lynn D. *Associate Professor* Ph.D., Ohio State University; environmental sociology.



- Palen, J. John *Professor* Ph.D., University of Wisconsin-Madison; urban sociology and demography.
- Perlman, Stephen M. *Assistant Professor* Ph.D., University of Massachusetts; ecological theory in anthropology, archeology of Eastern United States.
- Schwartzbaum, Allan M. *Associate Professor* Ph.D., Cornell University; industrial sociology, organizational behavior.
- Scully, Diana H. *Assistant Professor* Ph.D., University of Illinois; sociology of medicine, sex roles.
- Studer, Kenneth E. *Assistant Professor* Ph.D., Cornell University; sociology of science, sociology of knowledge.
- Williams, J. Sherwood *Associate Professor* Ph.D., Washington State University; research methods and behavioral sociology.

The Department of Sociology and Anthropology offers programs leading to the degree of Master of Science with specializations in several areas. The goal of the graduate program in sociology is to facilitate the development of theoretical, methodological, and substantive competence appropriate for students' interests and career goals.

### ADMISSION REQUIREMENTS

In addition to the general requirements for admission to graduate programs in the School of Graduate Studies (Part I of this bulletin) and in the College of Humanities and Sciences, the following requirements represent the minimum acceptable standards for admission:

1. Applicants must submit a transcript of their undergraduate course work and the results of their Graduate Record Examination in general aptitude (quantitative, analytical, and verbal) and an advanced area.
2. Admission priority is given to students with an undergraduate grade point average of 3.0 or higher on a 4-point scale. Students with grade point averages below 3.0 will be evaluated by the graduate coordinator and members of the graduate faculty on the basis of the GRE scores, recommendations from references, and other data submitted by applicants.
3. To be admitted as a regular graduate student, applicants should have completed 24 semester hours in the social sciences (including history), with at least 12 credits in sociology. Undergraduate

work in sociology should include a survey of sociological theory, research methods, and statistics. Students who are otherwise qualified for admission but lack this background may be admitted provisionally, with the stipulation that they may be requested to make up any deficiencies specified by the graduate coordinator.

Because of the diversity in different institutions of higher education, students trained abroad may be judged on an individual basis. Criteria on which this judgment is based include the reputation of the foreign university, the student's academic record, proficiency in English, and recommendations from professors. The university requires that foreign students demonstrate guarantees of financial support.

A limited number of assistantships are available for qualified applicants. Applicants for assistantships should have their files complete by March 1. Individuals not applying for assistantships should file their applications for graduate study as early as possible to permit adequate review and to insure consideration. Applications which reach the university after July 1 for the fall semester and after November 15 for the spring semester may not be processed in time for registration.

### DEGREE REQUIREMENTS

Thirty hours of graduate course work must be completed in the sociology master's program including the following core courses:

- SOC 601 Advanced Methods of Social Research
- SOC 602 Seminar in Sociological Theory
- SOC 608 Advanced Statistical Methods
- SOC 622 Theory Construction or
- SOC 623 Causal Analysis
- SOC 701 Research Practicum I
- SOC 702 Research Practicum II

Written comprehensive examinations in theory and research methods/statistics must be taken after students complete their first 18 hours of graduate study, including SOC 601, 602, and 608. Students admitted provisionally must also have achieved regular student status.

In the research practicum sequence, a master's thesis is developed under the supervision of a thesis committee and the general guidance of the research practicum coordinator. Both SOC 701 and SOC 702 are designed to help students complete all thesis work in two semesters while taking a full course load.

Up to six graduate credits from other schools or other departments may be accepted toward the M.S. degree upon approval of the graduate coordinator. If courses not designated as approved electives are to be taken outside the department while students are enrolled in the master's program in sociology, prior transfer approval should be sought.

Graduate students are expected to maintain an overall grade point average of at least 3.0 ("B"). Students who do not maintain a 3.0 average may be dropped from the master's program at any time. Any graduate students who do not have at least a 3.0 average after completing 15 hours of graduate work will be dropped from the program.

Graduate students must have earned an overall grade point average of 3.0 to receive a degree.

## PH.D. PROGRAM

The doctoral program in social policy and social work is designed to prepare persons in the development, implementation, and evaluation of programs and policies concerned with various social problems and to prepare clinical social work educators well grounded in research, theory, and teaching methods.

A complete description of this program is found in the School of Social Work section of this bulletin.

For application forms and additional information, write to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

## GRADUATE COURSES IN SOCIOLOGY (SOC)

**600 Advanced Principles of Sociology.** Semester course; 3 lecture hours. 3 credits. A comprehensive analysis of

the concepts and techniques useful for understanding society and culture as well as the social processes and structures operant within these spheres.

**601 Advanced Methods of Social Research.** Semester course; 3 lecture hours. 3 credits. Prerequisites: SOC 214 and 320 or equivalent. Research as a systematic process involving formulation of the problem, design of the research, field operation, the processing and analysis of data, and preparation of the research report. Also considered are critical analyses of current methods, administration of research projects, and the significance of research to social action.

**602 Seminar in Sociological Theory.** Semester course; 3 lecture hours. 3 credits. A graduate level seminar emphasizing contemporary sociological theories.

**603 Seminar in Population Studies.** Semester course; 3 lecture hours. 3 credits. Analysis of fertility, mortality, and migration from a sociodemographic perspective. Special attention will be paid to sociological determinants of demographic processes and their interrelationships.

**604 Sociology of Work in Industry.** Semester course; 3 lecture hours. 3 credits. Analyses of work relations and the social structures and mechanisms which govern and arise out of them and examination of the social problems that are inherent in the characteristics that make a society an industrial society.

**607 Seminar in Racial and Ethnic Relations in America.** Semester course; 3 lecture hours. 3 credits. A study of inter-group relations in such areas as busing and school desegregation, racism, minority separatist movements, ethnic-racial violence, minorities and athletics, the emergence of white ethnic groups in the political systems, and the position of minorities in legal, economic, and medical institutions.

**608 Advanced Statistical Methods.** Semester course; 3 lecture hours. 3 credits. Prerequisites: SOC 214 and 320 or equivalent. A discussion of statistical methods related to sociological research. The statistical techniques include correlation and regression, multiple correlation, and multiple regression, T test, one- and two-way analysis of variance, non-parametric statistical techniques—especially PRE measures.

**609 Seminar in the Family.** Semester course; 3 lecture hours. 3 credits. Analysis of contemporary family life with an emphasis on the influence of social change. Consideration of current family crises and problems.

**610 Complex Organizations.** Semester course; 3 lecture hours. 3 credits. A study of complex organizations in society with emphasis on the determinants and effects of organizational structure and process.

**611 Studies in the Community.** Semester course; 3 lecture hours. 3 credits. The organization of the community with emphasis on major trends in urban development and growth. The interdependence of political, social, and economic geographic units. The need for cooperative planning and control.

**612 Seminar in the Sociology of Deviant Behavior.** Semester course; 3 lecture hours. 3 credits. The nature and

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functions of deviance. Theories and problems of social control.

**613 Social Stratification.** Semester course; 3 lecture hours. 3 credits. An in-depth analysis of status differentials in society (e.g. social class, prestige, and power.).

**614 Seminar in the Sociology of Education.** Semester course; 3 lecture hours. 3 credits. A sociological analysis of education as a social institution with an emphasis on methodological issues and policy implications.

**615 Seminar in Mass Communications.** Semester course; 3 lecture hours. 3 credits. A sociological analysis of contemporary media and their interrelationships with social systems, media, and national development. Special emphasis on media as instruments of social and cultural change. (Some theoretical background in sociology is recommended.)

**616, 617 Independent Study and Reading.** Semester courses. 1-3 credits per semester. Prerequisites: permission of an instructor and the Graduate Program Committee. A maximum of six credits may be submitted toward the master's degree.

**620 Seminar in Criminology.** Semester course; 3 lecture hours. 3 credits. Discussion and investigation of contemporary issues in criminology. Special emphasis on research problems in and theories of crime causation.

**622 Theory Construction.** Semester course; 3 lecture hours. 3 credits. A consideration of recent social theorists in which emphasis is placed on the logic of theory construction.

**623 Causal Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisites: SOC 602 and 608 or equivalent. An examination of the utility of causal reasoning in the social sciences, and an introduction to causal modeling. Topics studied include the development of theoretical linkages, recursive and nonrecursive path estimation, causal thinking and theoretical refinement, and policy analysis and system dynamics.

**625 Urban Sociology.** Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing. A detailed analysis and examination of the social and ecological structures and processes of the modern city with primary emphasis on the macro-level organization of urban life.

**630 Social Psychology.** Semester course; 3 lecture hours. 3 credits. Discussion and investigation of selected social psychological issues in sociology, as well as traditional and innovative methodology applied to these issues.

**640 Seminar in Political Sociology.** Semester course; 3 lecture hours. 3 credits. Analysis of structures and processes of political organization. Examination of the creation and management of power, diffusion and regulation of conflict, and the politics of modernization and bureaucratization.

**645 The Sociology of Health and Illness.** Semester course; 3 lecture hours. 3 credits. An examination of sociocultural factors in health and illness and the influence of social factors on recovery and rehabilitation.

Special attention will be paid to the methodology found in current studies.

**698, 699 Topical Seminar.** Semester courses; 3 lecture hours. 3 credits. Seminars on current specialized areas of sociological and anthropological interest.

**701 Research Practicum I.** Semester course; 3 lecture and conference hours. 3 credits. Prerequisites: SOC 601, 602, 608 and at least a "B" average in all graduate work at VCU. The initial phases of a research project will be studied and completed: problem identification and statement, literature review, theoretical assumptions and framework, and research design and procedures. The course coordinator will structure class assignments and meetings to facilitate project development. Under the supervision of a three-member faculty committee, each student will prepare an original research proposal and defend it publicly.

**702 Research Practicum II.** Semester course; 3 lecture and conference hours. 3 credits. Prerequisite: a grade of at least "B" in SOC 701. An original research project proposed in SOC 701 will be executed and reported under the supervision of a three-member faculty committee and the general guidance of the course coordinator. The status of each project will be periodically reviewed in regular class meetings during the semester. The research will be described in (1) a master's thesis, and (2) a shortened article-length paper. The departmental faculty will be given the opportunity to examine and critique the master's thesis before the completion of the course.

## ADDITIONAL GRADUATE COURSES AVAILABLE IN THE COLLEGE OF HUMANITIES AND SCIENCES

**ANT 551 Anthropology for the Museologist.** Semester course; 3 lecture hours. 3 credits. A discussion and investigation of contemporary anthropological themes and questions and identification of how they can be depicted with museum materials. Students are expected to develop a research design for an exhibit.

**FLA 501 French Communication.** Semester course; 3 lecture hours. 3 credits. An intensive study of written or oral communication in French. The content of this course will emphasize primarily oral, written, or listening skills.

**FLA 502 German Communication.** Semester course; 3 lecture hours. 3 credits. An intensive study of written or oral communication in German. The content of this course will emphasize primarily oral, written, or listening skills.

**FLA 503 Spanish Communication.** Semester course; 3 lecture hours. 3 credits. An intensive study of written or oral communication in Spanish. The content of this course will emphasize primarily oral, written, or listening skills.

**FLA 511 French Civilization.** Semester course; 3 lecture hours. 3 credits. A comprehensive study of the civilization and culture of France and its global expressions.

**FLA 512 German Civilization.** Semester course; 3 lecture hours. 3 credits. A comprehensive study of the civilization and culture of Germany and its global expressions.

**FLA 513 Spanish Civilization.** Semester course; 3 lecture hours. 3 credits. A comprehensive study of the civilization and culture of Spain and its global expressions.

**FRE 500 French for Graduate Students.** Semester course; 3 lecture hours. 3 credits. This course is designed to prepare graduate students for the reading knowledge examination for higher degrees. Each graduate department will determine the nature and form of the certifying examination.

**GEO 550 Physical Geography of Virginia.** Semester course; 6 field hours. 3 credits. Field course, traversing the varied physical regions of Virginia with emphasis on the climate, terrain, soils, and vegetation of each region and on the transitional zones in between. Human modification of the physical environment and its consequences are also stressed.

**GEO 551 Cultural Geography of Virginia.** Semester course; 6 field hours. 3 credits. Field course, traversing the various cultural regions of Virginia with emphasis on the basic economic activities of each area, the cumulative effect of occupation of the regions, and past and present changes in the cultural landscape.

**GEO 698 Geography Workshop.** Semester course; 1 lecture or two field hours per credit. 1-6 credits. Lecture, laboratory, and/or field course; may be repeated with different topics to a maximum of 9 credits. An intensive study of a particular area or topic in geography. See Schedule of Classes for specific workshops to be offered each semester.

**GER 500 German for Graduate Students.** Semester course; 3 lecture hours. 3 credits. This course is designed to prepare graduate students for the reading knowledge examination for higher degrees. Each graduate department will determine the nature and form of the certifying examination.

**HIS 570 Special Topics in History.** Semester course; 1-3 lecture hours. Variable credit 1 to 3 credits. May be repeated with different topics for a maximum of nine credits. An intensive study of a selected topic in history.

**HIS 580 Studies in Early American Leadership.** Two-week session. 3 credits. A summer workshop combining lectures, discussion, projects, and tours to analyze the development of the ideals of a democratic society in the British/American colonies and the lives of eighteenth-century leaders. The focus of the workshop will be on Virginia; the context will be early America.

**HIS 692 Independent Study.** Semester course. 1-3 credits. Maximum of 6 credits. Prerequisite: permission of chairman of Department of History and director of graduate studies in department in which student is pursuing graduate work. For students in English or other graduate programs to analyze an historical problem or topic in depth under faculty supervision.

**PHI 508/Religious Studies 508 Indian Tradition.** Semester course; 3 lecture hours. 3 credits. A systematic

analysis of the major theories of Indian religious and philosophical thought: Vedas, Upanishads, Gita, Charvaka. Jainism, Buddhism, the six systems of Hinduism and contemporary developments.

**PHI 510/Religious Studies 510 The Chinese Tradition in Philosophy.** Semester course; 3 lecture hours. 3 credits. A study of the development of Confucianism, of alternative ways of thought prior to the fall of the Han Dynasty, and of neo-Confucianism. The systems of thought are examined in the light of their social, political, and religious impact on China, Korea, and Japan.

**PHI 512/Religious Studies 512 Buddhism in East Asia.** Semester course; 3 lecture hours. 3 credits. A survey of the development of Buddhism in China, Korea, and Japan, the formation of the various schools in each country, and their roles in the molding of Far Eastern culture.

**PHI 521-522 Aesthetics.** Semester course; 3 lecture hours. 3-3 credits. A critical survey of aesthetics from antiquity to the twentieth century. First semester: antiquity to the Renaissance; Second semester: the Renaissance to the present. Topics to be considered include: the nature of art, aesthetic experience, the aesthetic object, and aesthetic judgments. Specific attention will be given to aesthetic analysis in the arts of painting, music, architecture, and the motion picture.

**PHI 530 Philosophy of Religion.** Semester course; 3 lecture hours. 3 credits. An introduction to the major problems and questions of religion and reason. Special reference will be made to the nature of God, the nature of man, the problem of evil, the source of good, immortality, and the basis of authority.

**PHI 601 Principles of Ethics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing. An examination of major ethical theories and their application to contemporary issues in medicine, science, and public policy.

**PHI 602 Biomedical Ethics.** Semester course; 3 lecture hours. 3 credits. An examination of ethical theory and its application to moral problems in medicine and biotechnology.

**PHI 690/Public Administration 690 Administrative Ethics.** Semester course; 2, 3 lecture hours. 2, 3 credits. No prerequisite. A philosophical investigation into the problems of making ethical decisions, focusing on issues likely to confront the public administrator. Examples of such issues are: equity in social services delivery, affirmative action, loyalty to the bureaucracy vs. "whistle blowing," and conflicts of interest between personal and public interest.

**PHY 571 Theoretical Mechanics.** Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 337 and MAT 301 or permission of instructor. An introduction to advanced dynamics involving the Lagrangian and Hamiltonian formalisms.

**PHY 576 Electromagnetic Theory.** Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 362 and MAT 301 or permission of instructor. Maxwell's equa-

tions of electromagnetism, vector and scalar potentials, electromagnetic waves, and radiation theory.

**PHY 580 Quantum Mechanics.** Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 351, MAT 301, or permission of instructor. Theoretical quantum descriptions with emphasis upon mathematical techniques. Schrodinger equation, hydrogen atom, eigenfunctions and eigenvalues, angular momentum and spin, and perturbation theory.

**POS 553 The Military in Politics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. The course will examine the pervasive character and growing importance of the military in the

governmental and policymaking processes. It will include a study of the history of civil-military relations, and of the changing dynamics of the relationship that occurs in response to changes in social and political contexts and as a result of technological changes in the military and warfare.

**POS 660/Public Administration 660 Community Power Dynamics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of department. Examination of the location of power in the American community: operational concepts and general methodological approaches defined; empirical findings based on various methodological approaches; conclusions on community political systems and power.



## PART III—School of Allied Health Professions

### ADMINISTRATIVE OFFICERS

THOMAS C. BARKER, B.S., M.A., Ph.D.  
Dean

BENJAMIN T. CULLEN, Jr., B.S., M.A., Ed.D.  
Associate Dean

JAMES W. HOLSINGER, B.S., M.S., M.D., Ph.D.  
Associate Dean for Veterans Administration  
Affairs

JENNIE D. SEATON, B.A., M.S., Ed.D.  
Director, Center for Allied Health Education

The School of Allied Health Professions was established on January 1, 1969. A fundamental reason for the establishment of the School of Allied Health Professions was to provide an administrative structure for existing educational programs in allied health disciplines and to direct the development of new programs in response to growing needs for allied health manpower. At the outset, the school incorporated existing educational programs for hospital administration, medical technology, physical therapy, and radiologic technology. A program for nurse anesthesia was inaugurated as a separate department in 1969; an existing educational program in occupational therapy located on the Academic Campus was transferred administratively to the School of Allied Health Professions in 1970; also in 1970, a teaching program in patient counseling formerly based within MCV Hospitals was integrated with the school. Since 1974 baccalaureate programs in health care management, medical record administration, and radia-

tion sciences with specific concentrations in education and in administration have been established.

### PROGRAMS

Graduate programs currently in this school and the degrees conferred on their graduates are:

- DEPARTMENT OF MEDICAL TECHNOLOGY: Master of Science
- DEPARTMENT OF OCCUPATIONAL THERAPY: Master of Science in Occupational Therapy; Master of Science
- DEPARTMENT OF PHYSICAL THERAPY: Master of Science; Ph.D. in conjunction with the Department of Anatomy or Physiology, School of Basic Sciences
- DEPARTMENT OF HEALTH ADMINISTRATION: Master of Health Administration; Ph.D. in health services organization and research<sup>1</sup>
- DEPARTMENT OF NURSE ANESTHESIA: Master of Science in Nurse Anesthesia

### PHILOSOPHY

The faculty of the school is committed to offer, through the establishment and

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<sup>1</sup>To begin fall, 1982 subject to final approval of the State Council of Higher Education for Virginia.

maintenance of rigorous standards of excellence, education that will prepare students for professional careers in the several allied health disciplines. Development of professional attitudes, emotional maturity, and ethical behavior in students are vital components of the educational process. It is essential that students gain a deep respect for the dignity of man and the inherent rights of patients and others who receive services. The programs are designed to include not only the development of skills to assure excellence in quality of health care, but also such factual knowledge and experiences that will provide the bases for continuing intellectual and professional growth.

Community services of the school and faculty include continuing education, consultative resources, and participation in all pertinent areas of health care. An integral part of these efforts is to stimulate and sponsor research activities in the allied health disciplines represented within the school and to encourage interdisciplinary research.

### **FACILITIES**

Departments and programs in the School of Allied Health Professions are presently housed in Randolph-Minor Annex, the MCV Hospital South, the Newton House, the Nursing Education building, the Tompkins-McCaw Library, VMI building, the Sheltering Arms building, and the McGuire Veterans Administration Medical Center. Plans are currently under way to consolidate the various components of the School of Allied Health into one educational facility. This facility will permit expanded enrollments in most departments and programs, and provide improved and enlarged educational and research areas.

### **ACCREDITATION**

The School of Allied Health Professions is an institutional member of the American Society of Allied Health Professions and the Virginia Association of Allied Health Professions. All of its programs are approved or accredited by the appropriate national professional or educational organizations.

### **ATTENDANCE REGULATIONS**

The faculty considers attendance at lec-

tures, laboratories, and other functions a requisite to the successful acquisition of the knowledge and skills required of the professional. Hence, the faculty cannot condone absence without good reason from any regularly scheduled educational experience. At the start of each course, instructors will relate to their classes the policy of the department concerning the attendance regulations for that semester. The nature of make-up work in the event of absence will be the prerogative of the instructor.

### **GRADUATE PROGRAMS**

Graduate degree offerings in the School of Allied Health Professions are designated as basic professional or advanced level programs. Accreditation requirements for the individual programs preclude the establishment of general school admission prerequisites, registration dates, and course and degree requirements beyond those of the School of Graduate Studies.

It is the intent that these regulations and procedures for each program insure the selection of applicants whose motivation, ability, character, and health status qualify them to pursue graduate study successfully. Specific information may be found in the departmental presentations in this section or are available from departmental graduate coordinators.

### **STUDENT PERFORMANCE AND BEHAVIOR**

The goals and objectives of the School of Allied Health Professions and its component departments and programs relate to the education of persons preparing for professional careers in the allied health disciplines. An integral requisite of students and practitioners is an undeviating acceptance of a professional attitude and pride that will motivate them to adhere to a code of professional ethics and to develop fully their competencies for practice.

Thus, the suitability of student performance and behavior relating to these professions and to the consumers of health care is a paramount concern of the administration and faculty of this school. To assure a quality of educational and clinical preparation for



its graduates, the following statement is promulgated:

“If, in the judgment of the Faculty/Administration of the School of Allied Health Professions, a student is not considered suitable for emotional, professional, or related reasons, the student’s academic status may be appropriately altered.”

If any questions arise regarding the standards of performance or behavior, it is the responsibility of students to apprise themselves of acceptable character and conduct requirements prior to matriculation in the designated department or program.

**GRADUATE COURSES IN ALLIED HEALTH PROFESSIONS (AHP)**

Nearly all course offerings in the schools are provided by departments and programs; however, selected graduate courses considered applicable to many students in these programs have been assigned to the School of Allied Health Professions.

**573 Teaching in Health Professional Schools.** Semester course; Section 01, 3 lecture hours. 3 credits. Section 02 (Dental), 3 lecture hours. 2 credits. Study of the relationships between health education and higher education in general; current essentials; and standards in education for the health professions; and theoretical approaches to the implementation of these standards in both academic and clinical learning. Emphasis will be placed on modes of adapting to future needs of the professions.

**582 Supervision in the Allied Health Profession.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Study of the supervisory process and staff development, training in communication and interpersonal skills, and public relations within the health facility.

**591 Special Topics.** Semester course; 1-4 credits. Prerequisite: permission of instructor. Interdisciplinary study through lectures, tutorial study, or independent research of selected topics not provided in other courses.

**594 Health Education Practicum.** Semester course; 1 lecture and 4 laboratory hours. 1-6 credits. Section 01, General. Section 02, Nurse Anesthesia. Section 03, Medical Technology. Preparation, presentation, and evaluation of selected educational experiences in the appropriate undergraduate program.

**596 Supervisory and Administrative Practicum in Allied Health Clinics.** Semester course; 60 clinical hours per credit. 1-9 credits. Section 01 MT, Section 02 PT. Prerequisite: permission of instructor. The course is designed for the student who will be assuming supervisory and administrative roles. Areas to be covered include

clinical personnel management, budgeting and ordering of materials and equipment, consultation with physicians, developing and troubleshooting clinical methods, designing job descriptions, and implementation of quality control programs.

Courses offered by the School of Education on the Academic Campus are generally oriented to graduate students interested in teaching, administration, or supervision.

**Department of Medical Technology**

**FACULTY**

- Fike, Dorothy J. *Assistant Professor M.S.*, Cleveland State University; immunology, immunohematology.
- Izard, Jessie V. *Professor and Chairman M.Ed.*, Virginia Commonwealth University; education, immunohematology.
- Karselis, Terence C. *Associate Professor M.S.*, State University of New York at Buffalo; instrumentation.
- Odom, Donna *Associate Professor M.A.*, Central Michigan University; education, microscopy, parasitology.
- Sauer, Debbie *Assistant Professor M.S.*, Medical College of Virginia Commonwealth University; clinical management, chemistry.
- Sauer, Ronald L. *Assistant Professor M.A.*, University of California; microbiology.
- Small, Barbara J. *Assistant Professor M.S.*, Medical College of Virginia of Virginia Commonwealth University; chemistry.
- Sommer, Sandra R. *Assistant Professor M.S.*, Medical College of Virginia of Virginia Commonwealth University; hematology.

**GRADUATE PROGRAM**

The Department of Medical Technology offers a program leading to a Master of Science degree in medical technology. It is designed to provide advanced theoretical and practical education to the individual whose aim is to become an educator, supervisor (administrator), or researcher in the field of medical technology. Students may specialize in one of the following clinical disciplines: hematology, microbiology, chemistry, or instrumentation. The core curriculum comprises courses in education, administration, and clinical instrumentation. This is in addition to the numerous basic science courses offered within the department or in other departments of the university.

**ADMISSION REQUIREMENTS**

In addition to the general requirements for admission to the university, applicants must:

1. hold current certification as a medical technologist or specialist;
2. have a minimum of two years' experience in clinical laboratory science. It is recommended that at least one of these two years be in the area in which student plan to specialize (in extraordinary circumstances and upon approval of a majority of the faculty, this requirement may be waived); and
3. take the Graduate Record Examination (GRE). Any medical technologists who desire to advance their theoretical and practical knowledge may be admitted upon the recommendation of the faculty as special or conditional students, and enroll in any of the graduate courses offered within the university. Special or conditional students, however, cannot be considered for candidacy for the Master of Science degree until the full admission requirements are satisfied.

Application materials may be obtained from the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

### ACADEMIC REQUIREMENTS

It has been found that 21 to 25 months on a full-time basis are necessary to complete the requirements. There are no full-time residence requirements. However, part-time students must complete all work requirements within five years. An interruption in registration in excess of one semester requires prior approval of the department.

The minimum credit requirement is 34 semester hours: 18 in basic science (3 in instrumentation), 6 in research, 3 in education, and 3 in supervision/management. Actual credit hours accumulated will vary depending upon the area of specialization. Included is required participation in MET 690 Seminar for a minimum of 4 semesters. Past experience has shown that the average candidate accumulates more hours than this. All courses selected must be approved by the student's advisor.

A research study conducted under the guidance of an advisor and culminating in a thesis is required of all candidates. The thesis

must be presented in both written and oral form to a thesis committee composed of the student's advisor and two other members. The thesis committee will include at least one member from a department other than medical technology.

### PROGRAM OPTIONS

The department offers instruction in education, supervision and administration, biomedical research, and instrumentation. Students are expected to gain experience in at least one of these areas by way of specific theoretical and laboratory (practicum) courses.

The basic science requirement may be distributed among approved courses listed in the graduate bulletin. It is strongly recommended that students obtain at least one course in computer science and/or biostatistics.

### COURSES OF INSTRUCTION (MET)

**501 Instrumental Methods of Analysis I.** Semester course; 2 lecture and 4 laboratory hours. 2-4 credits. Prerequisite: permission of instructor. A study of modern research and clinical laboratory instrumentation and procedures. Principles, theory, and comparison of laboratory instruments will be discussed in detail along with the factors affecting their operation. Two credit hours will be given students upon successful completion of the lecture portion of the course. Laboratory exercises have been designed to demonstrate the practical applications of the instruments studied in the research and clinical laboratory. Two additional credit hours will be given to students who elect and satisfactorily complete this option. Areas to be covered include: spectrophotometry, fluorometry, flame emission photometry, and atomic absorption spectrophotometry. Offered alternate years beginning 1981.

**502 Instrumental Methods of Analysis II.** Semester course; 2 lecture and 4 laboratory hours. 2-4 credits. Prerequisite: permission of instructor. A study of modern research and clinical laboratory instrumentation and procedures. Principles, theory, and comparison of laboratory instruments will be discussed in detail along with the factors affecting their operation. Two credit hours will be given students upon successful completion of the lecture portion of the course. Laboratory exercises have been designed to demonstrate the practical applications of the instruments studied in the research and clinical laboratory. Two additional credit hours will be given to students who elect and satisfactorily complete this option. Areas to be covered include: electrophoresis, chromatography, particle counters, radioisotope counters, and clinical laboratory automation. Offered alternate years beginning 1981.

**580 Supervision and Administration in Medical Technology.** Semester course; 3 lecture hours. 3 credits.

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This course is designed for students who will be assuming leadership roles in medical technology. Special emphasis will be placed on the role of the medical technologist in education. Topics to be covered include: curriculum design, laboratory design, including teaching areas, budgeting interviewing, ordering equipment and supplies, and requirements for accreditation of approved programs for MT, MLT, and CLA.

**605 Advanced Hematology.** Semester course; 4 lecture hours. 4 credits. To enable the student to understand the basis for special procedures used in hematology and their application in differentiating blood dyscrasias.

**610 Interpretative Clinical Hematology.** Semester course; 2 lecture hours. 2 credits. Prerequisite: permission of instructor. The aim of this course is to present the principles of hematopoiesis and to study related pathological and pathophysiological correlation of hematological disorders.

**690 Medical Technology Seminar.** Semester course; 1 lecture hour. 1 credit. Presentation and discussion of current research and topics of interest by the department faculty, graduate students, and visiting lecturers.

**750 Special Topics in Medical Technology.** Semester course; 1-4 credits. This course provides for lectures, tutorial studies, and/or library assignments in specialized areas not available in formal courses or research training.

**790 Research in Medical Technology.** Semester course; 1-15 credits. Research leading to the M.S. degree.

See other sections of this bulletin for descriptions of the following courses:

Biostatistics 521

Allied Health Professions 573, 574, 581, 582, 583

Health Administration 647

Pathology 509, 510, 513, 521, 522, 602, 606, 610, 614

Anatomy 514

Biochemistry 501, 503, 505

Microbiology and Immunology 504, 507

Human Genetics 504, 516

Physiology and Biophysics 501, 502

## Department of Occupational Therapy

### FACULTY

Barris, Roann *Assistant Professor* M.S., Columbia University; instructional technology, environment and occupational therapy role.

Chichester, Florence B. *Associate Professor* M.S., University of Southern California; professional education.

Ford, Lana J. *Assistant Professor* M.Ed., University of Kansas; visual perception, craft analysis.

Hopkins, Bette L. *Assistant Professor* M.A., University of New Hampshire; physical disabilities occupational therapy.

Kielhofner, Gary W. *Assistant Professor* Dr. P.H., University of California at Los Angeles; rehabilitation processes, theory development in occupational therapy.

Maurer, Patti A. *Professor* Ph.D., Purdue University; instrument development, instructional methods.

Nelson, Craig E. *Assistant Professor* M.S., Syracuse University; physical disabilities occupational therapy, adaptive equipment and environments for the disabled.

Powell, Judith N. *Associate Professor* Ph.D., University of Minnesota; perceptual learning, development of memory.

Saxton, Dorothy P. *Associate Professor* M.A., Western Michigan University; clinical education.

Watts, Janet H. *Assistant Professor* M.A., Virginia Commonwealth University; psychiatric occupational therapy.

Wolfe, Eleanor *Associate Professor* M.A., Texas Women's University; pediatric occupational therapy.

“Since the primary focus of occupational therapy is the development of adaptive skills and performance capacity, its concern is with factors which serve as barriers or impediments to the individual's ability to function, as well as those factors which promote, influence, or enhance performance.

“Occupational therapy provides service to those individuals whose abilities to cope with tasks of living are threatened or impaired by development deficits: the aging process, poverty and cultural differences, physical injury or illness, or psychologic and social disability.” (From Definition and Functions, American Occupational Therapy Association.)

### HISTORY

The program in occupational therapy was initiated at Richmond Professional Institute in 1942.

In 1965 the graduate program leading to a Master of Science degree in basic professional education in occupational therapy was initiated. The School of Occupational Therapy became a department in the School of Allied Health Professions in 1970 with the creation of Virginia Commonwealth University.

### PHILOSOPHY

The faculty of the Department of Occupational Therapy is concerned with improving the quality of occupational therapy professional services through education relevant to current consumer needs and through the development of student attitudes of commitment to personal and professional competence. Research, community service, and continuing education are viewed as ways to

improve professional services and at the same time enhance the quality of the educational program.

The department seeks to provide individualization of educational experiences through a professional curriculum. This curriculum emphasizes experiential learning and provides an integrated education organized around a human developmental frame of reference.

### OBJECTIVES

To provide students with the opportunity to become competent registered occupational therapists through critical thinking and problem solving experiences.

To provide an environment for students to develop respect for the dignity and basic needs of individuals throughout their life span as these may be met in present and future health care delivery systems.

To provide students with the opportunity to develop skills necessary to evaluate and execute effective treatment in occupational therapy.

### FACILITIES

The educational facilities of the Department of Occupational Therapy are located in the Virginia Mechanics Institute Building at the northeast corner of Tenth and Marshall Streets. In addition, the department has an educational clinic at McGuire Veterans Administration Medical Center.

During the basic professional graduate program, field work assignments are made for students in a wide range of clinics and agencies in the Richmond metropolitan area. A 24-week extended field work requirement will be arranged in approved clinical education facilities throughout the United States.

### ACCREDITATION

The basic professional graduate program to become an occupational therapist is accredited by the American Occupational Therapy Association and the Committee on Allied Health Education and Accreditation of the American Medical Association.

### HONORS AND AWARDS

C. A. Kooiman Memorial Award. This award is given in memory of C. A.

Kooiman, director of the occupational therapy curricula from 1961 until his death in 1976. The award is made annually to the graduate student completing the best research project.

### PROGRAMS

Three courses of study are offered:

1. A Master of Science in Occupational Therapy degree program, basic professional, designed for college graduates who wish to become occupational therapists. This program may be completed in two calendar years or may be individually designed for students who need a slower pace. The basic professional master's program includes academic courses, a thesis or research project, and 960 clock hours of field work experience. Twelve weeks of the field work clock hours must be continuous.
2. A Master of Science degree program for those who are registered occupational therapists. This program is individually designed in special areas of concentration. A minimum of 33 semester hours including a thesis is required.
3. A special concentration in the master's program for occupational therapists with interest and experience in hand management.

### ACADEMIC REGULATIONS

Students are admitted to the occupational therapy programs with the expectation that they will direct maximum time and effort to the learning process. Outside activities must be scheduled by students for such dates and hours that permit full compliance with the time requirements for course work. Students must not expect that allowances will be made, except in very unusual situations, for tardiness, lack of regular attendance, and meeting deadlines for course assignments because of employment or other outside activities.

To continue in the graduate curriculum students are expected to maintain a cumulative GPA of 3.0.

1. Students who fail to maintain a cumulative grade point average of 3.0

in all courses or who receive a grade of "D" at the end of the first fall semester of enrollment and for every semester thereafter, will automatically be placed on one semester of probation.

Conditions of probation require students to earn a quality point average the semester of probation sufficient to result in a cumulative GPA of 3.0 and may include recommendations for academic counseling, assignments by individual instructors, and other appropriate conditions as outlined in a letter of notification of probationary status prepared by the Committee on Academic Standing and Student Progress.

2. Students who earn an "F" or two "D" grades will not be allowed to continue in the program.
3. Students who receive two "C" grades (except in Field Work II) and yet who may not have a deficient GPA will receive a letter of concern of unsatisfactory performance with recommendations for remediation.
4. Students who withdraw from Field Work II before the mid-point of the field work will receive a "W." Students who withdraw from Field Work II after the mid-point of the experience and prior to three weeks from completion will normally receive an F. Students receiving an F will be reviewed by the Committee on Academic Standing which may result in termination or continuation on probationary status with continuation contingent upon remediation.
5. Students who have not fully met the requirements for admission may be admitted into the graduate program on conditional status. Advancement to full status may be approved by the Committee on Academic Standing and Student Progress when students have satisfactorily completed one semester of graduate studies. Students admitted on conditional status may be dismissed from the graduate program at the end of their first semester of graduate studies if they have not earned a 3.0 GPA. Conditional status is a probationary status; the requirements for advancement to regular status are

specified in the conditional admission letter prepared by the Graduate Admissions Committee.

6. Regardless of academic standing, to continue in the program, students are also expected to:
  - a. Pay all fees;
  - b. Maintain personal attributes and behavior appropriate for professional practice;
  - c. Complete field work requirements to the satisfaction of clinical and academic faculty.
7. Although arrangements are made in advance, each student is reviewed prior to placement in Field Work II education. Students must have satisfactorily completed courses prerequisite to that field work experience. They must also demonstrate the maturity, stability, professional attitude, and behavior essential for them to benefit and perform adequately in the placement.

### GRADUATE PROGRAM—BASIC PROFESSIONAL PROGRAM

The Department of Occupational Therapy offers a program leading to a Master of Science in Occupational Therapy degree for qualified students who have earned a bachelor's degree in a related field.

#### Admission Requirements<sup>2</sup>

Applicants for the basic professional master's degree program must complete the following prerequisites with a grade of "C" or better:

English .....	6 semester hours
Biological Sciences .....	6 semester hours
Must include	
Human Anatomy with laboratory — 1 course and	
Human Physiology with laboratory — 1 course	
or	
Human Anatomy and Physiology	
with laboratory.....	6 semester hours
Social Sciences.....	15 semester hours
Must include:	
Psychology.....	6 semester hours
Sociology, Social Psychology,	
Anthropology.....	3 semester hours
Statistics .....	2 semester hours

<sup>2</sup>See also the section on graduate programs in the School of Allied Health Professions.

These are considered minimal prerequisites, and applicants are encouraged to pursue additional study in biology, psychology, and sociology. To fulfill the psychology prerequisite, courses in Developmental Psychology, Theories of Personality, and Abnormal Psychology are highly recommended. Experience in occupational therapy or human service agencies is required. Admission is selective, since the number of applicants exceeds the number of students who can be enrolled.

For further information and application materials, contact the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 Franklin Street, Richmond, VA 23284.

**Curriculum Plan**

The total program is planned for completion in two calendar years of full-time study and encompasses academic and field work education as well as a research project. Each academic session has as a prerequisite successful completion of all preceding academic work.

<b>First Year, Summer</b>		<i>Credits</i>
BIO 525	Advanced Functional Anatomy . . . . .	5
BIO 529	Advanced Functional Neuroanatomy . . . . .	3
		8
<b>First Year, Fall Semester</b>		
OCT 501	Basic Treatment Concepts and Skills . . . . .	2
OCT 503	Occupational Life Roles and Tasks . . . . .	2
OCT 505	Physical Dysfunction and Occupational Therapy Intervention I . . . . .	5
OCT 507	Psychosocial Dysfunction and Occupational Therapy Intervention I . . . . .	5
OCT 509	Activity Theory and Skills I . . . . .	2
		16
<b>First Year, Spring Semester</b>		
OCT 504	Occupational Life Roles and Tasks II . . . . .	1
OCT 506	Physical Dysfunction and Occupational Therapy Intervention II . . . . .	5
OCT 508	Psychosocial Dysfunction and Occupational Therapy Intervention II . . . . .	5
OCT 510	Activity Theory and Skills II . . . . .	2

OCT 602	Research Methods in Occupational Therapy . . . . .	3
		16
<b>Second Year, Summer</b>		
OCT 693	Field Work Education I . . . . .	9
<b>Second Year, Fall Semester</b>		
OCT 603	Administration and Supervision of Occupational Therapy Services . . . . .	3
OCT 605	Influences on Health and Health Care . . . . .	2
HAD 500	Hospital and Medical Care Organization (or an additional section of OCT 691, 3 credits . . . . .	3
OCT 691	Special Topics in Occupational Therapy . . . . .	3
OCT 698	Research in Occupational Therapy . . . . .	3
		14
<b>Second Year, Spring Semester</b>		
OCT 694	Field Work Education II . . . . .	9
OCT 699	Research in Occupational Therapy . . . . .	3
		12

**GRADUATE PROGRAM FOR OCCUPATIONAL THERAPISTS**

The Department of Occupational Therapy offers a Master of Science degree program for registered occupational therapists with the following areas of concentration: administration, education, gerontology, pediatrics, physical disabilities, and psychosocial dysfunction.

**Admission Requirements**

Applicants must have earned a bachelor's degree from an accredited college or university and have graduated from an accredited occupational therapy program approved by the American Occupational Therapy Association. An official report of scores on the Aptitude Test of the Graduate Record Examination is required.

For information and application materials, contact the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

**Curriculum**

The Master of Science degree program includes a minimum of 27 credits of approved course work and six credits for the thesis. Students may plan for full-time study or may

plan to enroll on a part-time basis. Full-time students must plan at least 12 months to complete all degree requirements.

Each occupational therapist accepted for the master's degree program will develop an individualized plan of study with the help of a faculty advisor. This study plan must be approved by the Committee on Academic Standing and Student Progress of the Department of Occupational Therapy.

**PROGRAM OF STUDY**

	<i>Credits</i>
<b>Required Core Courses</b>	
OCT 601    Advanced Theoretical Concepts in Occupational Therapy . . . . .	3
OCT 602    Research Methods in Occupational Therapy . . . . .	3
<b>Required Administration Course: Select One</b>	
OCT 603    Administration and Supervision of Occupational Therapy Services .	3
OCT 605    Influences on Health and Health Care . . . . .	2
OCT 611    The Habilitation Team in Public Schools . . . . .	3
<b>Area of Concentration</b>	9
Graduate courses from the Department of Occupational Therapy or from other departments at Virginia Commonwealth University	
<b>Elective Courses</b>	9
<b>Required Research</b>	
OCT 798    Thesis	3
OCT 799    Thesis	3

Notes: A minimum of 3 credits in the area of concentration or elective courses must come from within the Department of Occupational Therapy.

Students must complete one statistics course. Courses taken at the undergraduate level meet this requirement but may not be counted toward the graduate degree.

**GRADUATE PROGRAM FOR OCCUPATIONAL THERAPISTS: HAND MANAGEMENT**

The Department of Occupational Therapy offers a Master of Science degree program planned for experienced occupational therapists with special interest in functional assessment of hand problems, diagnosis of hand problems, and therapeutic programs for upper extremity problems.

The hand management program in occupational therapy is offered under the guidance of Wyndell H. Merritt, M. D. and the Department of Occupational Therapy and in collaboration with the Department of Physical Therapy. Two occupational therapists will be selected to participate each year.

**Admission Requirements**

Applicants must have earned a bachelor's degree from an accredited college or university and have graduated from an accredited occupational therapy program approved by the American Medical Association and the American Occupational Therapy Association. Professional experience and special interest in hand rehabilitation are required.

**Curriculum**

The advanced master's degree program in hand management requires 45 semester hours of course work and a thesis. A minimum of 18 months of full-time study is needed to complete the program.

**GRADUATE COURSES IN OCCUPATIONAL THERAPY (OCT)**

**501 Basic Treatment Concepts and Skills.** Semester course; 1 lecture and 2-4 laboratory hours. 2-3 credits. Introduces important occupational therapy concepts: the influence of activity on health, the basic occupational therapy process, evaluation, motivation, and learning. Develops skill in observation and interviewing as data-gathering methods.

**503 Occupational Life Roles and Tasks I.** Semester course; 1 lecture and 3 laboratory hours. 2 credits. A study of growth and developmental processes and influences from infancy through adolescence, with primary focus on life roles and occupational performance skills related to self-help tasks, play/leisure tasks, and school/work tasks.

**504 Occupational Life Roles and Tasks II.** Semester course; 2 laboratory hours. 1 credit. This course will examine the development of occupational behavior in the adult portion of the life span. It draws upon concepts of time, role, habits, interest, and values to examine how the normal adult proceeds through occupational choice, worker roles, and retirement. The course also examines the balance of work and play and its change in normal development. Finally the course will examine the effects and interrelationships of disability with normal occupational development in adulthood.

**505 Physical Dysfunction and Occupational Therapy Intervention I.** Semester course; 3 lecture and 6 laboratory hours. 5 credits. The focus of this course will be to identify and describe physical dysfunction seen in the continuum of health care in medical, educational, and community settings. A wide variety of evaluative and therapeutic approaches will be explored for the age range of infancy through adolescence. Assigned level one field work will be part of the course.

**506 Physical Dysfunction and Occupational Therapy Intervention II.** Semester course; 3 lecture and 6 laboratory hours. 5 credits. Beginning with the early adult years and continuing through the rest of the life

span, the emphasis of this course will be twofold: (1) To identify and describe physically disabling conditions (acute and chronic) which interrupt occupational development and function during this age range. (2) To apply the theories and principles of occupational therapy to the evaluation and treatment of physically disabled persons (acute and chronic) during this age range. Assigned level one field work will be a part of this course.

**507 Psychosocial Dysfunction and Occupational Therapy Intervention I.** Semester course; 3 lecture and 6 laboratory hours. 5 credits. This course will focus on psychosocial pathologies which occur within the infancy through adolescence age span (including specific learning disabilities, mental retardation, and other diagnostic classifications). Theories and principles of occupational therapy intervention, useful in medical, educational, and community settings will be explored. Assigned level one field work will be part of the course.

**508 Psychosocial Dysfunction and Occupational Therapy Intervention II.** Semester course; 3 lecture and 6 laboratory hours. 5 credits. This course will introduce common psychiatric disorders of young, middle, and older adults followed by review of theoretical frames of reference and related occupational therapy evaluation and intervention methods. Assigned level one field work will be included.

**509-510 Activity Theory and Skills I and II.** Semester course; 1 lecture and 2 laboratory hours. 2 credits. Analysis of student's activity history and skills in areas of play/leisure, self-care, homemaking, and work and development of skill in performing selected activities, including splint-making. Emphasizes teaching, analysis, and therapeutic application of activities. Also stressed are evaluation and development of client's work, homemaking, and daily living skills.

**601 Advanced Theoretical Concepts in Occupational Therapy.** Semester course; 3 lecture hours. 3 credits. Prerequisite: OCT 312 or 501 or student must be registered occupational therapist. This course offers an advanced conceptualization of a generic theory base for occupational therapy. The course includes examination of the nature and organization of scientific knowledge, the medical model and other models of health care, sociological features of occupational therapy practice, and the study of human occupation and its disruption in illness.

**602 Research Methods in Occupational Therapy.** Semester course; 3 lecture hours. 3 credits. II. Covers the steps in the research process: problem definition, literature review, research design and data collection appropriate to occupational therapy, data analysis and interpretation, and research reporting. Emphasizes action research, evaluation research, and the preparation of a proposal for a thesis or project. Students with prior course work or experience in research may be permitted to take an elective instead of this course.

**603 Administration and Supervision of Occupational Therapy Services.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. The management of human and non-human resources in the provision of efficient and effective occupational therapy services; the nature

of formal and informal organizations, the administrative process, and administrative tasks. Includes supervision, consultation, and the planning of occupational therapy field work education.

**605 Influences on Health and Health Care.** Semester course; 2-3 lecture hours. 2-3 credits. The nature of health, illness, and disability; the sick role; relationship between occupational therapy and the health care system; current professional issues in occupational therapy.

**611 The Habilitation Team in Public Schools.** Semester course; 3 lecture hours. 3 credits. Examination of P.L. 94-142, The Education for All Handicapped Children Act of 1975, with implications for allied health professionals. Emphasis on the role of the habilitation team in school programs for handicapped children.

**612 Occupational Therapy Assessment of Children.** Semester course; 3 lecture hours. 3 credits. Introduction to the theory of testing. Administration, scoring, interpretation, and reporting of selected tests and informal assessments useful in an occupational therapy evaluation of children. Field work experiences will be required.

**613 Occupational Therapy: From Research to Practice in Cognitive Development.** Semester course; 3 lecture hours. 3 credits. Review of current theory and research in cognitive development. Application of child development research to handicapped children. Emphasis on the practical implications for pediatric occupational therapy.

**614 Occupational Therapy for Severely Handicapped Children.** Semester course; 3 lecture hours. 3 credits. Prerequisite: OCT 612. Selected intervention strategies for pediatric occupational therapy. Emphasis on theory and the application of research to the treatment of severely handicapped children.

**691 Special Topics in Occupational Therapy.** Semester course; 3 credits. Designed around the interests of students, faculty expertise, and availability and expertise of Richmond area occupational therapists or visiting lecturers. Format may include intensive mini-courses or workshops, an advanced course, or independent study with some opportunity for election and development of knowledge and skills in a specialized area of occupational therapy.

**693 Field Work Education I.** 3-9 credits.

**694 Field Work Education II.** 3-9 credits. Twelve-week full-time experience in programs providing occupational therapy services.

Supervised field work experiences are arranged in various settings for the application of academically acquired knowledge. Placements include experiences in prevention, health maintenance, remediation, daily life tasks, and vocational adjustment. Field work settings may include hospitals, rehabilitation centers, school systems, community agencies, camping programs, penal systems, and the like. Field work experiences are arranged individually, but placement in a *specified location* cannot be guaranteed.

In the event of failure, the course may be repeated on-



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ly upon recommendation by the academic and clinical faculty. Field work must be completed no later than 24 months following completion of the academic phase.

**698 Research in Occupational Therapy.** 3 credits. Completion of a department proposal for a research project or master's degree thesis relevant to occupational therapy.

**699 Research in Occupational Therapy.** 3 credits. Completion of a research project or master's degree thesis relevant to occupational therapy.

**798 Thesis.** 3 credits. Completion of a departmental proposal for a master's degree thesis relevant to occupational therapy.

**799 Thesis.** 3 credits. Completion of a master's degree thesis relevant to occupational therapy.

## Department of Physical Therapy

### FACULTY

Gudas, Stephen A. *Assistant Professor* M.S., Medical College of Virginia of Virginia Commonwealth University; rehabilitation.

Hill, Jane R. *Assistant Professor* Ph.D., Union Graduate School; physical therapy administration.

Hirt, Susanne *Professor and Chairman* M.Ed., University of Virginia; therapeutic exercise.

Lamb, Robert L. *Associate Professor* Ph.D., University of Maryland; biomechanics and kinesiology.

Newton, Roberta A. *Associate Professor* Ph.D., Medical College of Virginia of Virginia Commonwealth University; neurophysiologic physical therapy.

Payton, Otto D. *Professor* Ph.D., University of Maryland; physical therapy education.

Personius, Walter J. *Assistant Professor* M.S., University of Iowa; orthopaedics/physical therapy.

VanSant, Anna F. *Assistant Professor* M.S., Medical College of Virginia of Virginia Commonwealth University; therapeutic exercise.

### HISTORY

The current graduate program in physical therapy, which was initiated in 1968 with one student, began to expand in 1971 with the appointment of a full-time director. Enrollment currently varies from 6 to 12 students in each class.

### PHILOSOPHY AND OBJECTIVES

In a world where knowledge is doubling every few years, continuing education has become a way of life for most professional people. Many of yesterday's truths have been disproven and tomorrow's truths are being generated in today's laboratories and clinics. Physical therapy, an integral part of

the health care system, is involved both broadly and deeply in this atmosphere of change and growth. Expanding knowledge and skills in the basic and clinical sciences and changes in the needs and mandates of society have placed new demands and created new responsibilities for physical therapists.

These changes have not only altered the existing basic professional preparation programs but have also stimulated the development of a variety of new and innovative postgraduate and continuing education programs. The master's degree program is designed to meet the needs of many practicing physical therapists who want to increase their skills and competencies in specialized aspects of their profession. The guiding principle of this program is flexibility which provides for adaptation to the specific interests and goals of the individual student. Students may elect courses from most of the graduate departments of both the MCV Campus and the Academic Campus of VCU (e.g. anatomy, physiology, health administration, psychology, education, etc.) in addition to courses from the graduate program of the Department of Physical Therapy in order to build a meaningful, integrated, individualized program of studies.

Prospective students are encouraged to have their goals clearly defined before they start a graduate program. Typical goals might include specialization as a clinician, educator, researcher, consultant, or administrator with expertise in a basic science or in a clinical specialty.

Areas of specialization have been developed in therapeutic kinesiology, teaching therapeutic exercise, general kinesiology and biomechanics, pediatrics, orthopaedic rehabilitation, academic and clinical education, and organization and delivery of physical therapy services. The faculty have developed recommended sequences of courses for each of these tracks.

A new interdisciplinary curricular track in geriatric physical therapy was established in 1980. The program is described in the back of this bulletin with the other interdisciplinary programs. See index.

Another interdisciplinary program in hand rehabilitation is co-sponsored by the Departments of Plastic Surgery, Physical

Therapy, and Occupational Therapy, under the guidance of Wyndell H. Merritt, M. D. The program is planned for experienced physical and occupational therapists with special interest in functional assessment and therapeutic programs for hand and upper extremity problems. One physical therapist and one or two occupational therapists will be admitted to this curriculum each fall. The advanced Master's Degree program in hand rehabilitation requires 45 semester hours of course work and a thesis. A minimum of 18 months of full-time study is needed to complete the program.

### **STUDIES LEADING TO A DOCTOR OF PHILOSOPHY DEGREE**

The Schools of Basic Sciences and Allied Health Professions offer Ph.D. programs in neurophysiological physical therapy and in anatomy-orthopaedic physical therapy. These research degrees are planned primarily as physical therapy faculty development programs; other needs may be met for individual students. Interested physical therapists should contact the Department of Physical Therapy for details.

### **FUTURE PLANS, FACILITIES**

In addition to the usual classroom facilities, the department is developing a kinesiological research laboratory with equipment for both bioelectrical and photographic studies. Graduate students interested in education do their teaching practicum in the undergraduate classes and laboratories and in the clinical departments of MCV Hospitals. A clinical specialty practicum may be individually arranged in appropriate facilities in or out of Richmond.

Present courses and facilities will be expanded as enrollment and student interests indicate a need.

### **ADMISSION REQUIREMENTS**

1. All general requirements for admission are specified in Part I of this bulletin.
2. Graduation from a physical therapy program approved by the American Physical Therapy Association (or, for foreign students, its equivalent as determined by the Physical Therapy Graduate Program Admissions Com-

mittee). For further information and application materials, contact the Office of Enrollment Services, Graduate Admission, Virginia Commonwealth University, 821 West Franklin, Richmond, VA 23284.

### **THE STUDENT'S ADVISOR AND GRADUATE COMMITTEE**

1. Each student shall have an advisor and a graduate committee.
2. Appointment and duties of the advisor:
  - a) An initial advisor will be the director of the graduate program of the student's department, or the director's designee.
  - b) A permanent advisor shall be appointed by the dean upon recommendation of the chairman of the student's major department. Appointment should be made no later than the second semester after acceptance. A change in advisor may be made by the dean upon recommendation of the chairman of the major department.
  - c) The advisor shall be chairman of the student's graduate committee.
  - d) The advisor shall, with the student's graduate committee, have responsibility for the total guidance of the student, subject to the approval of the chairman of the department and dean of the School of Allied Health Professions.
  - e) The advisor shall work out a plan of study with the student.
  - f) The advisor shall supervise the student's research work and thesis preparation and be one of the examiners of the thesis.
3. Appointment and duties of the student's graduate committee:
  - a) The student's graduate committee shall be appointed by the dean upon recommendation of the student's advisor. The composition of the graduate committee shall be such that all significant areas of the student's course work are represented. For the purpose of examinations and thesis evaluation, and because

- of special knowledge and distinction in the field of the candidate's work, an additional member, who may be from a different institution, may be appointed to the student's graduate committee by the dean. Changes in the membership of the committee are made in the same way. The committee for the M.S. candidate shall consist of a minimum of three members as follows: the student's advisor; one other representative member of the graduate faculty of the department in which major work is to be taken; and one representative of the faculty outside the major department.
- b) The student's graduate committee shall work with the student's advisor in guiding the student's graduate program.
  - c) The student's graduate committee shall conduct oral comprehensive and final examinations and act as moderators for the thesis.

#### GENERAL REQUIREMENTS FOR GRADUATE DEGREES

1. All full-time graduate students are expected to register for 12 semester hour credits per semester. This requirement includes research.
2. No student may take the comprehensive examination if the overall grade-point average is less than 2.5 or if the grade-point average for courses within the major department is below 3.0. Research credits shall not be counted in computing this average, and shall be graded as P—pass satisfactory, or F—fail. Other grade interpretations are described in Part I of this bulletin.
3. All cases of unsatisfactory student performance, including any grade of D or F, failure to pass written or oral comprehensive examinations, or thesis or final examinations require action of the dean to permit the student to continue.
4. Five or more copies of the thesis (as required) prepared according to standards approved by the school's graduate committee in final form three weeks or more before the date of graduation. (Graduation dates are in May, August, and December.) These copies are to be submitted in temporary binders. Following acceptance of the thesis and passing the final examination, it shall be the responsibility of the candidate to present to the dean's office five copies of the thesis suitable for binding along with a check to cover the cost of handling.
5. The dean will recommend granting a degree, only after all requirements have been fulfilled, including payment of all fees to the university, and after submission of the copies of the thesis for binding. Degrees are not granted *in absentia* unless specific written request is made to the dean and permission granted by him or her.
6. A minimum of 24 semester hours is required, exclusive of research credits. In practice, it is found that two years of study usually are necessary to complete the requirements. A time limit of five calendar years, beginning at the time of first registration, is placed on work to be credited toward the Master of Science degree. As many as eight semester hours credit may be given for work previously completed, upon recommendation of the student's graduate committee with concurrence by the dean.
7. Each student conducts a research study under the guidance of an advisor. This study is reported in a thesis, prepared in acceptable form and style. On approval of the thesis by the advisor, the students submit a copy to each member of the graduate committee.
8. The thesis is examined by the student's graduate committee members, acting as moderators, who shall decide upon its acceptability. The moderators may confer with one another before making their decision. Each moderator shall report to the dean through the advisor when the thesis is acceptable for defense. The thesis is approved only if the moderators accept it unanimously.
9. On approval of the thesis, the student appears for a final oral examination administered by the graduate committee

(and any appointed additional moderator). The dean, or an appointee, serves as chairman of the examination committee. Final examination shall be open to the faculty, and its time and place (together with the candidate's name, department, and title of thesis) shall be announced at least seven days in advance.

10. The final examination of M.S. candidates includes the subject matter of course work as well as the thesis. A favorable vote, with no more than one negative vote, is required to pass the examination. Only members of the graduate committee and the examiner appointed by the dean shall vote. The dean, or a faculty representative, will attend all oral examinations and will cast a vote. No examiner may abstain from voting.
11. Candidates, having fulfilled all the requirements for the degree of Master of Science, are recommended by the dean to the president for the degree.

## TRAINEESHIPS AND ASSISTANTSHIPS

In the past, the department has been able to offer a limited number of federal traineeships (stipend, tuition, and fees) and clinical assistantships (salary). These will continue to be offered as funds allow. Interested students should make inquiries to the program director.

## GRADUATE COURSES IN PHYSICAL THERAPY (PHT)

See page 54 for descriptions for the following allied health courses:

**AHP 573 Teaching in Health Professional Schools.**

**AHP 591 Special Topics in Allied Health.**

**AHP 594 Health Education Practicum.**

**AHP 582 Supervision in the Allied Health Professions.**

**AHP 596 Supervisory and Administrative Practicum in Allied Health Clinics.**

**601 Electromyographic Kinesiology.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. The emphasis of this course is on the theoretical and practical aspects of the use of electromyography as a tool to observe human movement, normal and pathologic. The student will have the opportunity to consider the electronic, physiologic, and anatomic principles related to the ap-

propriate selection of electromyographic techniques for the study of movement. Particular emphasis will be placed on data reduction methods and interpretation of data. The student will develop beginning skills in performing the techniques necessary for recording parameters involved in movement.

**602 Biomechanics.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. This course concerns the study of the effects of forces upon normal and pathologic human form and movement. Classroom and laboratory sessions are designed to guide the student in the use of the measurement techniques necessary to form a detailed picture of moving man viewed as a mechanical system. Particular emphasis is placed on the techniques of modeling, cinematography, and electrogoniometry.

**605 Foundations for Pathokinesiology.** Semester course; 3 to 4 lecture hours. 3 to 4 credits. A study of the principles that form a foundation for pathokinesiology and therapeutic kinesiology. Integration of principles of human development and motor behavior with emphasis on abnormal motor behavior and its remediation will be presented.

**606 Therapeutic Kinesiology.** Semester course; 1 to 3 lecture and 3 clinical hours. 2 to 4 credits. A study of motor behavior in both normal and pathological conditions. Reading and discussion of the basic literature of current neurophysiological approaches to therapeutic exercise and an integration of these concepts into a comprehensive model of human movement.

**607 Principles of Clinical Examination in Orthopaedic Physical Therapy.** Semester course; 2 laboratory hours. 1 credit. May be repeated for a maximum of 2 credits. Principles and techniques for evaluating joint and soft tissue injuries and disabilities with an emphasis on history-taking, the Maitland Physical Format, and accessory motion testing.

**608 Principles of Orthopaedic Physical Therapy.** Semester course; 2 lecture hours. 2 credits. A detailed examination of the basic principles and rationale for physical therapy treatment approaches to orthopaedic problems. Principles of mobilization will be emphasized.

**611 Research Process.** 2 lecture hours. 2 credits. Readings, discussions, and reports on the current status of professional literature and the validation of clinical practice, clinical administration, and professional education. A model for professional development, the role of research in the validation process, and the basics of research design are presented, non-mathematically. Required of all students unless excused by the faculty.

**690 Physical Therapy Seminar.** Semester course; 1 lecture hour. 1 credit. Reports on current problems and issues in the field of physical therapy. May be repeated for a maximum of four credits; required for two semesters.

**691 Special Topics in Physical Therapy.** 1-4 credits. Guided independent study of specific topics not discussed in other courses or discussed in *less detail in other* courses. Student's topic of desired study must be identified and approved prior to enrollment.

**692 Clinical Specialty Seminar.** Semester course; 0.5 to 3 credits. Individual reports dealing in depth with the history, current status, and problems in a given area of clinical specialization. It is anticipated that the student will identify several potential thesis topics in the course of preparing these reports.

**693 Clinical Specialty Practicum.** 60 clock hours per credit. 1-9 credits. Prerequisite: appropriate courses in sciences basic to area of specialization. One semester hour's credit per 60 clinical hours. Concentrated clinical experience in the student's chosen area of specialization under the guidance of an approval preceptor.

**798 Research in Physical Therapy.** 1-15 credits. Research in preparation for the master's degree thesis.

## Department of Health Administration

### FACULTY

- Barker, Thomas C. *Professor, Acting Chairman, and Dean* Ph.D., State University of Iowa; planning, policy, health administration.
- Breindel, Charles L. *Assistant Professor* Ph.D., Pennsylvania State University; health planning and policy.
- Cullen, Benjamin T. Jr. *Professor* Ed.D., University of Virginia; personnel/labor relations and health administration.
- Heck, J. Louis *Assistant Professor* Ph.D., University of South Carolina; health care finance.
- Mark, Barbara A. *Assistant Professor* Ph.D., Case Western Reserve University; nursing administration and organizational behavior.
- Modrow, Robert E. *Associate Professor* Ph.D., University of Michigan; health care organization, organizational theory and public accountability.
- Norville, Jerry L. *Professor* M.S., University of Colorado; M.B.A., Midwestern State University; M.A., Antioch School of Law; health administration, long-term care, and personnel/labor relations.
- O'Neil, Eileen A. *Assistant Professor* J.D., Creighton University; health care law.
- Shukla, Ramesh K. *Associate Professor* Ph.D., University of Wisconsin; systems analysis/management, manpower planning and health provider productivity.
- Wan, Thomas T.H. *Professor* Ph.D., University of Georgia; health systems evaluation/analysis, medical sociology, and health demography/epidemiology.
- Wiecking, David K. *Professor* M.D., John Hopkins University; L.L.B., University of Virginia; health care law.
- Witherspoon, John M. *Associate Professor* M.D., Duke University; quality assurance.

Education in health administration at the university began in 1949 with the establishment of a graduate curriculum in hospital administration. Early graduates received a certificate; the master's degree was awarded beginning in 1955.

These early efforts grew and developed in-

to the Department of Hospital and Health Administration which was established in 1972. The department now includes four major programs: (1) M.H.A. in health administration; (2) 'Ph.D. in health services organization and research; (3) B.S. in health care management; and (4) M.S. in nursing administration offered jointly with the school of nursing. In addition to these educational programs, the Department of Health Administration includes a growing research program and is involved in a wide range of public service activities including continuing studies for health services administrators and other health professionals.

### DEPARTMENTAL PURPOSE AND FUNCTIONS

The overall purpose of the Department of Health Administration is to provide educational programs and services related to the organization and administration of health services. In achieving that purpose, the Department's principal functions are to provide high-quality education leading to careers in the administration of health care institutions, agencies and systems and to provide advanced training and education for persons who will teach, plan, evaluate, and investigate health care policies and medical care systems. Corollary functions are to provide assistance and other services for community organizations and to conduct health services and health policy research.

### FACILITIES

The Department of Health Administration's master's and undergraduate programs are located in Randolph-Minor Annex, an historic building located on the corner of College and Broad Streets on the MCV Campus. The department's doctoral program and its learning research laboratory are located on the fifth floor of the Nursing Education Building.

The Medical College of Virginia Hospitals, one of the largest teaching hospitals in the nation, and MCV's other clinical facilities are readily accessible to the department's students and faculty. In addition, the department has clinical affiliations and close working relationships with a large number of health care organizations and agencies in

Virginia and throughout the eastern part of the United States. The organizations and agencies are used extensively as clinical facilities in the department's educational programs.

### **ENDOWED AWARDS, LECTURESHIPS, AND PROFESSORSHIPS**

The **Robert Hudgens Memorial Award** was established and endowed by the department's alumni association in cooperation with the American College of Hospital Administrators (ACHA). The Hudgens Award is presented annually to the person selected by a special ACHA committee as the most outstanding young hospital administrator in the United States. It is presented at the ACHA's Annual Congress each year.

The **Charles P. Cardwell Memorial Lectureship Series** was inaugurated and endowed by the department's alumni. It is held in conjunction with the ACHA's Annual Congress. The series is coordinated by a standing committee of the department's alumni association.

Endowed professorships have been established in honor of individuals who have played vital roles in the development of the Medical College of Virginia. The **Arthur Graham Glasgow Professorship of Hospital Administration** was established in 1957 in honor of Dr. Glasgow who had shown such a vital interest in hospitals.

The **Herman L. Mullins Award** is presented annually for the most outstanding thesis or management study completed by a graduate student in health services administration. This award was established by the M.H.A. Class of 1976 through the Health Administration Alumni Association as a lasting recognition for the contributions of **Herman L. "Moon" Mullins** as a teacher, advisor, and friend of the student.

### **GRADUATE PROGRAM IN HEALTH SERVICES ADMINISTRATION**

#### **Purpose**

The graduate program in health services administration is designed to prepare individuals for entry-level administrative positions in complex health institutions and systems. Concurrently, it is intended to pro-

vide graduates with a solid foundation for executive development in the field of health services administration. The program's educational goals and content are based upon the premise that a large number of students who select this curriculum aspire to become chief executive officers of health care organizations at some point in their careers. A comprehensive listing of these goals is set forth in a separate document, "Educational Goals of the Graduate Program in Health Services Administration."

The graduate program in health services administration is designed primarily for full-time time students. A limited number of part-time students may be accepted into the program. The part-time program is intended primarily for persons who are already employed in the health industry. The admissions standards and degree requirements for part-time degree candidates are the same as those for full-time degree candidates.

The graduate program was initially accredited in 1955, one of the first programs in the United States to achieve that status. It has maintained this status ever since and is fully accredited by the Accrediting Commission on Education for Health Services Administration.

#### **Admission Requirements**

Applications are encouraged from individuals who have earned undergraduate and graduate degrees in any discipline or field of study. However, to be eligible for admission to the graduate program, completed course work must include basic preparation in economics, accounting, and business statistics. In addition, a working knowledge of basic, college-level algebra is necessary preparation for the graduate program's courses in systems analysis and evaluation.

The foundation requirements may be met by completing specified prerequisite courses at any accredited college or university or by completing specified foundation courses within the School of Business at Virginia Commonwealth University. These requirements are:

1. One college-level course (3 credits) in accounting;

2. One college-level semester course (3 credits) in economics;
3. One upper-division course (3 credits) in business statistics.

Any or all of these three foundation courses may be taken in Virginia Commonwealth University's School of Business during the summer semester immediately prior to the fall term when the student enrolls in the graduate program in health services administration. The availability of these foundation courses provides an excellent opportunity for students without a strong background in business to fulfill the course work requirements for entrance into the graduate program. In addition, students who have met all or some of the prerequisite requirements may strengthen their preparation for the graduate program by taking other foundation courses in the Business School's summer session. These include courses in marketing, business law, finance, and other areas. The foundation courses **cannot** be applied toward the 54 semester hours required to qualify for the M.H.A. degree. Foundation courses at the graduate level are available only to those who have already been admitted to a graduate program offered by the department.

To be considered for admission into the graduate program in full-status, the applicant must meet the following minimum qualifications: (1) present evidence of personal achievement, scholarship, intellectual ability, and professional promise; (2) hold a baccalaureate or graduate degree from a college or university which is fully accredited by the Association of American Universities or by a regional accrediting agency; (3) have an overall grade-point average of 2.75 or higher on a four-point scale in undergraduate work or provide evidence of high achievement in a substantial amount of graduate-level coursework; and (4) attain a satisfactory score (at least 50th percentile) on the Graduate Record Examination Admission Test or the Graduate Management Aptitude Test.

Applicants who have completed the prerequisite course work and meet the other requirements may be admitted into the graduate program in *full status*. Students in full status are candidates for the M.H.A. degree. Full status is maintained so long as

the student achieves a grade-point average of 3.0 in all course work each semester.

If an applicant presents qualifications that approximate the admissions requirements and standards, that applicant may (at the discretion of the Admissions Committee) be admitted into the graduate program on *conditional status*. Advancement to full status may be approved by the faculty when the student has satisfactorily completed one or more semesters of graduate studies. Students admitted on conditional status may be dismissed from the graduate program at the end of their first semester of graduate studies if they have not earned at least a 3.0 grade-point average. Complete information regarding academic requirements and standards is set forth in "Academic Policies and Regulations for the Graduate Program in Health Services Administration."

Virginia Commonwealth University is a state-aided institution, and preference is given to applicants with equal qualifications who are residents of Virginia. Persons from countries other than the United States may apply for admission to the department's graduate program. Foreign applicants must meet all the regular admission requirements, score a minimum of 600 on the Test of English as a Foreign Language, and submit evidence of financial responsibility as stated in Part I of this bulletin.

Requests for further information regarding admission requirements, standards, and procedures should be sent to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284 or to the Department of Health Administration, School of Allied Health Professions, Box 203, MCV Station, Richmond, VA 23298.

### Transfer Credit

Students who have earned graduate credit before entering the Department of Health Administration's graduate program may be permitted, at the discretion of the faculty, to transfer a maximum of six semester hours of credit to count toward the M.H.A. degree. Transfer credit may be allowed when, in the judgment of the faculty, the applicants have satisfactorily completed course work

equivalent to courses in the graduate curriculum offered in this department. Normally, transfer credit is approved at time of admission.

HAD 646	Organizational Behavior in Health Institutions . . . . .	3
HAD 647	Administration in Health Institutions . . . . .	3
	Total Core Requirement	36

**Curriculum**

Students are required to complete a total of 54 semester hours (including transfer credit, if any) to qualify for the Master of Health Administration (M.H.A.) degree. This requirement includes 36 hours of core course work in combination with at least 12 semester hours of elective studies in health services administration and related disciplines such as business administration, public administration, urban and regional planning, and gerontology. In addition, six semester hours of practicum course work are required as a part of the administrative residency. At the discretion of the faculty, students with significant experience in health services administration may substitute additional elective courses for the administrative practicum course. The graduate program is designed to provide a balanced combination of academic studies and field experience to enable students to achieve the program's educational goals and to become well-prepared to enter the field of health services administration.

The core curriculum of the graduate program in health services administration consists of 12 courses totalling 36 semester hours which must be completed by all degree candidates. These courses represent an integrated series of learning experiences designed to provide students with a common body of knowledge and skills which are considered to be essential. The core courses are as follows:

HAD 602	Health Care Organization and Services . . . . .	3
HAD 603	Structure and Functions of Health Institutions . . . . .	3
HAD 606	Financial Management in Health Institutions . . . . .	3
HAD 607	Advanced Financial Management in Health Institutions . . . . .	3
HAD 608	Seminar in Health Care Finance . . . . .	3
HAD 609	Health Systems Analysis and Evaluation I . . . . .	3
HAD 610	Health Systems Analysis and Evaluation II . . . . .	3
HAD 611	Hospital and Medical Law . . . . .	3
HAD 614	Health Planning and Policy . . . . .	3
HAD 624	Health Economics . . . . .	3

**SPECIALIZATION**

The core of the M.H.A. curriculum are open only to graduate students who are enrolled in the M.H.A. program or in one of the other graduate programs offered by the Department of Health Administration.

By combining advanced courses in health services administration and related disciplines, students are able to pursue individual interests and career goals through the development of specialized knowledge and skills in a particular area of concentration. These areas of elective concentration represent major areas of specialization within the field of health services administration.

Students may select their concentrations of electives at the time they enter the graduate program or at a later point in their graduate studies. A broad range of courses is available within each area of concentration. In addition to course work, students ordinarily complete an administrative residency within a health care organization related to their areas of concentration.

Areas of concentration that are available within the graduate program in health services administration include:

1. Administration of hospitals and hospital systems;
2. Administration of long-term care facilities;
3. Administration of mental health programs, institutions, and systems;
4. Health planning and policy with emphasis upon planning in the institutional setting;
5. It may be possible for other areas of concentration to be developed by students in concert with their faculty advisor and the director of the graduate program.

**ADMINISTRATIVE RESIDENCY**

**Purpose of the Residency**

The administrative residency is an integral part of the Medical College of Virginia's



graduate program in health services administration. The basic purpose of the residency is to provide students opportunities to apply and further develop their administrative knowledge and skills through a period of applied experience in an operational setting. The administrative residency is directly supervised by experienced executives who serve as the student's preceptors.

Through a carefully selected and well-organized residency experience, students strengthen the foundation of general knowledge and skills gained through the core curriculum and gain further insight and expertise in their selected concentrations. Students will serve their residency in the type of health care organization in which they wish to gain specialized knowledge, skills, and experience. Overall policies and guidance for the administrative residency are established by the Department of Health Administration.

### **Appointment to the Residency**

Students become eligible for entrance into the administrative residency after completing 48 semester hours of specified course work and achieving an overall G.P.A. of 3.0. Students on academic probation because of their performance during their final on-campus semester prior to their residency may, at the discretion of the faculty, be prevented from entering their residency even though their overall G.P.A. is 3.0 or higher.

In addition to satisfactory academic performance, students must, in the judgment of the faculty, give evidence of sufficient maturity to constitute readiness for a clinical experience. Students are, of course, expected to demonstrate maturity and meet high standards of professional conduct throughout the educational process.

The director of the graduate program in health services administration has the responsibility to make residency assignments. In making these assignments, the director will consider the preferences of the students, the preferences of the preceptors, and the recommendations of faculty advisors. Students' preferences are not always met.

The length of the administrative residency is variable, depending upon student background and experience. For most students, the residency will be 11 months in length. Students who have had at least two years of prior experience in responsible management positions within health care organizations or agencies may petition the faculty to waive this requirement or reduce it to three months.

### **On-campus Commitments During the Residency**

During the residency phase of the graduate program, students must attend regularly scheduled, on-campus seminars. During these seminars students will participate actively in other educational activities associated with course work HAD 693, 694, and 695 taken during the residency period.

### **Residency Policies and Procedures**

A complete statement of academic policies and procedures relating to the administrative residency phase of the graduate program is set forth in "Administrative Residency Policies and Procedures," Section VI of the *Academic Policies and Regulations for the Graduate Program in Health Services Administration*.

### **Length of the Program**

The curriculum is designed to provide students with some flexibility in determining the pace and length of their program of studies. Full-time students ordinarily will begin their studies during the Fall semester and complete their course work requirements within 21 months. For most students this portion of the graduate program will be followed by an administrative residency of 11 months in length.

Depending upon their educational backgrounds and experience, the pace of studies they elect, and the length of their residency requirement (if any), some students will be able to complete all requirements and receive the M.H.A. degree within 21 months after enrolling in the graduate program.

### **REQUIREMENTS FOR GRADUATION**

To qualify for the M.H.A. degree, stu-

dents must meet the following requirements: (1) achieve an overall grade point average of 3.0 on a four-point scale for all graduate curriculum course work; (2) satisfactorily complete all requirements of the administrative residency including required course work taken during the period; (3) pass a comprehensive examination administered near the end of the graduate program; and (4) in the judgment of the faculty, demonstrate sufficient maturity, development, and abilities in health services administration to constitute readiness to enter the profession of health administration.

Degrees are conferred at commencement exercises of the university in May.

### **ACADEMIC POLICIES AND REGULATIONS**

Academic policies and regulations for the graduate program in health services administration are set forth in separate documents published by the Department of Health Administration. These departmental documents, as well as publications that state university-wide policies and regulations, may be obtained by applicants at the time of their interviews.

### **GRADUATE PROGRAM IN NURSING SERVICES ADMINISTRATION**

The Department of Health Administration cooperates with the School of Nursing in offering the M.S. track in Nursing Services Administration. This jointly sponsored program prepares graduates to assume top level management positions in the area of nursing services administration. A total of 56 semester hours and a thesis are required for the degree. Students take courses in the School of Nursing, School of Business, and in the Department of Health Administration in gaining the knowledge and skills related to the practice of administration in nursing.

The focus of the course of studies in both theoretical and experiential and seeks to promote the integration of administrative and nursing sciences. Emphasis is placed upon systematic methods of investigation, including the preparation and conduct of a research study. Practica are planned individually to capitalize upon student

background and to promote individual growth.

A more complete description of the graduate program in nursing services administration is found in the School of Nursing section of this bulletin.

### **DOCTORAL PROGRAM IN HEALTH SERVICES ORGANIZATION AND RESEARCH<sup>1</sup>**

The Ph.D. program in health services organization and research is designed to provide advanced training and education for academic and professional personnel who will teach, plan, evaluate, and investigate health care policies and medical care systems. The program emphasizes the application of quantitative research methods and scientific knowledge from a variety of behavioral/social and management sciences to the solution of health care issues. Health care organization and operations research/management sciences are major disciplines within the core knowledge area. Students are required to complete a total of 60 semester hours of course work - including 21 hours of foundation courses in health services administration, 12 hours in one major discipline, 15 hours in one of the two concentration areas (health organization design/assessment or health operations analysis/management system), and 12 hours in quantitative courses. A minimum of nine credit hours in dissertation research is required. Each student will further develop an area of specialization: health manpower and productivity analysis, organizational systems design and analysis, health policy analysis, or long-term care research. Full-time students can complete the Ph.D. degree in about three years.

#### **Admission Requirements**

To meet basic requirements for admission to the doctoral program in health services organization and research, applicants must:

1. Hold a graduate-level degree in an academic or professional field from a college or university fully accredited by the

<sup>1</sup>To begin fall, 1982 subject to final approval of the State Council of Higher Education for Virginia.

Association of American Universities or by a regional accrediting agency.

2. Complete graduate-level courses in statistics and economics.
3. Possess a working knowledge of college-level algebra and calculus.
4. Attain a satisfactory score on the Graduate Record Examination Aptitude Test.
5. Present evidence of personal achievement, scholarship, intellectual ability, and professional promise.
6. Submit three letters of recommendation.
7. Submit a graduate school application form and transcripts of all prior college-level academic work.
8. Submit a statement of study objectives.

### Financial Aid

Graduate assistantships are available with starting stipends of at least \$5,000 plus all tuition and fees. Various other forms of financial assistance are also available. Students with assistantships must pursue full-time study. Qualified applicants are encouraged to apply for assistantships as soon as possible, preferably before March.

### Application

Further information relating to the doctoral program in health services organization and research may be obtained by writing to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284 or to the Department of Health Administration, School of Allied Health Professions, Box 203, MCV Station, Richmond, Virginia 23298.

### PROGRAM OF CONTINUING EDUCATION

The Department of Health Administration's involvement in continuing education began in the early 1970's with the assistance of a grant from the W. K. Kellogg Foundation that included continuing education as a principal component. The basic purpose of the department's program of continuing education is to provide educational services for persons who have administrative responsibilities in hospitals, medical centers, multi-

unit systems, nursing homes, and other health care organizations and agencies.

### GRADUATE COURSES IN HEALTH ADMINISTRATION (HAD)

**500 Health and Medical Care Organization.** Semester course; 3 lecture hours. 3 credits. Intended for students seeking degrees in disciplines other than health care administration and for special students who wish to learn about the health industry and health care organizations. Provides an overview of the health industry. Examines the organization and operations of major health care organizations with particular emphasis on hospitals.

**501 Aspects of Illness and Disability.** Semester course; 3 lecture hours. 3 credits. An introduction to the physiological and psychological aspects of illness and disability. Focuses on both physiological and behavioral reactions and their interrelationships. Identifies factors that affect health; explores the concepts of normality and abnormality as well as patient, family, and societal attitudes about illness and disability.

**502 Management in Health Care Facilities.** Semester course; 3 lecture hours. 3 credits. Study of recent developments in management theory and practice in order to develop a foundation of technical, human, and conceptual skills necessary for successful performance as a health care manager. Focus of course learning activities is on management of departments and services in health care institutions, especially hospitals.

**602 Health Care Organization and Services.** Semester course; 3 lecture hours. 3 credits. Examines the structure and functions of the American health care industry, the concepts and processes of health and illness, the institutional and individual providers of health services and related concepts.

**603 Structure and Functions of Health Institutions.** Semester course; 3 lecture hours. 3 credits. Examines the organization, function, and administration of hospitals, medical centers, and other major forms of health care institutions.

**606 Financial Management in Health Institutions.** Semester course; 3 lecture hours. 3 credits. Prerequisite: Financial Accounting. A theoretical and practical study of organization and functions of health care financial administration. Emphases are on institutional fiscal policies, accounting concepts and practices, internal and external controls, financial statistical reporting, and the use of financial data as management tools.

**607 Advanced Financial Management in Health Institutions.** Semester course; 3 lecture hours. 3 credits. Prerequisite: HAD 606. Advanced practices of health care financial management. Emphasis on techniques to aid in financial decision making. Areas of investigation and study include analysis of financial statements, cost allocations, reimbursements, rate setting, budgeting, and capital financing.

**608 Seminar in Health Care Finance.** Semester course; 3 lecture hours. 3 credits. Prerequisite: HAD 607. Advanced studies of financial issues and the application of

analytic tools in case studies and exercises. Designed to enhance and strengthen the knowledge and skills provided in the graduate program's foundation and required courses in accounting and finance.

**609 Health Systems Analysis and Evaluation I.** Semester course; 3 lecture hours. 3 credits. Prerequisite: upper division course in statistics. Introduction to principles and methods employed in evaluation research and program evaluation as these relate to health services. Focus will be on conceptualization, design, and operational procedures used in program evaluation.

**610 Health Systems Analysis and Evaluation II.** Semester course; 3 lecture hours. 3 credits. Introduction to systems theory, hospital and medical care information systems, and systematic approaches to evaluation of health care services and programs. Application of selected analytical methods in administrative planning, decision-making, and control in health care organizations.

**611 Hospital and Medical Law.** Semester course; 3 lecture hours. 3 credits. Examines basic principles and practices of law affecting hospitals and medical practice: the legal aspects of patient care and treatment, medical services, and other hospital-patient related functions.

**614 Health Planning and Policy.** Semester course; 3 lecture hours. 3 credits. Examines the planning process in the context of both the community and the institution. Considers the essential components of planning and the development of a sound structure for planning. Examines the legal, regulatory, economic, and human factors that influence the planning process.

**615 Health Care Politics and Policy.** Semester course; 3 lecture hours. 3 credits. Examines the political process with particular emphasis on the impact of politics on health care. Focuses on current political issues in the health field, examining conflicts and anticipating effects on the health system.

**616 Seminar in Applied Health Planning.** Semester course; 3 lecture hours. 3 credits. Prerequisite: HAD 614. Provides students with opportunities to apply planning methodology, including problem definition, research design, information gathering, and evaluation to actual health issues and problems.

**617 Health Facility Design and Construction.** Semester course; 3 lecture hours. 3 credits. Prerequisite: HAD 614. Examines the essential elements and process of designing and constructing health facilities.

**624 Health Economics.** Semester course; 3 lecture hours. 3 credits. Develops an understanding of: (1) economics as a managerial tool in making choices or decisions that will provide for an optimum allocation of limited health care resources; and (2) economics as a way of thinking about and approaching issues of public policy in financing and organizing health and medical services. Individual research on crucial or controversial issues in the health field.

**626 Comparative Health Systems.** Semester course; 3 lecture hours. 3 credits. Examines the structure and

functions of health care systems in nations other than the United States.

**632 Personnel and Labor Relations in Health Institutions.** Semester course; 3 lecture hours. 3 credits. Examines the procurement, development, and maintenance of an effective work force. An analysis of staff development; health and safety; wage and salary administration; employee services; and labor relations.

**634 Case Studies in Assuring the Quality of Health Care.** Semester course; 3 lecture hours. 3 credits. Case studies that illustrate the relationship of administrative aims, strategies, tasks, and environment to the quality of health care. Examines the affects of health management, planning, and policy decisions on the delivery of health services.

**636 Administration of Mental Health Programs, Institutions and Systems.** Semester course; 3 lecture hours. 3 credits. Analysis of the current state of administration of mental health programs, institutions, and systems. Emphasis is on understanding both public and private mental health systems including goals, structure, functions, and financing. Also focuses on patient care concepts including diagnostic and treatment modalities and professional roles and standards. Regulations and legal aspects of mental health are considered.

**638 Administration of Long-Term Care Facilities and Programs.** Semester course; 3 lecture hours. 3 credits. Focuses on unique knowledge and skills considered essential to effective long-term care administration. Emphasis is on the professional role of the long-term care administrator in providing for the health and social needs of the chronically ill and elderly. Applied skills in addressing the technical, human, and conceptual problems unique to LTC are addressed through cases and field exercises.

**646 Organizational Behavior in Health Institutions.** Semester course; 3 lecture hours. 3 credits. Prerequisite: HAD 602 or permission of instructor. Focuses on the major concepts, principles, and theories of management and behavioral sciences as they relate to human behavior in health care institutions and agencies.

**647 Administration in Health Institutions.** Semester course; 3 lecture hours. 3 credits. Prerequisites HAD 603 and 646. Analysis of the current state of management study and practice with the objective of achieving a balanced development of both knowledge and skills in solving the human problems of administration in health institutions. The managerial process is critically examined with emphasis on individual behavior and development, intergroup behavior, and behavior in the total organization.

**648 Seminar in Health Services Administration.** Semester course; 3 lecture hours. 3 credits. HAD 603. Case studies and problem-solving exercises intended to integrate the knowledge and skills gained in prior course work.

**690 Departmental Research Seminar.** Semester course; variable credit. Research seminar that focuses on research design and methods organized under a single

topic or a series of related topics in health services research. Applied research training for master's-level students.

**691 Special Topics in Health Services Organization and Research.** 3 lecture hours. 3 credits. Prerequisite: two semesters of graduate work and permission of instructor. A seminar on the current state of knowledge and research within specialized areas of concern related to health services organization, planning, and assessment.

**692 Independent Study in Health Services Administration.** Variable credit. Offered in all semesters for students to investigate and study topics of major interests.

**693, 694, 695 Practicum in Health Services Administration, I,II,III.** 2 credits each. Prerequisite: admission to the administrative residency. Examination of contemporary problems and issues in the organization, administration, and evaluation of health services. A principal focus is the application of alternative approaches to administrative problem-solving. Special emphasis is placed on understanding of and appreciation for the internal and external factors that influence decision making in health care organization.

**697 Directed Research.** Semester course; variable credit. Special course offered on demand for one or more students who will design and implement an applied research project in the field setting under the guidance of a faculty sponsor. Focus of the course will be on the application of research methods to policy or operational problems of health care institutions.

**701 Health Organization Design and Assessment.** Semester course; 3 lecture hours. 3 credits. Prerequisite: HAD 602. Analysis of medical care organizations at both micro and macro levels. Critical review of empirical research in organizational analysis and design. Identifies measurement issues related to the quality of care and to formulation of evaluative research on health services programs.

**702 Health Care Financing and Delivery Systems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: HAD 701. Critical review and evaluation of major innovations in organization, delivery, and financing of health care services. Selected topics may include cost function analysis of alternative health care delivery systems and consideration of alternative public financing of health care.

**703 Strategies for Planned Change in the Health Field.** Semester course; 3 lecture hours. 3 credits. Prerequisite: HAD 609 and 701. Critical review and analysis of principles and theories of planned change. Planning methodology is introduced that covers methods of health planning, program planning, and community diagnosis. The relationships between planning methods and implementation strategies are examined.

**711 Long-Term Care Research.** Semester course; 3 lecture hours. 3 credits. Prerequisites: HAD 609 or permission of instructor. Analysis of factors contributing to problems in the delivery of services including ambulatory care and long-term care for the chronically ill and the aged. Emphasis is placed on the application of ana-

lytic designs and evaluation research to identify alternatives for institutionalization and to examine the health care outcomes.

**731 Advanced Health Economic Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisites: HAD 624, 609, 610, or permission of instructor. Study of analytical methods and their applications to health economic problems. Topics include cost-benefit and cost-effectiveness analysis, linear, integer and dynamic programming, input-output analysis, and other advanced techniques for economic analysis.

**732 Econometric Modeling in the Health Care Industry.** Semester course; 3 lecture hours. 3 credits. Prerequisite: HAD 731 or permission of instructor. Application of statistical modeling techniques including utility models, Bayesian analyses, multiple regression analyses, time-series and cross-section analyses, and forecasting models and problems of the health industry. Techniques will be applied to such areas as demand for health services, supply of medical care, allocation of health care resources, hospital economics, and equity/efficiency of health manpower.

**741 Health Industry Information Systems: Design and Evaluation.** Semester course; 3 lecture hours. 3 credits. Prerequisites: HAD 609 and 610. Principles and methods of health services information systems design and evaluation. Considers characteristics, requirements, and development of information networks for planning, administration, operation, and health services research. Cost/benefit evaluation of management information systems in the health care industry are stressed.

**742 Simulation Modeling in the Health Field.** Semester course; 3 lecture hours. 3 credits. Prerequisites: HAD 741 and one computer course. Analysis of complex deterministic and stochastic models and their applicability to health services research. Focus is on formulation of simulation models for planning and policy analysis of macro health delivery systems.

**743 Health Manpower Planning and Productivity and Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisites: HAD 701, 702, 761. Examination of various health manpower planning models and assessment of alternative approaches for improving the productivity of medical and allied health care manpower. Emphasis is on health manpower study design, planning methods, productivity analysis and utilization of manpower, and projection of manpower needs.

**760 Quantitative Analysis of Health Care Data.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 624 and HAD 609 or permission of instructor. Research course emphasizing computer application and statistical analyses of health care data generated from secondary sources.

**761 Advanced Epidemiological Principles and Methods.** Semester course; 3 lecture hours. 3 credits. Prerequisites: HAD 609, BUS 624, or permission of instructor. Introduction of advanced epidemiological principles and methods. Topics will include causal inferences from epidemiological studies, methods of analysis of epidemiological data, sociopathogenic factors in mortality and morbidity of specific chronic

diseases, and designs of prospective or retrospective studies using a community as an epidemiological laboratory. Emphasis will be given to application of epidemiological methods to health planning, policy analysis, health services research, and program evaluation.

**762 Health Services Research Methods.** Semester course; 3 lecture hours. 3 credits. Prerequisites: HAD 609, 761, and BUS 656 or equivalent. Application of multivariate statistical analysis and evaluation research methods to health services research. Emphasis is placed on the use of advanced statistical methods and designs to analyze panel data in the health field.

**791 Directed Independent Study.** Semester course; 1-3 credits. Prerequisite: permission of instructor. Research leading to a publication conducted under the guidance of a faculty member. Special studies or reading may also be arranged.

**792 Independent Study in Health Services Organization and Research.** Semester course; 1-3 credits. Special study or research leading to a publication. Conducted under the guidance of a faculty sponsor.

**793, 794, 795 and 796 Research Practicum.** Semester course; 1-3 credits. Supervised investigation of selected problems in health services research. Field research open only to second year doctoral students who have completed the preliminary examination.

**798 Thesis I.** 3 credits. Independent research to provide the opportunity for the student to select, organize, and report the results of an investigation in a field of major interest.

**799 Thesis II.** 2 credits. Prerequisite: HAD 698. Continuation of research study begun in HAD 698.

**898, 899 Doctoral Dissertation in Health Services Research.** Semester course; 3 credits. Prerequisite: completion of required course work and comprehensive examination. Dissertation research under direction of faculty advisor. A minimum of nine semester hours required for Ph.D. degree.

For descriptions of courses in other schools and departments, see the current *Virginia Commonwealth University Graduate Bulletin* and/or *Virginia Commonwealth University Undergraduate Bulletin*.

## Department of Nurse Anesthesia

### Faculty

Beeston, John T., III *Assistant Professor* B.S., University of Minnesota; nurse anesthesiology.

Ciresi, Salvatore A. *Assistant Professor* M.S.N., University of Washington; nurse anesthesiology.

Hahn, Gary *Instructor* B.S., State University of New York, Buffalo; nurse anesthesiology.

Keohane, Diane C. *Instructor* B.S.N., Wagner College; nurse anesthesiology.

Magennis, Michael J. *Instructor* M.S.N.A., Virginia Commonwealth University; nurse anesthesiology.

McDougle, Mary Lynn *Instructor* B.G.S., Virginia Commonwealth University; nurse anesthesiology.

Montesanti, Adrienne *Instructor* R.N., C.R.N.A., Medical College of Virginia; nurse anesthesiology.

Shalenko, Paul C. *Assistant Professor* M.M.S., Emory University; nurse anesthesiology.

Vining, Jay C. *Instructor* B.S., California State University; nurse anesthesiology.

Watson, Herbert T. *Chairman and Associate Professor* M. Ed., Columbia University; nurse anesthesiology.

## BASIC PROFESSIONAL PROGRAM HISTORY

The Department of Nurse Anesthesia was organized in 1969. The Master of Science degree in nurse anesthesia is the first such offering through a School of Allied Health Professions in the United States. It was implemented in 1979 and represents a significant milestone for the profession of nurse anesthesia. Equally significant has been the subsequent approval of the post-graduate certified registered nurse anesthetist (CRNA) program.

## PHILOSOPHY

The faculty of the Department of Nurse Anesthesia believes that the master's degree level of education is fundamental to preparing diversified clinical practitioners, future teachers, coordinators, and directors of nurse anesthesia educational programs. We view nurse anesthesiology as an expanded role of nursing in which the nurse anesthetist provides nursing and medically delegated services, instruction, evaluation, direction of nurse anesthesia services, and teaching educational processes. We believe that professional competence is based on self-awareness, an appropriate value system, and the possession of cognitive progress capabilities. We believe that clinical teaching, acquisition of clinical skills, competence, and safe practice can best be promoted when the curriculum design supports the philosophy of practice, and that the ability to utilize and retain theoretical knowledge is best facilitated through reinforcement from a variety of directions.

## OBJECTIVES

The overall objective of the Department of Nurse Anesthesia is to prepare registered professional nurses for practice in the specialty art and science of anesthesiology.

This rather broad objective is accomplished by implementation of the following:

1. An in-depth presentation of the basic sciences associated with anesthesia practice, with emphasis on understanding the practical application of concepts.
2. Focusing attention on the ultimate role of the nurse anesthetist as a member of the health team.
3. Providing integration of the clinical and didactic teaching programs so that the two are closely correlated throughout the course of study.
4. Placing emphasis on the great need for educators in the field, and encouraging those whose talents are oriented to pursue this goal.
5. Encouraging continued professional education by self-study and discipline, recognizing that these are the only keys to total professional maturity.
6. Providing students with a challenging and diverse selection of surgical and resuscitative experiences with opportunity for constant criticism and evaluation.

**ACCREDITATION**

The nurse anesthesia program is fully accredited by the Council on Accreditation For Nurse Anesthesia Educational Programs. Graduates are eligible to take the examination for certification conducted by the Council on Certification of Nurse Anesthetists.

**Admission Requirements**

In addition to the general university requirements, the requirements for admission to the Master of Science in nurse anesthesia are:

1. Baccalaureate degree in nursing or equivalent (a related basic science degree and graduate of an NLN accredited school of nursing).
2. Current licensure as a registered professional nurse in Virginia.
3. A 3.0 grade point average is preferred (other factors may be considered).
4. An average of 500 on State Board Examinations with no area below 450.
5. Three semester hours of college statistics—preferably biostatistics.

6. Completion of the Graduate Record Examination (GRE) verbal, quantitative, and analytical.
7. A minimum of one year (two years preferred) experience in an area of acute care nursing. Partial credit is granted for emergency room and recovery room experience. No credit for operating room nursing experience.
8. Personal interview with members of the Admissions Committee.

Further inquiries should be made to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

**CURRICULUM**

		<b>First Year, Fall Semester</b>	<i>Credits</i>
NUA 501	Fundamentals of Anesthesia Practice . . . . .		3
PHC 521	Medicinal Chemistry for Nurse Anesthetists I . . . . .		4
PMC 515	Pharmacology for Nurse Anesthetists I . . . . .		3
PIO 501	Advanced Mammalian Physiology . . . . .		5
			15

		<b>First Year, Spring Semester</b>	
NUA 531	Regional Anesthesia . . . . .		2
PHC 522	Medicinal Chemistry for Nurse Anesthetists II . . . . .		3
PMC 516	Pharmacology for Nurse Anesthetists II . . . . .		3
NUA 533	Pathophysiology: Anesthetic Considerations . . . . .		3
NUA 555	Professional Aspects in Anesthesia Practice . . . . .		2
NUA 593	Clinical Practicum I . . . . .		1
			14

		<b>First Year, Summer Semester</b>	
NUA 535	Historical Development of Anesthesia . . . . .		1
NUA 551	Advanced Practice and Principles of Anesthesia . . . . .		4
NUA 553	Biomedical Instrumentation for Nurse Anesthetists . . . . .		2
NUA 594	Clinical Practicum II . . . . .		5
			12

		<b>Second Year, Fall Semester</b>	
NUR 611	Methods of Research . . . . .		3
NUA 601	Physical Assessment . . . . .		3
AHP 573	Teaching in Health Professional Schools . . . . .		3
NUA 692	Clinical Practicum III . . . . .		4
			13

<b>Second Year, Spring Semester</b>	
HCM 502	Management in Health Care Facilities . . . . .
	3
NUA 631	Senior Clinical Seminar . . . . .
	1
NUA 681	Clinical Project I . . . . .
	4
NUA 631	Senior Clinical Seminar . . . . .
	1
NUR 612	Research Seminar in Nursing . . . . .
	1
AHP 574	Allied Health Education Practicum I . . . . .
	1
NUA 693	Clinical Practicum IV . . . . .
	4
	<hr/>
	12
<b>Second Year, Summer Semester</b>	
NUA 699	Clinical Project II . . . . .
	4
NUA 694	Clinical Practicum V . . . . .
	5
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	9

**GRADUATE COURSES IN NURSE ANESTHESIA (NUA)**

**501 Fundamentals of Anesthesia Practice.** Semester course; 3 lecture, 5 clinical, and 1 laboratory hour. 3 credits. This course introduces the beginning practitioner to those concepts necessary to plan and execute an anesthetic individualized for a patient which insures a margin of patient safety while meeting the surgical requirements. Integrated in this course are selected concepts of respiratory therapy which interface with anesthesia. (Program includes a four-week clinical affiliation in respiratory therapy.)

**531 Regional Anesthesia.** Semester course; 2 lecture hours. 2 credits. A study of the theoretical and practical considerations involved in the administration and management of regional analgesia: Neuroanatomy, neurophysiology, neuropharmacology, indications, contraindications, techniques, complications, and their prevention related to selected blocks. (Clinical anesthesia practicum will include practical experience in the administration and/or management of selected blocks.)

**533 Pathophysiology.** Semester course; 3 lecture hours. 3 credits. Pathophysiology of the neuromuscular, cardiovascular, respiratory, excretory, and endocrine systems; infectious diseases, gastrointestinal disorders; nutritional disorders; connective tissue diseases; muscle, skin, bone disorders; and environmental and behavioral disorders. The pathophysiology will be studied in relationship to anesthetic considerations.

**535 Historical Development of Anesthesia.** Semester course; 1 lecture hour. 1 credit. A study of the history of anesthesia, to include the evolutionary stages of the development of anesthesia and the professional organizations: the American Association of Nurse Anesthetists and the American Society of Anesthesiologists.

**551 Advanced Practice and Principles of Anesthesia.** Semester course; 4 lecture hours. 4 credits. This course delineates those practices and techniques of anesthesia management which are considered as situation-specific for specialized surgical procedures, diagnostic, or

therapeutic procedures; includes the obstetrical, pediatric, and geriatric patient.

**553 Biomedical Instrumentation for Nurse Anesthetists.** Semester course; 2 lecture hours. 2 credits. A course surveying the basic essentials of biomedical instrumentation as utilized in those electronic devices most often encountered by nurse anesthetists; to include a brief descriptive review of the basic laws of electrical circuits and the physical principles of biophysical measurement.

**555 Professional Aspects of Anesthesia Practice.** Semester course; 2 lecture hours. 2 credits. This course includes five specific areas of professional focus: psychosocial, ethics, legal aspects, organization and management of an anesthesia department, and basic life support (CPR) for health professionals.

**593 Clinical Practicum I.** 9 clinical hours. 1 credit. Pre-operatively conducts interviews, prepares anesthesia care plans with selection of anesthetic agents and techniques, calculates fluid requirements. Is introduced to clinical area with supervised participation in actual administration of anesthesia. Demonstrates knowledge of equipment and monitors, skills, dexterity, and ability to integrate physiological data in anesthesia management, its termination, and post-anesthetic care.

**594 Clinical Practicum II.** 40 clinical hours. 5 credits. Continuation of NUA 593. Demonstrates internalization of theoretical concepts and techniques and application in anesthetic management. Emphasis on assuming greater responsibility for total anesthetic regime. Progresses to a greater variety and more complex anesthetic managements, to include pm, nights, and weekend duty. Gains experience in emergency and acute trauma surgery.

**601 Physical Assessment.** Semester course; 3 lecture hours. 3 credits. A didactic and laboratory study of the physical examination to provide the graduate with the capability of performing a screening, pre-anesthesia examination aimed at identifying pathology rather than diagnosing particular disease entities, to include taking an appropriate health history.

**692 Clinical Practicum III.** 30 clinical hours. 4 credits. Continuation of NUA 594. Intensive clinical experience in each of the clinical anesthesia areas. Greater emphasis is placed on development of independent decision-making in planning, managing, terminating, and follow-up anesthesia care. Includes rotation of clinical experience to include affiliations at Richmond Memorial, Crippled Childrens, St. Luke's (respiratory therapy), and Veterans Administration Hospitals to gain experience in management of specialized anesthetic considerations, and functioning in a variety of clinical settings in conjunction with certified registered nurse anesthetists and staff attending anesthesiologists. Assesses clinical experience and plans for anesthesia project.

**693 Clinical Practicum IV.** 30 clinical hours. 4 credits. Continuation of NUA 692. Affiliations to specialized areas continue. Beginning to function with minimum of supervision from certified registered nurse anesthetists and attending staff anesthesiologists. Pursues indepen-



dent library research and collects clinical data to support anesthesia project.

**694 Clinical Practicum V.** 40 clinical hours. 5 credits. Continuation of NUA 693. Intensive application of all previous clinical experiences to demonstrate development of independent thought and judgment and ability to function with minimum of supervision. Correlates clinical data with anesthesia project in preparation for presentation. Reviews all clinical experiences in preparation for writing of qualifying examination of American Association of Nurse Anesthetist. All clinical requirements are completed.

**698 and 699 Clinical Project I and II.** 6 credits. Required of all students, the independent clinical project provides the student the opportunity to select, organize, and report the results of an investigation into some specific area of interest to clinical anesthesiology. The project study will be written in a publishable format.

### POST GRADUATE—CERTIFIED REGISTERED NURSE ANESTHETIST (CRNA Program)

The Department of Nurse Anesthesia offers, based on advanced standing, a Master of Science in nurse anesthesia for the certified registered nurse anesthetist (CRNA).

#### PHILOSOPHY.

The postgraduate CRNA program philosophy is in concurrence with that stated in the basic graduate program. It is further believed that the curriculum as planned provides the postgraduate CRNA a greater depth of study in the basic sciences and anesthesiology.

This central focus on expanded knowledge in clinical anesthesia practice will be ultimately reflected in improved overall patient care.

The curriculum is further enriched to provide the clinical specialist/practitioner in nurse anesthesia with beginning skills in educational instruction, departmental management, research, and consultation.

#### CURRICULUM

##### Three Semesters (12 months)

##### Fall Semester

PIO 501	Advanced Mammalian Physiology
AHP 573	Teaching in Health Professional Schools
NUA 601	Physical Assessment
NUR 611	Methods of Research

##### Spring Semester

HCM 502	Management and Health Care Facilities
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PMC 516	Pharmacology of Anesthetic Agents/Adjuncts
PHC 532	Medicinal Chemistry for Nurse Anesthetists II
NUA 531	Regional Anesthesia
NUA 533	Pathophysiology: Anesthetic Considerations
AHP 574	Allied Health Education Practicum I
NUR 612	Research Seminar in Nursing
NUA 698	Clinical Project I

##### Summer Semester

NUA 553	Biomedical Instrumentation for Nurse Anesthetists
NUA 551	Advanced Practice and Principles of Anesthesia
NUA 631	Advanced Senior Clinical Seminar
NUA 699	Clinical Project II
NUA 696	Advanced Clinical Practicum

#### Admission Requirements

Requirements for admission to the Master of Science in nurse anesthesia for the post graduate certified registered nurse anesthetist (CRNA).

1. A baccalaureate degree in nursing or equivalent (a related basic science degree and graduate of an NLN accredited school of nursing).
2. Graduation from a nationally accredited educational program in nurse anesthesia.
3. Certification by national examination as a certified registered nurse anesthetist (CRNA).
4. Current recertification as a CRNA by the National Council on Recertification for Certified Registered Nurse Anesthetists.
5. Current licensure as a registered professional nurse in Virginia.
6. A 3.0 grade point average is preferred (other factors may be considered).
7. Acceptable scores on the Graduate Record Examination (GRE) Aptitude Test.
8. A college statistics course (4 quarter hours or 3 semester hours), preferably biostatistics.
9. Prerequisite to NUA 532 Medicinal Chemistry II: 4 quarter hours or 3 semester hours each in biochemistry and organic chemistry.
10. A minimum of one year's experience as

a certified registered nurse anesthetist (CRNA).

11. References from current supervising nurse anesthetist (CRNA), chairman/chief anesthesiologist, and one other.
12. Personal interview with members of the Admissions Committee.
13. Proficiency Examination (Advanced Standing).

tion for certified registered nurse anesthetists.

4. Proficiency examination. Part A—Written: 100 multiple choice objective questions Part B—Oral: two anesthesiologists and two CRNA graduate faculty.

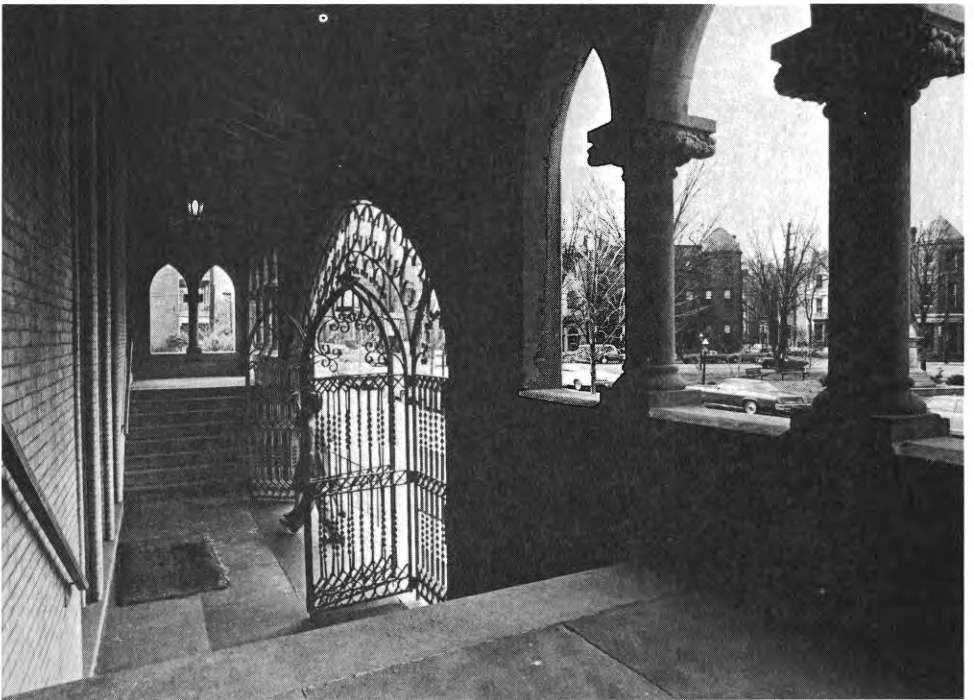
Advanced standing of one third (25 SH) of the generic Master of Science degree in nurse anesthesia curriculum (75 SH) will be awarded for the following courses (non-transferable to the VCU transcript):

**Advanced Standing**

Advanced standing is based on the following criteria:

1. Graduation from a nationally accredited educational program in nurse anesthesia.
2. Certification by national examination as a Certified Registered Nurse Anesthetist CRNA.
3. Current recertification as a CRNA by the National Council on Recertifica-

		<i>Credits</i>
NUA 501	Fundamentals of Anesthesia Practice. . . . .	3
NUA 535	Historical Development of Anesthesia . . . . .	1
NUA 555	Professional Aspects of Anesthesia Practice. . . . .	2
NUA 593	Clinical Practicum I . . . . .	1
NUA 594	Clinical Practicum II . . . . .	5
NUA 692	Clinical Practicum III. . . . .	4
NUA 693	Clinical Practicum IV. . . . .	4
NUA 694	Clinical Practicum V . . . . .	5
		<hr style="width: 100%; border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> 25



## Part IV—School of the Arts

### ADMINISTRATIVE OFFICERS

MURRY N. DePILLARS, B.A., M.A., Ph.D.

Dean

ROBERT F. HESTER, B.S., M.A.

Associate Dean

THOMAS DeSMIDT, A.A., B.F.A., M.F.A.

Assistant Dean

WILLIAM STEWART, B.F.A., M.Ed., D.Ed.

Director of Graduate Studies

The School of the Arts of Virginia Commonwealth University had as its beginning a sculpture course offered in 1926. In 1928 a one-faculty art department was formed under the direction of Miss Theresa Pollak and since that date has grown to its present organization, achieving national recognition through its quality program in the visual and performing arts.

In 1969 the Department of Dramatic Art and Speech and the School of Music, formerly independent units within Virginia Commonwealth University, were combined with the School of Art to form the present School of the Arts.

The School of the Arts is accredited by the National Association of Schools of Art and Design and the National Association of Schools of Music and offers a rich and unique concept of graduate study for students in the fine and performing arts. It is one of the few state-aided professional art schools in the nation with a professional curriculum within a combined academic and professional environment. Located within

an urban complex of higher education, students are provided with the advantages of comprehensive facilities as well as professionally competent faculty.

The rapidly growing graduate program offers advanced degrees in ten departments in the following areas of study:

Ph.D. in Art History<sup>1</sup>

Master of Arts, Art History

Historical

Museum Studies

Master of Art Education

Master of Fine Arts

Crafts

Ceramics

Furniture Design

Glassworking

Jewelry or Metalworking

Textiles

Design

Interior Environments

Photography/Film

Visual Communications

Painting and Printmaking

Sculpture

Theatre

Acting

Costume Design

Directing

<sup>1</sup>To begin fall 1983 subject to final approval by the State Council of Higher Education for Virginia.

Dramaturgy  
Stage Design/Technical Theatre  
Theatre Education

Master of Music  
Applied Music  
Church Music  
Composition - Theory  
Conducting  
Education  
Music History and Literature  
Piano Pedagogy

Master of Music Education

The School of the Arts has a full-time faculty of 146.

### GRADUATE STUDENT STATUS

The School of the Arts recognizes two categories of graduate students. The first is comprised of those who are accepted provisionally or as regular students into the graduate degree programs of the various departmental areas. These students are considered regular or continuing graduate students and may matriculate full-time or part-time except for the residence limitation discussed elsewhere in this bulletin. The second category is that of the special graduate student.

Holders of the baccalaureate degree from recognized institutions may enroll in graduate courses as special graduate students, but such courses are not applicable toward a graduate degree from this institution unless the student is accepted into a graduate degree program prior to the conclusion of the semester in which the student registered as a special graduate student. This consideration is intended solely to give those graduate degree applicants whose expectation of eventual acceptance into a graduate degree program is high an opportunity to begin graduate work while their application material is being completed and processed.

Holders of the baccalaureate degree who wish to take graduate work for their own enrichment, but who do not intend working in a graduate degree program toward a graduate degree are also considered special graduate students. Students who have made application to a graduate degree program who cannot be accepted without remedial, additional, or provisional course work and who wish to come to this institution to take

such course work are also considered special graduate students. Normally in the School of the Arts such work is taken at the undergraduate level. Special graduate students must have written permission to enroll in undergraduate or graduate courses from the director of graduate studies and the chairman of the appropriate department.

### ADMISSION PROCEDURE

Applications for admission to graduate degree programs in the School of the Arts may be obtained in person or by mail from the Office of Graduate Studies, School of the Arts, Virginia Commonwealth University, 325 North Harrison Street, Richmond, VA 23284.

### ADMISSION REQUIREMENTS

- A. For all degrees — M.A., M.A.E., M.F.A., M.M., and M.M.E.
  1. Applicants should hold the baccalaureate degree from an accredited institution.
  2. It is expected that applicants will have a 3.0 (B) average on the last 60 semester hours of undergraduate work.
  3. The Miller Analogies Test<sup>2</sup> or the Graduate Record Examination is required of all applicants except those for art history and music. The Graduate Record Examination is required of applicants for art history. An entrance examination is required of applicants for music and is included with the application material.
- B. The prospective student should consult the appropriate section of this bulletin for additional admission requirements for a particular degree program.

### ADVISING

All students accepted into advanced degree programs must make an appointment with the chairman of the department prior to registration for their first semester of course

<sup>2</sup>By appointment with the Department of Psychology, or at most other universities. The Miller Analogies Test is a high-level mental ability test which requires the solution of a series of intellectual problems in the form of analogies, mostly verbal.

work. Normally the student's advisor will be the chairman of the department, but students may be assigned an advisor more directly related to their areas of concentration.

Students are also encouraged to consult with the faculty members outside their major area and arrange with appropriate departmental chairmen to use facilities and equipment available in other departments.

## **REGISTRATION**

Graduate art students are urged to plan their schedules and register during advance registration. Registration materials for students accepted into advanced degree programs are available through the registrar's office during the advance registration and registration periods. The advantage of advance registration is that of securing places in classes before they are closed and of obtaining proper counsel from advisors. All graduate students must see their assigned advisors for schedule planning and signature approval. New special graduate students or those contemplating registration as such must secure written permission to register from the director of graduate studies, the School of the Arts.

## **CONTINUOUS ENROLLMENT POLICY FOR GRADUATE STUDENTS**

Graduate students in the School of the Arts must observe the University Continuous Enrollment Policy as explained in Part I of this bulletin.

A candidate for any advanced degree requiring a thesis, after completing all formal course work, must register for at least one semester hour of credit in ART 799 Thesis each term, except summer, until the thesis is completed. If graduate degree candidates expect to avail themselves of the faculty and the resources of the university in the preparation of the thesis during a summer term, they must register for one semester hour during that term also.

A candidate for the M.F.A. in crafts, painting and printmaking, and sculpture, after completing all formal course work, must register for at least one semester hour credit in an appropriate graduate seminar each term, except summer, until the

graduate exhibition is presented and documented.

A candidate for the M.M.E. degree, after completing all formal course work, must register for at least one hour of MUE 687 Research Assessment and Music Interaction each term, including summer, until the required research report is completed.

The grade of "P" or "F" is awarded for credit needed by all candidates to be continuously enrolled, except for those in the M.F.A. program in painting and printmaking who are awarded a letter grade.

## **SPECIAL CHARGES**

All graduate students enrolled in full-time degree programs (nine semester hours or more) are charged a comprehensive lab fee of \$50 each semester. Graduate students enrolled part-time in degree programs (less than nine semester hours) are charged a comprehensive laboratory fee of \$25 each semester. No comprehensive laboratory fee is charged students who are registered only in course work to complete thesis or to satisfy the one credit requirement for continuous enrollment. Special graduate students enrolled in any of the numerous courses which require an additional outlay for materials will be billed for those individual fees by the Office of Student Accounts.

## **FINANCIAL AID**

The School of the Arts awards a limited number of graduate assistantships to full-time students. Applications should be made directly to the chairman of the department in which the applicant proposes to major.

When funds are available, the Office of Graduate Studies of the School of the Arts also awards a limited number of scholarships to degree-seeking graduate students. Announcements are posted and applications are available for these awards at the beginning of each academic year.

## **ADVANCED DEGREE CANDIDACY**

Students seeking an advanced degree in all programs except art history must apply for advanced degree candidacy. Those seeking the M.A.E., the M.M., the M.F.A. in crafts, and the M.F.A. in design must make applica-

tion during or after the completion of the first nine semester credits of graduate work and prior to the completion of 16 semester credits. Those seeking the M.F.A. in painting and printmaking, the M.F.A. in sculpture, and the M.F.A. in theatre must make application during or after the completion of the first 15 semester credits of graduate work and prior to the completion of 24 semester credits. Applications for candidacy are made on form (2.1)<sup>3</sup> which is available in the Office of Graduate Studies, School of the Arts. There are two criteria for admission to candidacy. These are (a) certification by the department in which the applicant is matriculating that the applicant has met departmental expectations, and (b) the attainment of the minimal 3.0 (B) average. Ordinarily the department will arrange an examination and/or review of creative work or performance as the basis of its judgment. Upon the successful completion of a minimum of nine credit hours of course work and upon certification by the department involved that the student is prepared adequately to continue his degree program, the School of the Arts will admit the student to candidacy. Admission to degree candidacy is not an automatic process, the application for candidacy is approved by the department only after careful evaluation of all pertinent factors.

Students who are found inadequately prepared to continue their graduate programs will be advised to supplement the program minima with additional course work and candidacy will be suspended until the supplemental program requirements are met. Students whose tests, grade-point average, and/or creative work demonstrate conclusively no likelihood of a successful completion of a graduate degree program will not be admitted to candidacy by the School of the Arts. Admission to an advanced degree program does not constitute admission to advanced degree candidacy.

### **SCHOOL OF THE ARTS RESIDENCY REQUIREMENTS**

Candidates for the Master of Fine Arts

<sup>3</sup> This procedure must be followed by the student before November 1 of the fall semester or before March 1 of the spring semester.

degree in crafts, painting and printmaking, sculpture, and theatre must complete a minimum of one third of their degree program semester-hour credits within one calendar year, either at the beginning or toward the end of their program of study.

Candidates for all master's degrees in the School of the Arts have five years plus two possible extensions of one year each to complete all degree requirements. The above limitations apply to both full- and part-time students. A petition for an extension is initiated with the academic or thesis advisor.

### **ADVANCED DEGREE REQUIREMENTS**

1. Candidates must achieve no less than a "B" in each major course and a "B" average in the degree program as a whole.
2. A maximum of nine graduate credits may be transferred from other accredited institutions and applied to any of the graduate degree programs in the School of the Arts upon approval by the director of graduate studies.
3. A thesis is a requirement for all advanced degree programs in the School of the Arts except for the M.A.E. in art education (optional), the M.F.A. in the visual arts, and the M.M.E. in music. The thesis is undertaken and developed in the context of the course ART 799 and carries from three to six credits. Depending on the discipline involved, the thesis may be essentially scholarly or creative in content and form. In either instance, the written thesis or the thesis statement (when the thesis involves creative works or performance) is done in a form that can be retained by the university. A thesis proposal must be submitted and approved by the chairman of the department and a thesis committee appointed before the candidate enrolls in ART 799. In most cases the thesis committee is composed of the candidate's thesis advisor, a departmental reader, and the director of graduate studies.

Candidates for the M.A. degree in art history should contact the Department of Art History for specific information and

procedures for completing the thesis requirement.

After enrolling in ART 799, the candidate should obtain a copy of *The Preparation of Thesis* from the Office of Graduate Studies. This information sheet describes the stages in submission of thesis to the candidate's committee, the proper typing paper and reproduction process, the stylebook to be used, binding information, etc. When the thesis is completed, a final examination is arranged. This examination, which includes a defense of the thesis, is oral in nature. At the conclusion of the successful final examination, the candidate's thesis committee signs the copies of the thesis and assigns a grade for it (ART 799). The candidate then delivers the necessary copies of the thesis to the Office of Graduate Studies for the dean's signature and binding by the library. The library of Virginia Commonwealth University receives two copies, the Office of Graduate Studies receives one copy, and the department involved receives one copy. The Department of Music does not require a thesis copy.

4. An exhibit or performance, adequately documented, is required of every candidate for the M.F.A. degree in crafts, painting/printmaking, and sculpture. The candidate for the M.F.A. degree in crafts must present a cumulative exhibit of work near the end of the program of study.
5. An approved research report is required for the M.M.E. degree in lieu of thesis.

## THE SCHOOL OF THE ARTS LIBRARY

The School of the Arts Library, located in the Pollak Building, has a collection of more than 250,000 slides and an extensive collection of exhibit catalogs from various museums and galleries. There is also a working collection of current art publications and magazines.

Virginia Commonwealth University is a short distance from Washington, D.C., Baltimore, Philadelphia, and New York City and the museums, libraries, and research facilities in those urban areas.

## GRADUATE COURSES IN ART (ART)

**530 Guided Study Abroad.** Semester course. 1-6 credits.

**601-602 Seminar in Art.** Continuous course. 3-3 credits. Discussion and research in the visual arts providing experience and involvement in the various studio areas for students not concentrating in these areas.

**592, 692 Individual Projects/Field Work.** Semester courses. 1-6 credits. By appointment with director of graduate studies after approval by department chairman. (Obtain individual research project form from the dean's office prior to enrollment.) Individual work for graduate students.

**690 Methods of Art Research.** Semester course. 2 credits. Review of selected research methods relevant to the composition of a thesis in the student's master's degree area. Preparation of a proto-thesis concludes course work.

**705, 706 Research in the Arts.** Semester courses. 3, 6 credits. By appointment with director of graduate studies after approval by department chairman. (Obtain individual research project form from the director of graduate studies prior to enrollment.) Individual research for graduate student.

**799 Thesis.** Semester course. 1-6 credits. By appointment with director of graduate studies after approval by department chairman and review of candidate's record. (Obtain thesis plan approval form from director of graduate studies prior to enrollment.)

## Department of Art Education

### FACULTY

- Burton, David *Assistant Professor* Ph.D., The Pennsylvania State University; philosophy, design.  
 Ferris, Michael *Associate Professor* D.Ed., Ball State University; teaching methods, ceramics.  
 Hynson, Priscilla C. *Associate Professor* Ed.D., George Peabody College; teaching methods, related arts.  
 Landis, Alan L. *Professor* D.Ed., The Pennsylvania State University; curriculum, jewelry.  
 Reeves, Daniel *Professor and Chairman* Ed.D., Illinois State University; research, painting.  
 Tisinger, Betty *Associate Professor* D.Ed., The Pennsylvania State University; multi-cultural arts, art for the exceptional student.  
 Wright, James *Associate Professor* D.Ed., The Pennsylvania State University; theory, sculpture.

The Master of Art Education program attempts to expand and further refine each M.A.E. student's ability, knowledge, and attitudes in order to provide the profession with more effective art teachers, coordinators, supervisors, and other educational specialists in the arts.



**PROGRAM DESCRIPTION**

The M.A.E. program is structured on an individualized basis rather than on a prescribed program of graduate studies. To benefit from the program's flexibility, each M.A.E. student must assess his or her own educational needs and professional goals. From this assessment, and with a graduate advisor's assistance, the M.A.E. student gains the opportunity and the responsibility to help determine a viable structure for the content and sequence of an individualized program of graduate studies.

Such a program can utilize the collective expertise of the art education faculty as well as appropriate community resources. Graduate course work, therefore, could include both on-campus and off-campus involvement.

Opportunities for personal growth through the M.A.E. program also include the rich resources of other university graduate departments in the visual and performing arts, education (including supervision, administration, and special areas), the natural and social sciences, and the humanities. Alternative approaches to traditional thesis methods are also encouraged within the program.

**ADMISSION REQUIREMENTS, M.A.E.**

In addition to the School of the Arts admission requirements, applicants in art education must have completed a minimum of 36 semester hour credits in studio art at the undergraduate level. It is desirable for applicants to have had at least two years of teaching experience prior to beginning graduate studies.

**DEGREE REQUIREMENTS, M.A.E.**

**Program Pattern**

	<i>Credits</i>
Art Education Electives .....	12
Approved Electives .....	15
Issues and Methods .....	3
Thesis Requirement or Additional Course Work in Art Education .....	6
	36

**Thesis or Project Option**

A thesis or project problem may develop from graduate course work or professional involvement. Projects are those endeavors of

thesis proportion which do not fit the traditional thesis format. A thesis or project may be explored by: descriptive research, historical research, empirical/statistical research, design of learning packages, philosophical study, curriculum development, or action research.

**Non-Thesis Option**

In lieu of the thesis, students may elect to complete six credit hours of graduate course work in the Department of Art Education. The selection of these six credits is subject to the approval of the student's advisor. In addition, the student must successfully pass a written and oral examination at the conclusion of all course work. The examination will pertain to the course work, to contemporary issues in the field, and to the student's particular area of expertise.

**GRADUATE COURSES IN ART EDUCATION (AEN)**

**501-502 Concepts in Art Education.** Continuous course; 1 seminar and 4 studio hours. 3-3 credits. A sequence of studies organized around six major components: communications, expressive media, conceptual expression, teaching strategies, teacher affective attributes, and self-managing abilities.

**508 Two Dimensional Art Experiences.** Semester course; 2 seminar and 3 studio hours. 3 credits. The course explores the media, techniques, and concepts of drawing, painting, and printmaking. Not offered for credit to art majors.

**509 Three Dimensional Art Experiences.** Semester course; 2 seminar and 3 studio hours. 3 credits. Exploration of sculptural concepts with three dimensional materials such as wood, metal, clay, fibre, plaster, plastic, and glass. Not offered for credit to art majors.

**520 Teaching Concepts Through the Arts.** Semester course; 1 lecture, 1 seminar, and 3 studio hours. 3 credits. Students will investigate and compare traditional and contemporary patterns of expression; develop experiential techniques for teaching concepts; and participate in a series of activities which reveal relationships among the arts and other subject areas. Seminars will include guests from the visual, performing, and literary arts. Open to all graduate students.

**591 Topics in Art Education.** Semester course; variable credits from 1-3. May be repeated for a maximum of 9 credits. The course will explore selected topics of current interests or needs relative to art education. See schedule of classes for specific topic to be offered each semester.

**600 Seminar: Problems in Art Education.** Semester course; 3-6 lecture hours. 3-6 credits. Oral and written reports upon problems encountered by members of the

seminar in their own art teaching. Group discussion of reports with the instructor as moderator.

**601 Art for Elementary Classroom Teachers.** Semester course; 2 lecture and 2 studio hours. 3 credits. The nature of art and its function in the lives of individuals and society will be explored in addition to an emphasis upon relevant objectives, materials, and approaches in guiding the artistic expression of children at the elementary school level. Not offered for credit to art majors.

**611, 612 Art Education Theory.** Semester course; 3 lecture hours. 3, 3 credits. Review and analysis of significant writings and research in art education and the assessment of its pragmatic import.

**650 Art for the Exceptional Learner.** Semester course; 2 lecture and 3 laboratory hours. 3 credits. A study of exceptionality, including handicapped, aged, gifted, and talented or other exceptional individuals, in terms of participation in and appreciation of the visual arts. Course to include practicum and field experiences.

**652 Art Supervision and Administration.** Semester course; 3 lecture hours. 3 credits. Exploration of the duties and responsibilities of the public school art supervisor and administrative positions in art education within various organizations or institutions.

**665 Curriculum Development and Evaluation.** Semester course; 3 lecture hours. 3 credits. May be repeated for a maximum of 6 credits. A review of curriculum development including: needs assessment, determination of goals and objectives, curriculum writing, evaluation, and feed-back processes. A variety of theoretical approaches in the visual arts are studied and curriculum models are developed and analyzed within the class.

**670 Media in Art Education.** Semester course; 3 lecture hours. 3 credits. Examining the influence and implications of technology in art education through participation in creative learning processes.

**680 Teaching Laboratory.** Semester course; 3 lecture hours. 3 credits. Observations and experimental teaching experiences with children in art. Group discussions and evaluation of ideas, objectives, and methods.

**690 Issues and Methods of Research in Art Education.** Semester course; 3 lecture hours. 3 credits. Readings and discussions of studies in art education and related research emphasizing possibilities for implementation by art teachers. Methods of research in the field will be reviewed and sample research proposals will be developed by the students.

## Department of Art History

### FACULTY

Alexander, Sidney *Visiting Professor* B.S., Columbia University; Renaissance, Modern.

Bonds, Maurice *Professor Emeritus* M.A., Columbia University.

Flint, Richard C. *Associate Professor* Ph.D., Indiana University; Nineteenth Century, American.

Gairola, C. Krishna *Associate Professor* Ph.D., London University; D.E.L., Ecole du Louvre, Oriental.

Hinter-Reiter, H. Gilda *Associate Professor* Ph.D., The Pennsylvania State University; Aesthetics, art theory and criticism.

Jones, Sharon Gallagher *Associate Professor* Ph.D., New York University; Medieval.

Katz, M. Barry *Associate Professor and Chairman* Ph.D., Syracuse University; Renaissance, Nineteenth Century.

Koplin, Bruce M. *Associate Professor* M.F.A., Virginia Commonwealth University; museology, American.

Mullins, L. Cleo *Assistant Professor* M.A. and Certificate of Advanced Study in Conservation, Cooperstown Graduate Programs, Cooperstown, New York; conservation.

Perry, Regenia A. *Professor* Ph.D., Western Reserve University; American, African, architectural history.

Phillips, James E. *Assistant Professor* Ph.D., University of Texas; Ancient, Classical.

Risatti, Howard *Assistant Professor* Ph.D., University of Illinois; Modern, Contemporary.

The department offers a broad-based education in the humanistic discipline of art history. A general comprehensive knowledge of the field is stressed on the master's level, as well as the opportunity to develop professional skills of research and writing. Doctoral studies are more specialized with an increased emphasis on individual scholarship. Throughout, expertise is developed in criticism and the historiographic methods, such as connoisseurship, stylistic analysis, and iconography. Individual research is encouraged through seminars, independent projects, and ultimately, the writing of a thesis and dissertation.

The Department of Art History also offers a curriculum in museum studies, one which takes particular advantage of the rich cultural facilities of Virginia's urban environment. The program is run in coordination with numerous local and regional museums, stressing on-site instruction and internships. An opportunity is offered for the study of the conservation of art as well as curatorial and administrative aspects.

Overseas studies are available through university-sponsored programs abroad in Europe and Asia.

Graduate assistantships and fellowships are available to full-time students.

### M.A. IN MUSEUM STUDIES

The two year program in *museum studies* stresses those attitudes and skills necessary to accomplish the major goals of any profes-

sional museum operation; to collect, to preserve, to exhibit, and to interpret the art and artifacts of the past and present within an extended curriculum and professional museum environment. The course of study also includes an internship for academic credit under the direct supervision and professional guidance of individuals in the field.

The curriculum will provide a broad educational background in the field as well as a more particularized experience in those areas in which the student desires to develop expertise. These specialized areas include: museum theory and practice, curatorial methods and conservation, registration methods, exhibit design, and education programs.

**Admission Requirements**

In addition to the School of the Arts admission requirements, applicants should have completed a minimum of 6 credits in the survey of western art, 6 credits of period studies, 3 credits in conservation, and some undergraduate work in the humanities. Any applicant whose training is less extensive may be provisionally admitted and subsequently gain full graduate status upon completion of the deficiency.

**Degree Requirements, M.A.**

	<i>Credits</i>
Museum Studies .....	15
Museum Internship .....	3
Conservation .....	3
Art History (period courses) .....	12
Art Historiography and Methodology .....	3
Aesthetics .....	3
Elective .....	3
Museum Project or Thesis .....	6
	48

Museum studies students will take a diagnostic examination upon entering the program and an appropriate comprehensive examination sometime toward the end of course work. They will also need to demonstrate proficiency in French or German.

An internship at one of the cooperating local or regional museums is a degree requirement of particular importance, enabling students to apply their knowledge and develop a personal awareness of effective

museum exhibition procedures. As a culmination to the course of study, students may opt to plan and mount a major exhibition on campus or at a museum in lieu of a written thesis, with the approval of the departmental Graduate Committee.

**M.A. AND PH.D. IN ART HISTORY<sup>1</sup>**

Graduate studies leading to the M.A. and Ph.D. degrees in Art History, are intended to train students to become creative and accomplished teachers and scholars in the discipline of art history. The Master of Arts program is designed to provide a comprehensive knowledge of the major areas and historical periods of art, as well as the various research and methodological skills requisite to the field. The Doctor of Philosophy degree is the highest that can be attained in a course of study at the university. The Ph.D. program will emphasize specialization in one or more major art historical periods. The course of study will culminate with the writing of a dissertation which will demonstrate scholarly proficiency and adduce a furtherance of knowledge in the field.

The requirements listed below are in conjunction with School of the Arts graduate admission and degree requirements.

**M.A. Admission Requirements**

In addition to the School of the Arts requirements, applicants should have completed a minimum of 21 undergraduate semester hours in art history with additional work in relevant humanities and social science courses such as English, philosophy, foreign language, and history. Students whose undergraduate training is less extensive may be provisionally admitted and subsequently attain full graduate status.

**M.A. Degree Requirements**

A total of 30 credits in course work and thesis.

<sup>1</sup>To begin fall 1983 subject to final approval of the State Council of Higher Education for Virginia.

*Credits*

Art History .....	21
Historiography and Methodology .....	3
Thesis .....	<u>6</u>
	30

At least 6 of the 21 art history credits must be taken in seminar classes.

Upon entering the program all students will immediately be given a departmental diagnostic examination which will be used for the purpose of determining the relative strengths and weaknesses of their educational backgrounds. This test will have no grade significance, but will be used solely as an aid in determining a course of study.

Degree candidates must have a reading knowledge of French or German. The requirement may be fulfilled after admission but prior to taking the comprehensive examination. The demonstration of proficiency is accomplished through the taking of the appropriate foreign language test of the Educational Testing Service.

Students must also demonstrate general programmatic competence by passing a comprehensive examination, taken sometime toward the end of course work (although it may be requested at any time after the completion of 18 credit hours), and following the successful demonstration of foreign language proficiency.

The master's program culminates with a thesis, written under the direction of a departmental adviser and a thesis committee.

For more complete information and details on these procedures, please contact the Department of Art History.

**Ph.D. Admission Requirements**

In addition to the School of the Arts requirements, applicants should hold an M.A. degree in Art History from an accredited institution or have completed 30 credits in art history beyond the bachelor's degree with a cumulative grade point average of 3.3. Applicants should already possess a reading knowledge of one of the required foreign languages (French and German).

**Ph.D. Degree Requirements**

A total of 60 credits in course work and dissertation.

*Credits*

Advanced Art History .....	30
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Dissertation .....	<u>30</u>
	60

At least 12 of the advanced art history credits must be taken in seminar class. A student may substitute 6 credits in approved electives for 6 credits in advanced art history. Entering students without prior graduate course work in methodology or art historiography will be required to complete 3 credits of the same (ARH 590) during the first year of doctoral study.

Students must complete a residence requirement of two academic semesters.

Degree candidates must possess a reading knowledge of both French and German. Competence in one language must be demonstrated at the time of admission. Competence in the second language should be demonstrated by the end of the first year. The demonstration of proficiency is accomplished through taking the appropriate foreign language test of the Educational Testing Service. The Graduate School Foreign Language Test is administered by the School of Graduate Studies (786-0347). Tests are available in French, German, Russian, and Spanish.

Students are required to declare a major area of specialization within the history of art upon entering the program. Current areas of specialization are: ancient, classical, medieval, Italian Renaissance, nineteenth-century, twentieth-century, contemporary, American, Oriental, African art, and film. Following the completion of all course work, students will be required to pass a comprehensive examination in their major area of specialization. Successfully passing an examination in a secondary area of art history will also be required.

After satisfactorily completing all course work and examinations, doctoral candidates are required to write and defend a dissertation written under the direction of a departmental adviser and a graduate advisory committee.

For more complete information and details on these procedures, please contact the Department of Art History.

**GRADUATE COURSES IN ART HISTORY (ARH)**

552 Art of Central, Eastern, and Southern Africa.

Semester course; 3 lecture hours. 3 credits. A study of the major art-producing tribes and areas of Central Africa, including the Cameroon, Gabon, and Zaire; East Africa, including Kenya, Tanzania, and Mozambique; and Southern Africa, Bushman art, prehistoric cave paintings, and rock engravings.

**580 Registration Procedures for Museums.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. A study of the standard registration procedures and the current vocabulary employed by the profession. Professional ethics will be stressed to enable the student to become more fully aware of the importance within the museum system.

**581 Museum Exhibitions.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. The study of exhibitions for museums including design, fabrication, lighting, brochures, invitations, and publications.

**582 Educational Program and Public Relations for Museums.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. A study of programming for an art center/museum, including organization of permanent displays, special exhibitions, lectures, docent programs for children and adults, and traveling exhibition services. Special emphasis will be placed on the use of audio-visual materials and techniques in the exhibitions and interpretation programs, as well as the techniques of public information, including press releases, use of television, radio, newspapers, and scholarly publications.

**583 Curatorship and Connoisseurship.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. An examination of the curator's relationship and responsibilities to the museum system, research methods, methods of acquisition, organization of museum reference library (including slides and other audio-visual materials), exhibition catalogues, clippings, and file and computer retrieval systems.

**584 Museum Administration.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ARH 464, 465 and/or permission of instructor. A study of museum organization, including staff organization and relationship of director to board, building and grounds, heating and humidity control, guarding and fire control, special installations and shops, membership programs, museum finances for operation and acquisition funds, grants, promotion, development, and overall responsibility to the community and profession.

**590 Art Historiography and Methodology.** Semester course; 3 lecture hours. 3 credits. Basic methodology for beginning art history graduate students. An examination of the traditional research methods of the art historical discipline, geared to familiarize students with standards in research and scholarship.

**604 Advanced Studies in Prehistoric and Ancient Art.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed study of a selected aspect of artistic development in prehistoric culture or ancient Mesopotamia, Iran, Anatolia, or Egypt. See Schedule of Classes for specific topic to be offered each semester.

**605 Advanced Studies in Greek, Etruscan, and Roman Art.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed study of a selected aspect of the art and ideas of the classical Greek and Roman cultures, including the Etruscans. See Schedule of Classes for specific topic to be offered each semester.

**614 Advanced Studies in Medieval Art and Architecture.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed study of a selected aspect of development in the art and ideas of Byzantine, Germanic, Romanesque, or the Gothic period. See Schedule of Classes for specific topic to be offered each semester.

**619 Advanced Studies in Renaissance Art and Architecture.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed study of a selected aspect of the development of the art and ideas of the Proto-Renaissance, early Renaissance, or high Renaissance. See Schedule of Classes for specific topic to be offered each semester.

**624 Advanced Studies in Baroque and Eighteenth Century Art and Architecture.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed study of a selected aspect of the development of the art and ideas of England, France, the low countries, Italy, Spain, Germany, and Austria during the Baroque period and eighteenth century. See Schedule of Classes for specific topic to be offered each semester.

**629 Advanced Studies in Nineteenth Century Art and Architecture.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed study of a selected aspect of the development of the art and ideas of the nineteenth century including neoclassicism, romanticism, realism, impressionism, and decadent art. See Schedule of Classes for specific topic to be offered each semester.

**639 Advanced Studies in Twentieth Century Art and Architecture.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed study of a selected aspect of the development of the art and ideas of the twentieth century. See Schedule of Classes for specific topic to be offered each semester.

**642 Advanced Studies in the Architecture of Richmond.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 6 credits. An advanced, detailed study of a selected aspect of the development of the architecture of the city of Richmond. See Schedule of Classes for specific topic to be offered each semester.

**644 Advanced Studies in American Art.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed study of a selected aspect of the development of the art and ideas of America. See Schedule of Classes for specific topic to be offered each semester.

**649 Advanced Studies in Asian Art.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed study of a selected aspect of the development of the art and ideas of India,

China, Japan, or Southeast Asia. See Schedule of Classes for specific topic to be offered each semester.

**654 Advanced Studies in African and Oceanic Art.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 6 credits. An advanced, detailed study of a selected aspect of the development of the art and ideas of African and oceanic cultures. See Schedule of Classes for specific topic to be offered each semester.

**655 Advanced Studies in Aesthetics and Art Theory.** Semester course; 3 lecture hours. 3 credits. An advanced, detailed investigation of aesthetic theories and concepts in art.

**656 Advanced Studies in Ideas and Criticism in Art.** Semester course; 3 lecture hours. 3 credits. An advanced, detailed examination of specific concepts in the literature of art criticism with particular emphasis on the principle writings of leading American critics.

**660 Advanced Studies in Curatorial Care of Collections.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ARH 360 or its equivalent. Advanced, detailed investigation of the examination and deterioration of art works. Designed to be of special interest to the future museum professional. Includes practical instruction in diagnosis, documentation, and emergency treatment.

**664 Advanced Studies in Conservation.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. An advanced, in-depth examination of selected topics in conservation. See Schedule of Classes for specific topic to be offered each semester.

**669 Advanced Studies in Museum Methods.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 9 credits. Advanced instruction in the major aspects of museum administration. Lectures by museum personnel and workshops in a variety of museums. A major research project is required.

**671 Advanced Studies in Film Theory.** Semester course; 3 lecture hours; 3 credits. Advanced, detailed study of the theories and criticism of film, dealing with medium, form, function, and psychology.

**674 Advanced Studies in Film.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credits. An advanced, detailed examination of selected topics in the history of film. See Schedule of Classes for specific topic to be offered each semester.

**675 Advanced Studies in the History of Photography.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 12 credit hours. An advanced, detailed examination of selected topics in the history of photography. See Schedule of Classes for specific topic to be offered each semester.

**693 Advanced Museum Internship.** Semester course; 9 to 18 studio hours. 3 to 6 credits. Course may be repeated to a maximum of 12 credits. Prerequisites: ARH 464 or 465 and permission of director of museum studies and chairman of Art History Department. Advanced field work in a local, regional, or national museum.

**699 Museum Project.** Semester course; 3-6 credits.

Prerequisite: permission of departmental graduate committee and director of museum training program. The planning, mounting, and documentation of a major exhibition on campus or in a local/regional museum.

**752 Art of Nigeria.** Semester course; 3 lecture hours. 3 credits. A study of the culture and traditional art forms of Nigeria, from ca. 500 BC to present, including architecture, sculptural works in wood, stone, ivory and metal, royal attire, jewelry, and weaponry. Special emphasis will be placed upon the art of the Yoruba and Benin bronzes.

**759 Seminar in Aesthetics, Theory, and Criticism of Art.** Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 6 credits. An advanced, detailed study of selected topics of aesthetics, art theory and criticism in a seminar situation. See Schedule of Classes for specific topic to be offered each semester.

**780 Aspects of Christian Iconography.** Semester course; 3 lecture hours. 3 credits. Seminar: the study of meaning in the visual arts of Europe from the Middle Ages to the Neo-Classical period. Students will analyze special themes of a Christian or classical derivation and study major cultural shifts within a broader historical perspective.

**781 Aspects of Buddhist Iconography.** Semester course; 3 lecture hours. 3 credits. Seminar: permission of instructor. Seminar: research into the origins and expansion of Buddhist art in Asia.

**782 Aspects of Hindu Iconography.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Seminar: research into the origins and expansion of Brahmanical Hindu art in Asia.

**789 Problems in Advanced Art History.** Semester course; 3 lecture hours. 3 credits. May be repeated. Seminar for scholarly research and discussion of specific issues, i.e., in prehistoric art, ancient art, classical art, medieval art, Renaissance art, Baroque art, nineteenth century art, modern art, contemporary art, American art, Asian art, museum management, film and photography.

**797 Directed Research Project.** Semester course; variable credit; maximum 3 credits per semester. Prerequisite: permission of instructor and department chairman. Advanced individual work on subject to be formulated by student and instructor.

**898 Ph.D. Dissertation.** Semester course; 1-15 credits. May be repeated.

## Department of Crafts

### FACULTY

Eastman, Allan A. *Professor Emeritus* B.S., Vesper George School of Art.

Hammersley, William S. *Assistant Professor* M.F.A., University of Wisconsin, Madison; woodworking, furniture design.

Hawthorne, John *Assistant Professor* M.F.A. Cranbrook Academy of Art; fabric design, textiles.

Ipsen, Kent F. *Professor* M.F.A., University of Wisconsin, Madison; glassworking.

- Iverson, Susan *Assistant Professor* M.F.A., Tyler School of Art; tapestry, textiles.  
 Meyer, C. James *Assistant Professor* M.F.A., State University College, New Paltz; metalsmithing, jewelry.  
 Ripley, Curtis *Assistant Professor* M.F.A. University of Wisconsin, Madison; ceramics.  
 Silliman, Christopher *Assistant Professor* M.F.A., Alfred University; ceramics.  
 Thompson, Nancy K., *Associate Professor and Chairman* M.F.A., Indiana University; jewelry.  
 Winebrenner, Daniel K. *Associate Professor* M.F.A., Rochester Institute of Technology; design, multi-media.

The Department of Crafts offers a program of study leading to the Master of Fine Arts degree in five disciplines: ceramics, furniture design, glassworking, jewelry or metalworking, textiles.

Within the studio concentration, emphasis is placed on self-motivation, individual investigation, and the development of professional attitudes and skills. Students are expected to demonstrate a serious commitment to their work and to develop mature ideas and forms of expression.

The program also offers graduate students opportunities for enhancing their major fields of concentration. Twenty elective credits are available for this purpose.

**ADMISSION REQUIREMENTS M.F.A.**

In addition to the School of the Arts admission requirements, applicants in crafts must have completed a minimum of 36 semester hour credits in studio art at the undergraduate level. Students admitted to the graduate program are expected to have achieved a high level of competency in one of the departmental disciplines.

**DEGREE REQUIREMENTS, M.F.A.**

**Program Pattern**

	<i>Credits</i>
Studio Major . . . . .	24
Approved Electives . . . . .	20
Graduate Seminar . . . . .	4
	48

The candidate for the M.F.A. degree in crafts must present a cumulative show of work near the end of the program of study. The show must have the approval of a simple majority of the graduate faculty for the degree to be awarded.

**GRADUATE COURSES IN CRAFTS (CRA)**

**547 Ceramic Technology.** Semester course; 3 lecture hours. 3 credits. Study of ceramic materials through calculation and experimentation.

**591 Special Topics and Practicum.** Semester course; 1-3 credits. May be repeated. Prerequisite: permission of instructor. A topical seminar/workshop offered in a variety of craft subjects or issues not included in the regular curriculum. See Schedule of Classes for particular topic or topics to be covered each semester.

**601, 602, 603, 604 Metal or Jewelry.** Semester courses; 3, 6, or 9 credits. Hours to be arranged. Personal investigation of materials, processes, and attitudes relating to the creative production of metal and/or jewelry forms.

**621, 622, 623, 624 Furniture Design.** Semester courses; 3, 6, or 9 credits. Hours to be arranged. Design, research, and experimentation in wood and varied materials, relating to a body of work demonstrating the student's mastery of material.

**641, 642, 643, 644 Ceramics.** Semester courses; 3, 6, or 9 credits. Hours to be arranged. Problems in the design and production of functional and nonfunctional ceramic objects as well as study of experimentation in ceramic technology and kiln design.

**651, 652, 653, 654 Glassworking.** Semester courses; 2 lecture, 3 or 12 studio hours. 3 or 6 credits. Prerequisite: permission of instructor. Investigation of and experimentation with the ideas, material, and processes relative to the production of glass forms.

**661, 662, 663, 664 Textiles.** Semester courses; 3, 6, or 9 credits per semester. Hours to be arranged. Work in contemporary and traditional textile techniques.

**690 Graduate Seminar.** Semester courses; 1 lecture hour. 1 credit. May be repeated. A weekly series of topical discussions dealing with contemporary issues in the arts as they affect the craftsman. Faculty, students, and, as appropriate, visiting lecturers will participate.

**The Master of Fine Arts in Design**

**INTERIOR ENVIRONMENTS  
 PHOTOGRAPHY/FILM  
 VISUAL COMMUNICATIONS**

**GENERAL PROGRAM DESCRIPTION**

The purpose of this advanced degree program in design is to prepare the individual designer to assume a leadership role in a complex and expanding profession. The course work, internship experience, and research which constitutes the program will enable the designer to better solve visual and spatial problems and to function more effec-

tively as an administrator, planner, and educator.

The program offers the graduate student the opportunity to use appropriate courses and resources from schools within the university, to participate in internship and research with various agencies and organizations concerned with programs of design and to view design as an interdisciplinary profession with an essential contribution to make toward the solution of the problems of today.

There is an emphasis placed upon design education because of the need for better design programs and more qualified faculty to staff schools, especially community colleges. The program also recognizes the need for better trained designers and design educators from minority groups.

## **CHARACTERISTICS OF THE PROGRAM**

The Master of Fine Arts in design is an advanced interdisciplinary program in the study of design which utilizes knowledge and human potential in alternative ways to define problems and create change.

Graduate students not only have the opportunity to work within a design field such as visual communications, interior environments, and photography/film, but also have the opportunity to develop competencies across fields and engage in research and inquiry of a social or environmental nature to create new visual forms and communicative content in a rapidly changing society.

### **Internship and Field Experiences**

The graduate program places an emphasis upon field experiences as an interface between the theoretical and the practical. Within a professional school of the arts in an urban university there are excellent opportunities for appropriate graduate field experiences. They include:

1. Formal arrangements with state agencies, industries, foundations, and community organizations which would enable the graduate designer to function as a member of a project team or task force.
2. Service to various organizations, of-

fered as the need arises, possibly with the student working on a specific problem or project.

3. Research internships developed with the university on school supported or outside funded projects, especially those which concern social problems, health care, and institutional environments.

## **PROGRAM REQUIREMENTS**

### **Thesis**

Depending upon the discipline involved, the thesis may be essentially scholarly or creative in content and form. In either instance, the written thesis or the thesis statement (when the thesis involves creative work or performance) is done in a form that can be retained by the university.

## **EXAMPLES OF THESES**

### **Interior Environments**

An investigation in a scholarly area or specific research and documentation of a technical or creative project.

### **Photography/Film**

An exhibition of photographs appropriately documented; a film appropriately documented; specific research problem of a technical or creative nature; and documentation of research or project during internship.

### **Visual Communications**

An exhibition of a visual communications project appropriately documented; specific research problem of a technical or creative nature; and documentation of research or project during internship.

## **COURSES FOR M.F.A. IN DESIGN (DES)**

### **Courses Common to All Subspecialties**

**601 Interdisciplinary Design Seminar.** Semester course; 3 lecture hours. 3 credits. An introductory seminar for beginning graduate students across the three subspecialty areas which examines the mission of the contemporary designer and the technological, psychological, and aesthetic resources. Professional designers, educators from other fields on campus, and resource people from business and industry will participate.

**602 Advanced Design Seminar.** Semester course; 3 lec-



ture hours. 3 credits. May be repeated. An advanced seminar in which students and faculty from the three subspecialty areas meet and discuss the professional and conceptual aspects of interdisciplinary design activity. Students will draw upon past knowledge and current investigations.

**603 Design and Visual Communication Education.** Semester course; 3 lecture hours. 3 credits. This course will explore the philosophical, informational, and technical aspects of design education.

**School of the Arts and University Courses**

The following courses common to all graduate programs in the School of the Arts are available to M.F.A. students in design who desire to engage in research supervised by qualified professors within the school and other academic divisions within the university.

**ARTS 509, 510; 609, 610 Individual Projects/Field Work**

**ARTS 705, 706 Research in the Arts**

**ARTS 799 Thesis**

There are a variety of graduate courses offered within the School of the Arts which can be utilized as electives by the student in this degree program. Some examples are:

**ARH 639 Advanced Studies in Twentieth Century Art and Architecture**

**ARH 674 Advanced Studies in Film**

**PAP 605-606 Graduate Painting**

**PAP 615-616 Graduate Printmaking**

**PAP 621-622 Graduate Drawing**

**SCU 500, 600 Graduate Sculpture**

**THE 503, 504 History of Dramatic Literature**

**THE 526, 527 Playwriting**

Virginia Commonwealth University offers a wealth of graduate courses which can, as electives, support the educational process and personal development of our graduate students.

**Department of Interior Design**

**FACULTY**

Chandler, D. L. *Assistant Professor* M.A., Massachusetts Institute of Technology; graphic presentation skills, public relations, professional awareness.

Field, Jerry J. *Professor* B.S., Certificate in I.D., Virginia Commonwealth University; Diploma, Parsons School of Design; history of interior design and architecture, period restoration.

Gunter, Ben D. *Professor and Chairman* M.Ed., University of Virginia; interior design education, business and commercial design.

Long, James T. *Assistant Professor* M.A., University of Kansas, architecture as media, professional practice.

Marlow, Craig H. *Assistant Professor* M.F.A., Louisiana Tech University; graphic communication, design.

Philbrick, Pamela M. *Assistant Professor* M.A., University of Michigan; psychology of interior space.

Schroeder, Johanna E. *Professor* D.A., Federal Institute of Technology, Zurich; Gerrit T. Rietveld: De Stijl architecture, furniture.

Yung, Ringo *Associate Professor* M.F.A., University of Kansas; new trends in Chinese architecture.

The graduate program in interior environments will provide the opportunity to expand one's knowledge of intellectual, creative, cultural, and philosophical attitudes toward design.

The depth of the program will stimulate professional excellence in a specific area of interior environments and will allow interaction with disciplines in the School of the Arts and the university.

**SPECIFIC ADMISSION REQUIREMENTS**

**Undergraduate Preparation:** A minimum of 36 semester credits in studio art at the undergraduate level; an additional 15 semester credits are required in related courses such as architecture, business, environmental support systems, art/architectural history, and environmental psychology.

**Portfolio:** A minimum of ten recent designs which exemplify the ability to draft, sketch, render, and letter, as well as to solve interior and/or exterior design problems. Attending research data and slides of prototypes and work completed should be included if possible.

**DEGREE REQUIREMENTS**

A minimum of 48 credits are required within prescribed courses. A thesis is required and is undertaken and developed in the context of the course Art 799. The thesis may be essentially scholarly or creative in content and form. In either instance, the written thesis or thesis statement (when the thesis involves creative work) is done in a form that can be retained by the university.

**COURSE REQUIREMENTS**

	<i>Credits</i>
Graduate Design Core .....	24
Graduate Seminars .....	12
(Interior Environments or Design)	
Approved Electives .....	9
Thesis .....	3
	48

Internship may be substituted for Graduate Design Core or for Approved Electives.

**GRADUATE COURSES IN INTERIOR ENVIRONMENTS (IDE)**

**601 Graduate Design Core.** Semester course; 6, 12 studio hours. 3, 6 credits. May be repeated. Designing in specialized areas of interior environments.

**621 Interior Environments Seminar.** Semester course; 3 lecture hours. 3 credits. May be repeated. A topical seminar which examines the research and theory in the various areas of interior environments. Consultants and professionals in the design fields will be involved.

**693 Field Work, Internship.** Semester course; 6, 12, 18 studio hours. 3,6,9 credits. May be repeated. Prerequisite: approval of advisor. Professional experience in the cooperative solution of design problems in interior environments which relate theory to practice. Formal arrangements must be made with state agencies, industries, and community organizations and individuals.

**Department of Photography**

**FACULTY**

- Bremer, David *Assistant Professor M.A.*, Ohio University; still photography.
- Dixon, Clifton *Associate Professor M.A.*, University of Maryland; cinematography.
- Heroy, John *Associate Professor M.F.A.*, State University of New York at Buffalo; still photography.
- Lensen-Tomasson, Nancy *Assistant Professor M.F.A.*, University of Mexico; still photography, color.
- Nan, George *Professor and Chairman M.S.*, Institute of Technology; still photography, color.
- Quarterman, Dale *Associate Professor M.S.*, Illinois Institute of Technology; still photography.
- Strommer, Joan *Assistant Professor M.F.A.*, University of Minnesota; cinematography.

The Department of Photography seeks through its graduate program to advance the highest standards of the media of photography and film by encouraging the creative and professional growth of both its students and faculty. The goal is to provide a forum for the development and exchange of visual ideas and to encourage its members to translate these ideas through the medium with a high degree of sensitivity and proficiency.

The program is meant to be flexible. Participants in the program may choose to emphasize their search for personal expression or they may work in the Design Center with an emphasis on the application of their art to design problems. The program culminates with the presentation of a body of work, either visual or written and visual, that coherently expresses some aspect of the medium.

The successful candidate for the M.F.A. degree will be adequately prepared to continue to function as a working photographer and to begin a career in teaching or in photographic design.

**ADMISSION REQUIREMENTS**

**Undergraduate Preparation:** The 36 semester hour credits in studio art at the undergraduate level must include a minimum of nine semester hour credits in photography or cinematography.

**Portfolio:** Photography — a minimum of 20 recent photographs. Cinematography — A minimum of three recent films for which the applicant has had a primary responsibility in production. A video tape can be substituted for one of the films.

**DEGREE REQUIREMENTS**

The advanced study of photography and film is both broad and varied. Therefore, the program's requirements are flexible and determined by the needs of each student on an individual basis. There are, however, a few definite requirements. Each student must have on completion of the program a knowledge of contemporary art history and design, a more in-depth knowledge of the history of his discipline, be it still photography or film, and an understanding of the critical dialogue that is connected with his medium. The extent to which courses are suggested for students to meet these requirements depends on their background.

**TYPICAL COURSE OF STUDY**

	<i>Credits</i>
Studio and/or Research (in major) .....	15
Graduate Seminar .....	12
Approved Electives .....	9
History of Photography or Film .....	6
Internship .....	3
Thesis .....	3
	48

**GRADUATE COURSES IN PHOTOGRAPHY/FILM (PTY)**

**601 Photographic Studio.** Semester course; 6, 12 studio hours. 3, 6 credits. May be repeated. Non-majors by permission of instructor. Students will work on specific problems relating to the areas of their major interests. Options will be available in black and white photography, color photography, and motion picture photography.

**621 Research in Photography and Film.** Semester course; 6, 12 studio hours. 3, 6 credits. May be repeated. Non-majors by permission of instructor. Students will engage in appropriate theoretical, experimental, or historical research in a specific area.

**690 Seminar in Photography and Film.** Semester course; 3 lecture hours. 3 credits. An examination of contemporary issues and developments in photography and film. Students will have a chance to discuss their work and the work of others. May be repeated.

**693 Field Work, Internship.** Semester course; 6, 12 studio hours. 3, 6 credits. May be repeated. Professional field experience in the theoretical and practical applications of photography and/or film through cooperative organizations. Formal arrangements will be made with state agencies, industries, community organizations, and professionals in the field.

**Department of Communication Arts and Design**

**FACULTY**

- Apgar, Nicolas *Professor* M.F.A., Syracuse University; drawing, illustration.
- Bevilaqua, William *Professor* M.F.A., University of North Carolina; drawing, visual thinking.
- Callan, Mallory *Assistant Professor* B.F.A., Kansas Art Institute; illustration, drawing, design history.
- Carlyon, Richard *Professor* M.F.A., Richmond Professional Institute; drawing, design, art history.
- Carter, Robert *Assistant Professor* M.F.A., University of Illinois; graphics, computer graphic design, semiology.
- Davis, Meredith *Associate Professor* M.F.A, Cranbrook Academy of Art; graphics, educational design, design methods.
- Meganck, Robert *Associate Professor* M.F.A., Cranbrook Academy of Art; graphic design, typography, illustration.
- Meggs, Philip B. *Associate Professor and Chairman* M.F.A., Virginia Commonwealth University; graphic design and design history.
- Moore, Allen *Assistant Professor* M.A., City University of New York, Hunter; painting.
- Scalin, Charles *Associate Professor* M.F.A., Pratt Institute; illustration, graphic design.

The objective of this program is to develop the philosophy and personal direction of each student while focusing his/her resources for inventive visual communication toward man and the environment.

Students working in the Graduate Center for Visual Communications concentrate on the philosophical, social and aesthetic relationships of visual problem solving, the development of prototypes for socially viable visual communications, and the invention of visual form. Although the program anticipates refinements of students' technical abilities, education in this program does not emphasize technical instruction.

**SPECIFIC ADMISSION REQUIREMENTS**

**Undergraduate Preparation:** The 36 semester credits in studio art must include a minimum of 20 semester credits in visual communications.

**Portfolio:** A minimum of 15 examples of visual communications which demonstrate visual organization, creative problem solving ability, and potential for research and growth.

**TYPICAL PROGRAM PATTERN**

<b>First Semester</b>	<i>Credits</i>
Interdisciplinary Seminar .....	3
Visual Communications Workshop .....	6
Elective: Urban Studies .....	3
	12
 <b>Second Semester</b>	
Visual Communications Workshop .....	6
Design and Visual Communication Education .....	3
Elective: Photography .....	3
	12
 <b>Third Semester</b>	
Visual Communications Workshop .....	6
Visual Communications Seminar .....	3
Elective: Photography .....	3
	12
 <b>Fourth Semester</b>	
Advanced Design Seminar .....	3
Visual Communications Workshop .....	6
Documentation (Thesis) .....	3
	12
<b>TOTAL</b>	<b>48</b>

Possible thesis title: "A Proposed Signage Code for Countries in Transition from a Rural to an Urban Character."

**GRADUATE COURSES IN VISUAL COMMUNICATIONS (CDE)**

**611 Visual Communications Workshop.** Semester course; 6, 12, 18 studio hours. 3, 6, 9 credits. May be repeated. A professionally oriented class. Selected projects will be in areas

concerned with theoretical research of an advanced nature or involvement with institutions offering opportunities for designing on an advanced level.

**621 Visual Communications Seminar.** Semester course; 3 lecture hours. 3 credits. May be repeated. Faculty, students, designers from industry, and authorities from appropriate disciplines will examine aesthetic and social areas of concern to the designer and specific projects developed in the Visual Communications Workshop.

## Department of Music

### FACULTY

- Batty, L. Wayne *Professor* M.M., Chicago Musical College; voice, choral music.
- Bilyeu, Landon *Associate Professor* M.M., University of Tulsa; piano.
- Blank, Allen *Associate Professor* M.A., University of Minnesota; composition, theory.
- Carle, Harold W. *Assistant Professor* M.M., Columbia University; theory.
- Carrier, Loran *Associate Professor* Ph.D., University of Maryland; electronic music, composition.
- Cherry, Milton, *Professor Emeritus* M.M., Chicago Musical College.
- Donnell, Cynthia S. *Assistant Professor* M.M., University of North Carolina, Greensboro; voice, vocal literature.
- Giles, Martha *Assistant Professor* D.M.E., University of Oklahoma; music education.
- Jarrett, Jack *Associate Professor* D.M., Indiana University; conducting.
- Koehler, Richard *Professor and Chairman* Ph.D., University of Oregon; choral conducting.
- Kugler, Roger *Assistant Professor and Assistant Chairman* Ph.D., University of Oregon; music education.
- Lohuis, Ardyth *Associate Professor* D.M.A., College-Conservatory of Music, University of Cincinnati; organ, church music.
- Marrion, Melissa Wuslich *Associate Professor* M.M., College-Conservatory of Music, University of Cincinnati; piano.
- Newlin, Dika *Professor* Ph.D., Columbia University; history, literature.
- Pfeifer, Carl *Professor* M.M., University of Miami; piano.
- Robinson, J. Lawrence *Associate Professor* M.M., University of Michigan; organ, church music.
- Smetana, Frantisek *Professor* Diploma, Ecole Normale de Musique; cello.
- Tennant, Donald *Professor Emeritus* M.M., Chicago Musical College.
- Thomas, Ronald B. *Associate Professor* M.M., Boston University; music education.
- Vlahcevic, Sonia K. *Professor* Ph. D., Catholic University; piano, theory.

The Department of Music views graduate students as sensitive musicians who bring with them a particular educational background and a variety of life experiences. They have defined for themselves their pro-

fessional and artistic goals. The graduate program is a collaborative effort among the students and the faculty to help each student achieve these goals.

The music curriculum allows individual uniqueness and expertise. Its flexibility accommodates the personal aspirations of the student while it emphasizes quality musicianship. At VCU a great deal is expected of graduate level musicians, and the atmosphere in which they work is both provocative and challenging.

All students are encouraged to define their personal objectives within a music-centered life style, to express themselves musically, and to discover their most creative selves. Their resources include the expertise of 27 full- and 43 part-time and adjunct faculty, the environment created by our performing organizations, and the excitement generated by other talented student musicians. Within this community of musicians are three composers in residence, artist-performers of the Richmond Symphony, leading musicians from Washington, D.C., and educators and musicologists who have authored numerous articles and professional publications.

As musicians, all students perform regularly in recitals and concerts. These performances include more than 150 public concerts presented each year as well as studio and departmental recitals. VCU student and faculty composers are frequently featured in works for traditional instrumentation and/or our four synthesizers. Participating in the VCU musical community means involvement in a musically rich environment — studio lessons with artist-teachers, small classes, independent study, and participation and touring with performing organizations and ensembles. Specialized resources include the curriculum lab for music education and well-equipped electronic music studios.

### ADMISSION REQUIREMENTS

In addition to the School of the Arts admission requirements, applicants in music must meet the following requirements:

An audition is required. Appointments for auditions are arranged through the chairman of the Graduate Faculty Committee of the Department of Music. Audition tapes may be sent by out of state applicants. Prepara-

tion in music history and theory is assessed through the submission of a departmentally developed written examination or through the GRE Advanced Music Examination.

### Composition

A portfolio of compositions must be submitted by all applicants to the M.M. program in composition. The portfolio of compositions should contain a minimum of six works, each approximately five minutes in length, which demonstrate proficiency in the following areas:

- 1) large classical form
- 2) non-serial twentieth century techniques
- 3) serial techniques
- 4) electronic studio techniques
- 5) orchestration (minimum of eight instruments).

A high level of craftsmanship must be exhibited in at least three of these areas. A student inexperienced in any of these areas must demonstrate competence in them at the time of his application for candidacy. Tape recordings of electronic compositions should be submitted by applicants in this area.

Note: These requirements are in addition to the audition and musicianship examination.

### Conducting

Applicants for the conducting program will submit the written entrance examination. The audition-interview will cover the following areas:

- 1) proficiency in performance in at least one applied area equivalent to at least the first semester senior level of undergraduate study.
- 2) ability to conduct a work prepared in advance by the auditionee.
- 3) ability to play at sight simple keyboard passages and to harmonize a given melody at the keyboard.
- 4) physical coordination and ability to modify physical gestures quickly and efficiently.
- 5) ability to identify from score wrong notes in passages played at the keyboard by the examiner.
- 6) ability to express one's self verbally with clarity and efficiency.
- 7) knowledge of ranges, performing

characteristics, and idiomatic writing for orchestral instruments and voice.

- 8) knowledge of music literature and styles.
- 9) ability to sight-read complex rhythms and pitch sequences.

The piano proficiency requirement for conducting majors will be met by the keyboard entrance requirements specified above and the score reading course.

## PROGRAM AND DEGREE REQUIREMENTS

### Proficiency Examinations

All newly admitted M.M. students will be given diagnostic examinations in music history, theory, piano, and aural skills (sight singing and melodic and harmonic dictation) in order that they may be effectively advised early in their academic program of areas of strength and weakness.

Proficiency in piano, graded to the pianistic needs of the various fields of concentration, must be demonstrated prior to the granting of the degree. The specific requirements are detailed in the *Handbook for Graduate Studies in Music*.

M.M.E. students will demonstrate proficiency in all the above areas through the competency assessments which are a part of their curriculum.

A reading knowledge of foreign language(s) is required for the following curricula: music history (one language required for admission to candidacy, one additional language for graduation); church music (German required for admission to candidacy). The writer of any thesis or lecture-recital dealing with foreign literature shall demonstrate competence in the appropriate language(s). The student has the option of taking the Foreign Language Test of the Educational Testing Service or an examination administered by the department.

### Applied Music (Master of Music)

The applied music faculty is comprised of artist-teachers who remain active professional performers, including musicians from the Richmond Symphony Orchestra, the National Symphony, the Contemporary Music Forum, Wolf Trap Farm Park, and principal freelance performers in the Metropolitan

D.C. area. Vocal faculty include soloists with major orchestras, operatic and concert singers, coaches, and conductors. Performance opportunities include opera, oratorio, musical theatre, and appearances as soloists with the many regional and university ensembles. The applied synthesizer major will have both solo and ensemble performance opportunities with the New Music Ensemble.

The thesis/recitals which culminate the program will ordinarily include both a full-length solo recital and a lecture-recital.

**Core Program**

	<i>Credits</i>
Music History .....	2
Analysis for Performance and Composition .....	6
Bibliography and Methods of Research .....	2
Conducting, Rehearsing, and Interpreting .....	3
	13
Applied Music .....	6
Approved Electives .....	7
Thesis—Recital .....	6
<b>TOTAL</b>	<b>32</b>

**Church Music (Master of Music)**

Virginia Commonwealth University is the only state-aided institution in Virginia which offers degree programs in church music. Located in a region with more than 240 churches of all denominations, the church music major has exceptional opportunities for observation, field work, and participation in programs of all types. Through refinement of skills in conducting, analysis, and performance, as well as formulation of a philosophical base for program development and implementation, the graduate of this curriculum will be prepared to develop and administer multi-faceted church music programs. Since the graduate curriculum is designed to complement undergraduate majors in this field, students who have not had preparatory course work in hymnology, liturgics, children's choir, or choral repertoire will supplement their curriculum with selected courses from the undergraduate offerings. The thesis/recital requirement may be satisfied by the presentation and direction of a choral concert, or a written paper involving program development or other research. Other thesis alternatives may be

developed with the approval of the Graduate Faculty Committee of the Department of Music.

	<i>Credits</i>
Analysis for Performance and Composition .....	3
Applied Music .....	4
Bibliography and Methods of Research .....	2
Choral Pedagogy .....	3
Church Music Philosophy and Administration .....	6
Conducting, Rehearsing, and Interpreting .....	3
Field Work in Church Music .....	2
Approved Electives .....	6
Thesis—Recital .....	3
	32

**Composition (Master of Music)**

The composition degree program is centered on private study with faculty members who are themselves published composers as well as outstanding performers. Emphasis is placed on the development of traditional compositional skills as well as contemporary techniques. The availability of three separate electronic music studios gives VCU some of the most complete facilities of this type in the country. Student compositions are performed as a regular part of the Chamber Music Ensemble program and may be featured in ensemble concerts. The graduate curriculum may be supplemented with courses in composition for the theatre and modern popular media. In addition to an exit portfolio of a minimum of four works of at least five minutes duration each, the student will submit a thesis composition of at least eight minutes duration accompanied by an expository paper, score and parts, and taped performance.

	<i>Credits</i>
Core Program* .....	13
Analysis (MUC 612) .....	3
Applied Music (composition) .....	6
Approved Electives .....	7
Thesis .....	3
	32

**Conducting (Master of Music)**

VCU offers the diversity of ensemble conducting experiences essential to the development of the graduate conductor. Conducting majors ordinarily elect to specialize in either band, choral, or orchestral conducting. At the discretion of the major teacher, the stu-

\*The specifics of the Core Program are listed under the Master of Music (Applied Music).

dent will also assist in rehearsing and conducting major departmental ensembles. Close involvement with the performance lab program will enable conducting majors to form ensembles from which coaching and conducting experience can be gained, and each student will be expected to demonstrate skill in rehearsing and conducting at least one work in each of the areas outside his specialization. The thesis requirement will be fulfilled by rehearsing and conducting a full concert or its equivalent during the final semester of study and the presentation of a written research document.

	<i>Credits</i>
Applied Music (conducting) . . . . .	6
Score Reading . . . . .	2
Ensemble . . . . .	2
Bibliography and Methods of Research . . . . .	2
Analysis for Performance and Composition . . . . .	3
Music history-literature or composition-theory electives (at least one course in each area) . . . . .	8
Electives . . . . .	3
Thesis . . . . .	6
	32

**Music Education (Master of Music)**

The Department of Music offers both M.M. (Education) and the M.M.E. degrees. The M.M. degree has a traditional structure and provides the student an opportunity to take courses during the fall, spring, and summer sessions as a full-time student. This degree program is intended for students who are able to take a leave of absence from their school positions, those who are not currently teaching, or those who feel that the M.M.E. degree program is not suited to their needs. In addition to electives and required courses, a thesis is presented for this degree. The thesis may be developed on a subject related to some phase of music education or music education history or may take the form of a recital or lecture-recital for students who have a particular interest in performance.

	<i>Credits</i>
Applied Music . . . . .	3
Arranging . . . . .	3
Choral or Instrumental Pedagogy . . . . .	3
Conducting, Rehearsing, and Interpreting . . . . .	3
Music Education Philosophy and Technology . . . . .	6
Approved Electives . . . . .	11
Thesis . . . . .	3
	32

**Master of Music Education**

The M.M.E. program is an alternative to traditional graduate study. Through a unique combination of the academic environment and the professional life of the student, the curriculum deals directly with the professional demands, responsibilities, and potentials of the skilled music educator. The emphasis is on both musical and teaching competence. Teachers entering the program must be experienced and currently employed, since their own classrooms and teaching are involved in their graduate study. The program involves two intensive summers on the VCU campus plus significant supervised research and development work during the school year in the teacher's own professional position.

**Master of Music Education Program Schedule**

**Phase I**

Major Activity . . . Homogeneous group. Acquisition of music education competencies and preparation for individual research  
 Place of Activity . . VCU  
 Credits Earned . . . 10  
 Courses . . . . . MUE 681, 5 credits  
                           MUE 683, 5 credits

**Phase II**

Major Activity . . . Independent study projects in programmatic research and development plus preparation of thesis.  
 Place of Activity . . Teacher's classroom  
 Credits Earned . . . 6-6 research  
 Courses . . . . . MUE 685-686  
                           12 credits

**Phase III**

Major Activity . . . Homogeneous group. Musical and educational exploration and analysis. Elective courses  
 Place of Activity . . VCU  
 Credits Earned . . . 10  
 Courses . . . . . MUE 687 3 credits  
                           Elective courses 7 credits

For additional information regarding the M.M.E. degree program, write to the Department of Music, Virginia Commonwealth University, 1015 Grove Avenue, Richmond, VA 23284.

**Music History (Master of Music)**

Graduate music history study encompasses all aspects and phases of the field: compositional styles, ethnomusicology, bibliography, and general musicology. Virginia Commonwealth University is in a rare position to offer the opportunity of first-hand research in early American music because it is centrally located in an area which contains many pieces of music and musically-related documents which helped to form our musical culture. The close proximity of the Library of Congress and the Smithsonian Institution also provide excellent research opportunities.

	<i>Credits</i>
Core Program .....	13
Seminar in Music History .....	2
Music History .....	8
Approved Electives .....	3
Thesis .....	6
	32

**Piano Pedagogy (Master of Music)**

The curriculum in piano pedagogy has been developed for the professional advancement of the teacher of private and group piano. The four-fold emphasis of the program is designed to enhance one's musicianship and to enable the student to acquire skills and knowledge pertinent to successful piano teaching. Included are further development of the student's performance ability; continued study of musical styles, literature, and analysis; materials and methods for all levels of instruction; and studio and classroom management. VCU is the only state aided institution in Virginia to offer advanced study in piano pedagogy. The expertise of the entire piano faculty is available to the pedagogy student for studio instruction, course work, independent study, advising, and thesis. The four credit thesis recital which culminates the program includes the presentation of a full-length recital and the preparation of an analytical paper centered on the recital literature.

	<i>Credits</i>
Course outline	
Bibliography and Methods of Research .....	2
Music History .....	2
Analysis for Performance and Composition .....	3
Applied Piano .....	6
Advanced Pedagogy .....	3
Group Piano Methods and Management .....	2
Seminar in Piano Technique .....	1

Piano Ensemble .....	1
Electives (music history and literature or psychology recommended) .....	8
Thesis-recital .....	4
	32

**ADDITIONAL INFORMATION**

Students in all fields of graduate music study may, with the approval of their advisor, department chairman, and the director of graduate studies, elect independent study for the fulfillment of course requirements.

All degree seeking students in music should consult the current Handbook for Graduate Studies in Music for specific departmental policies which pertain to their degree programs and the calendar of diagnostic and proficiency examination dates.

**GRADUATE COURSES IN MUSIC**  
**Courses in Applied Music (APM)**

**501-560, 601-660 Private Instruction: Principal and Secondary Performance Mediums.** Semester courses; one half hour or one hour private lesson per week. 1 to 3 credits. Extra fee required. Hour lessons are primarily for music students on major instruments. One hour practice daily for each credit. Non-major must get course assignment from music department office. Private lessons are available in the following areas: voice, piano, organ, harpsichord, carillon, percussion, flute, clarinet, saxophone, oboe, bassoon, trumpet, trombone, baritone horn, French horn, tuba, violin, viola, cello, double bass classical guitar, harp, composition, synthesizer, conducting.

**563-564 Pedagogy.** Continuous course; 2 lecture hours. 2-2 credits. A study of the musical, physiological, and psychological aspects of teaching instruments or voice. Second semester will include practical experience in teaching students under faculty supervision. Sections: (1) piano, (2) voice, (3) organ, (4) percussion, (5) brass, (6) woodwinds, (7) strings, and (8) guitar.

**571 Choral Pedagogy.** Semester course; 3 lecture hours. 3 credits. Teaching competencies relative to the choral training and use of the unchanged, changing, and matured voice will be stressed. Included are consideration of vocal production, pronunciation, aural skills, reading skills, and stylistic interpretation.

**575-576 Score Reading.** Continuous course; 2 laboratory hours. 1-1 credits. Prerequisite: APM 274 or the equivalent. A progressive course in reducing scores at the keyboard, beginning with simple choral scores and progressing to full orchestra and band. No degree credit for graduate composition majors.

**585 Percussion Laboratory/Seminar.** Semester course; 2 laboratory hours. 1 credit. Advanced course in specialized percussion techniques and literature designed for the performer, composer, and educator. Topics may include surveys of literature, notational



problems, mallet making, and instrument maintenance. Topics will vary from semester to semester depending on the needs and interests of the class. May be repeated up to four times for credit.

**663 Advanced Pedagogy.** Semester course; 3 lecture hours. 3 credits. Further study in pedagogical systems and techniques with emphasis on materials for intermediate and advanced level students. Studio observation will be included. Sections: (1) piano, (2) voice, (3) organ, (4) percussion, (5) brass, (6) woodwinds, and (7) strings.

**670 Large Ensembles.** Semester course; 3 or 4.5 laboratory hours. .5 or 1 credit. Sections: (1) orchestra, (2) concert band, (3) symphonic band, (4) chorus, and (5) university-community chorale. (Auditions required for sections 1, 3, and 4.) Each section may be repeated up to six times for credit.

**671 Piano Technique Seminar.** Semester course; 1 lecture hour. 1 credit. Physiology of piano playing. Alternative approaches to building and reconstructing technique.

**673,674 Piano Literature and Performance Practice.** Semester courses; 2 lecture hours. 2, 2 credits. To familiarize the student with a broad repertoire of performing and teaching material. Discussion of approaches to styles and idioms of various periods; solution of technical and musical problems encountered in specific pieces; evaluation of various editions of piano literature.

**679 Conducting, Rehearsing, and Interpreting.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Acquisition of refined conducting competence including effective and efficient rehearsal procedures, recognition and correction of errors, effective communication, appropriate stylistic interpretation, and complex dextrous skills.

**680 Performance Laboratories.** Semester course; 4 laboratory hours. 1 credit. A flexible program designed to involve students in the performance of a wide range of music. Included are chamber music and conducting and reading experience with the conducting band, orchestra, and chorus in which all enrolled students participate. Each section may be repeated up to six times for credit.

**681 Group Piano Methods and Management.** Semester course; 2 lecture hours. 2 credits. Management, methods, and materials for group teaching. Includes beginning students of all ages, intermediate level students, and college keyboard skills classes.

**690 Small Ensemble.** Semester course; 3 laboratory hours. 1 credit. Sections: (1) stage band, (2) madrigalists, (3) collegium musicum, (4) piano ensemble, (5) opera workshop, (6) accompanying, (7) percussion ensemble, (8) trombone ensemble, (9) percussion lab ensemble, (10) clarinet choir, (11) new music ensemble, (12) brass ensemble, and (13) string quartet. (Auditions required for all sections.) Each section may be repeated up to six times for credit.

### Courses in Music History (MHT)

**521-522 Survey of Music History.** Continuous course; 3

lecture hours. 3-3 credits. A study of Western music in an historical context from antiquity to the present. No degree credit granted for music majors.

**541 American Music.** Semester course; 2 lecture hours. 2 credits. The growth and development of music in the United States from 1607. While the chief concentration will be upon art music and church music, folk music, jazz, and the other forms of popular expression will be included.

**542 Twentieth Century Music.** Semester course; 2 lecture hours. 2 credits. Impressionistic, expressionistic, neo-classic, and neo-romantic influences and styles of music. Development of new sound-generating techniques and methods for ordering the new tonal materials.

**551-552 Orchestral Repertoire.** Semester courses; 1 lecture hour (1 credit); 1 lecture and 2 laboratory hours (2 credits). Performance and study of selected major symphonic works from historical, analytical, and stylistic perspectives. Research reports will include comparisons of interpretations. Repertoire will consist of basic audition pieces selected by orchestras. Laboratory sessions will utilize available instrumentation for performance.

**561, 562 Anthropology of World Musics.** Semester courses; 3 lecture hours. 3,3 credits. Offered in alternate years. First semester will involve study of the correlation between the musical styles and the cultures of both Western nations and such non-Western nations as India, Japan, and China. Thought processes; political, social, and historical events; and the artist within society will be considered. Second semester study will emphasize such theoretical aspects as timbre, form, rhythm, meter, pitch, and texture.

**591 Topics in Music.** Semester course; variable credits, 1-3. May be repeated for a maximum of 9 credits. Flexible term courses in selected aspects of music performance, theory, literature, or history. See Schedule of Classes for specific topic to be offered each semester.

**617-618 History of Theory.** Continuous course; 2 lecture hours. 2-2 credits. Reading and discussion of writings of the major theorists of Western music. (Not offered every year.)

**630 History of Church Music.** Semester course; 2 lecture hours. 2 credits. A survey of liturgical music from Biblical times to the present with emphasis on the music of the Jewish, Orthodox, Roman, and Protestant rites. (Not offered every year.)

**642 Introduction to Musicology.** Semester course; 2 lecture hours. 2 credits. Prerequisite: a reading knowledge of at least one modern foreign language. A course to prepare students who wish to pursue further graduate or professional work for the extensive and intensive research methods of historical and ethnomusicology. (Not offered every year.)

**643,644 Notation.** Semester courses; 2 lecture hours. 2, 2 credits. A study of European notational systems no longer in use, ca. 1200-1600 A.D. Transcription into modern notation of each of the various types. (Not offered every year.)

**645 Gregorian Chant.** Semester course; 2 lecture hours.

2 credits. Prerequisite: MHT 690. A study of the history, theory, design, and use of Gregorian Chant from its inception to the present. Discussion will include non-liturgical and supra-liturgical uses in other Western music. (Not offered every year.)

**647,648,649,650 Seminar in Music History.** Semester courses; 2 lecture hours. 2 credits each semester. Prerequisite: MHT 690. An intensive study of a limited phase or segment of music history through examination of relevant materials and extended class discussion.

**666 Music of the Middle Ages.** Semester course; 2 lecture hours. 2 credits. Prerequisite: MHT 690. Principal musical developments from the first through the fifteenth centuries; Gregorian Chant, the rise of secular monophony; the development of polyphony — its forms and styles. (Offered alternate years.)

**667 Music of the Renaissance.** Semester course; 2 lecture hours. 2 credits. Prerequisite: MHT 690. Principal musical development from the late fifteenth through sixteenth centuries; sacred and secular homophonic and polyphonic forms and styles; the development of instrumental idioms and forms; the spread of music into cultured society. (Offered alternate years.)

**668 Music of the Baroque.** Semester course; 2 lecture hours. 2 credits. Prerequisite: MHT 690. Principal developments, ca. 1590-1750; accompanied monody and the beginning of opera; forms and styles of sacred and secular compositions. (Offered alternate years.)

**669 Music of Rococo and Classical Eras.** Semester course; 2 lecture hours. 2 credits. Prerequisite: MHT 690. Major developments in sacred and secular forms and styles, ca. 1730-1828; social and artistic influences on music; dominance of instrumental music; Mozart, Beethoven, and the German Symphony. (Offered alternate years.)

**670 Music of the Romantic Era.** Semester course; 2 lecture hours. 2 credits. Prerequisite: MHT 690. Influence of the Romantic Era on concepts of musical forms and styles; the development of the art song; the growth of opera; the exploitation of instruments and tonality. (Offered alternate years.)

**690 Bibliography and Methods of Research.** Semester course; 2 lecture hours. 2 credits. A course to introduce graduate students to the chief bibliographic materials in music and to help to develop skills of research and writing necessary to produce a thesis or other formal research paper.

### Courses in Music Theory (MHT)

**513 Arranging.** Semester course; 3 lecture hours. 3 credits. Practical, technical, and conceptual considerations of arranging and transcribing for vocal and instrumental groups will be explored. Students will demonstrate competence in these creative areas to the optimum level of school and/or church music organizations.

**613,614,615,616 Seminar in Music Theory.** Semester courses; 2 lecture hours. 2 credits each semester. Topical discussions and relevant research appropriate to the principal eras of music development. (Not offered every year.)

**620 Set Theory.** Semester course; 2 lecture hours. 2 credits. Discussion and analysis of sets as they are used in music, their function, mutation, and application in different historical periods. (Not offered every year.)

### Courses in Music Composition (MUC)

**505 Twentieth Century Techniques.** Semester course; 3 lecture hours. 3 credits. Prerequisite: MHT 222 or permission of instructor. Composition in and analysis of techniques associated with Late Romanticism, Impressionism, Neo-Classicism, Expressionism, Serialism, and current avant-grade music. No degree credit for graduate composition majors.

**506 Advanced Scoring Techniques.** Semester course; 3 lecture hours. 3 credits. Application of idiomatic scoring devices for orchestral instruments and voices in both large and small combinations. No degree credit for graduate composition majors.

**517 Introduction to Electronic Music.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. A study of laboratory techniques and composing for electronic instruments.

**518 Electronic Music Control Systems.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MUC 517. A study and application of analog/digital control techniques used in electronic music composition.

**525-526 Projects in Electronic Music.** Semester courses; 4-12 laboratory hours. 2-6 credits. Prerequisite: permission of instructor. Each course may be repeated for a maximum of 12 credits. Completion of selected projects in electronic module design and/or electronic music composition.

**611-612 Analysis for Performance and Composition.** Continuous course; 3 lecture hours. 3 credits. Analysis of the organization, combination, and manipulation of constructive devices of music from the sixteenth century to the present with demonstration of this knowledge through performance and composition.

**621, 622, 623, 624 Composition Seminar.** Semester course; 2 lecture hours. 2 credits each semester. Discussion, analysis, and criticism of selected compositions pertinent to the improvement of student skills and understanding.

### Courses in Church Music (CHM)

**621 Church Music Philosophy,** semester course; 3 lecture hours. 3 credits. Study of philosophical bases for the use of music in liturgical and non-liturgical worship from the Pre-Christian era to the twentieth century.

**622 Church Music Administration.** Semester course; 3 lecture hours. 3 credits. The administration of complex church music programs with emphasis on budgeting, personnel contracts, scheduling, recruiting, support groups, and touring.

**635 Seminar in Organ Performance Practice.** Semester course; 2 lecture hours. 2 credits. May be repeated up to 3 times for credit. Study of selected organ music from the Renaissance to the twentieth century with emphasis on performance practices, style, and structural analysis.

**640 Field Work in Church Music.** Semester course; 1 credit. May be repeated once for credit. Prerequisites: a position as a choir director or organist-director in a nearby church, and satisfactory completion of graduate piano proficiency requirements.

### Courses in Music Education (MUE)

**575 Aspects of Popular Music.** Semester course; 3 lecture hours. 3 credits. At the completion of the course, the student shall be able to articulate a thoughtful perspective of so-called "Classical Music" and "Pop Music," as well as be able to explicate the intellectual, aesthetic, and cultural aspects of this music. Open to both majors and non-majors; no degree credit for undergraduate music majors.

**576 The Phenomenon of "Rock."** Semester course; 3 lecture hours. 3 credits. After analyzing the formal musical principles and the socio-literary phenomenon of Rock music, as reported in Rock newspapers, books, and articles, and record jackets, etc., the student shall be able to offer cohesive and logical evidence, verbally and through position papers, which will lead to a clearer definition and understanding of this youth movement. He will also be able to cite, with corroborative evidence, an accurate survey of its historical development. No degree credit for music majors.

**583 Special Workshop in Music Education.** Semester course; 15-45 laboratory hours. Variable credits.

**587 Rhythms for Elementary Aged Children.** Semester course; 3 lecture hours. 3 credits. Significant contributions of rhythmic activity to the social, physical, emotional, intellectual, and musical growth of children. Fundamental rhythms, singing songs and games, traditional folk and national dances, creative movement, and the use of practical classroom materials in music education will be presented.

**591-592 Initial Course in Music Therapy.** Continuous course; 2 lecture and 2 laboratory hours. 3-3 credits. Prerequisite: ability to demonstrate basic skills on a musical instrument. An initial course that studies the therapeutic use of music in various educational settings; its historical development and present day application; methods and procedures for implementation in educational/clinical settings with observations and field work; case studies.

**593 Influencing Behavior Through Music.** Semester course; 3 lecture hours. 3 credits. A study of the methodology of behavior modification through music. Students will learn to analyze and make appropriate choices among existing methods of behavioral modification employing music. The student will also develop appropriate observational techniques.

**595 Music and the Exceptional Individual.** Semester course; 3 lecture hours. 3 credits. A comprehensive study of music activities for special populations (e.g. mentally retarded, emotionally disturbed, learning disabled, cerebral palsied, etc.) of all ages. Topics will include identification of populations, programs, facilities, literature, services, and resources.

**597 Human Response to Music.** Semester course; 3 lecture hours. 3 credits. The human response to music in

relation to physiological, cognitive, and affective responses; music ability and preference; acoustics and research methods applied in human responses to music problems will be studied.

**646 Aesthetics.** Semester course; 2 lecture hours. 2 credits. A study of music from the standpoint of design and craftsmanship as it embodies the principles of art defined and reflected in the literary writings of philosophers and composers. Examples of other art forms will be examined when relevant.

**661-662 Music Education Philosophy and Technology.** Continuous course; 3 lecture hours. 3-3 credits. Development of educational competencies which are intrinsic to contemporary educational processes including strategy design, evaluation procedures, curricula structuring, and school administration. Alternatives within these areas of competence will be developed and substantiated through philosophical rationale.

**675 Pedagogy of Music.** Semester course; 2 lecture hours. 2 credits. A class designed to train the prospective teacher how to present the elements and materials of music in a program designed for the general classroom; to include listening, performing, composing, and incorporating music in a meaningful aesthetic experience.

**676 School Music Supervision and Administration.** Semester course; 2 lecture hours. 2 credits. The study of the organization, curriculum, course content, administration, and personnel problems in public school music.

**681 Integrated Musical Behaviors.** Summer course; 10 hours weekly for 8 weeks. 5 credits. As a culmination of course activity, each student will demonstrate operational competencies to the level of the optimum field demands of his teaching specialty in all of the following areas: stylistic interpretation of music, conducting skills, rehearsal operations, repertoire selection, composing, arranging, functional piano performance, sight singing, score reading, and usage of electronic music instruments. In addition, each student will demonstrate performance capabilities on one instrument (or voice) to the level of standard professional repertoire.

**683 Music Education Processes.** Summer course; 10 hours weekly for 8 weeks. 5 credits. Each student will analyze three major educational systems and/or documented field operations and will evaluate operational procedures against stated or implied philosophical positions. To the level of the optimum field demands of his teaching specialty, each student will demonstrate operational competencies in the following areas: assisting students to sing with accuracy and appropriate vocal quality; using a variety of educational strategies; teaching basic techniques on orchestral and band instruments; employing contemporary educational technology; objectively evaluating his own and other's teaching; preparing alternatives in scheduling, purchasing, and other administrative procedures; assisting students to hear accurately; and structuring appropriate curricula which involve students in a wide range of musical behaviors.

**685-686 Music Education Research.** Continuous course;

6-6 credits. Prerequisites: MUE 681 and 683. Each student will design and implement a programmatic research and development project dealing with either instructional processes or curricular structures. The project activity will be conducted in a school classroom and will involve students in both the research and development operations. Two two-day seminars will be held each semester for analysis and evaluation of the project operations. The student will prepare a thorough report of all research and development operations including conclusions and recommendations.

**687 Research Assessment and Music Interaction.** Semester course; 1 or 3 credits. Prerequisite: MUE 685-686. Based on assessments of research and development activities of the entire class, each student will identify and explore styles of musical interaction and teaching with his class and the current MUE 683 class. The one-credit section is designed for students continuing projects beyond the summer term. (Open only to Master of Music Education students.)

## Department of Painting and Printmaking

### FACULTY

- Blyn, Stefany *Instructor* M.F.A., Columbia University; painting.
- Bradford, James A. *Associate Professor* M.F.A., University of Wisconsin; painting.
- Bumgardner, James A. *Professor* B.F.A., Virginia Commonwealth University; painting.
- Campbell, Jewett *Professor* attended New York Art Students' League; painting.
- Donato, Gerald M. *Associate Professor* M.F.A., University of Wisconsin; painting.
- Drought, Michael *Assistant Professor* M.F.A., University of Wisconsin; painting.
- Freed, David C. *Professor* M.F.A., University of Iowa; printmaking.
- Gower, Ann Renee *Instructor* M.F.A., Syracuse University; painting.
- Kevorkian, Richard E. *Professor* M.F.A., California College of Arts and Crafts; painting.
- Kord, Victor *Professor and Chairman* M.F.A., Yale University; painting.
- Martin, Bernard M. *Professor* M.A., Hunter College; painting.
- Miller, James B. *Assistant Professor* M.F.A., University of Arkansas; painting and printmaking.
- Pollak, Theresa *Professor Emerita* attended New York Art Students' League; painting.
- Russell, Milo F. *Professor* M.A., University of Virginia; painting.
- Tisserat, Barbara *Assistant Professor* M.F.A., University of Wisconsin; printmaking.
- Wetton, Philip S. *Associate Professor* Diploma, Coventry College; printmaking.
- Yarowsky, Morris *Professor* M.F.A., California College of Arts and Crafts; painting.

The Department of Painting and Printmaking offers a graduate program of study leading to the M.F.A. degree. Students ad-

mitted to the program are expected to have achieved a high level of competency in either painting or printmaking. The graduate program is designed to encourage the development of professional attitudes and skills, with an emphasis on individual investigation.

### ADMISSION REQUIREMENTS, M.F.A.

In addition to the School of the Arts admission requirements, applicants in the visual arts must have completed a minimum of 36 semester hour credits in art at the undergraduate level.

### DEGREE REQUIREMENTS, M.F.A.

#### Program Pattern

First Semester	<i>Credits</i>
Studio (6 credits of major, 3 credits of minor) . . . .	9
Issues in Contemporary Visual Arts	
or	
Art and Critical Theory	
or	
Graduate Art History . . . . .	3
Graduate Seminar . . . . .	<u>3</u>
	15
Second Semester	
Studio (6 credits of major, 3 credits of minor) . . . .	9
Issues in Contemporary Visual Arts	
or	
Art and Critical Theory	
or	
Graduate Art History . . . . .	3
Graduate Seminar . . . . .	<u>3</u>
	15
Third Semester	
Studio (6 credits of major, 3 credits of minor) . . . .	9
Aesthetics . . . . .	3
Graduate Seminar . . . . .	<u>3</u>
	15
Fourth Semester	
Studio (6 credits of major, 3 credits of minor) . . . .	9
Elective (Graduate Level) . . . . .	3
Graduate Seminar <sup>1</sup> . . . . .	<u>3</u>
	15
TOTAL	60

<sup>1</sup>Enrollment in the Graduate Seminar is mandatory for the duration of the student's study in the graduate program.

**GRADUATE COURSES IN PAINTING AND PRINTMAKING (PAP)**

**525 Issues in Contemporary Visual Arts.** Semester course; 3 lecture hours. 3 credits. May be repeated up to 6 credits. Prerequisite: painting and printmaking majors only. The investigation of content and meaning of major directions in contemporary art as they relate to the studio. Students will relate their own work to major movements in contemporary visual art.

**527,528 Art and Critical Theory.** Semester courses; 3 lecture hours. 3,3 credits. Prerequisite: general art history or equivalent. Reading and interpretation of major critical works on painting and related areas. First semester: modernist critics and later schools: Greenberg, Fried, Judd, Lippard. Second semester: structuralist criticism, analysis of theoretical aspects of conceptual art, recent major critical writing on painting.

**605, 606, 607, 608 Graduate Painting.** Semester courses; 6 or 12 studio hours, 3 or 6 credits. A studio class in which primary emphasis is placed on the creative disciplines of contemporary painting. Special attention is given to the development of personal expression through individual criticism.

**615, 616, 617, 618, 619, 620 Graduate Printmaking.** Semester courses; 6 or 12 studio hours. 3 or 6 credits. Specialization in one printmaking medium with emphasis upon technical research and the aesthetic suitability of design to medium. Individual and group criticism.

**621, 622 Graduate Drawing.** Semester courses; 6 studio hours. 3, 3 credits. A studio class with individual criticism. Special attention is given to contemporary concepts. Permission of instructor required for non-painting and printmaking majors.

**690 Graduate Seminar.** Semester course; 1,3 lecture hours. 1,3 credits. May be repeated. Degree requirement for graduate students in the Department of Painting and Printmaking. Weekly seminar for the purpose of discussion of recent artistic developments in painting and printmaking. Critiques dealing with student work will take place.

**Department of Sculpture**

**FACULTY**

Helfgott, Myron *Professor* M.F.A., Southern Illinois University.

Henry, Charles R. *Associate Professor* M.F.A., Cranbrook Academy.

North, Harold E. *Professor* M.F.A., Virginia Commonwealth University.

Renick, Charles C. *Professor and Chairman* M.F.A., Virginia Commonwealth University.

Seipel, Joseph *Assistant Professor* M.F.A., Maryland Institute, College of Art.

Van Winkle, Lester *Associate Professor* M.A., University of Kentucky.

The Department of Sculpture exists primarily for persons who wish to structure

their ideas by manipulating tangible materials. The goals of the M.F.A. degree program in sculpture are to instill in students a sense of pride based on competence and to help them develop methods of working and attitudes which will sustain them as they grow professionally.

The department has a faculty of six teachers who represent various directions and attitudes related to the making of sculpture. These range from formal ideas involved with solutions in wood, steel, stone and plastic to those utilizing video, music and holography.

Both formal and informal contact with the faculty is designed into the program with mutually beneficial results. Additionally, the graduate student is encouraged to participate in, and contribute to, our undergraduate program.

The graduate student is provided with a generous amount of studio space and is given time, support, and encouragement to pursue his independently determined goals.

**ADMISSION REQUIREMENTS, M.F.A.**

In addition to the School of the Arts admission requirements, applicants in the visual arts must have completed a minimum of 36 semester hour credits in art at the undergraduate level.

**DEGREE REQUIREMENTS, M.F.A.**

**Program Pattern**

<b>First Semester</b>	<i>Credits</i>
Studio (Graduate Sculpture) . . . . .	9
Elective . . . . .	3
Graduate Seminar . . . . .	3
	15

**Second Semester**

Studio (Graduate Sculpture) . . . . .	9
Elective . . . . .	3
Graduate Seminar . . . . .	3
	15

**Third Semester**

Studio (Graduate Sculpture) . . . . .	9
Elective . . . . .	3
Graduate Seminar . . . . .	3
	15

**Fourth Semester**

Studio (Graduate Sculpture) . . . . .	9
Elective . . . . .	3
Graduate Seminar <sup>1</sup> . . . . .	3
	<hr/>
	15
TOTAL	60

**GRADUATE COURSES IN SCULPTURE (SCU)**

**500, 600 Graduate Sculpture.** Semester course; 8-10 studio hours. 4-5 credits. May be repeated. Emphasis on individual creative production with periodic exposure of student's work and ideas to the critical attention of the teaching faculty of the Department of Sculpture and other graduate students.

**517 Seminar in Contemporary Sculpture.** Semester course; 3 lecture hours. 3 credits. A forum for consideration and discussion of recent developments in the field. May be repeated for a maximum of 12 credits.

**690 Graduate Seminar.** Semester course; 1 or 3 lecture hours. 1 or 3 credits. May be repeated. Degree requirement for graduate students in the Department of Sculpture. Weekly seminar for the purpose of exploring recent developments in sculpture and conducting critiques in which students can discuss the ideas and attitudes manifest in their work.

**Department of Theatre  
FACULTY**

Bennett, Beate H. *Assistant Professor* Ph.D., University of South Carolina; comparative literature, dramaturgy.

Campbell, Kenneth *Professor and Chairman* Ph.D., University of Denver; directing.

Conrad, Daniel H. *Assistant Professor* M.F.A., Brigham Young University; dance, stage movement.

Erickson, Maurice Leonard *Assistant Professor* M.F.A., Ohio University; acting.

Goodlin, John C. *Assistant Professor* M.F.A., University of Tennessee; acting, voice for stage.

Hodges, Raymond *Professor Emeritus* M.A., Teachers College, Columbia University.

Holloway, C. Thomas *Professor* M.F.A., Boston University; creative dramatics, directing.

Hopper, Elizabeth *Assistant Professor* M.F.A., University of Wisconsin, Madison; costume design.

Hopper, Gary *Assistant Professor* M.F.A., Boston University; acting.

Janke, Robert H. *Associate Professor* Ph.D., Columbia University; speech, theatre.

Newdick, Richard L. *Associate Professor* M.A., University of North Carolina; directing, dramatic literature.

Parker, James W. *Associate Professor* Ph.D., City University of New York; theory, criticism, dramatic literature, acting.

Pike, Richard T., Jr. *Assistant Professor* M.F.A., Florida State University; stage design.  
Szari, Louis J. *Assistant Professor* M.F.A., University of Texas; technical theatre.

The Department of Theatre offers intensive M.F.A. degree programs in performance, design, dramaturgy, and theatre education. The curriculum provides graduate students with the educational and professional foundations essential to attaining the highest standards in the art of the theatre. Applicants are admitted only upon satisfactory demonstration of ability and genuine interest through audition and interview. The demands of the program are stringent and only those students who are willing to commit themselves to the work in the department, who are capable of observing strict professional discipline, and who are in good health should apply.

The M.F.A. program is based on the philosophy that the nature of theatre requires the creative collaboration of all theatre artists working together as members of a company. All company members share the responsibility of solving problems relating to the planning, preparation, and realization of productions.

The curriculum consists of an intensive program of related practical and theoretical studies. Each semester a specific period of theatrical history — from the Greeks to the Contemporary/Experimental — will be chosen as an area of concentration. All company productions and performance events will reflect the period being studied.

**ADMISSION REQUIREMENTS, M.F.A.**

In addition to the School of the Arts admission requirements, applicants in theatre must have completed a minimum of 30 semester hour credits in theatre at the undergraduate level. Professional experience will also be considered.

An audition or presentation of portfolio is required in addition to a personal interview which the applicant must arrange with the graduate advisor of the Department of Theatre.

**Special Degree Option Requirements:  
Performance (Acting and Directing).** Students must present upon entrance at least six

<sup>1</sup>Enrollment in the Graduate Seminar is mandatory for the duration of the student's study in the graduate program.

hours of undergraduate production or technical theatre course credit or the equivalent in professional experience.

**Production (Costume and Stage Design).** Students must present upon entrance at least six hours of undergraduate performance course credit or the equivalent in professional experience.

**Dramaturgy.** Students must present upon entrance at least three hours of undergraduate acting credit and three hours of undergraduate technical theatre credit or the equivalent in professional experience.

**Theatre Education.** Students must present upon entrance at least three hours of undergraduate acting or directing credit and three hours of undergraduate design or technical theatre credit or the equivalent in professional experience.

Deficiencies in any of these special degree option requirements may be satisfied at Virginia Commonwealth University but no graduate credit will be given for them. These prerequisites must be satisfied before the student may apply for candidacy.

## CANDIDACY

After the completion of 15 and before the completion of 24 semester hours credit, or one full academic year, whichever comes first, the student seeking an advanced degree from the Department of Theatre, Virginia Commonwealth University, must apply for candidacy. Before applying for candidacy, candidates for the M.F.A. in *acting* must have completed two roles, at least one with a faculty director prior to applying for candidacy; in *directing* must have completed one stage management assignment and one directing assignment (which may be an apprenticeship); in *stage design* must have served in a design position of substantial authority for at least one departmental production; in *costume design* must have completed two costume design classes and served in a position of designated authority; in *dramaturgy* must have served as assistant-to-the-director for one production and assistant-to-the-designer for one production, both faculty directed; and in *theatre education* must have completed one stage management assignment and one directing assignment (which may be an apprenticeship).

In addition to the requirements listed above for the various area specialties, the process of evaluation for advancement to candidacy may require the presentation of a portfolio and/or audition; written, oral, and/or practical testing; and other devices deemed by the Department of Theatre to be serviceable measurements to determine the prospective success of the candidate at the advanced level in the program. Each candidate for the Master of Fine Arts in theatre may stand for evaluation for admission to candidacy a second time if the evaluation for candidacy is unsuccessful. If, after the second evaluation, the student is denied candidacy, he is obliged to withdraw from the program. In special circumstances where unusual strength in another area is evidenced and when the student is acceptable to the graduate faculty, he may be invited to transfer into another degree option. The completion of 18 semester hours credit is the latest point at which a student may transfer into another degree option without loss of credits.

Prior to applying for candidacy all students in all degree options in the M.F.A. program in theatre must satisfy the following *non-credit degree requirement*: Theatre History, six semester credits. This undergraduate course must be taken at this university unless exempted by test. If required to enroll in Theatre 307-308: Theatre History, the student will receive no semester credits towards the M.F.A. credit hour requirements. The exemption test must be taken no later than the end of the first semester of matriculation and may be attempted twice.

## DEGREE REQUIREMENTS, M.F.A.

### Core Requirements

Candidates for the M.F.A. in theatre in the areas of acting, directing, costume design, stage design/technical theatre, and dramaturgy must satisfy the following core requirements in addition to the requirements of their special area. Theatre education candidates see below.

- A. Theatre 603-604: Theory and Criticism . . . . . 6 credits
- B. Theatre Literature . . . . . 6 credits

(Both Theatre 603-604 and Theatre Literature may be exempted on the basis of an oral, written, or practical

test administered between the date of admission to the program and the first matriculation period, or on the basis of the undergraduate transcript. If 3 or 6 hours in either or both areas are exempted, the student must select the number of hours exempted in approved electives.)

C. Theatre 609: Seminar in Production Process . . . . .	6 credits
D. Arts 701: Thesis . . . . .	3 credits
<b>TOTAL . . . . .</b>	<b>21 credits</b>

**PROGRAM PATTERNS**

<b>ACTING</b>	<i>Credits</i>
Colloquium and Practical Training . . . . .	12
Production . . . . .	12
Graduate Acting . . . . .	3
Approved Electives . . . . .	12
Core . . . . .	21
	60

<b>DIRECTING</b>	
Directing . . . . .	12
Internships . . . . .	6
Minor emphasis . . . . .	9
Theatre Literature	
Design	
Acting	
Approved Electives . . . . .	12
Core . . . . .	21
	60

<b>STAGE DESIGN/TECHNICAL THEATRE</b>	
Stage Design . . . . .	12
Costume Design . . . . .	6
Scene Painting . . . . .	3
Light Design . . . . .	6
Advanced Theatre Technology . . . . .	3
Approved Electives . . . . .	9
Core . . . . .	21
	60

<b>COSTUME DESIGN</b>	
Costume Design . . . . .	12
Scene Design . . . . .	6
Light Design . . . . .	3
Advanced Theatre Technology . . . . .	3
Approved Electives . . . . .	15
Core . . . . .	21
	60

<b>DRAMATURGY</b>	
Area of Concentration	
Major Emphasis . . . . .	9
American Dramatic Literature	
British Dramatic Literature	
Dramatic Literature in Translation	
Minor Emphasis . . . . .	6
Arts in General	
Art History	
Music History	

Art or Music Criticism	
Aesthetics	
World Literature	
Cultural History or Anthropology	
Philosophy and Religion	
Secondary Area of Concentration . . . . .	12
Directing	
Management	
Administration	
Internship . . . . .	3
Approved Electives . . . . .	9
Core . . . . .	21
	60

**THEATRE EDUCATION**

The Master of Fine Arts in theatre education will take the following sequence of courses; the student will not be required to satisfy the core requirements for degree options in acting, directing, costume or stage design, or dramaturgy.

	<i>Credits</i>
Dramatic Theory and Criticism . . . . .	6
Theatre Literature . . . . .	6
Special Area Requirements:	
Design . . . . .	6
Scene Design	
Costume Design	
Lighting Design	
Sound Design	
Performance . . . . .	6
Acting	
Directing	
Rehearsal and Performance	
Management/Administration . . . . .	3
State Management	
Theatre Administration	
Creative Dramatics . . . . .	6
Speech and Theatre Methods . . . . .	3
Theatre Education Curriculum Evaluation . . . . .	3
Theatre Education Professional Internship . . . . .	12
Approved Electives . . . . .	9
	60

**Phase One** — all course work except Creative Dramatics, Speech and Theatre Methods, Curriculum Evaluation, and Professional Internship.

<b>Phase Two</b>	<i>Credits</i>
Summer One:	
Creative Dramatics . . . . .	3
Speech and Theatre Methods . . . . .	3
Academic Year:	
Professional Internship . . . . .	12
Summer Two:	
Creative Dramatics . . . . .	3
Curriculum Evaluation . . . . .	3

**Research and Documentation, Theatre Education**

A final report for Theatre Education Professional Internship is a degree requirement. Upon completion of the degree requirements four copies of this report will be prepared in



accordance with School of the Arts procedures.

## GRADUATE COURSES IN THEATRE (THE)

**SPE 508 Speech for Teachers.** Semester course; 3 lecture hours. 3 credits. Principles and practice for the prospective or in-service teacher in creative oral expression in the classroom, as well as in interpersonal and public communication. Emphasis on the role of the teacher as listener. Voice and articulation exercises.

**SPE/THE 519 Speech and Theatre Methods.** Semester course; 3 lecture hours. 3 credits. A study of the basic methods used in the teaching of drama and speech in the secondary school.

**SPE 521 Speech for Business and the Professions.** Semester course; 3 credits. Theory and practice in the oral communication process as it relates to business organizations and the professions. Development of expository and persuasive subject matter with presentation in simulated interpersonal and group situations.

**SPE 593, 594 Professional Internship.** Semester courses; 3-9 credits. Prerequisite: permission of department chairman. A practicum in theatre conducted in cooperation with selected professional or semi-professional theatre organizations. Majors only.

**503, 504 History of Dramatic Literature.** Semester courses; 3 lecture hours. 3, 3 credits. Study and analysis of dramatic literature.

**505-506 Advanced Stage Design.** Continuous course; 1 lecture and 4 studio hours. 3-3 credits. Prerequisite: THE 305-306 or permission of instructor. A more advanced study of the techniques, methods, and problems of scene design. participation in departmental productions.

**507 Advanced Scenic Technique.** Semester course; 1 lecture and 4 studio hours. 3 credits. Prerequisite: THE 221 or permission of instructor. An intensive involvement in contemporary theory and practice of scenic techniques. Participation in departmental productions.

**508 Scene Painting.** Semester course; 1 lecture and 4 studio hours. 3 credits. Methods of painting scenery based on traditional and contemporary theories. Participation in departmental productions. This course may be repeated for a maximum of 9 credits.

**513-514 Acting Styles.** Continuous course; 6 studio hours. 3-3 credits. A study of the history and theory of acting styles from the Greeks to the present.

**521, 522 Advanced Costume Design.** Semester courses; 2 lecture and 2 studio hours. 3, 3 credits. Prerequisite: THE 321-322 and permission of instructor. An advanced study of the techniques, methods, and problems of costume design for the student who plans to enter the field professionally.

**523, 524 Modern Drama.** Semester courses; 3 lecture hours. 3, 3 credits. Intensive study of major Continental and American plays.

**525 Theatre Administration.** Semester course; 3 lecture hours. 3 credits. The business aspects of successful theatre operation — college, commercial, community, regional — from basic purchasing methods to publicity and “house” operation for the finished product.

**526, 527 Playwriting.** Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: permission of instructor. A practical introduction to the creation of original play scripts for theatre, television, and motion pictures. Readings and studio performances of works in progress and completed scripts.

**528 Puppetry.** Semester course; 2 lecture and 2 studio hours. 3 credits. A study of puppetry as a serious and dynamic performing art, explored through its historical traditions and practical applications.

**532-533 Living Newspaper.** Continuous course; 2 lecture and 2 studio hours. 3-3 credits. An analysis of the development and methodologies of the living newspaper, a dramatization of contemporary events, in an historical context. Application of techniques to create original living newspaper scripts.

**540, 541 Theatre Projects.** Semester courses; 1 or 2 lecture and 4 or 8 laboratory hours. 3 or 6 credits per semester. Individual or group projects in acting, directing, costume design, stage design, or dramaturgy. Open only to theatre majors.

**561, 562 Advanced Directing.** Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: THE 361-362. Further study in direction techniques, especially the problems of the full-length play.

**591 Special Issues in Theatre.** Semester course; variable credit. 1-3 credits per semester; may be repeated for a maximum of 9 credits. Prerequisite: permission of instructor. An in-depth study of contemporary issues not included in the regular curriculum. See Schedule of Classes for specific offerings each semester.

**593 Professional Internship.** Semester course; 3-9 credits. May be repeated. Prerequisite: permission of department chairman. A practicum in theatre conducted in cooperation with selected professional or semi-professional theatre organizations. Majors only.

**594-595 Practicum in Theatre for Special Populations.** Continuous course; 1 lecture and 4 studio hours. 3-3 credits. Prerequisite: permission of instructor. A study of theatre principles and techniques as they apply to the exceptional and handicapped student. A supervised practicum in the application of theatre curricula design and teaching methodology to the special needs of the institutionalized, incarcerated, and other atypical populations.

**596 Practicum in Creative Dramatics.** Semester courses; 1 lecture and 4 studio hours. 3, 3 credits. May be repeated. A study of the theory of creative dramatics as it applies to elementary and secondary school education. A supervised practicum in the application of theory to classroom methods.

**603-604 Dramatic Criticism and Theory.** Continuous course; 3 lecture hours. 3-3 credits. The major dramatic theories from Aristotle to the twentieth century and

associated movements as they affect the development of Western drama.

**607 Introduction to Graduate Study in Speech and Drama.** Semester course; 3 credits. A study of methods used in graduate research in drama and speech.

**609 Seminar in Production Process.** Semester course; 1 lecture and 4 laboratory hours. 3 credits. May be repeated with a change of topic for a maximum of 9 credits. Students and faculty in design, technical theatre, and performance working together in studio situations to identify and solve problems relating to the planning, preparation, and realization of productions.

**613 Workshop in Acting.** Semester course; 1 credit, 1 lecture and 2 studio hours. May be repeated for a maximum of 3 credits. Focus on acting problems related to the individual actor's needs to develop proficiency in certain areas.

**630 Production.** Semester course; 6 laboratory hours. 3 credits. The design, rehearsal, and performance of dramatic works. May be repeated.

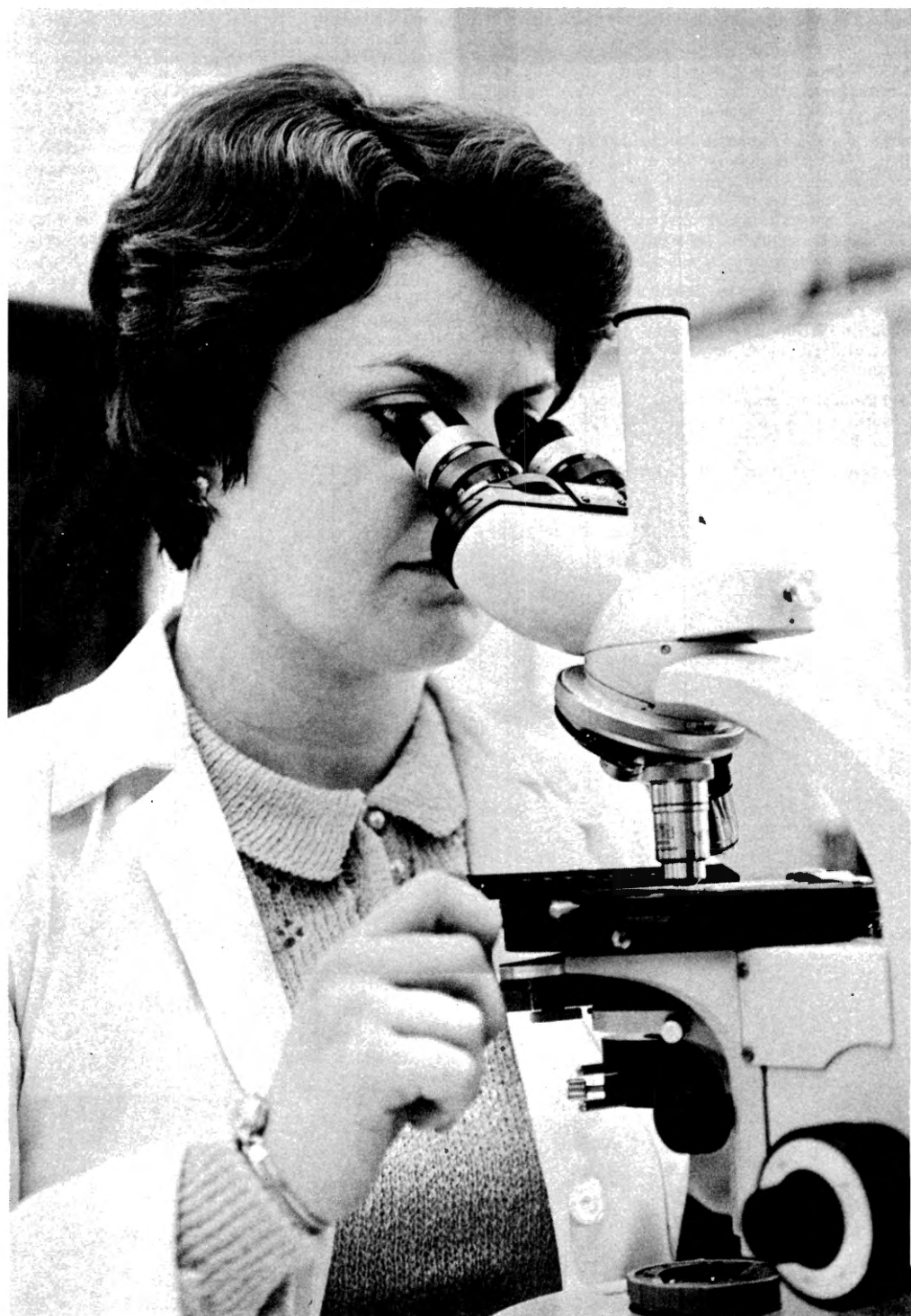
**651 Advanced Design Studio.** Semester course. 1 lecture

and 4 laboratory hours. May be repeated. Intensive individual training in design and presentation processes as they apply to contemporary professional production.

**693 Colloquium and Practical Training.** Semester course; 2 lecture and 2 studio hours. 3 credits. Literary, historical, and theoretical studies together with specialized voice and movement training related to dramatic works in production. May be repeated for a maximum of 12 credits.

**694 Theatre Education Professional Internship.** May be repeated. Prerequisite: THE 596 and 519 and permission of the graduate advisor in theatre. Research, design, and either implementation or thoroughly planned implementation of a curricular research and development project of relevance to a formal speech and/or theatre education program.

**697 Research and Special Problems in Theatre.** Semester course; 1, 3 lecture hours. 1, 3 credits. Individually directed study and research under faculty supervision on approved research problems or projects in theatre. May be repeated with permission of graduate advisor.



## PART V—School of Basic Sciences

### ADMINISTRATIVE OFFICERS

S. GAYLEN BRADLEY, Ph.D.

Dean

WILLIAM L. DEWEY, Ph.D.

Associate Dean

### HISTORY

Basic sciences historically have been an integral part of the curriculum of medicine, dentistry, pharmacy, nursing, and allied health fields. In the earlier years of this university, the basic sciences departments were administered by the School of Medicine with the dean of that school working with a committee of deans to establish policy for the teaching of the basic sciences in the several professional schools. In 1966, by the action of the Board of Visitors, a separate School of Basic Sciences and Graduate Studies was established. In 1974, with the establishment of a university-wide graduate program, it became the School of Basic Sciences. The Ph.D. programs at MCV continue to be administered through the dean of the School of Basic Sciences who serves as chairman of the MCV Graduate Committee.

### PROGRAM

All departments in the School of Basic Sciences provide instruction in their disciplines for students in the other schools on the MCV Campus. By developing large, strong departments with a good balance of

faculty, postdoctoral fellows, and graduate assistants, it is possible to provide quality instruction for all the health profession schools, and to maintain strong research, M.S., and Ph.D. programs, including combined M.S. or Ph.D., M.D. or D.D.S. programs.

### PH.D. AND M.S. PROGRAMS IN THE SCHOOLS OF BASIC SCIENCES, MEDICINE, AND PHARMACY

The graduate programs in the Schools of Basic Sciences, Medicine, and Pharmacy at the Medical College of Virginia are under the supervision of a Graduate Committee which is composed of one faculty member from each department offering graduate degrees. The dean of the School of Basic Sciences serves as chairman of this committee.

The current membership of this committee is: Dr. Juan A. Astruc, anatomy; Dr. Joseph P. Liberti, biochemistry; Dr. Sung Choi, biostatistics; Dr. JoAnn Boughman, genetics; Dr. Philip H. Coleman, microbiology and immunology; Dr. Robert L. Balster, pharmacology; Dr. Steven Price, physiology and biophysics; Dr. George W. Gander, pathology; Dr. Marvin Boots, pharmaceutical chemistry; and Dr. John H. Wood, pharmacy and pharmaceuticals. Committee members are appointed by their respective deans upon the recommendation of the department

chairmen. The committee establishes and maintains admission requirements and rules and procedures for awarding the M.S. and Ph.D. degrees. Courses to be offered for graduate credit in these schools must have the approval of this committee, following the rules and guidelines established by the University Graduate Council.

### REQUIREMENTS FOR ADMISSION

1. The purpose of admission requirements and procedures is to encourage applications from competent students and to insure selection of those whose motivation, ability, education, and character qualify them to successfully pursue graduate study in preparation for a scientific career.
2. The following credentials constitute an application and should be sent to the Dean, School of Basic Sciences, Medical College of Virginia, Virginia Commonwealth University, Box 110, MCV Station, Richmond, VA 23298.
  - a) Application for admission on a form furnished to the applicant on request. A fee of \$10, in the form of a check or money order (payable to VCU), must accompany the application. The fee cannot be returned nor credited toward tuition payment.
  - b) Official transcripts of all undergraduate and graduate work, sent directly from college or university registrars to the Office of the Dean, School of Basic Sciences.
  - c) Letters of recommendation from three present or former teachers, or others believed by the applicant to be qualified to evaluate fitness to engage in graduate study for the degree in the field of choice.
  - d) A personal letter from the applicant summarizing motivation, education, and aims in pursuing graduate study.
  - e) Verbal, quantitative, and analytical portions of the Graduate Record Examination are required. Advanced tests (biology, chemistry, physics, or mathematics) are recommended where appropriate. The Medical College Admission Test or Dental Aptitude Test is acceptable in lieu of the Graduate Record Examination for combined degree programs. Scores are to be sent to the dean. For information on this examination, contact the Office of Enrollment Services, Graduate Admission, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284 or the Office of Student Services, School of Education, Virginia Commonwealth University, Oliver Hall, 2087, Richmond, VA 23284 or Educational Testing Service, Box 955, Princeton, NJ 08540.
  - f) Foreign applicants who do not use English as their natural language must have a TOEFL score greater than 550—See section on international students in Part I of this bulletin.
3. Acceptance of an applicant rests with the dean of the School of Basic Sciences upon recommendation of the major department.

### REGISTRATION

While most students register for the first semester, beginning in August, arrangements may be made to initiate graduate work at other times during the academic year.

### SCHOLARSHIPS, ASSISTANTSHIPS, AND FELLOWSHIPS

Graduate students may apply for a number of state or federal teaching assistantships, scholarships, or fellowships, including the A. D. Williams fellowships (college endowment). These usually pay \$5,040, plus tuition and fees on a calendar year basis.

A brief description of financial aid based on demonstrated need is contained in Part I of this bulletin. Need-based aid programs include National Direct Student Loan, college work-study, and institutional loans.

## THE STUDENT'S ADVISOR AND GRADUATE COMMITTEE

1. Each student shall have an advisor and a graduate committee.
2. Appointment and duties of the advisor.
  - a) An initial advisor will be the director of the graduate program of the student's department, or his designee.
  - b) A permanent advisor shall be appointed by the dean upon recommendation of the chairman of the student's major department. Appointment should be made no later than the third semester after acceptance. A change in advisor may be made by the dean upon recommendation of the chairman of the major department.
  - c) The advisor shall be chairman of the student's graduate committee.
  - d) The advisor shall, with the student's graduate committee, have responsibility for the total guidance of the student, subject to the approval of the chairman of the major department and dean of the School of Basic Sciences.
  - e) The advisor shall work out a plan of study with the student.
  - f) The advisor shall supervise the student's research work and thesis preparation and be one of the examiners of the thesis.
  - g) At the close of each academic year, the advisor shall submit to the Office of the School of Basic Sciences, a statement covering the progress of the student and recommendations as to whether or not his graduate studies shall be continued.
3. Appointment and duties of the student's graduate committee.
  - a) The student's graduate committee shall be appointed by the dean upon recommendation of the student's advisor and after approval by the chairman of the major department. The composition of the graduate committee shall be such that all significant areas of

the student's course work are represented. For the purpose of examinations and thesis evaluation, and because of special knowledge and distinction in the field of the candidate's work, an additional member, who may be from a different institution, may be appointed to the student's graduate committee by the dean. Changes in the membership of the committee are made in the same way.

- (i) The committee for the Ph.D. candidate shall consist of a minimum of five members as follows: the student's advisor; two other members of the graduate faculty of the department in which major work is to be taken; and at least two other representatives of the graduate faculty outside the major department, where feasible, from two different departments.
  - (ii) The committee for the M.S. candidate shall consist of a minimum of three members as follows: the student's advisor; one other member of the graduate faculty of the department in which major work is to be taken; and one representative of the faculty outside the major department.
- b) The student's graduate committee shall work with the student's advisor in guiding the student's graduate program.
  - c) The student's graduate committee shall recommend and approve a degree program (including foreign language if applicable) for the student as soon as practical. The proposed M.S. program should be filed with the dean's office no later than the beginning of the third semester of study; for the Ph.D. degree, no later than the end of the third semester of study. In approving a foreign

language, the student's graduate committee is guided by the importance of the language in the scientific literature of the student's major subject.

- d) The student's graduate committee shall conduct the oral comprehensive and final examinations and act as moderators for the thesis.

### GENERAL REQUIREMENTS FOR GRADUATE DEGREES

1. All full-time graduate students are expected to register for a minimum of 12 semester hour credits per semester and six semester hours during the summer. This requirement includes research. As an example, when students are registered for ten credits in formal courses, they are expected to undertake two or more credits of research under their advisors or other approved faculty member.
2. Students may not take the comprehensive examination for the Ph.D. degree or the final oral examination for the M.S. degree if their overall grade-point average is less than 2.5 or if the grade-point average for courses within the major department is below 3.0. Research credits shall not be counted in computing this average, and shall be graded as P—pass satisfactory; or F—fail. Other grade interpretations are described in Part I of this bulletin.
3. All cases of unsatisfactory student performance, including any grade of D or F, failure to pass written or oral comprehensive examinations, or thesis or final examinations require action of the MCV Graduate Committee to permit students to continue.
4. Proficiency in a foreign language is not a degree requirement. However, in some graduate programs, due to the nature of the discipline, the demonstration of proficiency in a foreign language can be required by the student's advisory committee as stipulated by the department. When a foreign language is required, each foreign language examination shall be

given by an examiner approved by the dean. The dean may elect to accept, as evidence of satisfactory foreign language knowledge, a comparable examination at another graduate school.

5. Five or more copies of the thesis (as required), prepared according to standards approved by the school's graduate committee, shall be sent to the student's graduate committee in final form three weeks or more before the date of graduation. (Graduation dates are in May, August, and December.) These copies are to be submitted in temporary binders. Following acceptance of the thesis and passing of the final examination, it shall be the responsibility of the candidate to present to the dean's office the original plus four copies of the thesis suitable for binding along with a check to cover the cost of handling.
6. The dean will recommend the granting of a degree, only after all requirements have been fulfilled, including payment of all fees to the university, and after submission of the copies of the thesis for binding. Degrees are not granted *in absentia* unless specific written request is made to and permission is granted by the dean.

### MASTER OF SCIENCE

1. Advanced graduate study leading to the Master of Science degree is offered in the Departments of Anatomy, Biochemistry, Biostatistics, Human Genetics, Microbiology and Immunology, Pathology, Pharmacology, Pharmacy and Pharmaceutics, Pharmaceutical Chemistry, and Physiology and Biophysics.
2. A minimum of 24 semester hours is required, exclusive of research credits. In practice, it is found that two years of study usually are necessary to complete the requirements. A time limit of five calendar years, beginning at the time of first registration, is placed on work to be credited toward the Master of Science degree. As many as 12

semester hours credit may be given for work previously completed, upon recommendation of the student's graduate committee with concurrence by the dean.

3. Each department, at its own discretion, may stipulate one foreign language requirement for the master's degree. It is strongly recommended that students satisfy the foreign language requirement as soon as possible after beginning the program. Students must do so at least two months before submission of the thesis.
4. Each student conducts a research study under the guidance of his/her advisor. This study is reported in a thesis, prepared in acceptable form and style. On approval of the thesis by the advisor, the student submits a copy to each member of the graduate committee.
5. The thesis is examined by the student's graduate committee members, acting as moderators, who shall decide upon its acceptability. The moderators may confer with one another before making their decision. Each moderator shall report to the dean through the student's advisor when the thesis is acceptable for defense. The thesis is approved only if the moderators accept it unanimously.
6. On approval of the thesis, the student appears for a final oral examination administered by the student's graduate committee (and any appointed additional moderator). The dean, or an appointee, serves as chairman of the examination committee. Final examination shall be open to the faculty, and its time and place (together with the candidate's name, department, and title of thesis) shall be announced at least seven days in advance.
7. The final examination of an M.S. candidate includes the subject matter of course work as well as the thesis. A favorable vote, with no more than one negative vote, is required for the candidate to pass the examination. Only members of the student's graduate committee and the examiner ap-

pointed by the dean shall vote. The dean, or a faculty representative, will attend all oral examinations and will cast a vote. No examiner may abstain from voting.

8. The candidate, having fulfilled all the requirements for the degree of Master of Science, is recommended by the dean to the president for the degree.

### **DOCTOR OF PHILOSOPHY**

1. Advanced graduate study leading to the Doctor of Philosophy degree is offered in the Departments of Anatomy, Biochemistry, Biostatistics, Human Genetics, Microbiology and Immunology, Pathology, Pharmaceutical Chemistry, Pharmacy and Pharmaceuticals, Pharmacology, and Physiology and Biophysics.
2. At least two years in residence are required for entering students holding the M.S., M.D., or D.D.S. degrees and at least three years for those entering with the baccalaureate degree only. A time limit of seven calendar years, beginning at the time of first registration, is placed on work to be credited towards the Doctor of Philosophy degree.
3. A student becomes an applicant for the doctorate when admitted as such to graduate studies. No assurance as such is given that the student will become a candidate for the Ph.D. degree until the student has given evidence of superior scholarship.

#### **Admission to Candidacy**

Before admission to candidacy for the doctorate, students must have satisfied the (1) language requirements, if applicable, (2) completed required course work, (3) successfully completed the comprehensive examinations, and (4) fulfilled any additional departmental requirements. Students are admitted to candidacy by the dean upon recommendation of their advisors and graduate committees, with the approval of the major department.

#### **Comprehensive Examinations**

1. Upon satisfactory completion of all



required, formal course work and successful passing of foreign language examination(s) (if required), the student takes written and oral comprehensive examinations. The written examination is administered by the student's major department. The student's committee may require a minor field of study, in which case the student will also take a written comprehensive examination given by that department. In the event of failure in the written comprehensive examination in the major or minor department, the student, with the approval of the MCV Graduate Committee, may be permitted to repeat the written examination in the department in which the failure occurred.

2. After successfully passing the written examination(s), the student will take the oral portion within one month. This examination is conducted by the student's graduate committee. A favorable vote of the graduate committee with no more than one negative vote (all members being required to vote) shall be required to pass the oral portion of the comprehensive examination. The dean or a faculty member representing him will chair the oral examination and will cast a vote.
3. If a student passes the written comprehensive examination, but fails the oral part, the student may be re-examined only in the oral part with the approval of the MCV Graduate Committee.
4. The oral comprehensive examination is open to all members of the faculty. Faculty members in attendance may ask questions of the candidate, but their questions shall not be presented until after the graduate committee has completed its questions. Faculty members other than those on the committee shall not vote on the success or failure of the candidate. The time and place of the examinations shall be posted at least seven days in advance.
5. The examination must be successfully completed at least six months before submission of the dissertation.

### **Dissertation Research**

1. The student must conduct a substantial original investigation under the supervision of his/her advisor and prepare a dissertation reporting the results of this research and analyzing its significance in relation to existing scientific knowledge.
2. When the dissertation has been completed, five copies, or more as required, in acceptable form and style are submitted to the members of the graduate committee who act as moderators for the dissertation. These moderators decide upon the acceptability of the candidate's thesis. A favorable unanimous vote is required to approve the dissertation and all examiners are required to vote.
3. If the moderators accept the dissertation for defense, the candidate appears before them for a final oral examination. The dean, or his representative, shall serve as chairman of the committee. This examination is open to all members of the faculty. The final oral examination will be limited to the subject of the candidate's dissertation and related matters. A favorable vote of the candidate's moderators, and no more than one negative vote, shall be required for passing the final oral examination. All moderators including the dean or a representative must vote. There shall be prior announcement of the candidate's name, department, and title of dissertation, together with the day, place, and hour of the final oral examination at least seven days in advance.
4. The candidate, having fulfilled all of the requirements for the degree of Doctor of Philosophy, is recommended by the graduate dean to the president for the degree.

### **SPECIAL STUDENTS**

Upon recommendation of the department, the dean may admit for individual courses students who are not candidates for a degree. Students must obtain permission from the instructor before being allowed to

register. Special students who carry full-time employment will be limited to one course per semester, usually about three or four semester hours credit.

**SUMMER REGISTRATION**

Graduate students are expected to devote ten or more weeks during the summer to fulltime research. Students registered for research credit are billed at the established tuition rate.

**TRAINING AS A TEACHER**

Currently there is increased emphasis on competence as a teacher as well as an investigator for faculty members of colleges, universities, and professional schools. In addition to practical experience, laboratory teaching, and lecturing, students should give consideration to courses offered by the School of Education concerning learning theory, instructional strategy, and educational technology in adult education.

A complete listing of courses available in education are listed in this bulletin.

**COMBINED M.S./PH.D AND M.D. OR D.D.S. DEGREE PROGRAMS**

Many future physicians and dentists, especially those interested in academic and research careers, need to start in-depth training in research while still in school or residency training. This need can be effectively met by completing the requirements for the M.S. or Ph.D. degree concurrently with the study of medicine or dentistry. The MCV/VCU medical and dental curricula, with free time for elective courses and research, provide an excellent opportunity for interested students to enter a combined M.S./Ph.D.-M.D. or D.D.S. program.

Admission of medical and dental students regularly enrolled in these schools to this combined degree program is processed through the office of the dean of the School of Basic Sciences by established procedures. The Medical College Admission Test or Dental Aptitude Test is accepted in lieu of the Graduate Record Examination. Undergraduate transcripts and references are obtained from the professional school. No application fee is required since students are already

regularly enrolled in a school of the university.

The requirements for a combined professional school/graduate school degree in basic sciences are equivalent to those required of students seeking a graduate degree alone and are determined by the individual department. One of the graduate committee members is the student's professional school advisor.

The minimum graduate residence requirement is one year for the M.S. and two years for the Ph.D. degree. Twenty-four weeks of graduate work (two summers) will be considered equivalent to one year of residence. A time limit of five calendar years for the M.S. and seven calendar years for the Ph.D. degree, beginning at the time of first registration in the graduate school, applies to work to be credited toward degrees for students in combined programs.

**DEPARTMENTAL RESEARCH INTERESTS**

The graduate course offerings and the list of graduate faculty for each department offering graduate work under the administration of the dean of the School of Basic Sciences are given in the appropriate school sections of this bulletin. The pages on which these may be found and brief statements of the research interests of the faculties of the departments follow:

**SCHOOL OF BASIC SCIENCES—RESEARCH INTERESTS**

1. Department of Anatomy . . . . . page 121  
 Research Interests: ultrastructural studies of ovary, uterus, and placenta; maternal accommodations to implantation; experimental embryology; teratological aspects of drug metabolism; control of corpus luteal life span; comparative neuroanatomy and CNS connectivity; neuroendocrinology; anatomical substratum of analgesia; structural and functional studies of the cerebral vasculature and CNS trauma; neuroanatomy and neurophysiology of eye movement; eye differentiation; synaptology; maturation in central nervous system; renal transplantation rejection; ontogeny of the immune system; immunohematology; immune dysfunction and malignancy; and carcinogenesis.
2. Department of Biochemistry . . . . . page 121  
 Research Interests: enzyme chemistry; cellular control mechanisms; protein structure and function; macromolecular structure; genetic control of development and differentiation; nuclear proteins; mechanism of hormone action; neurochemistry; intracellular pro-

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tein catabolism; protein and nucleic acid metabolism; steroid and phospholipid function; spectroscopy; X-ray crystallography and other aspects of physical biochemistry.

### 3. Department of Biophysics . . . . . page 129

Research Interests: response surface applications to cancer treatment; correlation analysis and sequential analysis; multivariate analysis; statistical analysis of toxicology studies; multidimensional scaling; linear models; statistical analysis of clinical trials; epidemiological and demographic research; applications of bayesian statistics to the medical sciences; time series analysis and automatic classification of evoked potential elicited from severe head trauma patients.

### 4. Department of Human Genetics . . . . . page 124

Research Interests: human cytogenetics and somatic cell genetics; biochemical and molecular genetics; human population, quantitative and behavior genetics; clinical genetics including studies of counseling, twins, metabolic and neurosensory disorders.

### 5. Department of Microbiology and Immunology . . . . . page 125

Research Interests: microbial biochemistry, ecology, genetics and physiology; molecular biology; biophysical characterization of biological macromolecules; genetic mechanisms and regulation of prokaryotic and eukaryotic cells; membrane transport; cellular differentiation; X-ray crystallography; immunobiology; immunotoxicology; immunopotential; host-parasite interactions; animal virology; mycology; medical bacteriology; cellular oncology; cellular and tumor immunology; cancer chemotherapy; antibiotics and chemotherapy.

### 6. Department of Pharmacology . . . . . page 127

Research Interests: Drug metabolism; pharmacodynamics; psychopharmacology; cardiovascular pharmacology; clinical pharmacology; toxicology; drug evaluation; and biochemical and central nervous system pharmacology.

### 7. Department of Physiology and Biophysics . . page 129

Research Interests: Motor and sensory systems; behavior; endocrine regulation of reproduction and thyroid systems; gastrointestinal secretory systems; oxygen transport and delivery systems; topics in general physiology including mechanisms of solute transport in epithelial and synthetic membrane systems; and excitation-contraction coupling in cardiac, skeletal, and smooth muscle; effects of ionizing and nonionizing radiation on the eye and other organs; photobiology.

## School of Medicine

### Department of Pathology . . . . . page 124

Research Interests: biochemical and clinical applications of enzyme and protein immobilization, clinical enzymology, techniques in clinical chemistry, membranes in the pathogenesis of muscular dystrophy, mechanism of complement activation, oral carcinogenesis, mycoplasma-bacterial interactions, bacterial L-forms, immunohematology, immunotherapy of cancer, cerebral microcirculation, blood substitutes, leukemia, sickle cell disease, trace metal metabolism in tumors, drug distribution, diagnostic immunoassays, inflammation,

fever, neuro-chemistry and ultrastructure of brain, infectious diseases, paleopathology, and diagnostic virology.

## School of Pharmacy

### 1. Department of Pharmaceutical Chemistry . . page 219

Research Interests: synthesis and biological evaluation of new compounds, determination of relationships between chemical structure and biological activity, studies on modes of drug action, theoretical studies on structure-activity relationships of drugs including the use of molecular orbital theory and molecular connectivity, rational design of new drugs, studies on drug metabolism. Drug classes under investigation include antineoplastics, hypocholesteremics, hypoglycemics, hypotensives, neurotransmitters, antagonists, peptide antibiotics, psychotropic agents, urolithiasis inhibitors.

### 2. Department of Pharmacy and Pharmaceutics . . . . . page 220

Research Interests: bioavailability studies, factors governing release of drugs from solid dosage forms, micellar nature of drug solutions, drug-protein binding interactions, effects of saturated and competitive metabolism on pharmacokinetics, clinical pharmacokinetics including computer modeling of pharmacokinetics in man and use of individual pharmacokinetic parameters in optimizing dosage regimens, development of analytical methodology for drugs in biological fluids, isolation of new drugs from natural sources, design and management of pharmacy-related health service systems, drug prescribing and utilization studies.

## INTEGRATED CURRICULUM— SCHOOL OF MEDICINE

All basic sciences departments are involved in teaching the integrated curriculum in the School of Medicine. Lectures, conferences, and laboratories are offered during the M-I year, principally by the Departments of Anatomy, Biochemistry, Biostatistics, Genetics, and Physiology. Microbiology and pharmacology are taught mainly in the M-II year. In addition, the basic sciences departments offer electives which are available to medical students throughout their curricula but primarily in the fourth year.

## INTERDEPARTMENTAL BASIC SCIENCES COURSES

Certain courses are taught by two or more departments.

**BAS 550-551.** Basic Science Core Curriculum for Postgraduate Dental Students. 3 lecture hours. 3-3 credits. I and II. This course is designed to provide the postgraduate dental student with the educational experience in the basic science required for the successful completion of his/her specialty training program. Selected lectures in the basic science areas related to

dentistry are presented and are supplemented by assigned articles.

## Department of Anatomy (ANA)

### FACULTY

- Astruc, Juan A. *Professor* Ph.D., M.D., University of Granada; neuroanatomy.
- Ching, Melvin C. *Associate Professor* Ph.D., University of California-Berkeley; anatomy.
- East, James M. *Assistant Professor* Ph.D., Jefferson Medical College; anatomy.
- Goldberg, Stephen J. *Associate Professor* Ph.D., Clark University; biology.
- Haar, Jack L. *Associate Professor* Ph.D., Ohio State; anatomy.
- Harris, Thomas M. *Professor* Ph.D., University of North Carolina; zoology.
- Jackson, Caroline G. *Assistant Professor* Ph.D., Virginia Commonwealth University; anatomy.
- Johnson, James H. *Associate Professor* Ph.D., University of California-Los Angeles; anatomy.
- Jollie, William P. *Professor and Chairman* Ph.D., Harvard University; general bio-science.
- Jordan, Robert L. *Associate Professor* Ph.D., University of Cincinnati; anatomy.
- Krieg, Richard J., Jr. *Assistant Professor* Ph.D., University of California-Los Angeles; anatomy.
- Leichnetz, George R. *Associate Professor* Ph.D., Ohio State University; anatomy.
- Lieb, Richard J. *Assistant Professor* Ph.D., Medical College of Georgia; anatomy.
- McClung, John R. *Assistant Professor* Ph.D., University of Texas-Medicine; anatomy.
- Owers, Noel O. *Associate Professor* Ph.D., Nagpur University; biology.
- Povlishock, John T. *Associate Professor* Ph.D., St. Louis University; anatomy.
- Quattropiani, Steven L. *Associate Professor* Ph.D., University of Massachusetts-Amherst, zoology.
- Seibel, Hugo R. *Professor* Ph.D., University of Rochester; anatomy.
- Sholley, Milton M. *Associate Professor* Ph.D., Temple University; anatomy.
- Spencer, Robert F. *Assistant Professor* Ph.D., University of Rochester; anatomy.
- Szkal, Andras K. *Associate Professor* Ph.D., University of Tennessee; immunology/anatomy.

A few 400 level courses (ANA 401, 402, 403, 405) have been approved for selected students to apply towards this degree. Permission is required from advisors to register for these undergraduate courses.

**501 Gross Anatomy (Dentistry).** 4.5 lecture and 8 laboratory hours. 8.5 credits. I. A systematic dissection and study of the human body with clinical correlation and emphasis on the head and neck.

**502 Microscopic Anatomy (Dentistry).** 3 lecture and 6 laboratory hours. 6 credits. I. A study of the normal tissues and organs of the human body at the microscop-

ic level, with emphasis on the histological organization and development of the oral cavity.

**503 Neuroanatomy (Dentistry).** 1.5 lecture hours. 1.5 credits. I. This course provides the student with a wide exposure to the field of neuroanatomy. The structure and connections of the brain and spinal cord are stressed so that the student is prepared to deal with physiological, pharmacological, and clinical aspects presented in other courses.

**507 Head and Neck Anatomy (Dental Hygiene).** 3 lecture and 1 laboratory hour. 3.5 credits. I. An overview of head and neck anatomy with emphasis on oral and neck anatomy with emphasis on oral structures. Lectures and laboratory with ANA 501 for one month.

**509 Gross Anatomy.** 3 lecture and 18 laboratory hours. 12 credits. I. A graduate level, in-depth study of human anatomy at the gross level. Though intended primarily for graduate students in anatomy, this course will prove useful for all graduate students desiring a thorough knowledge of human gross anatomy.

**510 Neuroanatomy.** 4 lecture hours. 4 credits. II. An in-depth study of the structure, connections, and function of the central nervous system. ANA 510 and 512 constitute a complete graduate level neuroanatomy course.

**512 Neuroanatomy Laboratory.** 4 laboratory hours. 2 credits. II. Prerequisite: ANA 510 (concurrently or equivalent.) A complement of ANA 510 which trains the student to study the central nervous system through the use of literature and actual gross and histological preparations.

**513 Advanced Studies in Anatomy.** 3 lecture and 6 laboratory hours. 6 credits. An in-depth course in specific areas of anatomy: histology, gross anatomy, and neuroanatomy.

**514 Microscopic Anatomy.** 3 lecture and 6 laboratory hours. 6 credits. II. A graduate level, in-depth study of human anatomy at microscopic and fine structural levels.

**516 Techniques in Electron Microscopy.** 2 lecture and 6 laboratory hours. 5 credits. II. Prerequisite: ANA 501. Students are taught the basic techniques and theories of ultramicrotomy and electron micrography, as well as the use of the electron microscope.

**590 Anatomy Seminar.** 1 lecture hour. 1 credit. I, II. This course is a joint effort by the faculty and graduate students of the Department of Anatomy. Reviews and reports of original research and significant advances in the basic medical sciences are submitted.

**690 Research in Anatomy.** 1—15 credits. I, II, S.

## Department of Biochemistry (BIC)

### FACULTY

- Banks, William L., Jr. *Professor* Ph.D., Rutgers University; cancer, protein and nucleic acid metabolism, protein nutrition.

- Bond, Judith S. *Associate Professor* Ph.D., Rutgers University; intracellular protein degradation.
- Brandt, Richard B. *Associate Professor* Ph.D., New York University; glyoxalase enzyme system in cancer.
- Chlebowski, Jan F. *Assistant Professor* Ph.D., Case Western Reserve University; biosynthesis and regulation of enzyme structure and function.
- Collins, James M. *Professor* Ph.D., University of Tennessee; biochemistry of cell cycle, DNA synthesis.
- DeVries, George H. *Associate Professor* Ph.D., University of Illinois; metabolism and composition of neurons and axons isolated from mammalian CNS.
- Evans, Herbert J. *Assistant Professor* Ph.D., Case Western Reserve University; biochemistry of hemostasis.
- Franson, Richard *Associate Professor* Ph.D., Bowman Gray School of Medicine; biochemistry.
- Grogan, W. McLean *Assistant Professor* Ph.D., Purdue University; lipid metabolism in differentiation and transformation.
- Higgins, Edwin S. *Professor* Ph.D., State University of New York Upstate Medical Center; electron transport and mitochondrial function.
- Kline, Edward S. *Associate Professor* Ph.D., George Washington University; metabolic effect of ethanol, control of protein synthesis.
- Liberti, Joseph P. *Professor* Ph.D., Loyola University; mechanism of hormone action.
- Martinez-Carrion, Marino *Professor and Chairman* Ph.D., University of California, Berkeley; mechanisms of enzyme action, neuroreceptors.
- Peterson, Darrell L. *Assistant Professor* Ph.D., University of Notre Dame; structure of hepatitis B surface antigen proteins.
- Rogers, Kenneth S. *Professor* Ph.D., Purdue University; proteins and enzyme chemistry.
- Schirch, LaVerne G. *Associate Professor* Ph.D., University of Michigan; properties of enzymes involved in one-carbon metabolism.
- Shaw, J. Michael *Assistant Professor* Ph.D., Temple University; distribution and transmembrane movement of phospholipids and/or cholesterol in the lipid bilayers.
- Shelton, Keith R. *Associate Professor* Ph.D., University of Illinois; nuclear acidic proteins, membrane proteins.
- Van Tuyle, Glenn C. *Associate Professor* Ph.D., Thomas Jefferson University; mitochondrial DNA and protein synthesis, DNA packaging.
- Wright, H. Tonie *Assistant Professor* Ph.D., University of California, San Diego; protein and nucleic acid structure by x-ray crystallography.

A few 400 level courses (BIC 402, 404) have been approved for select students to apply towards this degree. Permission is required from advisors to register for these undergraduate courses.

**501 Biochemistry (Dentistry).** 4 lecture and 2 laboratory hours. 5.5 credits. I. Prerequisite: organic chemistry, three credits of physical chemistry, or permission of instructor. A presentation of structural biochemistry, intermediary metabolism, physiological chemistry, and

nutrition as part of the fundamental background of modern dentistry.

**503-504 General Biochemistry.** 3 lecture hours. 3 credits. I and II. Prerequisite: eight credits of organic chemistry. Both semesters are required for the comprehensive introductory course for graduate students. BIC 503 is prerequisite for BIC 504.

**505-506 Experimental Biochemistry.** 4 laboratory hours. 2 credits. I and II. Prerequisite: BIC 503 (or concurrent) or equivalent, quantitative chemistry. Laboratory work, including theory and practice of advanced biochemical research methods.

**510 Current Trends in Biochemistry.** 2 lecture hours. 2 credits. I, II. Prerequisite: BIC 503-504. A study and literature review of common and complex biochemical substances using recent research methodology.

**590 Biochemistry Seminar.** 1 credit. I, II. Reports on recent biochemical literature and research by students and staff.

**601 Lipids.** 3 lecture hours. 3 credits. I. (Alt. yrs. '83-'84.) Prerequisite: BIC 503-504. Chemical basis of lipid structure determination and analysis. Treatment of methods for the analysis of lipid structures, micelles, membranes, and lipoproteins. Selected topics of lipid metabolism.

**602 Physical Properties of Macromolecules.** 3 lecture hours. 3 credits. II. Prerequisite: BIC 503-504 and physical chemistry. Physico-chemical approaches to the determination of the structure and conformation of macromolecules.

**603 Nutritional Biochemistry.** 3 lecture hours. 3 credits. I. (Alt. yrs. '82-'83.) Prerequisite: permission of instructor. Study of chemistry and mechanisms of vitamins and functions of essential elements. Experimental and practical aspects of nutrition.

**604 Enzymology.** 3 lecture hours. 3 credits. Prerequisite: BIC 503-504. Physical and chemical properties and mechanisms of action of enzymes. Treatment of chemical catalysis, enzyme kinetics, and correlation of enzyme structure to mechanisms.

**605 Molecular Biology.** 4 lecture hours. 4 credits. Prerequisite: undergraduate biology and/or chemistry. Chemistry of nucleic acids; protein synthesis; molecular genetics and control; membrane biophysics; molecular basis of disease.

**606 Biochemical Control Processes.** 3 lecture hours. 3 credits. I. (Alt. yrs. '82-'83.) Prerequisite: BIC 503-504 and permission of instructor. An advanced course on aspects of control mechanisms at the molecular level.

**697 Research in Biochemistry.** 1-15 credits. I, II, S. Research leading to the M.S. or Ph.D. degree and elective research projects for students in the professional schools.

## Department of Biostatistics (BIS) FACULTY

Carter, Walter H., Jr. *Professor* Ph.D., Virginia

Polytechnic Institute and State University; response surface applications to cancer treatment.

Chinchilli, Vernon M. *Assistant Professor* Ph.D., University of North Carolina, Chapel Hill; multivariate analysis, clinical trials and biomedical research, analysis of toxicology studies.

Choi, Sung C. *Professor* Ph.D., University of California; correlation analysis and sequential analysis.

Hamer, Robert M. *Assistant Professor (Psychiatry)* Ph.D., University of North Carolina, Chapel Hill; multidimensional scaling, linear models, statistical analysis of clinical trials.

Kilpatrick, S. James, Jr. *Professor and Chairman* Ph.D., The Queen's University of Belfast; statistical, epidemiological and demographic research.

Minton, Paul D. *Professor (Mathematical Sciences; Institute of Statistics, Director)* Ph.D., North Carolina State University; distribution theory and applications in medical research.

Smith, Philip J. *Assistant Professor* Ph.D., State University of New York at Buffalo; biostatistical consulting, applications of practical bayesian statistics to the medical sciences, time series analysis and automatic classification of evoked potentials.

Adjunct: Flora; Peace

**511-512 Methods of Biostatistical Analysis.** 3 lecture hours. 3 credits. (This is a two-semester sequence; however, BIS 511 may be taken without taking BIS 512.) Basic concepts of statistical methods, statistical measures, variation, distributions, tests of significance, simple nonparametric tests, analysis of variance, concepts of experimental design, regression, correlation; analysis and design of factorial experiments, Latin squares, and others; effects of blocking fractional replication, and confounding.

**515 Biostatistical Data Management.** 1 lecture hour. 1 credit. I. Concepts of data management are dealt with. Methods of data collection, editing, and validation are reviewed. Importance of data file arrangement and maintenance is addressed. Research protocols are critically reviewed.

**516 Biostatistical Consulting.** 1 lecture hour. 1 credit. II. The principles dealing with the basic art and concepts of consulting in biostatistics. The non-statistical course discusses role, responsibilities of biostatisticians, relationship between clients and consultants, method of writing reports, etc.

**521 Biostatistical Principles of Health Care Information.** 3 lecture hours. 3 credits. I. (For graduate students in nursing and physical therapy; others with consent.) A basic introduction to the nature, use, and analysis of hospital and health-care statistics. The collection, presentation, tabulation, and interpretation of statistical data. Classification of measurements and observations, properties of rates, ratios, and indices. Some typical statistical distributions. The use of measure of location and dispersion to describe a distribution. 'Normal' variation and outliers. The elementary laws of probability. The concept of a sampling distribution, the

standard error of the mean and confidence limits in large and small samples, and tests of significance.

**524 Biostatistical Computing.** 3 lecture hours. 3 credits. II. Prerequisite: BIS 511, 521, or equivalent. The Statistical Analysis System (SAS) is both a powerful computer language and a large collection of statistical procedures. Students will learn how to create and manage computer data files. Techniques for thorough examination and validation of research data will be presented as the initial step of a complete, computerized analysis. Descriptive statistics will be computed and statistical procedures such as t-tests, contingency tables, correlation, regression, and analysis of variance then applied to the data. Special attention will be paid to the applicability of each procedure. Students will be encouraged to analyze their own or typical data from their discipline.

**530(S) Elements of Biometry.** 4 lecture hours weekly during July and August. 2 credits. (For graduate students in dentistry; others with consent.) Concepts of biostatistics and epidemiology. Summary statistics and tables. Normal distribution and statistical association. Chi-square tests, t-tests, Wilcoxon test, and other tests. Sensitivity, specificity, odds ratios, and related topics. Clinical trials, prospective and retrospective studies, and other miscellaneous topics in biostatistics and epidemiology.

**537 Sampling.** 3 lecture hours. 3 credits. I. (Alt. yrs. '82-'83.) An introduction to the theory and methods of sampling and sample surveys including random, stratified, systematic, and probability sampling, estimation of sample sizes, ratio and regression estimates, and analytical survey.

**538 Epidemiology and Population Research.** 3 lecture hours. 3 credits. I. Sources of vital statistical data—review of the binomial, Poisson, negative binomial distributions as they apply to vital events; summary statistics, rates, ratios, and others; direct and indirect standardization; abridged life tables; principles of epidemiology; interpretation of analytical surveys; problems in the analysis of observational studies in health care and public health; causality; inferences; path analysis; modeling; and crucial observations.

**541-542 Theory of Probability and Biostatistical Inference.** 3 lecture hours. 3 credits. (This is a two-semester sequence. However, BIS 541 may be taken without taking BIS 542.) Discrete and continuous probability distributions, moment generating functions and change of variables; limit theorems and laws of large numbers; Bayesian, maximum likelihood, and estimators; Neyman-Pearson and likelihood ratio criteria for testing simple and composite hypotheses.

**546 Linear Biostatistical Models.** 3 lecture hours. 3 credits. II. Prerequisite: STA 513. Distribution of quadratic forms under normal theory; general linear model of full rank and less than full rank, Gauss-Markov theorem; estimability.

**547 Nonparametric Statistics.** 3 lecture hours. 3 credits. I. (Alt. yrs. '83-'84.) Theory of distribution-free and order statistics with emphasis on estimation and hypothesis testing.

<sup>1</sup>Department in parentheses indicates joint appointment.

**590 Biostatistics Seminar.** 1 lecture hour. 1 credit. I, II. Talks by the students, faculty, and visitors describing recent research or reviewing topics of mutual interest.

**600 Special Topics in Biostatistics.** Lecture and laboratory hours by arrangement. 1-4 credits. I, II. The faculty (including visiting and adjunct professors) from time to time offer courses in newly developing areas of statistics and biometry. For information, contact the department chairman.

**641 Advanced Biostatistical Inference.** 3 lecture hours. 3 credits. I (Alt. yrs. '83-'84). Prerequisite: STA 514. Concepts of classical decision theory, the Bayesian approach to decision theory, the use of prior information in arriving at decision procedures, empirical Bayesian tests of hypotheses, estimation of parameters, and other applications. In the second half of this course, the theories of estimation and hypothesis testing introduced in STA 514 will be extended.

**642 Methods of Multivariate Analysis.** 3 lecture hours. 3 credits. II. (Alt yrs. '83-'84.) Prerequisite: BIS 511, 546. Introduction to the theory and methods of analysis of multivariate data; generalization of standard univariate techniques to the multivariate, unionintersection, and likelihood ratio tests; multiple, partial, and canonical correlation; principle component analysis; discriminant analysis.

**650 Design and Analysis of Response Surface Experiments.** 3 lecture hours. 3 credits. II. (Alt. yrs. '83-'84.) Prerequisite: BIS 511 and 546. Philosophy, terminology, and nomenclature for response surface methodology, analysis in the vicinity of the stationary point, canonical analyses, description of the response surfaces, rotatability, uniform information designs, central composite in design, and modern design criteria.

**690 Research in Biostatistics.** 1-15 credits. I, II, S. For additional related courses, see offerings in mathematical sciences and statistics on the Academic Campus.

## Department of Human Genetics (GEN)

### FACULTY

Boughman, JoAnn A. *Assistant Professor* Ph.D., Indiana University; population genetics.

Brown, Judith A. *Professor (Obstetrics and Gynecology)*<sup>1</sup> Indiana University; somatic cell genetics.

Chinnici, Joseph P. *Associate Professor* Ph.D., University of Virginia; biochemical genetics.

Corey, Linda A. *Assistant Professor* North Carolina State University; biochemical genetics.

Holmes, W. Michael *Assistant Professor (Microbiology and Immunology)*<sup>1</sup> Ph.D., University of Tennessee; molecular genetics, nucleic acid chemistry.

Mamunes, Peter *Professor (Pediatrics)*<sup>1</sup> New Jersey College of Medicine; biochemical genetics.

Merz, Timothy *Professor (Division of Radiobiology, Chairman)*<sup>1</sup> Ph.D., Johns Hopkins University; cytogenetics.

Nance, Walter E. *Professor and Chairman* M.D.,

Ph.D., University of Wisconsin; population genetics.

Redwine, Fay O. *Assistant Professor (Obstetrics and Gynecology)*<sup>1</sup> M.D., Medical College of Virginia of Virginia Commonwealth University; biochemical genetics.

Townsend, J. Ives *Associate Professor* Ph.D., Columbia University; population genetics.

Wolf, Barry *Associate Professor (Pediatrics)*<sup>1</sup> M.D., Ph.D., University of Illinois College of Medicine; biochemical genetics.

**501 Introduction to Human Genetics.** 3 lecture hours. 3 credits. I. An introductory course in the principles of inheritance with particular reference to genetic variation in man.

**502 Advanced Human Genetics.** 2-6 lecture hours. 2-6 credits. I and II. Prerequisite: GEN 501 or equivalent. A comprehensive study of the principles of human genetics, including lectures on cytogenetics, biochemical genetics, population and quantitative genetics. Each unit is well defined and can be taken separately for variable credit.

**504 Biochemical Genetics.** 3 lecture hours. 3 credits. II. Prerequisite: biochemistry. Mechanisms of gene action as illustrated by inherited biochemical defects in man.

**511 Human Cytogenetics.** 3 lecture hours. 3 credits. II. Prerequisite: GEN 501 or equivalent. A comprehensive survey of the fundamentals of human cytogenetics including mitosis, meiosis, chromosome replication, metaphase chromosome structure, numerical and structural chromosome aberrations, human population cytogenetics, genetic constitution of human chromosomes, and chromosome evolution. Student participation will be through classroom discussion, informal topic presentations, and written literature reviews.

**516 Population Genetics.** 3 lecture hours. 3 credits. II. Genetic and ecological factors affecting normal and abnormal variation within and between populations of organisms, especially man.

**518 Methods in Human Population Genetics.** 3 lecture hours. 3 credits. I. Data analysis and discussion of methods including segregation analysis and linkage. Topics covered will include inbreeding, ascertainment, and genetic epidemiology.

**519 Quantitative Genetics.** 3 lecture hours. 3 credits. II. Methods of analysis of quantitative traits in families and populations.

**520 Principles of Human Behavioral Genetics.** 3 lecture hours. 3 credits. I and II. The theory of genetic and non-genetic transmission considered in relation to the design, analysis, and interpretation of studies to identify the principal genetic and environmental causes of behavioral variation. Included will be analysis of intelligence, personality, social attitudes and psychiatric disorders.

**531 Dental Genetics.** 1 lecture hour. 1 credit. I. The basis of inheritance and variation in man, including sim-

<sup>1</sup>Department in parentheses indicates joint appointment.

ple and complex modes of inheritance, the nature of mutations, human chromosomal aberrations, variation in proteins and antigens, genetic aspects of some syndromes, and birth defects.

**590 Genetics Seminar.** 1 lecture hour. 1 credit. I and II. Selected topics in genetics presented by students and staff.

**600 Clinical Genetics.** 1 lecture and 2 laboratory hours. 2 credits. I and II. Prerequisite: GEN 501 or equivalent. Practical experience in the genetic counseling clinic and on ward rounds. Includes collection and analysis of family histories, genetic counseling, and introduction to genetic nosology.

**650 Special Topics in Genetics.** 1-4 credits. I and II. Lectures, tutorial studies, library assignments in selected areas of advanced study, or specialized laboratory procedures, not available in other courses or as part of the research training.

**690 Genetics Research.** 1-15 credits. I, II, S. Research leading to the M.S. or Ph.D. degree; elective research projects for students in the professional schools.

## Department of Microbiology and Immunology (MIC)

### FACULTY

Archer, Gordon L. *Associate Professor* M.D., University of Virginia; infectious diseases, drug resistance.

Adler, Stuart P. *Assistant Professor* M.D., Johns Hopkins University; infectious diseases, molecular virology.

Bick, Peter H. *Assistant Professor* Ph.D., University of Michigan; cellular immunogenetics, immunotoxicology.

Bradley, S. Gaylen *Professor and Chairman* Ph.D., Northwestern University; physiological genetics, molecular pathogenesis.

Cabral, Guy A. *Assistant Professor* Ph.D., University of Connecticut; virology, hepatitis, viral oncology.

Coleman, Philip H. *Professor* D.V.M. University of Georgia; Ph.D., University of Wisconsin; veterinary infections, virology.

Cross, Sue S. *Assistant Professor* Ph.D., George Washington University; tumor viruses, viral immunology.

Dalton, Harry P. *Professor* Ph.D., University of Massachusetts; diagnostic bacteriology, chlamydia, L-forms.

Duma, Richard *Professor* M.D., University of Virginia; Ph.D., Virginia Commonwealth University; infectious diseases, nosocomial infections, free-living amebic infections.

Farnham, Candace J. M. *Assistant Professor* Ph.D., University of Florida; ultrastructure and differentiation of eukaryotic protists.

Fisher, Robert W., Jr. *Associate Professor* Ph.D., Syracuse University; aquatic microbiology, symbiotic nitrogen fixation.

Formica, Joseph V. *Associate Professor* Ph.D., Georgetown University; biosynthesis of antibiotics, chemotherapy.

Gates, James *Associate Professor* Ph.D., University of Missouri; general microbiology, microbial ecology.

Giebel, Peter, E. *Assistant Professor* Ph.D., University of North Carolina; fungal physiology, microbial ecology, medical mycology.

Holmes, Walter M. *Assistant Professor* Ph.D., University of Tennessee; molecular genetics, nucleic acid chemistry.

Hsu, Hsiu-Sheng *Associate Professor* Ph.D., University of Pennsylvania; host resistance, bacterial pathogenesis.

Hylemon, Phillip B. *Associate Professor* Ph.D., Virginia Polytechnic Institute and State University; anaerobe bacteriology, microbial chemistry and metabolism, regulation of cholesterol and bile acid synthesis in primary hepatocyte cultures.

Keefe, William E. *Associate Professor* Ph.D., Virginia Commonwealth University; X-ray crystallography, image-analysis, etiology of renal calculi.

Littman, Bruce E. *Associate Professor* M.D., State University of New York at Buffalo; clinical immunology, complement and serum proteases.

Loria, Roger M. *Associate Professor* Ph.D., Boston University; viral etiology of diabetes and cardiovascular diseases, multifactorial aspects of viral diseases, nutritional hypercholesterolemia and infection.

Macrina, Francis Louis *Associate Professor* Ph.D., Syracuse University; gene manipulation, molecular genetics of microbial pathogenesis.

Madge, Gordon E. *Professor* M.D., University of Maryland; gross pathology, pathology of diabetes.

Marciano-Cabral, Francine *Assistant Professor* Ph.D., University of Connecticut; parasitology, cellular bases of microbial pathogenesis.

Mohanakumar, Thalachallour *Associate Professor* Ph.D., Duke University; transplantation immunology, cellular immunology, human leukemia cell surface antigens.

Morahan Page S. *Professor* Ph.D., Marquette University; host resistance to viral infections, immunotoxicology.

Munson, Albert E. *Associate Professor* Ph.D., Virginia Commonwealth University; immunotoxicology, pharmacology, and toxicology of antitumor drugs.

Murray, Byron K. *Associate Professor* Ph.D., Brigham Young University; molecular virology, viral chemotherapy.

O'Neal, Charles H. *Associate Professor* Ph.D., Emory University; nucleic acids chemistry.

Phibbs, Paul V., Jr. *Associate Professor* Ph.D., University of Georgia; microbial regulation, biology of *Pseudomonas*.

Regeleson, William *Professor* M.D., New York State University Downstate; oncology, tumor chemotherapy.

Ruddy, Shaun *Professor* M.D., Yale University; clinical immunology, complement and serum proteases.

Schenkein, Harvey A. *Assistant Professor* D.D.S. and Ph.D., State University of New York at Buffalo; periodontal immunology, complement activation.

Schook, Lawrence B. *Assistant Professor* Ph.D., Wayne State University; cellular and molecular immunology, tumor immunology.

Shadomy, Helen Jean *Professor* Ph.D., University of



## 126 School of Basic Sciences

- California at Los Angeles; medical mycology, biology of *Cryptococcus*.
- Shadomy, Smith *Professor* Ph.D., University of California at Los Angeles; antimicrobial evaluation, experimental chemotherapy of infectious diseases.
- Shibley, Patricia L *Assistant Professor* Ph.D., University of Michigan; microbial genetics, molecular bases of microbial pathogenesis.
- Tew, John G. *Associate Professor* Ph.D., Brigham Young University; immunology of periodontal disease, regulation of the immune response.
- Tucker, Anne N. *Assistant Professor* Ph.D., University of Kentucky; immunotoxicology and immunopharmacology.
- Welshimer, Herbert J. *Professor* Ph.D., Ohio State University; medical bacteriology, biology of *Listeria*.

A few 400 level courses (MIC 401, MIC 465) have been approved for selected students to apply towards this degree. Permission is required from advisors to register for these undergraduate courses.

- 502 Animal Virology.** 3 lecture and 4 laboratory hours. 5 credits. II. A comprehensive introduction to animal virology emphasizing the molecular aspects of viral replication, the cellular responses following viral infection, and host viral infection.
- 504 Biology of Prokaryotic and Eukaryotic Cells.** 4 lecture hours. 4 credits. I. Prerequisite: BIC 503 (concurrently or equivalent) or permission of instructor. A comprehensive survey of the biology of prokaryotic and eukaryotic cells including studies of cell composition and structure, growth and cell division, metabolism and its control, membrane structure and function, basic genetic concepts and a comparative review of the major groups of microbes including viruses, bacteria, fungi, algae, and protozoa.
- 506 Immunobiology.** 3 lecture and 4 laboratory hours. 5 credits. II. A survey of immunobiology as a total host response to foreign agents, covering the nature of antigens and antibodies, antigen-antibody reactions, immunocompetent cells, allergic reactions, tumor immunology, transplantation immunology, and immunogenetics. The laboratory is designed to provide students with practical experience, using basic immunologic techniques which may be applicable in research projects and diagnostic laboratories.
- 507 Medical Mycology.** 2 lecture and 4 laboratory hours. 4 credits. I. A comprehensive study of fungi pathogenic to man with an emphasis on their properties, pathogenesis, and laboratory diagnosis.
- 508 Introduction to Microbiology Research.** 1 lecture and 2 laboratory hours. 2 credits. I. Introduction to all active research programs in microbiology. Lectures and practical instruction in the proper use of major pieces of equipment. Required for all first year microbiology graduate students.
- 510 Medical Parasitology.** 2 lecture and 4 laboratory hours. 4 credits. II. An introduction to the animal

parasites of man with emphasis on both the biological and the medical aspects of the host-parasite association.

- 512 Laboratory Safety.** 1 lecture hour. 1 credit. I or II. Describes health hazards commonly found in microbiology laboratories and appropriate safety precautions and responses. Includes hazards of working with bacteria, viruses, parasites, fungi, recombinant DNA procedures and regulations, and chemical, electrical, and fire hazards.
- 513 Infections and Immunity (Dentistry).** 1.5 lecture hours. I. 2 lecture and 4 laboratory hours. II. 5.5 credits. A lecture and laboratory study of the disease producing microorganisms of man with special emphasis on the roles of microorganisms in oral diseases and related topics that are of importance in dentistry.
- 515 Pathogenic Bacteriology.** 2 lecture and 4 laboratory hours. 4 credits. I. A survey of the bacteria that cause infections in man with an emphasis on their properties, pathogenesis, and laboratory diagnosis.
- 517 Biology of Cancer.** 3 lecture hours. 3 credits. I. A goal-oriented presentation of neoplasia pertaining to: the cancer cell, tumor host interrelationships, carcinogenesis, immunology of cancer, tumor growth and cell kinetics, common cancer related to age and sex, basic and practical concepts of therapy, and the role of the various medical and paramedical personnel involved in cancer.
- 590 Microbiology Seminar.** 1 lecture hour. 1 credit. I, II. Presentation and discussion of research reports and topics of current interest to the departmental seminar or special group seminar.
- 604 Cell Physiology and Metabolism.** 3 or 5 lecture hours. 3 or 5 credits. II. Prerequisite: MIC 504. An advanced course on the physiology and metabolism of prokaryotic and eukaryotic cells with some emphasis on the regulation of cell functions. Lectures and class discussions will focus on current scientific literature including review articles and original research papers.
- 650 Special Topics in Microbiology.** 1-4 credits. I or II. Lectures, tutorial studies, and/or library assignments in selected areas of advanced study not available in other courses or as part of the research training.
- 653 Molecular Genetics and Gene Expression.** 3 lecture hours. 3 credits. Prerequisite: BIC 502-503 and BIO 310 or equivalent, or permission of instructor. Examination of fundamental and current aspects of gene structure, organization, and expression at the molecular level, and both prokaryotic and eukaryotic systems will be viewed from the perspective of the gene. Topics to be covered will include gene organization and fine structure, and current methods of analysis, molecular control mechanisms, the nature of mutation, microbial systems of genetic exchange, bacterial virus genetics, DNA insertion elements, plasmids and transposons, genetic engineering, control of macromolecular synthesis, recent developments in gene overlap, message splicing, and molecular mechanisms of recombination.
- 685 Advanced Immunobiology.** 1-3 lecture hours. 1-3 credits. I. Lectures, seminars, and conferences on basic and clinical immunobiology. Topics have included

tumor immunology, cell interactions in the immune response, genetics of the immune response, mechanisms of host-defense and membrane receptors in immunology and neoplasia. Open primarily to residents, medical students, and graduate students with immunology background such as MIC 506.

**690 Research in Microbiology.** 1-15 credits. I, II, S. Research leading to the M.S. or Ph.D. degree and elective research projects for other students.

## Department of Pharmacology (PMC)

### FACULTY

Aceto, Mario D. *Associate Professor* Ph.D., University of Connecticut; mechanisms of action of analgesics and psychotherapeutic agents, drug dependence.

Ambrose, Anthony M. *Professor Emeritus*, Ph.D., Fordham University; applied and consulting pharmacology and toxicology.

Balster, Robert L. *Associate Professor* Ph.D., University of Houston; animal models of drug dependence, behavioral pharmacology, behavioral toxicology.

Blanke, Robert V. *Professor (Pathology; Hospital Toxicology Laboratory, Director)* Ph.D., University of Illinois; analytical toxicology, biological monitoring, trace-metal metabolism.

Borzelleca, Joseph F. *Professor* Ph.D., Thomas Jefferson University/Jefferson Medical College; movement of chemicals across membranes (testicular, salivary), toxicology, safety evaluation.

Bradley, S. Gaylen *Professor (Microbiology and Immunology, Chairman)* Ph.D., Northwestern University; host-parasite relations in bacterial and viral diseases.

Carchman, Richard A. *Associate Professor* Ph.D., State University of New York Downstate Medical Center; cyclic nucleotide metabolism in malignant transformation, macrophage function, toxicology.

Chau, Thuy T. *Assistant Professor* Ph.D., University of North Carolina; drugs affecting the central nervous system and their interactions with neurochemical transmitter systems.

Dewey, William L. *Professor and Associate Dean, School of Basic Sciences; Assistant Dean, School of Graduate Studies* Ph.D., University of Connecticut; mechanism of action of the constituents of marijuana, narcotic analgesics and their antagonists, including the role of endogenous substances in these actions.

Diasio, Robert B. *Assistant Professor (Medicine)* M.D., Yale University; biochemical pharmacology of anticancer agents, specifically pyrimidine antimitabolites.

Egle, John L., Jr. *Associate Professor* Ph.D., West Virginia University; cardiovascular and respiratory pharmacology and toxicology.

Ellis, Earl F. *Assistant Professor* Ph.D., Bowman Gray School of Medicine; cardiovascular pharmacology, prostaglandins, microcirculation.

Fallon, Harold J. *Professor (Medicine; Chairman, Department of Internal Medicine)* M.D., Yale

University; liver disease and ethanol effects, lipid metabolism.

Freer, Richard J. *Professor* Ph.D., Columbia University; synthesis and pharmacology of biologically active polypeptides.

Fry, David W. *Assistant Professor (Medicine)* Ph.D., Ohio State University; transport metabolism and mechanism of action of methotrexate in tumor cells.

Gewirtz, David A. *Assistant Professor (Medicine)* Ph.D., Mount Sinai College of Medicine; membrane transport metabolism and secretory functions in rat liver and isolated rat hepatocytes as determinants of antineoplastic drug activity and cytotoxicity.

Giordano, Anthony M., Jr. *Assistant Professor (Otolaryngology)* M.D., Hahnemann Medical College; Ph.D., University of Rochester; inhalation toxicology, tracheobronchial physiology, biochemical and biophysical analyses of tracheobronchial mucous secretions.

Goldman, I. David *Professor (Medicine)* M.D., University of Chicago; membrane transport of antineoplastic agents, the role of drug transport in drug action, biochemical pharmacology of antifolates, cytotoxic nucleosides, and bases.

Guzelian, Philip S. *Associate Professor (Medicine)* M.D., University of Wisconsin; regulation of microsomal hemoproteins and hepatic drug metabolism, control of collagen synthesis in the liver, liver cell culture.

Harris, Louis S. *Harvey Haag Professor and Chairman* Ph. D., Harvard University; relationship between chemical and biochemical factors and pharmacological actions of drugs affecting the central nervous system.

Hayes, Johnnie R. *Assistant Professor* Ph.D., Virginia Polytechnic Institute and State University; chemical carcinogenicity, biochemical mechanisms associated with drug metabolism, mycotoxins.

Kallman, Mary J. *Research Assistant Professor* Ph.D., University of Georgia; behavioral toxicology and behavioral teratology, central nervous system and behavioral pharmacology.

Lamb, Robert G. *Associate Professor (Medicine)* Ph.D., University of North Carolina; hepatic glycerolipid metabolism, effects of ethanol and hepatotoxins on lipid biosynthesis, mechanism of action of hypolipidemic agents.

Larson, Paul S. *Professor Emeritus* Ph.D., University of California; toxicology, biologic effects of tobacco and tobacco alkaloids.

Laychock, Suzanne G. *Assistant Professor* Ph.D., Medical College of Virginia Commonwealth University; endocrine regulation, role of cyclic nucleotides, phospholipases, prostaglandins, and calcium in cell biochemistry and hormone production.

Martin, Billy R. *Assistant Professor* Ph.D., University of North Carolina; central nervous system pharmacology, drugs of abuse, drug metabolism.

May, Everette L. *Professor* Ph.D., University of Virginia; medicinal chemistry, drug abuse.

<sup>1</sup>Department in parentheses indicates joint appointment.

Munson, Albert E. *Associate Professor* Ph.D., Medical College of Virginia of Virginia Commonwealth University; immunotoxicology, chemotherapy.

Narasimhachari, Nedathur *Professor and Director of Psychopharmacology Laboratory (Psychiatry)*<sup>1</sup> Ph.D., Delhi University; biochemical correlates of schizophrenia and depression, neuropsychopharmacology, studies on mode of action of neuroleptics.

Patrick, Graham A. *Assistant Professor* Ph.D., University of North Carolina; central nervous system pharmacology and neurotransmitter systems, drugs of abuse.

Putney, James W., Jr. *Associate Professor* Ph.D., Medical College of Virginia of Virginia Commonwealth University; autonomic receptor mechanisms, stimulus-secretion coupling, phospholipids and ion transport.

Robinson, Susan E. *Assistant Professor* Ph.D., Vanderbilt University; interactions between putative neurotransmitters and central cholinergic neurons, central control of blood pressure.

Rosecrans, John A. *Professor* Ph.D., University of Rhode Island; psychopharmacology, correlations between the behavioral and biochemical effects on CNS-acting drugs, drug dependence.

Rubin, Ronald P. *Professor* Ph.D., Albert Einstein College of Medicine; secretory mechanisms, catecholamine and steroid release from the adrenal gland.

Wasserman, Albert J. *Professor (Medicine)*<sup>1</sup> M.D., Medical College of Virginia; clinical pharmacology, cardiovascular pharmacology.

Watts, Daniel T. *Professor and Dean, School of Basic Sciences, Chairman, MCV Graduate Committee* Ph.D., Duke University; catecholamines and pheochromocytoma, epinephrine and norepinephrine.

Woods, Lauren A. *Professor and Vice President of Health Sciences* Ph.D., Iowa State University; M.D., University of Michigan Medical School; narcotic metabolism and distribution.

Wright, Jackson T., Jr. *Assistant Professor (Medicine)*<sup>1</sup> M.D., Ph.D., University of Pittsburgh; clinical pharmacology, cardiovascular pharmacology, hypertension.

A few 400 level courses (PMC 400, 403, 404, 413, 441, 448, 491, 492) have been approved for select students to apply towards this degree. Permission from your advisors to register for these undergraduate courses is required.

**509 General Pharmacology and Pain Control.** 4 lecture hours. 4 credits. I, II. The basic principles of pharmacology, including mechanisms of absorption, distribution, biotransformation, elimination; dose-response relationships, drug-receptor interactions are presented followed by detailed discussions of the

various classes of drugs, with special consideration given to mechanisms of action and untoward effects of drugs used in dentistry to control pain and related symptoms.

**511 General Pharmacology and Pain Control.** 2 lecture and 1 laboratory hour. 2 credits. I, II. A continuation of PMC 509.

**515 Pharmacology for Nurse Anesthetists.** 3 lecture hours. 3 credits. I. The basic principles of pharmacology including mechanisms of absorption, distribution, biotransformation, elimination, dose-response relationships, drug and receptor interactions are presented followed by a detailed discussion of autonomic, cardiovascular, and renal pharmacology as it relates to nurse anesthesia.

**516 Pharmacology for Nurse Anesthetists.** 3 lecture hours. 3 credits. II. A detailed presentation of the pharmacology of classes of drugs used by nurse anesthetists including agents with primary therapeutic effect on the brain and endocrine glands. General and regional anesthetics will be emphasized.

**517/MIC 517 Biology of Cancer.** 3 lecture hours. 3 credits. I. A presentation of the basic aspects of neoplasia with specific blocks devoted to pathology, biochemistry, carcinogenesis, anticancer drugs, and immunology. This is an interdisciplinary course offered primarily by the Departments of Pharmacology, Microbiology, Biochemistry, and Pathology.

**520 Introduction to Pharmacological Research.** 1-10 credits. I, II. Prerequisite: permission of instructor. Research in pharmacology laboratories for beginning graduate students.

**535 Principles of Toxicology.** 4 lecture hours. 4 credits. I. The basic principles of the various aspects of toxicology are presented. Correlations of functional, morphological, carcinogenic, teratogenic, and mutagenic responses with biochemical and toxicological lesions are attempted. Environmental and industrial toxicology, food and agricultural chemicals, pertinent legislation, and principles of forensic toxicology will also be covered.

**536 General Pharmacology.** 4.5 lecture hours. 4.5 credits. II. Prerequisites: PIO 501 and BIC 503 or permission of instructor. A comprehensive course in pharmacology for graduate students. The mechanisms of action of major classes of pharmacologically active agents and basic principles of pharmacology are discussed. Topics discussed in the first half of the course include drug absorption, distribution, and metabolism; receptor theory; chemotherapy and endocrine pharmacology.

**537 General Pharmacology.** 4.5 lecture hours. 4.5 credits. I. (Continuation of PMC 536). Topics covered in the second semester include: autonomic, cardiovascular, and central nervous system pharmacology.

**542 Forensic Toxicology.** 3 lecture and 2 laboratory hours. 4 credits. II. (Alt. yrs. '83-'84). Lecture and laboratory exercises in which common poisons and groups of poisons are discussed as to detection, diagnosis, and treatment of poisoning. Laboratory work includes basic principles of analytical toxicology.

<sup>1</sup> Department in parentheses indicates joint appointment.

**548 Drug Dependence.** 3 lecture hours. 3 credits. Prerequisite: graduate or post-baccalaureate standing. See PMC 448 for course description. This course may not be taken in lieu of any pharmacology offerings in the professional schools on the MCV Campus.

**590 Pharmacology Seminar.** 1 lecture hour. 1 credit. I, II. Members of the departmental staff, students, and visiting lecturers participate in discussions on topics of current and historical interest.

**625 Biochemical Pharmacology.** 3 lecture hours. 3 credits. I. (Alt. yrs. '82-'83.) Selected topics dealing with drug biodisposition and cellular sites of drug action.

**632 Neurochemical Pharmacology.** 3 lecture hours. 3 credits. II. (Alt. yrs. '82-'83.) The biochemical and theoretical aspects of the effects of drugs on the central nervous system will be discussed.

**633 Behavioral Pharmacology.** 3 lecture hours. 3 credits. I. (Alt. yrs. '83-'84.) This is a survey course covering research on the effects of drugs on behavior. The major emphasis will be on schedule-controlled learned behavior. Additional topics include drug self-administration, drug discrimination, and conditioned drug effects and developmental psychopharmacology. The course focuses primarily on laboratory research in animals although human research will also be covered. The relevance of this research literature to drug treatment of behavioral disorders and substance abuse will be discussed.

**634 Special Topics.** 1-4 credits. I, II. Prerequisite: permission of instructor. Special topics in pharmacology or toxicology covered in less detail in other courses will be studied in depth in this course.

**637 Cardiovascular-Autonomic Pharmacology.** 3 lecture hours. 3 credits. II. (Alt. yrs. '83-'84.) Specialized advanced course in the pharmacology of drugs which affect these systems.

**638 Advanced Toxicology.** 3 lecture hours. 3 credits. II. (Alt yrs. '82-'83.) A holistic approach will be taken to describe and analyze toxicological information. Animal, organ, cellular, and biochemical responses to toxic agents are presented. Immunologic, genetic, endocrine, and central nervous system paradigms and their relationship to the mechanism of action of these agents as well as the predictive value of tests of these systems will also be covered. Pharmacokinetics and metabolism of toxic agents as well as statistical and analytical procedures will be integrated into these discussions.

**639 Drug Development.** 1 lecture and 4 laboratory hours. 3 credits. I. (Alt. yrs. '82-'83.) Prerequisite: PMC 536 and 537 or their equivalents. The principles of drug screening, advanced testing, and procedures necessary prior to the clinical evaluation of new products are described. An emphasis is placed on physiological type procedures used in pharmacology. Conducted in cooperation with scientists from A. H. Robins.

**641 Pharmacology Review (Dentistry).** 1 lecture hour. 1 credit. I. A review course in pharmacology for senior dental students.

**642 Patient, Drugs, Diseases, and Dentists.** 1 lecture hour. 1 credit. II. Discussion of patients, their diseases, drugs used to treat these diseases, and how they relate to the practice of dentistry.

**690 Research in Pharmacology.** 1-15 credits. I, II, S. Research in pharmacology laboratories for advanced graduate students.

## Department of Physiology and Biophysics (PIO)

### FACULTY

Barnes, Robert W. *Professor* M.D., University of Illinois; cardiovascular biophysics.

Baumgarten, Clive Marc *Assistant Professor* Ph.D., Northwestern University; cardiac electrophysiology.

Biber, Thomas U. L. *Professor* M.D., University of Berne; epithelial transport.

Boadle-Biber, Margaret C. *Associate Professor* D.Phil., University of Oxford; neurotransmitters.

Briggs, F. Norman *Professor and Chairman* Ph.D., University of California at Berkeley; cardiac physiology.

Clamann, H. Peter *Associate Professor* Ph.D., Johns Hopkins University; motor physiology.

Clarke, Alexander M. *Associate Professor* Ph.D., University of Virginia; radiation biophysics.

Cleary, Stephen F. *Professor* Ph.D., New York University; radiation biophysics.

Corley, Karl C. *Associate Professor* Ph.D., University of Rochester; autonomic physiology.

Costanzo, Linda S. *Adjunct Assistant Professor* Ph.D., State University of New York Upstate Medical Center; renal physiology.

Costanzo, Richard M. *Assistant Professor* Ph.D., State University of New York Upstate Medical Center; sensory physiology-chemical senses.

DeSimone, John A. *Associate Professor* Ph.D., Harvard University; sensory physiology-chemical senses.

Driska, Steven P. *Assistant Professor* Ph.D., Carnegie Mellon University; vascular smooth muscle physiology.

Eckberg, Dwain L. *Professor* M.D., Northwestern University; cardiovascular physiology.

Fabiato, Alexandre *Professor* M.D., Ph.D., University of Paris; cardiac physiology.

Feher, Joseph J. *Assistant Professor* Ph.D., Cornell University; muscle physiology.

Ford, George D. *Associate Professor* Ph.D., West Virginia University; vascular muscle physiology.

Ham, William T. *Professor Emeritus* Ph.D., University of Virginia; radiation biophysics.

Kalimi, Mohammed Y. *Assistant Professor* Ph.D., Bombay University; endocrinology.

Mayer, David J. *Professor* Ph.D., University of California-Los Angeles; sensory physiology-pain.

Merz, Timothy *Professor* Ph.D., Johns Hopkins University; radiation biophysics.

Mikulecky, Donald C. *Professor* Ph.D., University of Chicago; theoretical biology.

Pang, David C. *Research Assistant Professor* Ph.D., McGill University; cardiac physiology.

## 130 School of Basic Sciences

Pittman, Roland N. *Associate Professor* Ph.D., State University of New York at Stony Brook; circulatory physiology.

Poland, James L. *Associate Professor* Ph.D., West Virginia University; exercise physiology.

Price, Steven *Professor* Ph.D., Princeton University; sensory physiology-chemical senses.

Rao, Gopal U. V. *Professor* D.Sc., Johns Hopkins University; radiation biophysics.

Ridgway, Ellis B. *Associate Professor* Ph.D., University of Oregon; muscle physiology.

Stein, Barry E. *Associate Professor* Ph.D., City University of New York, Queens College; sensory physiology-vision.

Szumski, Alfred J. *Associate Professor* Ph.D., Medical College of Virginia of Virginia Commonwealth University; motor physiology.

Watorsch, Raphael J. *Associate Professor* Ph.D., Yale University; endocrinology.

Wist, Abund O. *Research Assistant Professor* Ph.D., University of Vienna; computer science.

A few 400 level courses (PIO 413, 461, 482) have been approved for select students to apply towards this degree. Permission from your advisors to register for these undergraduate courses is required.

**501 Mammalian Physiology.** 5 lecture hours. 5 credits. I. Prerequisite: biology, chemistry, and physics. A comprehensive study of the function of mammalian organ system, designed primarily for graduate students.

**502 Mammalian Physiology.** 5 lecture and 3 laboratory hours. 6.5 credits. II. Prerequisite: same as for PIO 501. A comprehensive study of the function of mammalian organ systems, designed primarily for dental and pharmacy students.

**503 Radioisotopes.** 3 lecture and 2 laboratory hours. 4 credits. I. Elements of nuclear physics, statistics of counting, radiation dosimetry, health physics, radiation protection, tracer, radiographic techniques, and liquid scintillation and gamma counting techniques.

**504 Cell Physiology.** 4 lecture hours. 4 credits. II. A description of the functional properties of cells in terms of physics and chemistry. Topics discussed include cell structure and cytochemistry, bioenergetics, secretion, and transport of material across membranes, excitation, and contractility.

**505 Mathematical Physiology.** 3 lecture hours. 3 credits. I. The application of set theory to physiological problems. Physiological functions and mappings. Linear transformations. The use of complex numbers. Limits, derivatives, and integrals and their use in physiology. Rate processes. Physiological function and its dependence on many variables. Probabilistic ideas in physiology.

**506 Physical Principles in Physiology.** 4 lecture hours. 4 credits. II. Prerequisite: PIO 505 or permission of Instructor. A survey of those principles of physics and physical chemistry underlying physiological processes. Topics include energetics of equilibrium and none-

quilibrium systems, electrode processes, reaction-diffusion systems, kinetics, photochemistry, physical techniques in physiological research.

**507 Applied Electronics in Biology and Medicine.** 2 lecture and 2 laboratory hours. 3 credits. II. (Alt. Yrs. '83-'84) fundamental principles and applications of electronics as related to biological sciences.

**508 Computer Technology in the Biomedical Sciences.** 2 lecture and 2 laboratory hours. I. Research and clinical applications of automatic and semi-automatic data acquisition. Describes the functions and operations of microcomputers in detail. Development and assembly of microcomputer systems for biomedical application using an educational kit. Students can assemble their own microcomputer driven systems in the laboratory.

**522 Circuit Design and Analysis.** 3 lecture hours. 3 credits. II. (Alt. yrs. '83-'84.) Prerequisite: college physics, calculus. Emphasis is placed on the understanding in depth of the analysis and design of electronic circuits. Designed to meet the needs of quantitatively oriented students.

**523 Introductory Radiation Biophysics.** 5 lecture hours and 10 laboratory hours. 4 credits. S. This introductory course exposes the student to the basic physics behind the entire spectrum of radiation producing and radiation measuring equipment used in clinical medicine. Equipments discussed includes X-ray tubes, image intensifiers, intensifying screens, X-ray films, radionuclide imaging devices, linear accelerators, radionuclide teletherapy units, computerized emission and transmission scanners, etc. Radiation safety features involved in their design and use are also considered. Each session consists of a brief introductory lecture followed by an extensive laboratory. Each topic involves a 1-hour lecture and 2-hour laboratory, 5 days a week for 6 weeks during the summer semester.

**524 Physics of Diagnostic Radiology.** 3 lecture and 2 laboratory hours. 4 credits. I and II. Covers in depth the physical principles behind the use of radiation for medical diagnostic and therapeutic purposes. Topics covered include image forming devices, analysis and optimization of image quality, linear accelerators, betatrons, and sealed sources of ionizing radiation. Radiation dose measurement and treatment planning techniques are also considered. Each topic is developed with lecture and laboratory components in each semester.

**525 Irradiated Biological Systems.** 3 lecture hours. 3 credits. II. An advanced level course designed to provide information about the structure, properties, and biological activity of a class of agents that are mutagenic, carcinogenic, and lethal. These include ionizing and nonionizing radiation, chemical mutagens, and clastogens (chromosome breaking). The significant physics and significant chemistry will be examined. The biological responses will be considered in detail. Biological damage, repair of damage, and the expression of unrepaired and misrepaired damage will be presented in systems spanning isolated biological material, cell organelles, prokaryotes, and in vivo human responses. Consideration will also be given to cell survival, in critical target, repair processes,

chromosomal and other genetic events, physiological phenomena, development effects, immune system alterations, carcinogenesis, medical uses and ecology.

**530 Special Topics in Physiology.** 1-4 credits. I, II. Prerequisite: a 500-level physiology course or equivalent; permission of instructor. This course is designed to provide study of specific topics in physiology. The topics offered include cell physiology, neurophysiology, cardiopulmonary physiology, renalgastrointestinal physiology, and endocrinology.

**590 Physiology Seminar.** 2 lecture hours. 2 credits. I, II. Reports on current physiological research and problems presented by graduate students, staff, and visiting lecturers.

**602 Cardiovascular Physiology.** 3 lecture hours. 3 credits. II. Prerequisite: permission of instructor. An in-depth study of the original literature in selected areas of cardiovascular physiology.

**604 Membrane Transport.** 2 lecture hours. 2 credits. I. Advanced description of membrane transport processes.

**605 Neurophysiology.** 3 lecture hours. 3 credits. I. Prerequisite: permission of instructor. An in-depth study of the original literature in selected areas of neurophysiology.

**607 Endocrine Physiology.** 3 lecture hours. 3 credits. I. Prerequisites: courses in mammalian physiology and biochemistry, or permission of instructor. An in-depth study of the original literature in selected areas of endocrine physiology.

**608 Gastrointestinal and Renal Physiology.** 3 lecture hours. 3 credits. II. Prerequisite: permission of instructor. An in-depth study of the original literature in selected areas of gastrointestinal and renal physiology.

**690 Research in Physiology.** 1-15 credits. I, II, S. Research in physiology.

## Department of Pathology (PAT)

### FACULTY

Allison, Marvin J. *Professor* Ph.D., University of Pennsylvania; experimental pathology of infectious diseases, paleopathology.

Blanke, Robert V. *Professor* Ph.D., University of Illinois at Chicago Circle; characterization and measurement of toxic substances and their metabolites.

Cross, Sue S. *Assistant Professor (Microbiology and Immunology)* Ph.D., George Washington University; polytropic C-type, mouse thymic and lactic dehydrogenase viruses, host-versus-graft disease.

Dalton, Harry P. *Professor (Microbiology and Immunology)* Ph.D., University of Massachusetts; mycoplasma, L-forms and chlamydia, antibiotic action.

Elzay, Richard P. *Professor* Ph.D., D.D.S., Indiana University; oral pathology.

Escobar, Mario R. *Professor* Ph.D., Indiana University; mechanisms of viral immunopathology, viral carcinogenesis, hepatitis.

Fisher, Lyman M. *Professor* Ph.D., M.D., University of Saskatchewan, Canada; platelet function, atherosclerosis, thrombosis.

Gander, George W. *Professor (Biochemistry)*<sup>1</sup> Cornell University; inflammation and phagocytosis, pathogenesis of fever, leukocyte function, biochemistry of disease.

Gerszten, Enrique *Professor* M.D., University of Buenos Aires, Argentina; paleopathology, medical education.

Gruemer, Hans-Dieter *Professor* M.D., University of Frankfurt; membranes in the pathogenesis of Duchenne muscular dystrophy, biochemistry of disease.

Hadfield, M. Gary *Professor* M.D., University of Utah; neurotransmitter responses to aggressive behavior, stress, and psychoactive drugs, electron microscopy.

Hard, Richard *Associate Professor* M.D., St. Louis University; immunopathology.

Hossaini, Ali A. *Professor (Blood Bank, Director)*<sup>1</sup> Ph.D., Ohio State University; biological function of lectins in cancer and hematologic disorders, epidemiology of hepatitis.

Johnston, Charles L., Jr. *Professor* M.D., University of Pennsylvania; hematology, cell marker and cytochemistry.

King, Mary E. *Assistant Professor* Ph.D., University of Iowa; interaction of the cytoskeleton system with the plasma membrane.

Lim, Franklin *Associate Professor* Ph.D., Purdue University; microencapsulation of biological materials, analytical biochemistry and instrumentation.

Madge, Gordon E. *Professor (Microbiology and Immunology, Ophthalmology)*<sup>1</sup> M.D., University of Maryland; experimental diabetes mellitus, Reye's syndrome, pathophysiology of transplantation.

Miller, W. Gregory, Jr. *Assistant Professor* Ph.D., University of Arizona; mechanism of complement activation.

Moncure, Charles E. *Associate Professor* M.D., Medical College of Virginia of Virginia Commonwealth University; tumor markers, immunochemistry, autoimmunity.

Nakoneczna, Irene *Associate Professor* M.D., Albert-Ludwigs University, Germany; anatomic pathology.

Qureshi, Ghulam D. *Associate Professor (Medicine)*<sup>1</sup> M.D., King Edward Medical College of Pakistan; synthesis of clotting factors by the liver.

Rosenblum, William I. *Professor and Vice-Chairman* M.D., New York University; cerebral microcirculation, blood substitutes, platelet aggregation.

dos Santos, Jose *Professor* M.D., University of Bahai, Brazil; parasitology.

Schatzki, Peter F. *Professor* M.D., Tufts University; Ph.D., University of Texas; ultrastructural changes in the liver, electron microscopy.

Scott, Robert B. *Professor* M.D., Medical College of Virginia; leukemia and cell differentiation.

Sharp, David E. *Assistant Professor* M.D., Ph.D., University of North Carolina; platelet and blood cell survival, plasmapheresis in drug therapy.

<sup>1</sup>Department in parentheses indicates joint appointment.

Shiel, Fergus O'M. *Professor M.D.*, National University of Ireland; M.R.C. Path., London; cardiovascular pathology, stress-induced cardiomyopathy.

Vennart, George P. *Professor and Chairman M.D.*, University of Rochester; liver diseases, lipid chemistry.

The Department of Pathology of the School of Medicine offers the Master of Science and Doctor of Philosophy degrees. Requirements for admission and academic performance are the same as for the School of Basic Sciences.

**501 General Pathology (Dentistry).** 3 lecture and 6 laboratory hours. 6 credits. Instruction in the basic principles regarding alternation of structure and function in disease and in the pathogenesis and effect of disease in the various organ systems.

**509 Basic Immunohematology.** 3 lecture hours. 3 credits. II. A study of the blood groups in man, their mode of inheritance, and clinical significance. Pertinent laboratory exercises will be carried out in the blood bank.

**510 Basic Clinical Immunohematology.** 4 lecture hours. 4 credits. I. Prerequisite: PAT 509 or permission of instructor. Indications for the transfusion of blood, blood components, and derivatives. Laboratory experience related to the collection and storage of blood, blood components, and blood derivatives.

**513 Blood Banking Laboratory.** 8 laboratory hours. 4 credits. I, II. Prerequisite: PAT 509. The laboratory is devoted to exercises in blood grouping, typing, genotyping, antibody screening, antibody identification, detection of Australia antigen (HB<sub>s</sub>Ag), and the collection of blood from normal donors.

**515 Problems in Neuroscience.** 3 lecture hours. 3 credits. I. This multidisciplinary pathology/neuroscience course is designed to provide graduate students, residents, and fourth year medical students with a broad, updated, and integrated overview of neuropathology and the other neurosciences. Basic molecular and cellular principles of neurobiology are brought to life by selected clinical correlations and applications. The lectures introduce major CNS pathways and systems in conjunction with basic and advanced neuropathological principles. The disease topics are cohesively taught from several points of view by specialized faculty drawn from many departments, clinical and basic.

**521 Clinical Chemistry.** 3 lecture hours. 3 credits. I. Prerequisite: permission of instructor. Principles and applications of automation and instrumentation to the analysis of biological fluids in health and disease. May be repeated for up to 12 credits.

**522 Clinical Chemistry** 3 lecture hours. 3 credits. II. Prerequisite: permission of instructor. The metabolic basis of disease and the interpretation of laboratory data for diagnosis and patient management. May be repeated up to 12 credits.

**530 Clinical Immunopathology.** 2 lecture and 6 laboratory hours. I. Prerequisite: MIC 506 or equivalent. Application of immunologic methods to disease diagnosis and management with emphasis on immunopathogenetic mechanisms of organ systems: endocrine, lympho-reticuloendothelial, renal, gastrointestinal, cardio-pulmonary, skin, neurologic, etc. Technical aspects of testing, test interpretation, and clinical case presentations will be intermingled to provide a comprehensive understanding of clinical immunopathology and its role in patient care.

**560 Advanced Oral Pathology.** 2 lecture hours. 2 credits. I. Prerequisite: PAT 501. A didactic course on the etiology, clinical histopathologic characteristics, prognosis, and treatment of oral and paraoral lesions.

**561 Oral Pathology Seminar.** 1 lecture hour. 1 credit. II. A thorough review of assigned topic from the current literature is required. Students then report on the clinical, histological, and biological characteristics of the assigned entity.

**580 Experimental Pathology Seminar.** 1 lecture hour. 1 credit. I, II.

**590 Clinical Chemistry Seminar.** 1 lecture hour. 1 credit. I, II. Graduate students, residents, and staff present topics of current interest in clinical chemistry.

**602 Experimental Pathology of Infectious Diseases.** 2 lecture and 6 laboratory hours. 5 credits. II. Autopsies and histopathology are studied to acquaint the graduate student with infectious disease pathology. Various animal and other models are used to demonstrate pathogenesis of some infections and other inflammatory mechanisms.

**606 Biochemistry of Disease.** 2 lecture hours. 2 credits. I. Prerequisite: BIC 503. A detailed study of the biochemical mechanisms involved in the pathogenesis of certain diseases.

**610 Physiology of Blood Coagulation.** 1 lecture and 4 laboratory hours. 3 credits. II. Prerequisite: BIC 503 and PIO 502. The historical development of bleeding and clotting disorders with current diagnostic methodology and treatment.

**612 Pathogenesis of Infectious Disease (Viral Agents).** 2 lecture and 6 laboratory hours. 5 credits. II. Prerequisite: MIC 502 or equivalent. Discussion of the pathogenesis and epidemiology of viral and rickettsial diseases emphasizing interrelationships of host, parasite, and environment. Students learn to evaluate virological procedures as well as the interpretation of laboratory results and their application to diagnostic problems in clinical areas.

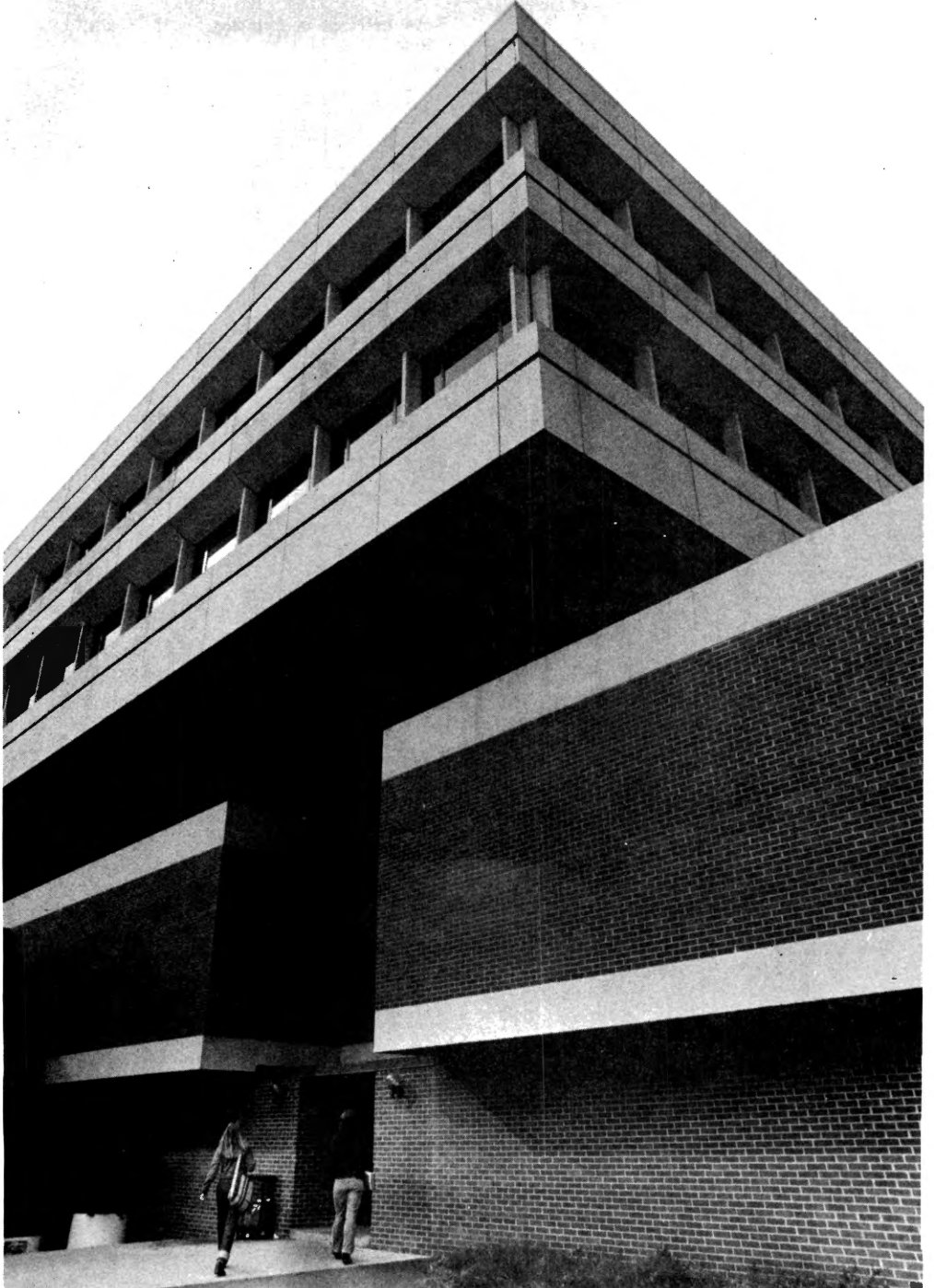
**614 Pathogenesis of Infectious Disease (Bacterial Agents).** 2 lecture and 4 laboratory hours. 4 credits. II. Prerequisite: MIC 515 or equivalent. Emphasis is on the pathogenesis and epidemiology of infectious disease. The dynamic interaction among the host, microorganism, and environment are documented using data obtained from MCV Hospitals. Students have the opportunity to apply laboratory data and techniques to present microbiological problems in clinical areas.

**620 Special Topics in Modern Instrumental Methods.** 1 lecture and 2 laboratory hours. 2 credits. I, II. A study of some of the modern research methods of molecular biology. The student gains experience with the technique concomitant with discussions with faculty. The

student writes a comprehensive review of the technique studied.

**690 Research in Pathology.** 1-15 credits. I, II, S. Research leading to M.S. or Ph. D. degree.





## Part VI—School of Business

### ADMINISTRATIVE OFFICERS

- J. CURTIS HALL, A.B., M.S., Ed.D.  
Dean
- JOHN D. LAMBERT, B.S., M.S., Ph.D.  
Associate Dean for Administration
- MOUSTAFA H. ABDELSAMAD, B.Com., M.B.A.,  
D.B.A.  
Associate Dean for Graduate Studies
- GLENN H. GILBREATH, B.S., M.S., Ph.D.  
Associate Dean for Undergraduate Studies
- DENNIS O'TOOLE, B.A., M.S., Ph.D.  
Associate Dean for External Affairs
- JOHN B. SPERRY, B.S., M.B.A., Ph.D., C.P.A.  
Chairman, Department of Accounting
- WALTER S. GRIGGS, JR., M.H., J.D., Ed. D.  
Chairman, Department of Business Administration  
and Management
- J. HOWARD JACKSON, B.S., M.S., Ph.D., C.P.S.  
Chairman, Department of Business Education and  
Office Administration
- WILLIAM F. HELLMUTH, B.A., Ph.D.  
Chairman, Department of Economics
- A. JAMES WYNNE, B.S., M.S., Ph.D.  
Chairman, Department of Information Systems
- KURT E. OLMOSK, B.S., Ph. D.  
Acting Director, The Management Center
- CLIFFORD J. ELLIOTT, B.S., M.Econ., Ph.D.  
Chairman, Department of Marketing

### HISTORY

Virginia Commonwealth University's School of Business and its graduate program can be traced back to 1917 when a board of private citizens organized the Richmond School of Social Economy for Social Workers and Public Health Nurses. The school was first headed by Dr. Henry H. Hibbs and

held its first classes in a converted residence at 112 Capital Street in Richmond, Virginia. For the next 20 years, the school underwent changes in name, physical plant, affiliation, and curriculum. By 1937 the school was called the Richmond Professional Institute, was affiliated with the College of William and Mary, and had added business courses to the curriculum.

The first business courses were designed primarily to aid students in obtaining employment in retail establishments and in becoming professional secretaries. It was soon apparent, however, that these business courses were successful and were able to meet a community need. Accordingly, by 1940 the Department of Economics and Business was established, and in 1943 the first Bachelor of Science in business degree was awarded.

The G.I. bill, which emerged from World War II, enabled many former servicemen to return to school, and many of these veterans studied business. Throughout the 1940's and 1950's, the business program expanded and grew as it continued to meet the needs of an urban community. During its development, the School of Business offered a one-year certificate in secretarial work, a two-year certificate in business administration, a three-year certificate in accounting, and a four-year degree. The success of the undergraduate program led to the develop-

ment of graduate curricula. In 1962 the Master of Science in business degree was awarded. Other degrees have been added to meet the needs of an urban constituency.

The graduate program in business at Virginia Commonwealth University is a successor to a long tradition of meeting the needs of an urban community and an urban student body. From the halting starts of the past, the program has continued to develop and mature to meet the needs of the future.

**DEGREE PROGRAMS**

The School of Business offers degree programs leading to the Master of Accountancy, Master of Arts in economics, Master of Business Administration, Master of Science in business, Master of Taxation, and the Ph.D. in business<sup>1</sup>.

**CERTIFICATE PROGRAMS**

The School of Business offers the post-baccalaureate certificate in accounting and the post-baccalaureate certificate in information systems.

**ADMISSION TO MASTER'S DEGREE PROGRAMS**

Students who have earned a bachelor's degree or its equivalent may be admitted to the graduate programs. Selection is made on the basis of undergraduate performance, Graduate Management Admission Test (GMAT), or Graduate Record Examination (GRE) depending upon the graduate program desired, intellectual capacity, character, experience, and other indicators of the ability to pursue graduate study profitably. To be accepted in the graduate program, in addition to other requirements, applicants must be in good standing at the college or university they previously attended.

Satisfactory subject-matter scores on the College Level Examination Program (CLEP) may, on a limited basis and at the discretion of the director of graduate studies in business, be substituted for some foundation courses. The CLEP Bulletin of Information and a registration form may be obtained from the College-Level Examination

Program, Box 1824, Princeton, NJ 08540, or from the Office of Graduate Studies in Business.

Foreign students should see the section on international students in Part I of this bulletin.

Applicants to the Master of Accountancy, Master of Business Administration, Master of Science, and Master of Taxation programs must submit scores on the Graduate Management Admission Test (GMAT). The School of Business at VCU is a testing center for this examination which will be given on October 23, 1982; January 29, 1983; March 19, 1983; and June 18, 1983. This test should be taken as far as possible in advance of the time of desired entry. The GMAT Bulletin of Information and a registration form may be obtained from the School of Graduate Studies, the Office of Enrollment Services, the Office of Graduate Studies in Business, or the Graduate Management Admissions Test, Educational Testing Service, Box 966-R, Princeton, NJ 08541.

Applicants to the Master of Arts degree program in economics must submit scores on the Graduate Record Examination (GRE), including the advanced test in economics. The School of Education at VCU is a testing center for this examination which is given in October, December, January, February, April, and June. This test should be taken as far as possible in advance of the time of desired entry. The GRE Bulletin of Information and a registration form may be obtained from the School of Graduate Studies, the Office of Enrollment Services, or the Office of Student Services, School of Education, 2087 Oliver Hall, 257-1296 on the Academic Campus, or Educational Testing Service, Princeton, NJ 08540, U.S.A.

**MASTER'S APPLICATION DEADLINE**

Applications should be completed at least eight weeks prior to the beginning of the semester or summer session desired. However, applications received after the deadline are evaluated as soon as possible.

**COURSES TAKEN PRIOR TO ACCEPTANCE**

No credit will be given for graduate classes

<sup>1</sup>To begin fall 1982 subject to final approval of the State Council of Higher Education for Virginia.

taken prior to acceptance into a graduate degree program in business or economics.

### **ENROLLMENT IN GRADUATE COURSES**

Students may not enroll in any graduate business or economics courses (except BUS 600) for credit without first being formally admitted to the graduate programs. Exceptions to this policy are made only with written permission of the director of graduate studies in business.

### **TRANSFER CREDIT TO MASTER'S DEGREE PROGRAMS**

A maximum of six semester hours of acceptable graduate credit earned in a degree program at an accredited institution may be transferred and applied toward the graduate degree. Such credits will be evaluated for acceptance purposes at the completion of nine semester hours of work at this institution.

Acceptance of transfer credit is made at the discretion of the director of graduate studies in business.

All transfer work must be at the "A" or "B" grade level. Students must be in good standing both at Virginia Commonwealth University and at the institution from which the credits were earned. Additionally, students must have had full admission during the time these credits were earned at that college or university. Transfer credit shall not be older than seven years at the time the master's degree is awarded.

Credit to be earned at other institutions after acceptance in the graduate program must be approved in advance, and approval is granted at the discretion of the director of graduate studies in business. Such work is approved only under unusual circumstances such as job transfers or other extenuating circumstances.

A "graduate transient" classification may be granted to a student in good standing in any recognized graduate school who desires to enroll in the School of Business for any one semester or summer session. Students will be required to present certificates of graduate standing but will not have to submit the data normally required for an admission decision. A special form is available to facilitate enrollment.

### **ADVISING PROGRAM**

All students admitted to graduate programs are assigned advisors. Students are expected to work with their advisors to plan their graduate programs. Each graduate program or changes thereto must be approved by both the advisor and the director of graduate studies in business. Courses taken without approval are taken at the student's own risk.

Students are responsible for knowing and fulfilling all general and specific requirements relating to the completion of his or her degree program. Answers to specific questions may be obtained from the Office of the Associate Dean of Graduate Studies in Business.

Students admitted to the post-baccalaureate certificate programs in accounting and information systems will also be assigned advisors.

### **GENERAL REQUIREMENTS FOR MASTER'S DEGREES**

1. Degree recipients must have received an overall grade point average of 3.0 ("B") on credit hours attempted at Virginia Commonwealth University. All grades received in courses required in student programs, whether graduate or undergraduate, will be included in computing the average. Excluded from this are BUS 600 and courses taken by students for their own benefit but are not required in the program. The grades of "D" and "F" are counted in computing the overall grade point average but carry no graduate credit.
2. Students who fail to register for at least one course per year will be dropped automatically from the program and must reapply for admission to continue in the program. At that time, some or all of the courses completed prior to the reapplication may not be accepted toward the degree program.
3. Grades of "A," "B," and "C" are passing grades; "D" is not a passing grade. Students who receive a grade of "C" or below on more than 20 percent of the credit hours attempted for the degree program will be dropped from

their programs. Also, students accepted conditionally are required to satisfy the requirements stated in their letters of acceptance. Courses required in the program, regardless of their level (undergraduate, graduate-foundation, or graduate-advanced) are included under this rule.

4. Courses in which students have earned a grade of "D" or "F" must be repeated if these courses are needed for graduation. Courses for which a passing grade was received cannot be repeated without prior written permission of the director of graduate studies in business. An appeal to the School of Business Graduate Advisory Committee is required.
5. Students who satisfy all the requirements but the 3.0 average may be allowed to take a maximum of six additional credit hours to raise the average. Students are required to appeal to the School of Business Graduate Advisory Committee to seek permission.
6. A foundation course may be waived by the director of graduate studies in business, based on satisfactory completion of equivalent undergraduate work prior to acceptance in the program. CLEP credit at the "B" or higher level may be accepted in lieu of foundation courses with permission. Waiving courses is at the discretion of the School of Business.
7. Full-time graduate status shall consist of a minimum of nine and a maximum of 16 graduate credits per semester. A maximum of 12 credits may be earned in Summer Sessions each summer.
8. Students must continually demonstrate acceptable professional behavior to be retained in a program of graduate studies.
9. A maximum of two courses in the master's programs may be taken with prior approval at the 400-level (courses not designated exclusively for graduate students). These courses are not acceptable in the M.B.A., Master of Accountancy, Master of Taxation or in the personnel and industrial relations concentration of the M.S. in business program. The advisor and director of

graduate studies in business may restrict even further the number of 400-level courses that may be taken in a specific program.

10. All requirements for the degree must be completed within five years from the date of admission to graduate study. This time limitation applies to both full- and part-time students. A maximum of two one-year extensions may be granted by the director of graduate studies in business if satisfactory progress was demonstrated on the part of students requesting extensions. For extensions, write to the director of graduate studies in business.
11. Students are not permitted to take undergraduate courses equivalent to foundation courses once they are admitted to the graduate program without the written permission of the director of graduate studies in business.
12. The records of students who receive grades of "D" or "F" may be reviewed by the director of graduate studies in business to determine whether they should continue or be dropped from the program.
13. Students may not use the same course(s) for two graduate degrees.
14. The maximum time allowed to change a grade of incomplete is the semester following the semester or summer session in which the grade of incomplete was given. An incomplete grade not changed by that time will be converted to a grade of "F."

### **QUANTITATIVE BACKGROUND**

Master's students with inadequate quantitative background will be required to take additional classes (MAT 100 and BUS 600).

### **CHANGE IN PROGRAM OR CONCENTRATIONS**

Students who desire to change their graduate programs or areas of concentration within the school must make that request in writing to the director of graduate studies in business. The director will advise them of the necessary requirements and whether the

change is possible. The student must be in good standing at the time of change.

### CHANGE OF ADDRESS

Students should notify, in writing, both the Office of Enrollment Services, Academic Records Office, and the Office of Graduate Studies in Business of any address changes.

### GRADUATION

Students must apply to be graduated. For specific instructions as related to the School of Business, contact the director of graduate studies in business.

### STUDENT APPEALS

Appeals for exceptions to policies or academic standards may be made in writing to the School of Business Graduate Advisory Committee, Graduate Studies in Business, School of Business, Virginia Commonwealth University, 1015 Floyd Avenue, Richmond, VA 23284.

### INDIVIDUAL RESEARCH PROJECTS

Various opportunities exist for students to work closely with faculty on individual research projects. BUS 690, 693, 697, 798-799, and ECO 798-799 are suitable for this purpose.

Unless students select the thesis option, no more than one research course may be taken as part of a program.

Research courses, except in the Master of Accountancy, must be taken at the end of the student's program. Registration in all research courses requires approval of the director of graduate studies in business. Forms are available upon request from the Graduate Studies in Business Office. Students are expected to seek approval by the end of the semester or summer session preceding the semester or summer session for which registration is desired.

### FINANCIAL AID

The School of Business offers a limited number of graduate assistantships to full-time students in the amount of \$3,000 for the academic year. For further information, write to the associate dean for administration of the School of Business.

Graduate students are also eligible for

funds administered under the National Defense Loan and college work-study programs. For further information, write to: Director of Financial Aid, Virginia Commonwealth University, 327 West Main Street, Richmond, VA 23284.

### FACULTY

- Abdelsamad, Moustafa H. *Professor and Associate Dean for Graduate Studies* D.B.A., George Washington University; finance.
- Aboud, John, Jr. *Associate Professor* Ph.D., Pennsylvania State University; management.
- Ackley, Robert J. *Assistant Professor* Ed.D., Utah State University; business education and office administration.
- Ameen, David *Associate Professor* Ph.D., University of Maryland; information systems.
- Andrews, Robert L. *Assistant Professor* Ph.D., Virginia Polytechnic Institute and State University; management science.
- Atukorala, Vimal W. *Assistant Professor* Ph.D., American University; macroeconomic theory.
- Baker, Robert L., Jr. *Assistant Professor* Ph.D., Ohio State University; business education and office administration.
- Balogun, Jacob O. *Assistant Professor* Ph.D., Louisiana State University; accounting.
- Beall, Larry G. *Associate Professor* Ph.D., Duke University; economics of labor and health care.
- Berry, Sam G. *Associate Professor* D.B.A., Florida State University; finance.
- Bowman, John H. *Associate Professor* Ph.D., Ohio State University; public finance.
- Boykin, James H. *Professor and holder of Alfred J. Blake Chair* Ph.D., American University; real estate.
- Brindley, Edward C., Jr. *Associate Professor* Ph.D., University of Missouri; management science.
- Brown, Darrel R. *Professor* Ph.D., University of Oregon; management.
- Campbell, Thomas C. *Professor* Ph.D., University of Pittsburgh; transportation and industry studies.
- Canavos, George C. *Associate Professor and Assistant Dean of the School of Graduate Studies* Ph.D., Virginia Polytechnic Institute and State University; management science.
- Coffman, Edward N. *Professor* D.B.A., George Washington University; accounting.
- Coppins, Richard J. *Associate Professor* Ph.D., North Carolina State University; management science.
- Creasman, Kay M. *Assistant Professor* J.D., University of Richmond; business law.
- Dalton, Amy H. *Assistant Professor* Ph.D., University of Virginia; international economics.
- Daniel, Herman C., III *Assistant Professor* J.D., University of Richmond; M.L.T., College of William and Mary; accounting.
- Daughtrey, William H., Jr. *Associate Professor* J.D., University of Richmond; business law.
- Dawson, Gaye C. *Assistant Professor* Ph.D., University of Maryland; business education and office administration.

- DeGenaro, Guy J. *Professor* Ph.D., University of Florida; management.
- Dunn, Clarence L. *Professor* Ph.D., University of Illinois; C.P.A., accounting.
- Elliott, Clifford J. *Professor and Chairman* Ph.D., Ohio State University; marketing management and international marketing.
- Feiner, Susan F. *Assistant Professor* Ph.D., University of Massachusetts; economic history.
- Ferguson, Jerry T. *Associate Professor* Ph.D., University of Florida; real estate
- Freeman, Scott A. *Assistant Professor* D.B.A., Kent State University; finance.
- Fuhs, F. Paul *Assistant Professor* Ph.D., University of Massachusetts; information systems.
- Gallagher, Charles J. *Associate Professor* Ph.D., West Virginia University; managerial economics.
- Gilbreath, Glenn H. *Professor and Associate Dean for Undergraduate Studies* Ph.D., University of Alabama; management science.
- Gray, George R. *Associate Professor* Ph.D., University of Alabama; personnel.
- Gray, Robert L., Jr. *Assistant Professor* Ph.D., McMaster University, Hamilton, Ontario; information systems.
- Hall, J. Curtis *Professor and Dean* Ed.D., Columbia University; basic business.
- Harrison, William B., III *Associate Professor* Ph.D., University of Maryland; monetary economics and financial markets.
- Hellmuth, William F. *Professor and Chairman* Ph.D., Yale University; public finance.
- Hodges, Bob S., III *Assistant Professor* Ph.D., University of Texas at Austin; marketing research.
- Hoffer, George E. *Associate Professor* Ph.D., University of Virginia; industrial organization.
- Holley, Charles L. *Associate Professor* D.B.A., University of Tennessee; C.P.A.; accounting.
- Holmes, Raymond T., Jr. *Professor* M.S., Virginia Commonwealth University; C.P.A.; accounting.
- Hosseini, Jinoos *Assistant Professor* Ph.D., University of Arizona; management science.
- Howorka, Mamiko V. *Assistant Professor* Ph.D., University of Florida; econometrics and mathematical economics.
- Hubbard, Elbert *Associate Professor* Ph.D., University of Cincinnati; finance.
- Hunt, Eugene H. *Professor* Ed.D., University of Maryland; management.
- Humphreys, L. Wade *Assistant Professor* D.B.A., Florida State University; management.
- Humphreys, Neil J. *Associate Professor* Ph.D., University of Pennsylvania; management.
- Jackson, J. Howard *Professor and Chairman* Ph.D., Ohio State University; business education and office administration.
- Jennings, George W. *Professor* Ph.D., University of Virginia; public finance.
- Johnston, Russell A. *Professor* Ed.D., University of Kentucky; management.
- Johnston, Wallace R. *Associate Professor* D.B.A., George Washington University; personnel.
- Klosky, J. Michael *Assistant Professor* Ph.D., Clemson University; information systems.
- Kurtulus, Ibrahim *Assistant Professor* Ph.D., University of North Carolina; management science.
- Lambert, John D. *Professor and Associate Dean for Administration* University of Michigan; management.
- Maricle, Kenneth E. *Associate Professor* D.B.A., Arizona State University; consumer behavior and macro-marketing.
- Mead, Howard R., Jr. *Assistant Professor* Ph.D., University of South Carolina; management.
- McDermott, Dennis R. *Associate Professor* Ph.D., Ohio State University; marketing management, and logistics and physical distribution.
- McLean, James H. *Professor* J.D., Emory University; Ph.D., Ohio State University; C.P.A.; accounting.
- Miller, Don M. *Assistant Professor* Ph.D., Virginia Polytechnic Institute and State University; management science.
- Miller, Elbert G., Jr. *Assistant Professor* Ph.D., University of Alabama; management science.
- Moszer, Max *Professor* Ph.D., University of Pennsylvania; cycles and forecasting.
- Nestman, Chadwick H. *Assistant Professor* Ph.D., Southern Illinois University; information systems.
- Olmosk, Kurt E. *Assistant Professor* Ph.D., Case Western Reserve University; management.
- O'Toole, Dennis M. *Associate Professor and Associate Dean for External Affairs* Ph.D., Ohio University; money and banking.
- Pearce C. Glenn *Associate Professor* Ph.D., Georgia State University; business education and office administration.
- Pentico, David W. *Associate Professor* Ph.D., Carnegie-Mellon University; management science.
- Pratt, Michael D. *Assistant Professor* Ph.D., University of Kansas; urban economics.
- Rasnic, Carol *Assistant Professor* LL.B., Vanderbilt University; business law.
- Reilly, Robert J. *Assistant Professor* Ph.D., University of Tennessee; microeconomic theory.
- Riehl, Julian William *Assistant Professor* D.B.A., George Washington University; information systems.
- Rimler, George W. *Professor* D.B.A., Georgia State University; management.
- Sharshar, Abdelaleem M. *Associate Professor* Ph.D., George Washington University; applied microeconomic theory.
- Shin, Tai S. *Professor* Ph.D., University of Illinois; finance.
- Sleeth, Randall G. *Assistant Professor* Ph.D., University of Massachusetts; management.
- Smith, Alfred L., Jr. *Assistant Professor* LL.M., New York University; business law.
- Snellings, Eleanor C. *Associate Professor* Ph.D., Duke University; microeconomic theory.
- Sperry, John B. *Professor and Chairman* Ph.D., American University; C.P.A.; accounting.
- Spinelli Michael A. *Associate Professor* Ph.D., West Virginia University; management science.
- Spring, Marietta *Assistant Professor* Ed.D., Virginia Polytechnic Institute and State University; business education and office administration.
- Sutherland, John W. *Professor* Ph.D., University of California at Los Angeles; information systems.
- Taylor, Robert D., Jr. *Assistant Professor* D.B.A., University of Colorado; C.P.A.; accounting.

Thompson, Thomas W. *Associate Professor* Ph.D., George Washington University; financial marketing and macro-marketing.

Thornton, Jack E. *Professor* Ph.D., University of North Carolina; finance.

Tondkar, Rasoul H. *Assistant Professor* Ph.D., North Texas State University; accounting.

Tucker, Woodie L., *Professor* Ph.D., University of Pittsburgh; business education and office administration.

Turshen, I. Jeffrey *Assistant Professor* Ph.D., University of Virginia; management science.

Wetzel, James N. *Assistant Professor* D.Com., University of North Carolina; environmental economics.

Wijnholds, Heiko de B. *Associate Professor* D.Com., University of South Africa; marketing strategy and international marketing.

Willis, H. David *Associate Professor* M.Ed., Virginia Polytechnic Institute and State University; accounting.

Wood, D. Robley, Jr. *Associate Professor* D.B.A., University of Tennessee; management.

Wynne, A. James *Assistant Professor and Chairman* Ph.D., University of Nebraska; information systems.

Yoo, Jang H. *Professor* Ph.D., Texas A.&M. University; macroeconomic theory.

ECO 600 Concepts in Economics . . . . .	3
BUS 620 Financial Concepts of Management . . .	3
BUS 670 Concepts and Issues in Marketing . . . .	3
BUS 640 Management Theory and Practice . . . .	3

The above courses must be taken prior to taking the advanced courses.

<b>Advanced Courses</b>	<i>Credits</i>
Core Area . . . . .	24
Electives . . . . .	6
	30

**A. Required**

ECO 610 Managerial Economics or Bus 642 for students that have not had a policy course previously . . . . .	3
BUS 645 Operations Research OR Bus 648 Managerial Decision Making . . . . .	3
BUS 690 Business Research Seminar . . . . .	3
BUS 601 Accounting Theory . . . . .	3
BUS 603 Environment of Accounting. . . . .	3
BUS 602 Managerial Accounting: Cases and Topics . . . . .	3
BUS 604 Auditing . . . . .	3
BUS 682 Taxation of Corporations and Shareholders . . . . .	3

**B. Electives (select 6 credits)**

Bus 605 Accounting for Governmental and Not-For-Profit Entities. . . . .	3
BUS 606 International Accounting . . . . .	3
BUS 661 Information Systems Development . . . .	3
BUS 662 EDP Auditing . . . . .	3
Approved 600/700 level business or economics elective . . . . .	3

**MASTER OF ACCOUNTANCY**

The Master of Accountancy degree is designed to provide training for professional positions in public accounting (CPA firms), government, and industry. The required courses provide a diversified background in functional and support areas which are important for any business-related advanced study. The electives are consistent with the philosophy that graduate students should develop individual academic specialities and should develop the ability to work independently in pursuit of their goals.

The degree requires a minimum of 30 semester credits distributed over core courses and restricted electives. Foundation courses represent prerequisites for the advanced courses. Some or all of the foundation courses may be waived for students having satisfactory equivalent preparation.

**DEGREE REQUIREMENTS**

<b>Foundation Courses</b>	<i>Credits</i>
BUS 607 Financial Accounting . . . . .	3
BUS 303-304 Financial Accounting I and II (Intermediate) . . . . .	6
BUS 306 Cost Accounting . . . . .	3
BUS 404 Financial Accounting III (Advanced) . .	3
BUS 405 Tax Accounting . . . . .	3
BUS 406 Auditing . . . . .	3
BUS 410 Advanced Tax Accounting . . . . .	3
BUS 481 Law for Accountants I . . . . .	3
BUS 660 Business Information Systems. . . . .	3
BUS 624 Statistical Elements of Quantitative Management . . . . .	3

**MASTER OF ARTS DEGREE IN ECONOMICS**

The Master of Arts degree in economics is designed to provide training for business and government economists, for those now teaching in secondary schools or in junior colleges, and for those who plan further study at the doctoral level. The required courses provide a firm foundation in economic theory, while the electives permit students to concentrate in the field of their choice.

The program provides both a thesis and a non-thesis option. Both options require 30 semester hours of work. Each student's program must be approved by both the advisor and the director of graduate studies in business.

Under the THESIS option 30 hours are to be distributed over the following areas:

1. CORE AREA (15 credits)



	<i>Credits</i>
ECO 604 Advanced Microeconomic Theory . . . .	3
ECO 607 Advanced Macroeconomic Theory . . . .	3
ECO 612 Econometrics . . . . .	3
ECO 798-799 Thesis . . . . .	6

**2. ELECTIVES (15 credits)**

The additional 15 credits, at least nine of which must be in the Department of Economics, must be elected from graduate-level courses.

Under the NON-THESIS option the 30 required hours are to be distributed over the following areas:

**1. CORE AREA (12 credits)**

	<i>Credits</i>
ECO 604 Advanced Microeconomic Theory . . . .	3
ECO 607 Advanced Macroeconomic Theory . . . .	3
ECO 612 Econometrics . . . . .	3
ECO 690 Seminar in Economic Methodology and Research . . . . .	3

**2. ELECTIVES (18 credits)**

The additional 18 credits, at least 12 of which must be in the Department of Economics, must be elected from graduate-level courses.

Students admitted to the Master of Arts program must have completed 12 semester credits of economics courses or their equivalent in quarter credits, including principles of economics, microeconomic theory, and macroeconomic theory. A knowledge of mathematics and statistics sufficient for the study of econometrics and the advanced theory courses must be acquired before those courses may be attempted. The student's advisor will review the student's economics and mathematical background and will determine the necessary prerequisites.

**MASTER OF BUSINESS ADMINISTRATION PROGRAM**

The Master of Business Administration program is designed for students with diverse undergraduate backgrounds. It is a program suitable for both nonbusiness and business graduates. Normally, it is a two-year program for graduates of the curricula in the arts and humanities, in engineering, and in the sciences. With an undergraduate degree in business, a person can complete the program in one year of full-time study.

The aim of the M.B.A. program is to prepare persons for the administration of an enterprise and for the responsibilities of management in a wide variety of business

endeavors. The program is intended to develop a knowledge of the functions and techniques of management, as well as an understanding of environmental and economic forces that influence administration and decision making. The emphasis is on breadth of outlook rather than on specialization.

Students who have had no undergraduate work in business must earn 54 semester credits to fulfill requirements for the degree. Included are 24 credits of foundation courses designed to provide preparation comparable to the professional core in the undergraduate curriculum of the School of Business. Some, or all, of these foundation courses may be waived for students who present satisfactory, equivalent preparation. A minimum of 30 credits of advanced graduate courses will be required of all students. All courses must be at the 600 level or higher.

**DEGREE REQUIREMENTS**

	<i>Credits</i>
<b>Foundation Courses<sup>2</sup></b>	
BUS 660 Business Information Systems . . . . .	3
BUS 624 Statistical Elements of Quantitative Management . . . . .	3
ECO 600 Concepts in Economics . . . . .	3
BUS 607 Financial Accounting . . . . .	3
BUS 620 Financial Concepts of Management . . .	3
BUS 630 Fundamentals of the Legal Environment of Business . . . . .	3
BUS 670 Concepts and Issues in Marketing . . . .	3
BUS 640 Management Theory and Practice . . . .	3
	24
<b>Advanced Courses</b>	
BUS 608 Managerial Accounting Concepts . . . . .	3
BUS 645 Operations Research . . . . .	3
ECO 610 Managerial Economics . . . . .	3
BUS 641 Organizational Behavior . . . . .	3
BUS 621 Advanced Financial Management . . . .	3
BUS 671 Marketing Management . . . . .	3
BUS 661 Information Systems Development . . . .	3
BUS 642 Business Policy . . . . .	3
Approved Business or Economics Electives . . . .	6
	30
<b>TOTAL</b>	<b>54</b>

Unless warranted by circumstances beyond the control of students, the above courses must be taken in the order given above. Approval of the advisor and director of graduate studies is needed.

<sup>2</sup>These foundation courses may not be included in the 30 semester credits of advanced work required for any of the master's degrees offered by the School of Business.

## **MASTER OF SCIENCE DEGREE IN BUSINESS**

The Master of Science degree program is designed to be flexible enough to meet a variety of needs. It provides advanced professional education for those now engaged in, or preparing for, managerial positions. It also offers appropriate graduate education for those now teaching or contemplating future graduate work. The work that is required of all candidates gives a broad approach to improving understanding of the principles of business management and economics that are important in any of the business fields. The elective part of the program is in keeping with the philosophy that graduate students should develop the ability to work independently in pursuit of their own goals. The elective portion of this program also allows students to specialize in a particular area of business. Concentrations are available in the following areas:

- Business Education
- Economics
- Finance
- Information Systems
- International Business
- Management
- Marketing
- Personnel and Industrial Relations
- Quantitative Methods
- Real Estate and Urban Land Development
- Risk Management and Insurance

### **Business Education**

The Master of Science degree provides a major concentration in business education. This program offers advanced professional education for teaching and for supervisory and administrative positions in secondary schools and community colleges.

### **Economics**

The concentration in economics requires at least 12 credits in economics, including ECO 604 Advanced Microeconomics and ECO 607 Advanced Macroeconomics. Students may do general work in economics, or they may choose a limited concentration such as public policy, finance, applied microeconomics, or mathematical economics. Students are encouraged to elect some related courses in other fields. Students are

required to get approval of their academic program in advance from the graduate student advisor in the Department of Economics and from the director of graduate studies, School of Business.

### **Finance**

The finance concentration is designed to prepare students for numerous positions in financial management in commercial, industrial, financial, and governmental institutions.

It consists of courses in advanced financial management, advanced financial theory, funds management in financial institutions, security analysis, and portfolio management. Supporting courses may be taken in accounting and economics.

### **Information Systems**

Master of Science students may concentrate in the information systems area by taking courses at the graduate level within the particular area of concentration desired; for example, computer programming, systems analysis and design, hardware/software, and information systems administration.

Depending upon academic background and work experience, additional undergraduate course work in the field of information systems may be required up to a maximum of 15 hours.

### **International Business**

Graduate students may concentrate in the field of international business. A program of study in the international business field will, in addition to the academic requirements, normally include enrollment in at least four courses, to be selected by the students, in the international field. Such courses may include international accounting, marketing, management, trade theory, economic development, etc. Candidates admitted to the graduate program of the School of Business will not require any additional undergraduate work to pursue a concentration in international business.

### **Management**

Graduate students wishing a greater concentration in management than the M.B.A.

program allows may meet their objectives by electing to work for the M.S. in business with a management concentration. In addition to Business Policy and Organization Theory (required in the M.B.A. program), such students may take additional management courses in Systems Management, International Business Management, Personnel and Industrial Relations, and such other relevant electives as may be approved by their advisors.

**Marketing**

The marketing concentration is intended for those who wish to practice management with a strong emphasis on marketing. Specializations are available in consumer behavior, marketing research, and the strategic aspects of marketing.

**Personnel and Industrial Relations**

The Master of Science with a personnel and industrial relations concentration is designed to prepare students to deal with ever-changing personnel and industrial relations problems in various organizations. It allows flexibility for inclusion of courses in business, economics, psychology and sociology, as well as other courses.

**Quantitative Methods**

This concentration prepares students for a conceptual understanding of the quantitative methods that are used successfully in many business environments and simultaneously provides sophistication in the application of these techniques. BUS 632, BUS 645, BUS 648 and BUS 668 are the nucleus of the program. Additionally, a restricted number of approved quantitative courses can be selected from the Departments of Economics, Biostatistics, or Mathematical Sciences.

**Real Estate and Urban Land Development**

Tomorrow's leaders in the complex and challenging field of real estate must obtain a clear understanding of the effects of inter-related land use activities and how these activities are best developed, coordinated, analyzed, financed, and marketed. Providing this knowledge is a major objective of this concentration, which integrates studies

with actual contemporary urban real estate and land development issues. The university's urban environment provides an excellent "real world" laboratory for student research.

**Risk Management and Insurance**

This concentration is designed to increase one's effectiveness in establishing policies and making decisions concerning risk management and insurance in organizational and individual settings. Advanced courses utilize an applied management approach, covering technical aspects of risk management and insurance, internal management of insurance organizations, and cases on consumer uses of insurance.

**MASTER OF SCIENCE DEGREE REQUIREMENTS**

Students who have had no undergraduate work in business or economics must earn a minimum of 54 credits to fulfill requirements for the degree. Included are 24 credits of foundation courses designed to provide preparation comparable to the professional core in the undergraduate curriculum of the School of Business.<sup>3</sup> Some, or all, of these foundation courses may be waived for students who present satisfactory equivalent preparation. A minimum of 30 credits of advanced graduate courses will be required of all students.

**DEGREE REQUIREMENTS**

<b>Foundation Courses<sup>4</sup></b>	<i>Credits</i>
BUS 660 Business Information Systems . . . . .	3
BUS 624 Statistical Elements of Quantitative Management . . . . .	3
ECO 600 Concepts in Economics . . . . .	3
BUS 607 Financial Accounting . . . . .	3
BUS 620 Financial Concepts of Management . . .	3
BUS 630 Fundamentals of the Legal Environment of Business . . . . .	3
BUS 670 Concepts and Issues in Marketing . . . .	3
BUS 640 Management Theory and Practice . . . .	3

<sup>3</sup>Some concentrations (e.g., accounting, economics, information systems, real estate and urban land development, and taxation) have additional special prerequisites. Please consult the Office of Graduate Studies in Business.

<sup>4</sup>These foundation courses may not be included in the 30 semester credits of advanced work required for any of the master's degrees offered by the School of Business.

Unless circumstances beyond the control of the student warrant it, the above courses must be taken prior to taking advanced courses and in the order given above.

Each student must complete an M.S. program to be approved by both the advisor and the director of graduate studies in business. The 30 semester credits of advanced work must be distributed over the following three areas:

**1. CORE AREA (9 credits)**

All students must complete a minimum of three semester credits in each of the following areas, with one exception noted under THESIS OPTION. The specific courses to be taken in these areas will be determined by each student's background and professional objectives: economics, quantitative techniques, and research (or BUS 642, if applicable). Students who have not had a policy class at the undergraduate level are required to take BUS 642.

**2. RESTRICTED ELECTIVES (9 credits)**

All students must complete three semester credits in each of three of the following fields: accounting, business education, economics, finance, industrial relations, information systems, insurance, international business, management, marketing, quantitative techniques, real estate and urban land development, and taxation.

**3. ELECTIVES (12 credits)**

With the approval of their advisors and the director of graduate studies in business, students may concentrate these 12 credits in the area of concentration or related areas.

**THESIS OPTION:** Students interested in writing a thesis may take six course credits in Area 3 plus BUS 798-799 Thesis. If a student elects to write a thesis and has already acquired an adequate knowledge of research techniques, the student may, with the permission of the advisor and the director of graduate studies in business, omit the research requirement in Area 1 and replace it with an additional three-credit elective.

**MASTER OF TAXATION**

The Master of Taxation degree is designed to prepare individuals for positions in the specialized professional area of taxation with-in public accounting, private or industrial accounting, trust and fiduciary ac-

counting, and governmental accounting. The field of taxation is very broad and includes not only income taxes for individuals, corporations, estates, and trusts but also estate and gift taxes, estate planning, pensions, and profit-sharing plans. The degree program is designed to develop both a conceptual understanding and a sound technical knowledge necessary for professional specialization in taxation. The program provides a thorough treatment of tax laws and regulations, tax research, and tax practices and procedures needed within the purview of accounting.

The degree requires a minimum of 30 semester credits distributed over core courses, restricted electives, and individual electives. Foundation courses represent prerequisites for the advanced courses. Some or all of the foundation courses may be waived for students having satisfactory equivalent preparation.

**DEGREE REQUIREMENTS**

<b>Foundation Courses</b>	<i>Credits</i>
BUS 607 Financial Accounting . . . . .	6
BUS 303-304 Financial Accounting I and II (Intermediate) . . . . .	6
BUS 306 Cost Accounting . . . . .	3
BUS 404 Financial Accounting . . . . .	3
BUS 405 Tax Accounting . . . . .	3
BUS 406 Auditing . . . . .	3
BUS 410 Advanced Tax Accounting . . . . .	3
BUS 481 Law for Accountants I . . . . .	3
BUS 660 Business Information Systems . . . . .	3
BUS 624 Statistical Elements of Quantitative Management . . . . .	3
ECO 600 Concepts in Economics . . . . .	3
BUS 620 Financial Concepts of Managements . . . . .	3
BUS 670 Concepts and Issues in Marketing . . . . .	3
BUS 640 Management Theory and Practice . . . . .	3

The above courses must be taken prior to taking the advanced courses.

<b>Advanced Courses</b>	<i>Credits</i>
Core Area . . . . .	12
Taxation Electives . . . . .	12
Electives . . . . .	6
	30

**A. Core Area**

ECO 616 Advanced Public Finance or BUS 642 for students that have not had a policy course previously . . . . .	3
BUS 645 Operations Research or BUS 648 Management Decision Making . . . . .	3
BUS 680 Research in Federal Taxation . . . . .	3
BUS 682 Taxation of Corporation and Shareholders . . . . .	3

**B. Taxation Electives (Select 12 credits)**

BUS 679 Case Studies in Federal Income Taxation . . . . .	3
BUS 681 Tax Administration and Procedure . . . . .	3
BUS 683 Corporate Reorganizations and Collapsible Corporations . . . . .	3
BUS 684 Taxation of Partnerships and Selected Organizations . . . . .	3
BUS 685 Taxation of Property Transactions . . . . .	3
BUS 686 Tax Aspects of Pensions, Profit-Sharing, and Deferred Compensation Plans . . . . .	3
BUS 687 Income Taxation of Estates and Trusts . . . . .	3
BUS 688 Estate and Gift Taxation . . . . .	3
BUS 689 Taxation in Estate Planning . . . . .	3

**C. Electives (Select 6 credits)**

Any 600 level accounting course except BUS 607 or 608

BUS 621 Advanced Financial Management . . . . .	3
BUS 626 Property and Liability Insurance . . . . .	3
BUS 627 Urban Land Development . . . . .	3
BUS 629 Real Estate Feasibility Analysis . . . . .	3
BUS 635 Investments and Security Analysis . . . . .	3
BUS 638 Real Property Investment Law . . . . .	3
Approved 600 or 700 level Business or Economics Elective . . . . .	3

**PH.D. IN BUSINESS<sup>1</sup>**

The Ph.D. program is designed to develop the intellectual capabilities necessary for careers in teaching and research and for leadership in business, government, education, consulting, or research organizations. The program offers a research degree designed to provide the graduates with an in-depth research experience in dealing with theoretical and applied business topics.

In addition to completing required course work, students must pass both written and oral comprehensive examinations and complete an acceptable dissertation. Scholarship, innovation, and academic excellence are expected of all Ph.D. students.

**Admission**

Admission will be restricted to those who are considered by the Admissions Committee to possess academic and professional qualifications necessary to succeed in the program and make a contribution to the profession. Criteria considered will include, among other things, performance at the bachelor's and graduate levels, GMAT scores, letters of recommendation, academic and business experience, and personal inter-

views, where appropriate. Each student is required to have a master's degree in business or its equivalent and must have completed the basic foundation courses in business including business policy.

Enrollment in the program is open to qualified persons without regard to age, race, sex, religion, physical handicap, or national origin, and admission requirements are in compliance with all applicable federal and state statutes, orders, and regulations. Admission to the doctoral program is limited by the number of places available. Consequently, qualified applicants may be denied admission because of insufficient space and resources. Admission, then, is highly competitive, and preference is given to qualified applicants who demonstrate serious purpose, scholastic excellence, superior preparation, and appropriate experience for the program.

**Course Work**

Each student will be required to have completed, prior to acceptance, a minimum of one course that covers intermediate algebra and calculus. Each student's previous course work and preparation will be taken into consideration. A specific program will be developed based upon the student's needs. Qualifying examinations will be used, when appropriate, to determine the extent of the student's competency in various subject areas.

In addition to the initial admission requirements, students are required to have had at least one course at the master's level in each of the following areas; accounting, information systems, organization behavior, quantitative management, financial management, marketing, and economics. Students who do not meet this requirement will be required to take additional courses.

The following courses beyond those required at the master's level will be required for the Ph.D. degree.

	<i>Credits</i>
ECO 604 Advanced Microeconomic Theory . . . . .	3
ECO 607 Advanced Macroeconomic Theory . . . . .	3
BUS 656 Applied Multivariate Methods (ECO 612 is required, instead, for economics majors)	3
BUS 701 Research Methods in Business . . . . .	3
Five Courses in the major area . . . . .	15

<sup>1</sup>To begin fall 1982 subject to final approval of the State Council of Higher Education for Virginia.

Three courses (9 semester credits; in each of the two minor areas . . . . .)	18
	45
BUS 898 Dissertation (Minimum of 12 credits) . .	12
TOTAL	57

Students who select a major area other than that in which they have received their bachelor's or master's degree may be required to take additional courses to cover any deficiencies. Accounting and information systems are fields where such deficiencies are most likely to occur.

A minimum of 12 semester credits in the major area and 6 credits in each of the minor areas must be completed at Virginia Commonwealth University after entry into the Ph.D. program.

**Specialty Tracks**

Each student must select a major in one of the following specialties;

1. Accounting/Taxation
2. Economics
3. Finance
4. Information Systems
5. Management
6. Management Science
7. Personnel and Industrial Relations

Additionally, students must select two different minors from the specialties listed above or the following:

1. Business Education
2. Marketing
3. An approved field outside the School of Business in a school or a department that offers a doctoral program. This option must have the prior approval of the Admissions Committee and the director of graduate studies in business.

**Advising and Evaluation**

Each student will be assigned an advisory committee. The student's original program and any subsequent changes must be approved by the committee and the director of graduate studies in business. A file will be maintained on all students in the Graduate Studies in Business Office where their progress will be monitored and coordinated.

**Comprehensive Examinations and Admission to Candidacy**

Written and oral examinations are required in the major and minor fields upon completion of course work. Students are admitted to candidacy for the degree after passing the written and oral examinations and successfully defending a dissertation proposal.

**Dissertation**

Each candidate will write a dissertation involving substantial independent and original research related to the major field. The dissertation committee is responsible for supervising the candidate's research and for verifying the significance and importance of the work. The candidate will be required to give a successful oral defense of the dissertation.

**General Requirements for the Ph.D.**

1. After admission to the Ph.D. program, students must maintain a minimum cumulative grade point average of 3.0 in all course work attempted at Virginia Commonwealth University. Students who fall below that minimum will have one semester to make-up that deficiency.
2. Students must register each semester (summer sessions excluded) for continuation in the program. Students who fail to register each semester will be dropped automatically from the program and must reapply for reinstatement.
3. Even though the overall grade point average is 3.0 or better, students may earn no more than two (6 credit hours) grades of "C." Students who receive a grade of "D" or "F" will be dropped from the program.
4. The maximum time to complete all the requirements for the degree is seven calendar years from the date of entry into the program. The maximum time to complete the course work, pass the comprehensive examinations, and present an acceptable dissertation proposal is five years from the date of entry.
5. Doctoral study involves a devotion to

independent study outside the classroom and interaction with the faculty and other students. During the period of advanced course work, students must complete at least nine credits each semester for a minimum of two consecutive semesters, one of which may be a summer session.

6. A maximum of nine semester credits may be transferred from another university and applied toward the Ph.D. course requirements. Transfer credit is given at the discretion of the director of graduate studies in business after consultation with appropriate departmental or faculty representatives.

BUS 405	Tax Accounting . . . . .	3
BUS 406	Auditing. . . . .	3
BUS 407	Auditing Methods . . . . .	3
BUS 410	Advanced Tax Accounting . . . . .	3
BUS 411	Accounting Opinions and Standards . . . . .	3
		<hr/> 30
BUS 260	Information Systems Concepts . . .	3
BUS 301	Business Statistics. . . . .	3
BUS 481-482	Law for Accountants I and II . . .	6
BUS 487	Management Decision Methods . .	3
		<hr/> 45

Bus 203-204 may be taken in lieu of Bus 205. Up to 15 credit hours of the non-accounting courses may be waived if equivalent courses have been completed. All transfer credits and waiver of courses must be approved by the Department of Accounting and the director of graduate studies in business.

**POST-BACCALAUREATE CERTIFICATE IN ACCOUNTING**

The Post-Baccalaureate Certificate in accounting is designed for students who hold bachelor’s degrees in fields other than accounting and desire to continue their education beyond the undergraduate level but who do not aspire to a master’s degree. Candidates for the certificate are required to complete the courses presented below (45 credits), or their equivalents, with a minimum of 24 semester credits in accounting to be taken at Virginia Commonwealth University with a minimum “C” average. The program is designed to provide a basic common body of knowledge in accounting. Persons desiring to sit for the Uniform Certified Public Accountants Examination, the Certified Internal Auditors examination, or the examination leading to the Certificate in Management Accounting should consult with their advisor concerning specific requirements.

**REQUIREMENTS**

		<i>Credits</i>
BUS 205	Introductory Accounting Survey .	3
BUS 303	Financial Accounting I (Intermediate) . . . . .	3
BUS 304	Financial Accounting II (Intermediate) . . . . .	3
BUS 306	Cost Accounting. . . . .	3
BUS 404	Financial Accounting III (Advanced). . . . .	3

**POST-BACCALAUREATE CERTIFICATE IN INFORMATION SYSTEMS**

The Post-Baccalaureate Certificate in information systems (CIS is designed for students who hold bachelor’s degrees in fields other than information systems and who desire to continue their education beyond the undergraduate level but do not aspire to a master’s degree. Candidates for the certificate are required to complete a total of 30 hours including the courses listed below, or their equivalents, with a minimum of 24 credit hours of study in information systems to be taken at Virginia Commonwealth University with a minimum “C” average.

The CIS program is designed to provide more than a basic knowledge of information systems. Specifically, persons completing the program are expected to achieve competency in understanding information systems terminology, concepts, and principles; computer program design, writing, and testing; systems analysis/design through proper application and knowledge of current hardware and software; and planning and carrying out system development and the management of information systems.

Those acquiring these skills should be well received in terms of employment opportunities within the business community and within governmental organizations. Additionally, depending upon the particular mix of required courses and chosen electives,

they should be well prepared to sit for the Certificate in Data Processing and Registered Professional Programmer Examinations given under the auspices of the Data Processing Management Association. Presented below are the courses included in the CIS program.

**REQUIREMENTS**

	<i>Credits</i>
BUS 260 Information Systems Concepts . . .	3
BUS 361 Systems Analysis . . . . .	3
BUS 362 Computer Hardware and Software Operations . . . . .	3
BUS 363 Introduction to Programming . . .	3
BUS 364 Applications Programming . . . . .	3
BUS 365 Systems Design . . . . .	3
BUS 367 Advanced Programming Design Techniques . . . . .	3
BUS 464 Data Base Systems . . . . .	3
	24
CIS Electives . . . . .	6
	30

**CIS Electives**

Select six credits from the following:

BUS 205 Introduction to Accounting . . . . .	3
BUS 366 Computerware . . . . .	3
BUS 460 Assembler Programming . . . . .	3
BUS 461 System Project Planning . . . . .	3
BUS 462 Control Programming . . . . .	3
BUS 463 Computer Center Operations . . .	1
BUS 463 Programming Laboratory-PL/1 . . .	1
BUS 463 Programming Laboratory- FORTRAN . . . . .	1
BUS 463 Programming Laboratory- Assembler . . . . .	1
BUS 463 Programming Laboratory- Simulation Languages . . . . .	1
BUS 467 System Development Project . . .	3
BUS 468 Direction and Coordination of I/S Organization . . . . .	3

**GRADUATE COURSES IN BUSINESS (BUS)**

Each student who enrolls in BUS 624 or other quantitative courses, may be given a quantitative test at the beginning of the class to determine if the student's quantitative background is appropriate for that course.

Foundation courses may not be included in the 30 semester credits of advanced work required of any of the masters' degrees offered by the School of Business.

M.S. students in all but the personnel and industrial relations concentration may take, with prior approval of the advisor and the director of graduate studies in business, a

maximum of 6 credits in 400-level courses (BUS 461, 464, 468, 477, 493, ECO 402, 412, and 432).

**600 Quantitative Foundation for Decision Making.** Semester course; 3 lecture hours. 3 credits. Prerequisite: a basic course in introductory algebra. A survey of basic tools from algebra, differential and integral calculus, and their application in solving business problems. These topics also provide the necessary foundation for using and understanding more advanced quantitative procedures. May not be included in the 30 semester credits of advanced work required for any of the master's degrees offered by the School of Business.

**601 Accounting Theory.** Semester course; 3 lecture hours. 3 credits. Prerequisite: 15 hours of accounting or permission of instructor. The historical development of accounting thought and the way it has been influenced by social, political, and economic forces. Analysis of the structure and methodology emphasizes objectives, postulates, and principles. Income determination and asset equity valuation, in both theory and practice.

**602 Managerial Accounting: Cases and Topics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: a basic course in managerial accounting, cost accounting, or permission of instructor. Advanced aspects of the use of accounting information in the management process. Cost-based decision making and control systems are related to short- and long-term objectives of the firm.

**603 Environment of Accounting.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 601. The organization of the profession, its ethics and responsibilities and the impact of governmental and private sector organizations on current and emerging accounting issues. Areas covered will include FASB, AICPA, SEC, other governmental regulatory agencies, and current financial accounting topical issues.

**604 Auditing.** Semester course; 3 lecture hours. 3 credits. Prerequisite: a basic course in auditing or permission of instructor. Historical development of auditing theory, theory of evidence, special disclosure issues, ethical, legal, and social responsibilities of external and internal auditors.

**605 Accounting for Governmental and Not-For-Profit Entities.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 607 or equivalent. Budgeting, accounting, reporting, and related issues in governmental and non-profit organizations.

**606 International Accounting.** Semester course; 3 lecture hours. 3 credits. Prerequisite: six hours of accounting or permission of instructor. International dimensions of accounting; national differences in accounting thought and practice; problems and issues.

**607 Financial Accounting.** Semester course; 3 lecture hours. 3 credits. Financial accounting standards and procedures. Income determination and financial statement preparation for businesses. Business combinations, consolidations, and other complex business organizations. (This is a foundation course.)

**608 Managerial Accounting Concepts.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 607 or



equivalent. The use of accounting information contained in reports to management. The functions of planning, decision making, and control are studied as accounting data are reported through the firm's information system and in special analyses.

**610 Business Education in Post Secondary Institutions.** Semester course; 3 lecture hours. 3 credits. Role of business education in community colleges, junior colleges, post-secondary vocational-technical schools, and private business schools. Teaching special student populations. Interaction with the business community. Designed specifically for business teachers.

**611 Improvement of Instruction in Typewriting.** Semester course; 3 lecture hours. 3 credits. This course is designed for experienced teachers and prospective teachers specializing in typewriting. It deals with the aims of the typewriting course, the relationship of typewriting to vocational and general education, available instructional materials, teaching aids and devices, current writings and developments, techniques for improving instruction, and practical application and demonstration at the typewriter.

**612 Improvement of Instruction in Shorthand.** Semester course; 3 lecture hours. 3 credits. This course is designed for experienced teachers and for prospective teachers specializing in shorthand. It deals with the aims of the shorthand and notehand courses; the relationship of shorthand and notehand to the vocational, college preparatory, and general curricula; available instructional materials; teaching aids and devices, including the most modern electronic equipment; current writings and developments; techniques for improving instruction; and demonstration lessons at critical points in the shorthand and transcription courses.

**613 Current Practices in Accounting and Data Processing Programs.** Semester course; 3 lecture hours. 3 credits. Prerequisite: for business teachers only. Content selection, resource materials, and the integration of bookkeeping, data processing, and clerical accounting in block programs.

**614 Readings in Business Education.** Semester course; 3 lecture hours. 3 credits. This course offers the student an opportunity to become thoroughly conversant with significant current literature. It will involve critical evaluation of an extensive selection of materials representative of research and other writing in the field of business education.

**615 Cooperative Work-Study Programs in Office Education.** Semester course; 3 lecture hours. 3 credits. Designed to prepare teachers in the selection, placement, supervision, and coordination of secondary school students in cooperative office work-study programs. Includes federal, state, and local legislation pertaining to the employment of youth and the requirements for funding work-study programs.

**616 Advanced Office Administration.** Semester course; 3 lecture hours. 3 credits. Designed to acquaint teachers with innovations in business offices. Includes methods, materials, and demonstrations related to the latest word processing and calculation techniques and equipment in up-to-date office systems.

**617 Current Practice in Basic Business Education.** Semester course; 3 lecture hours. 3 credits. Prerequisite: for business teachers only. Research findings, content selection, instructional materials, and current trends in teaching basic business subjects.

**618 Trends in Business Education.** Semester course; 3 lecture hours. 3 credits. Prerequisite: for teachers only. Developments, contributions, and problems of business education in high school and college curricula; philosophy of vocational preparation, professional organizations, legislation, and other trends in the field.

**619 Office Procedures in Block Programs.** Semester course; 3 lecture hours. 3 credits. Prerequisite: for business teachers only. Current literature, research findings, and current practices in teaching office procedures in secondary schools.

**620 Financial Concepts of Management.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 607 or 203-204. A study of the essential concepts of financial management including working capital management, capital budgeting, capital structure planning, and dividend policy. Not open to students who have completed BUS 311 or the equivalent. (This is a foundation course.)

**621 Advanced Financial Management.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 311 or 620 or permission of instructor. Analysis of financial problems and policies of non-financial firms, including capital management, capital rationing and cost of capital, and capital structure.

**622 Financial Management of Financial Institutions.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 620 or equivalent. Understanding and application of concepts relevant to the financial management of financial institutions.

**623 Advanced Financial Theory.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 311 or 620 or permission of instructor. Advanced theories, concepts, major structural areas, and techniques for financial decision making.

**624 Statistical Elements of Quantitative Management.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 600 or equivalent. Develops an ability to interpret and analyze business data in a managerial decision-making context. Managerial applications are stressed in a coverage of descriptive statistics, probability, sampling, estimation, hypothesis testing, and simple regression and correlation analysis. (This is a foundation course.)

**625 Group Insurance and Pensions.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 333 or equivalent, or permission of instructor. Analysis of the role and costs of employee benefits in the operation of the modern organization. Includes group life and health insurance, pension plans, and emerging benefit areas.

**626 Risk Management.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 333 or equivalent. Property and liability risks faced by business and public institutions are studied. Insurance and alternative

methods of treating these risks are analyzed and compared.

**627 Urban Land Development.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. A study of the development process; considering planning, financing, management, and marketing of real property.

**628 Issues in Land Development.** Semester course; 3 lecture hours. 3 credits. Considers spatial growth and the impact of regulations upon land use decision.

**629 Real Estate Feasibility Analysis.** Semester course; 3 lecture hours. 3 credits. Housing demand forecasting, commercial site selection, and real estate investment analysis.

**630 Fundamentals of the Legal Environment of Business.** Semester course; 3 lecture hours. 3 credits. The legal environment of business with emphasis on the development of the law, contracts, sales, business organizations, and commercial paper. (This is a foundation course.)

**631 Advanced Labor Law and Legislation.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 323 or permission of instructor. Advanced labor law and legislation with pertinent causal factors; administrative and juridical determination to date. Not open to students who have completed BUS 427.

**632 Statistical Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 624 or equivalent. A business application-oriented coverage of statistical inference, analysis of variance, multiple regression and correlation, basic forecasting techniques, non-parametric tests, and other related procedures. Use of a computer statistical package will be included for most topics.

**633 Issue in Labor Relations.** Semester course; 3 lecture hours. 3 credits. The conceptual framework of labor relations; the interconnection between labor-management relations and the sociopolitical environment.

**634 Advanced Labor Relations.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 633. The negotiation and administration of collective bargaining contracts; the handling of grievances.

**635 Investments and Security Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 620 or equivalent. The process of investing in stocks and bonds, from the analysis of individual securities to portfolio formation and evaluation.

**637 Advanced Personnel Administration.** Semester course; 3 lecture hours. 3 credits. A critical analysis of the functions and problem areas related to personnel administration in a large organization; philosophy of personnel administration; employee recruiting, testing, and wage and salary administration and supplemental compensation systems; manpower, training, and development; employee services; the legal environment of personnel administration.

**638 Real Property Investment Law.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 323 or equivalent, or permission of instructor. Covers legal

aspects of real property development from acquisition through disposition; emphasizes selection of appropriate ownership form, financing, operation, and tax considerations.

**639 International Finance.** Semester course; 3 lecture hours. 3 credits. A study of financial management of multinational enterprises, banks, firms with foreign subsidiaries, exporters, and service industries. Additionally, financing trade and investments, international money and capital markets, foreign exchange risks, and governmental policies will be covered.

**640 Management Theory and Practice.** Semester course; 3 lecture hours. 3 credits. Theories, principles, and fundamentals applicable to contemporary management thought and productive activities. (This is a foundation course.)

**641 Organizational Behavior.** Semester course; 3 lecture hours; 3 credits. Prerequisite: BUS 640 or equivalent, or permission of instructor. An advanced course in management, involving theories and models aimed at developing the managerial competencies needed to analyze, understand, predict, and guide individual, group, and organizational behavior.

**642 Business Policy.** Semester course; 3 lecture hours. 3 credits. Must be taken after completion of all foundation courses plus 15 credits of advanced courses. Integration of principles and policies of business management from the fields of accounting, economics, marketing, finance, statistics, and management in the solution of broad company problems and in the establishment of company policy. Emphasis on interaction of disciplines in efficient administration of a business. Course employs case analysis approach.

**643 Systems Management.** Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 640 and 641 or equivalent, or permission of instructor. The application of systems theory and principles to the operation of contemporary organizations, with emphasis on non-quantitative methods of analysis.

**644 International Business Management.** Semester course; 3 lecture hours. 3 credits. Prerequisite: completion of foundation courses. Survey course for students interested in international and multinational management. Review of historical, governmental, monetary, and cultural issues affecting the transfer of resources and management knowledge across national boundaries; multinational business and management strategies; study of management practices in selected countries.

**645 Operations Research.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 624 or equivalent. Business problems in production, inventory, finance, marketing, and transportation translated into mathematical models: strengths and weaknesses of such translations. Solution procedures and their limitations.

**646 Personnel Law.** Semester course; 3 lecture hours. 3 credits. This course examines the laws concerning human resources in organizations, Equal Employment Opportunity, wage and hour laws, Equal Pay Act, the Employees Retirement Income Security Act, the Oc-

cupational Safety and Health Act, and employee personal rights laws are emphasized.

**647 Public Sector Collective Bargaining.** Semester course; 3 lecture hours. 3 credits. This course examines the development, practices, and extent of collective bargaining in the public sector. Analysis of labor issues at federal, state, and local government levels with emphasis on public sector policy issues.

**648 Managerial Decision Making.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 624 or equivalent. Formal analytical techniques used by organizations in reaching decisions. The concepts of both classical and Bayesian decision methods will be examined. The emphasis is on the application of a decision-theoretic approach to solving problems in contemporary organizations.

**649 History of Management Thought.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 640. Traces the history of management from its beginnings to current approaches and theories.

**650 Theories and Research in Motivation and Leadership.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 641 or equivalent. Critical examination of significant research and application of motivation and leadership concepts in the organization context.

**651 Workshop in Machine Shorthand.** Semester course; 3 lecture hours. 3 credits. A course designed for prospective teachers of machine shorthand to provide a knowledge of machine shorthand theory, a development of basic recording skills, and an examination of machine shorthand teaching procedures.

**652 Advanced Business Communication.** Semester course; 3 lecture hours. 3 credits. Development of skill in planning and writing business reports and other shorter written communications, conducting business research, delivering oral presentation, and using business communication media.

**653 Competency-Based Business Education.** Semester course; 3 lecture hours. 3 credits. An introduction to the principles and characteristics of competency-based business education. Designed for business teachers in secondary schools who have had no previous instruction in competency-based concepts. Utilization of standardized materials for improving classroom instruction will be stressed.

**654 Topics Seminar in Business Education and Office Administration.** Semester course; 3 credits. Prerequisite: permission of department chairman. In-depth treatment within a seminar format of a timely topic in business education and office administration. The topic may vary from semester to semester.

**655 Advanced Operations Research.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 645 or equivalent. Advanced discussion of topics in mathematical programming and network analysis as applied to organizational decision making. Includes network flows, integer, non-linear, and dynamic programming, and multicriteria optimization. Emphasis on applications and the use of the computer for problem solving.

**656 Applied Multivariate Methods.** Semester course; 3

lecture hours. 3 credits. Prerequisite: BUS 632 or equivalent. Study of multivariate statistical methods frequently used in organizational applications including tests on mean vectors, MANOVA, discriminant analysis, principal components and factor analysis. The focus is on applying these techniques to active problems.

**657 Corporate Strategy and Long-Range Planning.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 642 or equivalent. Analysis and evaluation of current methods and research in the areas of corporate strategy and long-range planning.

**658 Capital Budgeting Decisions.** Semester course; 3 lecture hours. 3 credits. Prerequisites: all foundation courses, 12 hours of graduate business courses, and one advanced finance course, or permission of instructor. Methods and techniques of capital budgeting under certainty, risk, and uncertainty. Administrative aspects, capital acquisition, and special problem areas and applications within the firm will be discussed.

**659 Portfolio Theory and Management.** Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 624 and 635 or equivalent. A study of current theory of valuation and performance of portfolios, focusing on models to express the risk/return characteristics of the portfolio. Will include models for portfolio selection and for evaluation of managed portfolios.

**660 Business Information Systems.** Semester course; 3 lecture hours. 3 credits. Introduces computer organization, programming, computers in management decision making, and systems analysis and design. Not open to students who have completed BUS 260 or the equivalent. (This is a foundation course.)

**661 Information Systems Development.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 660 or equivalent. (not open to those concentrating in information systems). Familiarizes students with the concepts and methodologies inherent in design and development of management information systems.

**662 EDP Auditing.** Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 604 and either 661 or 665 or equivalent courses. Concepts and applications of EDP auditing, including the audit of data processing facilities, systems, controls, and accounting records.

**663 Information Systems Procurement and Contracting.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Study of methods and techniques involved in procurement of ADP equipment, software, materials, and services; in contracting and in contract management.

**664 Topics in Information Systems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Study of current topics of concern to administrators of information systems organizations. Covers technical, management, and policy subjects.

**665 Advanced Systems Analysis and Design.** Semester course; 3 lecture hours. 3 credits. A required course for those concentrating in information systems. Prerequisites: BUS 362, 363, 364, 365, 367, and 645 or 648 or equivalent.

**666 Computer Performance Evaluation.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 645 or 632. Methodology and use of hardware and software tools for the evaluation of computer based information systems including people and machine productivity.

**667 Distributed and Teleprocessing Systems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 362, 363, 364, 365, 367 and 645 or 648 or equivalent. Computer network design, communication carriers and tariffs, communication line control, and communication hardware and software.

**668 Computer-aided Decision Making.** Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 362, 263, 364, 365, and 645 or equivalent. Familiarity with programming languages. Use of computers in modeling and solution of managerial decision-making problems.

**669 Forecasting Methods for Business.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 624 or equivalent that includes simple regression. A presentation of forecasting methods and applications for managerial decision making in business and other organizations. Coverage includes selection of appropriate methods and issues involved in developing and implementing forecasting models. Techniques covered include smoothing, seasonal adjustment, time series (Box-Jenkins) and judgmental methods.

**670 Concepts and Issues in Marketing.** Semester course; 3 lecture hours. 3 credits. Designed for graduate students with little or no undergraduate education in marketing. A study of the philosophy, environment, and practice of contemporary marketing. (This is a foundation course.)

**671 Marketing Management.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 670 or equivalent. Detailed study of concepts and procedural alternatives in the delineation of the market target, the development and implementation of the marketing mix, and the control and analysis of the total marketing effort.

**672 Concepts in Consumer Behavior.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 670 or equivalent. A study of the pertinent psychological, sociological, and anthropological variables that influence consumer activity and motivation.

**673 Marketing Research.** Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 624 and 670 or equivalents. A discussion of the techniques of marketing research. Special emphasis will be given to marketing problem definition, determination of information needs, and current methods of analysis of marketing data.

**674 Cases in Operations Research.** Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 608, 645 and completion of foundation courses or equivalent. Integrates and applies prior instruction in operations research. Provides experience in the use of operations research techniques for solving organizational problems through the analyses of cases and management simulations. Use of computer packages will be emphasized.

**675 Operations Management.** Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 640 and 645 or

equivalent. A systematic investigation of the concepts and issues in designing, operating, and controlling productive systems in both manufacturing and services. Emphasis is placed on modeling for problems in location and layout, scheduling, production and inventory control, quality control, work design, and maintenance.

**676 Marketing Strategy.** Semester course; 3 lecture hours. 3 credits. Prerequisites: all foundation courses, BUS 671 and 673 or equivalents. Application of marketing concepts and techniques to real-world situations. Development of a marketing plan designed to effectively market a new or existing product or service.

**677 Topics In Operations Management.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 675 or equivalent. An advanced analysis of one or more topics in operations management, selected from: production and inventory planning and control, quality control, facility location and layout, job design and measurement, scheduling, and maintenance.

**679 Case Studies in Federal Income Taxation.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 410 or equivalent. Tax problems of corporate liquidation, corporate reorganization, collapsible corporations, and corporate capital structure.

**680 Research in Federal Taxation.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 410 or equivalent. Tax research methodology; the sources of tax law and their relationship to tax research.

**681 Tax Administration and Procedure.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 680. The administrative processes within the Internal Revenue Service and the practices and procedures involved and/or available for the settlement of tax controversies.

**682 Taxation of Corporations and Shareholders.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 410 or equivalent. Corporate tax laws as related to the corporations involved and to individual shareholders; tax aspects of the creation, operation, reorganization, and partial liquidation of corporations; corporate distributions.

**683 Corporate Reorganizations and Collapsible Corporations.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 682. Continuation of the study of corporate taxation, with emphasis on corporate liquidations and reorganizations as well as collapsible corporations.

**684 Taxation of Partnerships and Selected Organizations.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 680. Tax problems related to operations of the partnership; entry of a new partner; withdrawal of a partner; payments to partners. Also, tax problems of tax-exempt organizations, private foundations, and other special corporate forms.

**685 Taxation of Property Transactions.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 405. Tax problems and elections relating to acquisition, holding, and disposition of property. Tax planning in relation to comparisons of sales and exchanges as

methods of acquiring and disposing of property; study of Section 1245, 1250, and 1231.

**686 Tax Aspects of Pensions, Profit-Sharing and Deferred Compensation Plans.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 682. Tax laws as related to pensions, profit-sharing, and deferred compensation plans, and the tax consequences related thereto for individuals and businesses.

**687 Income Taxation of Estates and Trusts.** Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 680. Tax laws relating to trusts, *inter vivos* and testamentary, and to estates. Tax planning will be stressed.

**688 Estate and Gift Taxation.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 680. Concepts of gross estate, marital deduction, powers of appointment, gross gifts, exclusions, deductions, and credits; tax aspects of estate planning.

**689 Taxation in Estate Planning.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 688. Estate planning as it encompasses the acquisition, protection, and disposition of property; the role of the accountant in estate planning.

**690 Business Research Seminar.** Semester course; 3 lecture hours. 3 credits. This course is designed to provide research experience for candidates not following the BUS 798-799 program. Approval of proposed work is required by the director of graduate studies in business.

**693 Field Project.** Semester course; 3 lecture hours. 3 credits. Students will work under the supervision of a faculty advisor in planning and carrying out a practical research project. A written report of the investigations is required. (To be taken at the end of the program.) Approval of proposed work is required by the director of graduate studies in business.

**697 Guided Study in Business.** Semester course; 3 lecture hours, 1, 2, or 3 credits. Graduate students wishing to do research on problems in business administration or business education will submit detailed outlines of their problems. They will be assigned reading and will prepare a written report on the problem. (To be taken at the end of the program.) Approval of proposed work is required by the director of graduate studies in business.

**701 Research Methods in Business.** Semester course; 3 lecture hours. 3 credits. Prerequisite: acceptance in the doctoral program. Study of the scientific method as currently applied in business and organizational research, with emphasis on philosophy, design, execution, and presentation of empirically-based knowledge.

**790 Doctoral Seminar.** Semester course; 3 lecture hours. 3 credits. Prerequisite: open only to Ph.D. students in business. An advanced course dealing with general theories, practices, and functions of the student's area of specialization.

**798-799 Thesis.** Year course; 3 lecture hours. 6 credits. Graduate students will work under supervision in outlining a graduate thesis and in carrying out the thesis.

**898 Dissertation Research.** 3 to 12 credits. Limited to Ph.D. in business candidates.

## DEPARTMENT OF ECONOMICS (ECO)

**600 Concepts in Economics.** Semester course; 3 lecture hours. 3 credits. Essential economic concepts including the price system, price determination in imperfectly competitive markets, employment theory, and monetary theory. Not open to students who have completed ECO 201 and 202 or the equivalent. (This is a foundation course.)

**601 Contemporary Economic Problems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201-202 or 600 or equivalent. An analysis of current economic issues. Not open to economics majors.

**602 Comparative Economic Systems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: 9 semester hours of economics. Surveys the organization, operation, and performance of capitalism, socialism, and the centrally planned economy.

**603 History of Economic Thought.** Semester course; 3 lecture hours. 3 credits. Prerequisite: 6 semester hours of intermediate micro and macroeconomics. A survey of the principal contributions to the development of economic theory by leading economists from medieval times to the present.

**604 Advanced Microeconomic Theory.** Semester course; 3 lecture hours. 3 credits. Prerequisite: undergraduate course in intermediate microeconomic theory or theory of the firm. Theory of prices and markets; value and distribution. Partial and general equilibrium analysis.

**605 Economic Development.** Semester course; 3 lecture hours. 3 credits. Prerequisite: 12 semester hours of economics. Examination of problems of poverty and economic policies in developing countries. Areas considered are Southeast Asia, Middle East, Africa, and Latin America.

**606 Urban Economic Problems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 600 or equivalent. A study of the location of economic activity, zoning, blight and unemployment, urban renewal, and redevelopment programs.

**607 Advanced Macroeconomic Theory.** Semester course; 3 lecture hours. 3 credits. Prerequisite: undergraduate course in macroeconomic theory. National income analysis, monetary and fiscal theory and policy, and general equilibrium analysis.

**609 Advanced International Economics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 600 or equivalent. An advanced level examination of why trade occurs, balance of payments concept and adjustment, international equilibrium, forward exchange, markets, international investment, and international organizations.

**610 Managerial Economics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 600 or equivalent. Analysis of business decisions, applying tools of

economic theory. Decisions on demand, production, cost, prices, profits, and investment.

**612 Econometrics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 401 or equivalent or permission of instructor. Provides empirical content to the theoretical concepts of economics by formulating and estimating models. Introduction to simultaneous equation problems in economics and the studies of production, demand, and consumption functions.

**614 Mathematical Economics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 403 or equivalent or permission of instructor. Economic analysis utilizing simple mathematical methods. Includes derivation and exposition of theories and the application of tools to widen the scope and increase the usefulness of economics.

**616 Advanced Public Finance.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 306 or equivalent or permission of instructor. Theory and application of public finance, including taxation, expenditures, and budgeting. Special attention to cost-benefit analysis and to intergovernmental relations in a federal system.

**617 Financial Markets.** Semester course; 3 lecture hours. 3 credits. Prerequisites: money and banking, intermediate macroeconomics. Theories of markets for loanable funds are related to empirical findings and institutional structures. Yields of financial assets, kinds of debt instruments, financial institutions, public policy, financial models, and the role of money and credit in economic growth are considered.

**620 The Economics of Industry.** Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 301, or 303, or 610, or the equivalent. The application of economic analysis to the structure, conduct, and performance of industry; public regulation and policies to promote workable competition.

**621 Topics in Economics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 600 or equivalent

and permission of instructor. Study of specialized topic(s) in economics.

**624 Health Economics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 600 or equivalent. Develops an understanding of (1) economics as a managerial tool in making choices or decisions that will provide for an optimum allocation of limited health care resources and (2) economics as a way of thinking about and approaching issues of public policy in financing and organizing health and medical services. Individual research on crucial or controversial economic issues in the health field.

**631 Labor Market Theory and Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 600 or one year undergraduate Principles of Economics. The study of theories and applications designed to analyze wage rate, wage structure, and employment patterns. Studies exploring specific labor markets and problems will be examined.

**682 An Economic Approach to Environmental Issues.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 600 or equivalent. The effect of externalities in terms of efficiency and equity considerations. The role and problems of benefit-cost analysis in decision making is developed. The interrelationship of air, water, and land quality issues is analyzed. The use rate of natural resources, energy consumption, and the steady-state economy and their impacts are evaluated.

**690 Seminar in Economic Methodology and Research.** Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 604, 607, and 612 or 12 credit hours of graduate economics courses. Familiarizes students with various research methodologies and research techniques, and provides in an elected field of economics, research experience and a survey of the literature.

**798-799 Thesis in Economics.** Year course; 3 lecture hours. 6 credits. Graduate students will work under supervision in outlining a graduate thesis and in carrying out the thesis.



## Part VII—School of Community and Public Affairs

### ADMINISTRATIVE OFFICERS

LAURIN L. HENRY, B.A., M.A., Ph.D.  
Dean

ALVIN J. SCHEXNIDER, B.A., M.A., Ph.D.  
Associate Dean

E. DAVIS MARTIN, JR., B.S., M.S., Ed.D.  
Assistant Dean

The School of Community Services was established in September, 1969, in recognition of the need for interdepartmental and interdisciplinary relationships to provide better solutions to human problems in a complex society which is rapidly becoming urbanized. In 1981, the school changed its name to the School of Community and Public Affairs in order to reflect more accurately the nature and scope of its academic and professional activities.

The School of Community and Public Affairs offers the following degrees:

Administration of Justice and Public Safety (M.S.)

Public Administration (M.P.A.)  
Recreation (M.S.)

Rehabilitation Counseling (M.S.)

Urban and Regional Planning (M.U.R.P.)

Doctor of Public Administration (D.P.A.)

### ADMISSION PROCEDURES

Applicants are responsible for submitting all required admission documents to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University,

821 West Franklin Street, Richmond, VA 23284. These documents become the property of the university and are not returned to the applicants. After all required documents have been received, candidates will be notified of the decision of the department as soon as possible by the dean of the School of Graduate Studies.

Unless otherwise specified by the department, the application deadline for degree-seekers for the fall semester is August 1; the deadline for the spring semester is December 1. However, all applicants—especially those seeking financial aid—are urged to apply before March 1 in order to have the best chance of being accepted or receiving an award of financial assistance for the following academic year.

The following must be submitted to the Office of Enrollment Services when applying for admission.

1. **Application Form.** Candidates seeking admission to the university in a graduate degree program must file graduate applications for admission before the specified deadline. Care should be taken to read the directions accompanying the application and to complete all information requested. Incomplete applications will result in a processing delay.
2. **Official Transcripts.** Two copies of the official transcript from an accredited



institution showing that a bachelor's degree was awarded must be submitted. In addition, official transcripts of all work undertaken beyond the bachelor's degree must be submitted. (Note: An "official" transcript includes the school seal affixed by the registrar.)

- a) College seniors may be provisionally admitted to a graduate program on partial transcripts with the proviso that complete transcripts will be submitted upon completion of the bachelor's degree.
3. **Letter of Reference.** Three letters from persons qualified to give information concerning the applicant's promise of success in graduate study are required on official reference forms. Applicants who received their undergraduate degrees within the past five years are urged to request references from faculty members at their undergraduate institutions.
4. **Personal Letter.** Each applicant must submit a letter stating reasons for wanting to enter graduate study.
5. **Application Fee.** A nonrefundable application fee of \$10 in the form of a check or money order, payable to Virginia Commonwealth University, must be submitted with the application.
6. **Scholastic Aptitude Test (GRE) Scores.** Applicants must submit the results of the Aptitude Test (verbal and quantitative sections) of the Graduate Record Examination. Satisfactory GRE or other test scores are determined by the departmental admissions committees.

Applications for the GRE may be obtained from the School of Graduate Studies, the Office of Enrollment Services, or from the Graduate Record Examination, Educational Testing Service, Box 955, Princeton, NJ 08540. (There are specific deadlines for registration for the examination.)

### FULL ACCEPTANCE

Applicants are notified of the decision by the dean, of the School of Graduate Studies.

### PROVISIONAL ACCEPTANCE

Applicants who do not fully meet the requirements for admission may be accepted provisionally upon recommendation of the department. The provisions for earning full acceptance are stated in the provisional acceptance letter sent to students by the dean of graduate studies.

### SPECIAL STUDENTS

A special student in the School of Community and Public Affairs may not take more than a total of nine semester hours of course work as a special student without having formally applied for admission to a graduate program within the school, and no more than a total of 12 semester hours without having been accepted as a degree-seeking student in a graduate program in the school. For more than nine semester hours, the student must have the approval of the chairman of the department. Courses taken as a special student may not necessarily apply toward departmental degree requirements.

### TRANSFER CREDIT

Graduate credits earned at other institutions must be approved by the department. See departmental descriptions for specific transfer provisions.

### PART-TIME STUDY

Degree-seeking students may complete requirements for the degree by studying as full- or part-time students during the regular academic year and summer sessions.

### ADVISING PROGRAM

Students admitted to any department in the School of Community and Public Affairs are assigned an advisor from the departmental faculty. In addition to academic counseling, the advisor is available for advice on other matters whenever students perceive a need.

### EFFECTIVE BULLETIN

Students complete the degree programs listed in the bulletin effective at the time of admission to a graduate program.

Students in continuous enrollment may

choose to stay with their original bulletin or change to a later issue, at their option, but must satisfy all requirements of either.

## Doctor of Public Administration Program<sup>1</sup>

L. Grosenick, Interim Director

**FACULTY** The graduate faculty of the School of Community and Public Affairs

### DPA PROGRAM COMMITTEE

Brown, John C. *Assistant Professor* Ph.D., University of Pittsburgh; urban finance and policy, economic development.

Fairholm, Gilbert W. *Associate Professor* D.P.A., State University of New York at Albany; organizational theory, applied behavioral science.

Farmer, David J. *Associate Professor* D.P.A., Nova University; criminal justice and police management.

Grosenick, Leigh E. *Professor* Ph.D., University of Minnesota; managerial ethics and public policy, local government financial management.

Hartsoe, Charles E. *Professor and Chairman, Department of Recreation* Ph. D., University of Illinois; administration, historical and philosophical foundations in recreation.

Henry, Laurin L. *Professor and Dean* Ph.D., University of Chicago; the American presidency, bureaucracy.

Luck, Richard S. *Assistant Professor* Ed.D., University of Virginia; supervision and administration.

Oliver, Robert B. *Assistant Professor* Ph.D., University of Virginia; organizational theory, research and evaluation.

Pak, Chong M. *Professor and Chairman, Department of Public Administration* D.P.A., University of Southern California; administrative and organizational theory, organizational behavior.

Schexnider, Alvin J. *Associate Professor and Associate Dean*, Ph.D., Northwestern University; urban politics, intergovernmental relations.

The Doctor of Public Administration (DPA) program is a school-wide degree program of the School of Community and Public Affairs. The teaching faculty is drawn primarily from the graduate faculty of the School of Community and Public Affairs, but also includes the graduate faculties of other professional and academic schools at Virginia Commonwealth University. The multi-disciplinary nature of the program enables students to utilize the talents of the

entire VCU faculty to acquire a quality doctoral education.

As an advanced professional degree for public executives, the goals of the Doctor of Public Administration program are to provide a quality education to a limited number of individuals who have demonstrated administrative abilities, executive potential intellectual capabilities, and a strong commitment to the public service. Those who complete the degree program will be educationally prepared to assume positions of executive and policy leadership in variety of governmentally- and public-oriented organizations.

Although the major educational focus of the program is centered about a core of required courses, there are two program options—an administrative management track and a program management track. The former is especially appropriate to those persons who have served as generalist governmental managers or who have pursued careers in the management or staff specialties of governmental organizations. The latter properly serves a more diverse group of individuals whose previous professional education and experience in a substantive governmental program field has necessitated the acquisition of executive management expertise and understandings.

### REQUIREMENTS FOR ADMISSION

Applicants to the program must hold a master's degree from an accredited institution of higher education or a recognized post-baccalaureate degree in one of the professions, such as law or medicine. In addition, applicants are expected to have had an appropriately relevant organization professional experience for a period of five years. The Graduate Record Examinations Aptitude Test or the Graduate Management Admissions Test is required of all applicants. Admissions decisions will be made only once each year, by May 1. Personal interviews with the Doctoral Committee will be scheduled for those who meet the basic requirements before an admissions decision is made.

There is no full-time study requirement. It is expected that during the period of required course work students may continue to be ful-

<sup>1</sup>To begin fall 1982, subject to final approval of the State Council of Higher Education for Virginia.

ly employed. Required doctoral core courses will be scheduled on an intensive weekend basis. Full-time graduate study is possible after the second year of the program, 1984-85.

Application forms may be obtained from the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

**REQUIREMENTS FOR THE DOCTOR OF PUBLIC ADMINISTRATION (D.P.A.) DEGREE**

A minimum of 36 semester credit hours past the master's or professional degree is required. Up to six semester hours of credit may be granted for appropriate course work completed in a doctoral program at an institution of higher education which is accredited for doctoral studies. There is no foreign language requirement, but competency in analytical methods must be demonstrated. The core curriculum and other requirements are briefly described below:

1. The successful completion of all requirements for the D.P.A. degree will mean that students have successfully passed through six educational gates beginning with an acceptance into the program on a provisional basis and enrollment in the first of the core courses.
  - Gate 1.* Successful completion of DPA 711 Public Career Analysis and Planning. After this course is completed, students choose to continue with the program.
  - Gate 2.* Full admission into the D.P.A. program. This occurs after the successful completion of DPA 712 Public Professionals and an informal review of student progress by the Doctoral Committee of the School of Community and Public Affairs.
  - Gate 3.* The demonstration of methods competency through the completion of nine semester hours of advanced analytical methods courses, or through passing a competency examination or examinations in analytical methods. This step is required before other core courses are undertaken.
  - Gate 4.* Formal faculty review of student

progress. After a student has completed one-half of the required curriculum, the Doctoral Committee will formally review the student's progress toward the degree. At this point, the student will be urged to continue or discontinue studies.

*Gate 5.* Successful completion of comprehensive written and preliminary oral examinations; and admittance to candidacy for the degree.

*Gate 6.* Dissertation presentation and approval.

2. **Core Curriculum.** The core curriculum listed below must be completed by all students. These courses must be taken in the order listed.

DPA 711 Public Career Analysis and Planning

DPA 712 The Public Professions

DPA 713 Ethics and Public Policy

DPA 714 Government Organization Design (This course has a prerequisite of methods competency)

DPA 715 Advanced Public Policy Systems Analysis (This course has a prerequisite of methods competency)

DPA 716 Theory and Practice in Public Administration

Individuals who have completed a nine-semester hour sequence in the policy track of the Master of Public Administration program or similar courses in other programs can be exempted from the DPA 715 requirement. This exemption does not affect the 36 hour minimum degree requirement.

3. **Methods Competency.** Competency in analytical methods will be measured by the successful completion of a minimum of nine semester hours in graduate methods courses or by a competency examination. Methods courses taken in a master's degree program will count toward this requirement if the courses were graduate level offerings. The precise configuration of courses taken will be decided by the student in consultation with an advisor. These courses are offered on a regular basis by the school and other graduate departments at Virginia Commonwealth University.
4. **Program Options.** Students may choose between two subject matter tracks in com-

pleting formal course work for the D.P.A. degree:

- a. **The Administrative Management Track.** Those who choose this track will complete the following two courses:

PAD 670 Advanced Governmental Financial Management

PAD 682 Advanced Governmental Personnel Management

Students who have offered either or both of these courses, or their equivalents, for a master's degree, will substitute two other appropriate advanced courses in general management from the graduate offerings of the School of Community and Public Affairs or another of the schools that offer such advanced courses; or, in consultation with an advisor, will engage in independent studies supporting the Administrative Management Track. All prerequisites for enrolling in these courses must be met. Students who feel qualified by experience or previous study may take competency examinations to fulfill prerequisite course requirements.

- b. **The Program Management Track.** Students opting for this track will complete two of the courses listed below, usually from a single program area:

AJP 763 Seminar in Social Justice

AJP 773 Seminar in Criminal Justice Systems

RCO 656 Seminar in Rehabilitation Administration and Supervision

RCO To be announced

USP 731 Economic Development Planning

USP To be announced

All prerequisites for these courses must be satisfied. Other Program Management Track options can be developed in cooperation with the faculties of other schools and departments at Virginia Commonwealth University.

5: **Comprehensive Written Examinations.**

After the successful completion of all of the courses required in the core curriculum, the establishment of methods competency, and the completion of the required courses in either the Administrative Management or Program Management Tracks, students may present themselves for written examinations in the core and an option. Those who fail to demonstrate competence on these examinations will be allowed to retake them once.

6. **Preliminary Oral Examination and Admittance to Candidacy.** After passage of the comprehensive written examinations, an oral examination by the faculty will be scheduled. In addition to demonstrating a doctoral level of understanding of the discipline, students will be required to present dissertation plans. Completion of this phase of the program will admit the student to doctoral candidacy.

7. **Dissertation Preparation.** Under the guidance of faculty first and second readers, and with the assistance of an advisory doctoral committee, the candidate for the D.P.A. degree will prepare an appropriate dissertation. During the period of this preparation the student will continuously enroll in DPA 898 Dissertation Research.

8. **Dissertation Presentation.** After the approval of the dissertation by the first and second faculty readers and the dissertation committee, a dissertation presentation will be scheduled. In addition to the student's academic advisors, well-qualified professionals will be invited to critique the dissertation presentation. Acceptance of the dissertation will lead to the awarding of the Doctor of Public Administration degree.

**GRADUATE COURSES IN DOCTORATE OF PUBLIC ADMINISTRATION PROGRAM (DPA)**

**711 Public Career Analysis and Planning.** Semester course; 4 lecture hours. 4 credits. An extensive analysis of student's career plans and their *relationship to* the DPA Program. Included are each student's 1) assessment of personal and career milestones; 2) examination and presentation of life and career goals; 3) evaluation

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of data from the professional community; and 4) statement of DPA and life long learning plans. (Doctoral students only)

**712 The Public Professions.** Semester course; 3 lecture hours. 3 credits. A critical review of the development of the public professions with special emphasis upon the combination of historical, cultural, technological, and intellectual forces that led to the growth of public management and its differentiation from private or corporate systems. (Doctoral students only)

**713 Ethics and Public Policy.** Semester course; 3 lecture hours. 3 credits. An examination of the role of ethics and ethical reasoning within the American public policy system. Special emphasis is given to the personal and professional ethical structures of the public executive and how these impact upon public policy. Topics include obligation, values, constitutionalism, distributive justice, equity, equality, secrecy, and lying. (Doctoral students only)

**714 Government Organization Design.** Semester course; 3 lecture hours. 3 credits. An intensive examination of government organizational theory from a macro level focusing on public sector organizations and their environments, technologies, and structures. Also incorporated are aspects of organizational research which serves as a vehicle for examining and further understanding the above variables. Methods competency required. (Doctoral students only)

**715 Advanced Public Policy Design and Evaluation.** Semester course; 3 lecture hours. 3 credits. A comprehensive examination of the theory and practice of public policy decision-making, analysis, and evaluation. The course is designed to provide students with an awareness of the public policy environment and knowledge of the range of decision tools available for prospective analysis and program evaluation. Methods competency required. (Doctoral students only)

**716 Theory and Practice in Public Administration.** Semester course; 3 lecture hours. 3 credits. The application of theory to public policy operational problems. Students will select major theoretical and operational perspectives for critical analysis from an administrative and management standpoint. (Doctoral students only)

**898 Dissertation Research.** Semester course. 3 to 12 hours. May be repeated for credit. Prerequisite: admittance to doctoral candidacy. Research on an approved dissertation subject.

## Department of Administration of Justice and Public Safety

### FACULTY

Deurmier, Armon O. *Assistant Professor* S.S.E., Central Missouri State University; safety and education.

Farmer, David J. *Associate Professor* D.P.A., Nova University; criminal justice management and police management.

Hageman, Mary J. *Assistant Professor* Ph.D., Washington State University; administration, management and juvenile justice.

Hague, James L. *Associate Professor* J.D., L.L.M., University of Virginia School of Law; criminal law and procedure, course and judicial process.

Hooker, James E. *Assistant Professor* M.A., Washington State University; criminal justice management and criminalistics.

Keve, Paul W. *Professor* M.S.W., Richmond Professional Institute; corrections and social work.

Malcan, Jay W. *Assistant Professor* Ph.D., Florida State University; criminology and corrections.

Morgan, James P. *Associate Professor and Acting Chairman* M.P.A., City University of New York; management and organizational development.

The graduate program in administration of justice and public safety is designed to provide advanced educational preparation for practitioners and students pursuing careers in the fields of criminal justice or juvenile justice. Such preparation includes understanding appropriate theoretical positions and developing appropriate professional skills.

The Master of Science in administration of justice (MS) is a one year degree program requiring 36 semester hours of classwork. Four separate options are available, designed to meet specific needs of differing students. These options are

Intervention/Prevention—for the practitioner or student interested in developing treatment or case management skills appropriate for counseling positions, probation or parole positions, or correctional institutions.

Program Management (Administration)—for the practitioner or student interested in developing skills appropriate for middle and upper level management positions in criminal justice.

Research—for the practitioner or student interested in developing research evaluation related skills, or planning to pursue the Ph.D. degree.

Manpower Development—for the practitioner or student interested in training positions in criminal or juvenile justice agencies, and/or community college level education.

Within each option, students take appropriate graduate courses from AJPS faculty and other selected departments in the university. Each option includes sufficient flexibility for students to elect to emphasize areas of the specialized professional interest. The Department of Administration of Justice offers students the opportunity to

complete the equivalent of a minor in several related fields: public administration, rehabilitation counseling, sociology, business, education, and urban planning. A two-course foundation sequence is required for all students who do not hold an undergraduate degree in criminal justice; field placement opportunities will be available for students without field experience.

The program is designed to accommodate both full- and part-time students. Nearly all courses are available in the evenings after 4 pm; weekend courses are also offered for students desiring to commute to Richmond on a work-study basis.

The Master of Science in the administration of justice program was established in 1975 in response to a clear expression of need from the justice field, and as an outgrowth of the undergraduate administration of justice and public safety program.

### **WORK-STUDY**

A work-study program is available for those students able to come to classes only on weekends. The program is presented on a split intensive basis including weekends during the semester. Several such courses will be offered each year permitting students to take all administration of justice and public safety courses necessary to graduate over a period of four years. Students should register for work-study courses through the evening program in the usual manner.

### **NORTHERN VIRGINIA PROGRAM**

Graduate courses in the program management option are also available in northern Virginia. The courses are generally taught on the campus of George Mason University in Fairfax.

### **ADMISSIONS**

Beyond the general graduate school standards listed admissions will be based on:

1. An undergraduate grade-point average of at least 2.7.
2. Previous evidence of ability to perform graduate level work (such as graduate level course work with grade of "B" or above).
3. Assessment of prior experience or

potential in criminal justice and related areas.

4. In addition, applicants will be evaluated by the Departmental Admissions Committee in two general areas: evidence of the ability to perform satisfactorily at the graduate level, and evidence of commitment and potential for contribution to the field.

### **TRANSFER CREDIT**

At the time of acceptance of a student into the program, a maximum of six semester hours of appropriate graduate credit may be applied toward a Master of Science degree in the Department of Administration of Justice and Public Safety. Recommendations to accept transfer credit or to deviate from this policy will be made by the departmental admissions committee to the dean of the School of Graduate Studies.

### **FINANCIAL AID INFORMATION**

Information and application forms for the Law Enforcement Education Program (LEEP) may be secured from the Virginia Commonwealth University Financial Aid Office, 327 West Main Street, Richmond, VA 23284.

### **REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN ADMINISTRATION OF JUSTICE**

(In addition to general graduation requirements)

1. Students must complete a minimum of 36 graduate semester credits approved by the chairman, with an overall grade point average of 3.0 or above.
2. Students without acceptable experience in administration of justice must complete a supervised field placement under the direction of the department and the immediate supervision of a qualified person in an approved agency or facility.
3. All students must pass a comprehensive examination. It is administered after students have completed a minimum of 30 graduate credits. This examination presently is coordinated in

conjunction with a faculty committee review of the student's required research project (692 or Thesis 799).

**CORRESPONDENCE AND INFORMATION**

Further information and appropriate forms may be obtained by writing to the Chairman, Department of Administration of Justice and Public Safety, Virginia Commonwealth University, 816 West Franklin Street, Richmond, VA 23284, (804) 257-1050.

Application forms and other material may be obtained from the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284, (804) 257-0334.

**PROGRAM OPTIONS**

**INTERVENTION/PREVENTION OPTION**

	<i>Credits</i>
AJP 501 <sup>2</sup> Behavior and Justice System Intervention . . . . .	3
AJP 502 <sup>2</sup> Judicial Process and Intervention . . . . .	3
AJP 511 Research and Evaluation in Administration of Justice . . . . .	3
REH 611 Principles, Methods, and Techniques in Rehabilitation Counseling . . . . .	3
REH 612 Principles, Methods, and Techniques in Rehabilitation Counseling (Group Methods) . . . . .	3
AJP 555 Community-Based Corrections . . . . .	3
AJP 600 Seminar: Innovations in Administration of Justice . . . . .	3
AJP 692 Independent Study . . . . .	3
Select two . . . . .	6
AJP 525 International Crime Control And Prevention (3 credits)	
AJP 611 Delivery of Services in Administration of Justice (3 credits)	
AJP 621 Prevention and Diversion in Administration of Justice (3 credits)	
AJP 625 Managing Community Resources Toward Diversion	
AJP 655 Planning and Politics of Community-Based Corrections (3 credits)	
AJP 661 Case Management in Justice and Public Safety (3 credits)	
Recommended Electives . . . . .	<u>6</u>
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**Recommended Electives:**

- AJP 574 Correctional Institution Development and Design
- AJP 660 Public Safety: Legal Systems
- EDU 571 Education of Self
- PSY 507 Abnormal Psychology

- PSY 508 Forensic Psychology
- PSY 509 Personality
- PSY 511 Survey of Psychological Tests
- PSY 623 Counseling and Psychotherapy
- PSY 630 Social Psychology
- REH 521 Overview of Alcoholism
- REH 607 Community Resources
- REH 625 Measurement and Evaluation in Rehabilitation
- REH 655 Seminar in Rehabilitation
- SOC 620 Criminology
- SOC 630 Social Psychology

**PROGRAM MANAGEMENT OPTION**

	<i>Credits</i>
AJP 501 <sup>2</sup> Behavior and Justice System Intervention . . . . .	3
AJP 502 <sup>2</sup> Judicial Process and Intervention . . . . .	3
AJP 511 Research and Evaluation in Administration of Justice . . . . .	3
AJP 611 Delivery of Services in Administration of Justice . . . . .	3
AJP 631 Public Safety: Administrative Trends and Issues . . . . .	3
AJP 600 Seminar: Innovations in Administration of Justice . . . . .	3
Select three . . . . .	9
AJP 525 International Crime Control and Prevention (3 credits)	
AJP 555 Community-Based Corrections	
AJP 574 Correctional Institution Development and Design (3 credits)	
AJP 612 Public Safety: Policy Issues in the Administration of Justice (3 credits)	
AJP 621 Prevention and Diversion in Administration of Justice (3 credits)	
AJP 622 Public Safety: Comparative Systems (3 credits)	
AJP 655 Planning and Politics of Community-Based Corrections (3 credits)	
AJP 660 Public Safety: Legal Systems (3 credits)	
AJP 661 Case Management in Justice and Public Safety (3 credits)	
AJP 692 Independent Study . . . . .	3
Recommended Elective . . . . .	<u>6</u>
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**Recommended Elective:**

- BUS 509 Governmental Accounting
- BUS 643 Administrative Systems
- BUS 660 Business Information Systems
- EDU 645 Public Relations Principles (2 credits)
- PAD 601 Introduction to Public Administration
- PAD 607 Personnel Administration in Governmental Organizations
- PAD 621 Organizational Behavior and Management in Government
- PAD 631 Financial Management and Budgeting in Government
- PAD 641 Analytic and Evaluative Methods in Public Administration

<sup>2</sup>For those with appropriate undergraduate preparation, an additional six hours of approved elective credit may be substituted.

REH 607 Community Resources  
 SOC 610 Complex Organizations  
 SOC 615 Seminar in Mass Communications  
 SOC 620 Criminology  
 USP 511 Urban Public Policy-Making Processes  
 USP 512 Metropolitan and Regional Public Management  
 USP 522 Programming and Budgeting  
 USP 531 Introduction to Urban and Regional Planning  
 USP 671 Planning Methods I: Planning Information Systems and Research Design  
 USP 672 Planning Methods II: Plan Formulation Implementation Strategies

**RESEARCH AND EVALUATION OPTION**

*Credits*

AJP 501<sup>2</sup> Behavior and Justice System Intervention . . . . . 3  
 AJP 502<sup>2</sup> Judicial Process and Intervention . . . 3  
 AJP 511 Research and Evaluation in Administration of Justice . . . . . 3  
 AJP 512 Advanced Research and Evaluation . . . 3  
 AJP 600 Seminar: Innovations in Administration of Justice . . . . . 3  
 SOC 608<sup>3</sup> Advanced Statistical Methods (3 credits) Select three. . . . . 9  
 AJP 525 International Crime Control and Prevention (3 credits)  
 AJP 555 Community-Based Corrections (3 credits)  
 AJP 574 Correctional Institution Development and Design (3 credits)  
 AJP 611 Delivery of Services in the Administration of Justice (3 credits)  
 AJP 621 Prevention and Diversion in Administration of Justice (3 credits)  
 AJP 622 Public Safety: Comparative System  
 AJP 655 Planning and Politics of Community-Based Corrections (3 credits)  
 AJP 660 Public Safety: Legal Systems (3 credits)  
 AJP 799 Thesis . . . . . 6  
 Recommended Electives. . . . . 6  
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**Recommended Electives:**

CSC 501 Data Structures  
 CSC 503 Programming Language  
 CSC 504 Compiler Construction  
 CSC 505 Computer Organization  
 PSY 511 Survey of Psychological Tests  
 PSY 627 Statistics in Psychological Research  
 PSY 643 Principles of Psychological Measurement  
 SOC 600 Advanced Principles of Sociology  
 SOC 601 Advanced Methods of Social Research  
 SOC 602 Seminar in Sociological Theory  
 SOC 620 Seminar in Criminology  
 SOC 622 Theory Construction  
 BUS 564 Complex Information Systems  
 BUS 566 Computer Performance Analysis  
 BUS 632 Statistical Analysis  
 BUS 645 Operations Research  
 BUS 661 Information Systems Development

PAD 623 Analytical and Evaluations Methods in Public Administration  
 PAD 627 Policy Analysis Research  
 URP 671 Planning Methods I: Planning Information System and Research Design

**MANPOWER DEVELOPMENT (EDUCATION AND STAFF TRAINING) OPTION**

*Credits*

AJP 501<sup>2</sup> Behavior and Justice System Intervention . . . . . 3  
 AJP 502<sup>2</sup> Judicial Process and Intervention . . . 3  
 AJP 511 Research and Evaluation in Administration . . . . . 3  
 AJP 621 Prevention and Diversion in Administration of Justice . . . . . 3  
 AJP 600 Seminar: Innovations in Administration of Justice . . . . . 3  
 Select three. . . . . 9  
 AJP 525 International Crime Control and Prevention (3 credits)  
 AJP 555 Community-Based Corrections (3 credits)  
 AJP 574 Correctional Institution Development and Design (3 credits)  
 AJP 611 Delivery of Services in Administration of Justice (3 credits)  
 AJP 612 Public Safety: Policy Issues in the Administration of Justice (3 credits)  
 AJP 622 Public Safety: Comparative Systems (3 credits)  
 AJP 625 Managing Community Resources Toward Diversion (3 credits)  
 AJP 631 Public Safety: Administrative Trends and Issues (3 credits)  
 AJP 655 Planning and Politics of Community-Based Corrections (3 credits)  
 AJP 660 Public Safety: Legal Systems (3 credits)  
 AJP 661 Case Management in Justice and Public Safety (3 credits)  
 AJP 692 Independent Study . . . . . 3  
 Select one: . . . . . 3  
 EDU 687 The Adult Learner (3 credits)  
 EDU 688 Instructional Strategies for Adults (3 credits)  
 EDU 698 Adult Education Seminar (3 credits)  
 Recommended Electives. . . . . 6  
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**Recommended Electives:**

EDU 648 Preparation of Instructional Materials  
 EDU 649 Utilization of Educational Media and Materials  
 EDU 686 The Adult Education Movement  
 EDU 694 The Community College, Its History and Development  
 EDU 696 Adult Program Management and Evaluation  
 SOC 620 Criminology

<sup>3</sup>An applied social science statistics course may be substituted for SOC 608.

<sup>2</sup>For those with appropriate *undergraduate preparation*, an additional six hours of approved elective credit may be substituted.



## GRADUATE COURSES IN ADMINISTRATION OF JUSTICE (AJP)

**501 Behavior and Justice System Intervention.** Semester course; 3 lecture hours. 3 credits. A survey of factors associated with human behavior as related to crime prevention and justice system intervention. Emphasis is placed on the sociopath, aggressive offender, sub-cultural client of the justice system, and the youthful delinquent. (Graduates of appropriate undergraduate curricula may obtain permission to substitute this course.)

**502 Judicial Process and Intervention.** Semester course; 3 lecture hours. 3 credits. A survey of the theoretical and historical foundations of juvenile and criminal law, American judicial system, and system intervention. Includes review of juvenile and criminal courts, issues related to placement and sentencing practices, and relationship of the legal process to prevention and intervention. (Graduates of appropriate undergraduate curricula may obtain permission to substitute this course.)

**511 Research and Evaluation in Administration of Justice.** Semester course; 3 lecture hours. 3 credits. Examination of juvenile and criminal justice research and evaluation, emphasizing principles of design, methodology, analysis, and interpretation of data. Ascertains the reliability, validity, and applicability of justice system research.

**512 Advanced Research and Evaluation.** Semester course; 3 lecture hours. 3 credits. Exploration of more sophisticated justice system research techniques and methodologies. Students design methods of applying research and evaluation principles to actual operational problems in the justice and safety systems.

**525 International Crime Control and Prevention.** Semester course; 3 lecture hours. 3 credits. An analytical study of the United Nations, Interpol, the World Court, and other crime control and prevention agencies, operating on the international scene and an examination of new, emerging types of crimes throughout the world. Exploration of etiological factors related to international criminality. Review of planning and world models for crime reduction/prevention.

**555 Community-Based Correctional Programs.** Semester course; 3 lecture hours. 3 credits. A comprehensive overview of community correctional programs is offered. Probation and parole are covered in detail.

**574 Correctional Institution Development and Design.** Semester course; 3 lecture hours. 3 credits. Examines the various concepts, theories, and techniques involved in development of modern correctional treatment processes as they influence design of correctional institutions, including community-based facilities. Students analyze current designs and architectural innovations in corrections, with major consideration directed toward the national standards for correctional architecture.

**600 Seminar: Innovations in Administration of Justice.** Semester course; 3 lecture hours. 3 credits. Seminar in administration of justice topics, including new intervention and prevention techniques, victimization and data analysis, impact of juvenile and correctional law and

court decisions, and other current pertinent issues. (One semester required for all graduate students; may be repeated once as an elective).

**611 Delivery of Service in Administration of Justice.** Semester course; 3 lecture hours. 3 credits. Analyzes contemporary and innovative practices in delivery of public safety services with emphasis on administrative, organizational, and management principles. Includes discussion emphasis on managing change and long-range planning within juvenile justice, criminal justice, and public safety agencies or programs.

**612 Public Safety: Policy Issues in the Administration of Justice.** Semester course; 3 lecture hours. 3 credits. Examines critical public policy issues relating to the administration of justice in terms of society's interests. Emphasizes policy and planning implications of: inter-agency relationships, the impact of social change in the criminal justice process, and community involvement in the control and prevention of crime in an urbanized society. Special attention is directed to the distribution of crime and disturbance, the development of public safety indicators, and the alternative for governmental response.

**621 Prevention and Diversion in Administration of Justice.** Semester course; 3 lecture hours. 3 credits. Evaluates recent developments in preventive techniques and strategies related to juvenile delinquency and youthful or adult offenders. Considerable attention devoted to theories and practices associated with diversion of juveniles and adults from the formal justice system, and to workable models for crime and delinquency prevention programs.

**622 Public Safety: Comparative Systems.** Semester course; 3 lecture hours. 3 credits. Study of contemporary national and international criminal justice and public safety systems, emphasizing their comparative aspects. Critique of major hypotheses; review of recent developments and contributions of operational agencies and academic institutions through projects and research.

**625 Managing Community Resources Toward Diversion.** Semester course; 3 lecture hours. 3 credits. Views diversions from the juvenile justice system as an unstructured series of subsystems involving various community resources including education, employment, recreation, religion, mental health, and civic groups. The planning and management of these resources toward the common goal of crime and delinquency prevention will be studied, as well as the implication for the resources. Principles and skills developed will be applicable to diversion of adults from the criminal justice system.

**631 Public Safety: Administrative Trends and Issues.** Semester course; 3 lecture hours. 3 credits. Examines administrative behavior and organizational theory in criminal justice and public safety agencies. Analyzes substantive administrative concepts, program planning and development, and innovative management practices.

**655 Public Safety: Planning and Politics of Community-Based Corrections.** Semester course; 3 lecture hours.

3 credits. Examines the process of planning community-based correctional programs. Administrative problems related to budgeting, staffing, and managerial policy-making are considered. Political considerations in introducing innovative correctional programs which involve the community and criminal justice agencies are reviewed as part of the planning process.

**660 Public Safety: Legal Systems.** Semester course; 3 lecture hours. 3 credits. Comparative study of the formal and informal procedures of various criminal justice systems. Examines the major constraints and authorizations of the legal and judicial systems on arrest, prosecution, trial, sentencing, appeal, and the general operations of the criminal justice system.

**661 Case Management in Justice and Public Safety.** Semester course; 3 lecture hours. 3 credits. Discussion of concepts, processes, and implications related to determination and implementation of management philosophies and strategies for achieving productivity and accountability within justice and safety agencies. Individual priority needs of the citizen/client are assessed and compared with concern for public safety, costs, and other administrative factors.

**692 Independent Study in Administration of Justice.** Semester course; 3 credits. Prerequisite: permission of department chairman. Readings, individual research, or field placement in juvenile or criminal justice agencies. Completion of this course requires a research project on an issue pertinent to the student's graduate program needs and career interests.

**711 Public Career Analysis and Planning.** Semester course; 4 lecture hours. 4 credits. An extensive analysis of student's career plans and their relationship to the DPA program. Included are each student's (1) assessment of DPA and life long learning plans. (Doctoral and presentation of life and career goals; (3) evaluation of data from the professional community, and (4) statement of DPA and life long learning plans. (Doctoral students only)

**712 The Public Professions.** Semester course; 3 lecture hours. 3 credits. A critical review of the development of the public professions with special emphasis upon the combination of historical, cultural, technological, and intellectual forces that led to the growth of public management and its differentiation from private or corporate systems. (Doctoral students only).

**713 Ethics and Public Policy.** Semester course; 3 lecture hours. 3 credits. An examination of the role of ethics and ethical reasoning within the American public policy system. Special emphasis is given to the personal and professional ethical structures of the public executives and how these impact upon public policy. Topics include obligation, values, constitutionalism, distributive justice, equity, equality, secrecy, and lying. (Doctoral students only)

**714 Government Organization Design.** Semester course; 3 lecture hours. 3 credits. An intensive examination of government organizational theory from a macro level focusing on public sector organizations and their environments, technologies, and structures. Also incorporated are aspects of organizational research which

serves as a vehicle for examining and further understanding the above variables. Methods competency required. (Doctoral students only)

**715 Advanced Public Policy Design and Evaluation.** Semester course; 3 lecture hours. 3 credits. A comprehensive examination of the theory and practice of public policy decision making, analysis, and evaluation. The course is designed to provide students with an awareness of the public policy environment and knowledge of the range of decision tools available for prospective analysis and program evaluation. Methods competency required. (Doctoral students only)

**716 Theory and Practice in Public Administration.** Semester course; 3 lecture hours. 3 credits. The application of theory to public policy operational problems. Students will select major theoretical and operational perspectives for critical analysis from an administrative and management standpoint. (Doctoral students only)

**763 Seminar in Social Justice.** Semester course; 3 lecture hours. 3 credits. Exploration of basic concepts related to social justice, and review of the major contemporary problems related to social injustice in criminal justice and the world. Study of the basic principles and systems approaches in development of social justice models for the future. (Doctoral students only)

**773 Criminal Justice Systems Seminar.** Semester course; 3 lecture hours. 3 credits. Systematic examination of criminal justice policy-making, management and operations in the context of past experience, and future needs. Among the items explored will be the context of criminal justice policy-making and management; criminal justice management reform in historical perspective; critical policy issues and cross-cutting management issues; and emerging needs in the area. Attention will be paid to system-wide issues, to the component subsystems, and to the relationships between the criminal justice and other systems. (Limited to doctoral students)

**799 Thesis.** 3 or 6 credits. Prerequisite: permission of instructor and appropriate research courses.

**898 Dissertation Research.** Semester course; 3 to 12 hours. May be repeated for credit. Prerequisite: admittance to doctoral candidacy. Research on an approved dissertation subject.

## Department of Public Administration

### FACULTY

Armstrong, Crichton J. *Assistant Professor* M.Sc., London School of Economics and Political Science; public finance, policy analysis.

Binder, James C. *Assistant Professor* Ph.D., University of Virginia; policy analysis, evaluation.

Fairholm, Gilbert W. *Associate Professor* D.P.A., State University of New York; organizational behavior, executive leadership.

Grosenick, Leigh E. *Professor* Ph.D., University of Minnesota; administrative ethics, public finance.

- Hambrick, Ralph S. *Associate Professor* Ph.D., Syracuse University; public management, policy analysis.
- Henry, Laurin L. *Professor and Dean* Ph.D., University of Chicago; the American presidency, bureaucracy.
- Oliver, Robert B. *Assistant Professor* Ph.D., University of Virginia; organizational theory, research, evaluation.
- Pak, Chong M. *Professor and Chairman* D.P.A., University of Southern California; research, evaluation.
- Wergin, John F. *Associate Professor* Ph.D., University of Nebraska; research, evaluation.

The emphasis of the graduate degree in public administration is to professionally educate individuals in the responsibilities of public sector administration.

The program is generalist in nature: thus, 31 of the 45 credit hours are devoted to a core curriculum of required courses. Students may use 14 hours to pursue an area of interest; however, a specialization is not required and these 14 hours may be used to pursue additional generalist courses. A three-hour practicum in a non-profit agency or a governmental organization providing public services completes the program.

### CORE CURRICULUM

In the generalist portion of the program, four broad areas of course work are offered in order to strike a balance between theory and application. These are

- I. The political, social, and economic context of public administration.
- II. Public organization management processes, and behavior.
- III. Quantitative and non-quantitative analytic tools.
- IV. Policy analysis.

### SPECIALIZATION OPTION

Each student can select an area for specialization following completion of the first 12 hours of course work. The public administration program offers specializations in personnel, finance, economics, general management, policy analysis, and local government. Additional specialization fields may be developed to suit the individual student's needs. This is done in conjunction with other VCU departments, such as Administration of Justice and Public Safety, Urban and Regional Planning, Social Work,

and Economics. Specializations must be approved by the student's faculty advisor.

### HUMAN RESOURCE PROGRAM MANAGEMENT CONCENTRATION

In cooperation with the Center for Public Affairs and the U.S. Department of Labor a 15-hour concentration in human resource program management is now available. For further details, contact the Department of Public Administration.

### ADVISORY COMMITTEE FOR THE GRADUATE PROGRAM IN PUBLIC ADMINISTRATION

The graduate program in public administration is multidisciplinary in nature and draws upon the resources of several schools within the university. Members of the university faculty as well as practicing public administrators on the federal, state, and local levels serve on the Advisory Committee for the Graduate Program in Public Administration. This committee serves in an advisory capacity, offering advice and suggestions to the director and faculty regarding the policies, procedures, curriculum, and other matters pertaining to the administration of the program.

### ADMISSIONS

In addition to the general graduate school requirements, selection is made on the basis of undergraduate academic performance, intellectual capacity, accomplishments, experience, and other indicators of the ability to pursue graduate studies profitably.

### Interview

A personal interview with the public administration faculty is required. If this poses a hardship, the chairman will designate an alternate method for the pre-acceptance interview.

### Full Acceptance

Students accepted in full standing must have a minimum of 3.0 grade point average on a 4.0 scale in their last 60 (semester) hours of undergraduate work and a total score of at least 1,000 on the Graduate Record Examinations (GRE), or 500 on the Graduate

Management Admissions Test, or 500 on the Law School Admissions Test.

### **Individuals with Advanced Degrees**

Persons holding advanced degrees from fully accredited institutions of higher education may be given full admittance without reservations upon presentation of evidence of the award of an advanced degree. Although this does not eliminate any step in the admissions procedure outlined previously, it does relieve the applicant of the necessity of submitting GRE results.

### **TRANSFER CREDIT**

A maximum of six semester hours of acceptable graduate credit earned in a degree program at an accredited institution but not applied towards an awarded degree may be transferred and applied toward the M.P.A. degree. Such credits will be evaluated for acceptance purposes at the completion of nine semester hours of work in VCU's graduate program in public administration.

### **FINANCIAL AID INFORMATION**

Small amounts of financial aid are available through awards made by the university through the School of Community and Public Affairs. Notice of the availability of these funds will be mailed to students and applicants when such awards are made.

### **REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC ADMINISTRATION**

1. Students must complete a minimum of 45 semester hours, as approved by the faculty advisor with an overall grade-point average of 3.0 or above.
2. **Practicum.** Each student not appropriately employed in the public sector or in a non-profit agency while enrolled in the program will be required to earn three hours of credit in a public service practicum. The practicum will usually be taken during the summer between the first and second years or during the last semester of course work. However, the scheduling of the practicum will be flexible enough to accommodate the needs of

those students who pursue the degree on a part-time basis.

All practicums will be negotiated between the university and the host agency in terms of the scope of work to be performed by the student; the type and extent of supervision both within the agency and from the university; and, the stipend, if any, to be attached to the internship. Based on such negotiations, a learning contract will be executed among the university, the agency, and the student.

For students who have been continuously employed in a governmental agency for a period of two years or more, the practicum is waived. These students are required to complete PAD 680 Advanced Executive Leadership, in lieu of the practicum.

### **CONTINUOUS ENROLLMENT REQUIREMENTS**

Students who fail to register for two consecutive semesters (summer sessions excluded) will automatically be dropped from the program and must reapply for admission in order to continue. Students who drop all courses during a regular term will not be counted as having registered for that term. Any exceptions to this policy will be made on an individual basis and by petition, whenever the department is notified in writing either prior to the beginning of a term or when a continuous absence is occasioned by hardship conditions. Students who reapply after having been dropped for failure to register continuously will be admitted, if at all, under the bulletin requirements in effect at the time of readmittance. This means that some or all of the courses completed prior to the reapplication may not be accepted toward completion of the degree.

### **CORRESPONDENCE AND FURTHER INFORMATION**

Further information and appropriate forms may be obtained by writing to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284, (804) 257-0334.

**CORE CURRICULUM  
(REQUIRED COURSES)**

**First Phase**

PAD 601 Principles of Public Administration . . .	3
PAD 606 Governmental Organizational Models . . .	3
PAD 607 Personnel Administration in Governmental Organizations . . . . .	3
PAD 609 Government Financial Management . . .	3

**Second Phase**

URP 671 Planning Methods I: Planning Information Systems and Research Design . . .	4
URP/PAD 652 Planning, Administration, and the Legal Process (Prerequisite: PAD 601) . . .	3
PAD 621 Organizational Behavior and Management in Government (Prerequisite PAD 606) . . . . .	3

**Third Phase**

PAD 623 Analytic and Evaluation Methods in Public Administration (Prerequisite: URP 671) . . . . .	3
PAD 625 Public Policy Formulation and Implementation (Prerequisite: URP 671) . . . .	3
PAD 680 Executive Leadership (Prerequisite PAD 621) . . . . .	3
	<hr/> 31

ELECTIVES OR CONCENTRATION . . . . .	14
	<hr/> 45

May be chosen from any additional public administration courses, or other related courses offered by academic departments at VCU.

**CONCENTRATION OPTION**

The elective portion of the curriculum is designed to accommodate the professional development needs of the individual student. To achieve this students may elect to take a variety of courses to improve a range of administrative skills and understandings; or a concentration track can be chosen to develop graduate professional skills and understandings in one of six major areas of governmental responsibility. These are:

- Public Personnel Management
- Public Financial Management
- Local Government Management
- Executive Management
- Human Resource Program Management
- Evaluation and Public Policy Analysis

**Public Personnel Management**

A concentration curriculum designed to give students the knowledge, skills, and abilities to operate and manage public agen-

cy functions professionally and contribute to the product of new knowledge and management practice in the public management field.

**Required Courses**

	<i>Credits</i>
PAD 637 Organic Public Personnel Management . . . . .	3
BUS 646 Personnel Law . . . . .	3
PAD 682 Advanced Public Personnel Management . . . . .	4
Electives (PAD, BUS, ECO, EDU) . . . . .	4
	<hr/> 14

**Public Financial Management**

This concentration is directed toward professional and theoretical competence in the various component fields of public financial operations. Technical, supervisory, and general financial management competencies are emphasized.

**Required Courses**

	<i>Credits</i>
PAD 622 Public Sector Budgeting . . . . .	3
PAD 670 Advanced Financial Management . . .	3
ECO 616 Advanced Public Finance . . . . .	3
Electives (PAD, BUS, EDU) . . . . .	5
	<hr/> 14

**Local Government Management**

This concentration prepares individuals for generalist management positions at the town, city, county, and regional levels of government through the completion of courses relating to local government services and management, understanding the political, sociological, and economic environments of local governments, and the special problems of managing a complex public organization.

**Required Courses**

	<i>Credits</i>
PAD 664 Local Government Administration I: Organization and Staff Functions. . . . .	3
PAD 666 Local Government Administration II: Line Functions . . . . .	3
Electives (PAD, BUS, EDU, SOC, ECO, URP) . . .	8
	<hr/> 14

**Executive Management**

This concentration is especially tailored to the needs of the public executive to assist in the development of productive leadership styles, decision making abilities, and careful consideration of ethical issues in service delivery and management.

**Required Courses**

	<i>Credits</i>
PAD 680 Executive Leadership . . . . .	3
PAD 681 Governmental Decision Making . . . .	3

PAD 690 Administrative Ethics . . . . .	3
Electives (PAD, BUS, PSY, EDU) . . . . .	5
	14

**Human Resource Program Management**

This concentration is oriented to the public manager or policy analyst preparing for a career in the management of governmental programs which focus on the delivery of human services. Programs having a primary or secondary function related to training and employment are emphasized.

<b>Required Courses</b>	<i>Credits</i>
PAD 643 Public Employment Policy Analysis . .	3
PAD 644 Human Resource Program Management . . . . .	3
Electives (PAD, ECO, EDU) . . . . .	8
	14

**Evaluation and Public Policy Evaluation Concentration**

This concentration provides students with the necessary methodological and program background to analyze governmental policy, recommend new approaches and applications, and generally perform at a high level as a program analyst and evaluator. Policy options are available in four policy areas. Students must have the permission of the cooperating departments for policy area concentrations.

<b>Required Courses</b>	<i>Credits</i>
PAD 650 Workshop in Evaluation . . . . .	3
PAD 627 Policy Analysis Research . . . . .	3
PAD 629 Workshop in Policy . . . . .	3
<b>Policy Area Options</b>	
Administration of Justice and Public Safety . . .	8
Economics . . . . .	8
Social Work . . . . .	8
Urban And Regional Planning . . . . .	8

**GRADUATE COURSES IN PUBLIC ADMINISTRATION (PAD)**

**501 Executive Structures and Management Processes.** Semester course; 3 lecture hours. 3 credits. An intensive examination of the executive processes in American government. Compares and contrasts the functional responsibilities of the executive branches of American government, including budget, personnel, regulatory functions, policy implementation, rule making, organizational structure and evaluation within a management framework. Course credits do not apply to the M.P.A. degree.

**583 Effective Managerial Communications.** Semester course; 1 lecture hour. 1 credit. Describes and explains the communication process as it applies in public organizations. Acquaints students with the theoretical basis of interpersonal communications and with applied methodologies from a managerial perspective.

**584 Planned Organizational Change.** Semester course; 1 lecture hour. 1 credit. Describes and explains strategies and tactics of planned organizational change. Emphasis is placed on the change process in organized situations and on various strategies and tactics the manager may employ to achieve desired change in his/her organization.

**585 Power, Influence, and Organizational Competence.** Semester course; 1 lecture hour. 1 credit. This course will explore the strategies and tactics of power and influence use in large-scale public organizations. A framework for use of influence strategies will be presented and tactical methodologies will be examined through case study and simulation.

**606 Government Management Models.** Semester course; 3 lecture hours. 3 credits. An examination of current thought and research on management theory and organizational behavior in government will be presented in this course. Theory and research from diverse sources, i.e. government, sociology, social psychology, and industrial psychology will be explored to provide each student with the conceptual framework necessary for the development or refinement of effective governmental management skills.

**607 Personnel Administration in Governmental Organizations.** Semester course; 3 lecture hours. 3 credits. Prerequisite: departmental permission. The general concepts, principles, and techniques of personnel administration and employee relations as applied in governmental units and agencies.

**609 Financial Management in Government.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of the department. The general concepts, principles, and techniques of financial management as they are applied in governmental units and agencies.

**610 The Municipal Property Tax.** 1 lecture hour. 1 credit. Prerequisite: PAD 609 or permission of the department. An in-depth study of the property tax. The property tax system as administered in Virginia is analyzed. New approaches to ameliorate problems with this tax are proposed.

**611 Revenue and Expenditure Forecasting.** 1 lecture hour. 1 credit. Prerequisite: PAD 609 or permission of the department. Analysis of the methods and techniques of revenue and expenditure forecasting and of their use in budgeting planning and capital programming. Relationships between forecasting, capital improvement, budgeting and overall government budgeting, planning, and managing systems are developed and elaborated.

**612 Government Purchasing.** 1 lecture hour. 1 credit. Prerequisite: PAD 609 or permission of the department. Provides the purchasing agent or the student of finance with working tools to improve public purchasing practices in state and local government agencies including: organizing for purchasing processes and practices in government and special problems and emerging concerns in purchasing management.

**613 Risk Management for State and Local Government Officials.** 1 lecture hour. 1 credit. Prerequisite: PAD 609 or permission of the department. Normal and extraordinary hazards associated with public organiza-

tional management are defined. Identification of measurement devices of "risk of loss" and methods of dealing with loss—prevention, minimization, and remediation—will be covered.

**614 Finance and Accounting for the Nonfinancial Executive.** 1 lecture hour. 1 credit. Provides orientation to the proper financial tools, ratios, and relationships in accounting for the financial status of the public enterprise. The emphasis is on how to analyze and interpret financial documents.

**615 Debt Management for Local Government.** 1 lecture hour. 1 credit. Prerequisites: PAD 609 or permission of instructor. Analyze the complex processes involved in managing temporarily idle public funds. Basic and advanced procedures of financial control and planning processes are explained and the use of relevant financial tools used in this field of public finance are taught.

**616 Capital Budgeting.** 1 lecture hour. 1 credit. Prerequisite: PAD 609 or permission of the department. Teaches the tools of capital budget preparation including cost estimation, discounting, debt management, and cost benefit analysis in the capital programming process.

**617 Financial Administration in Virginia State Government.** 1 lecture hour. 1 credit. Describes and explains the specifics of the Virginia state system of financial administration. Students will be acquainted with both the theoretical and legal bases of financial administration in Virginia. Emphasis will also be on understanding of responsibility of the various organizations in financial administration and the processes each carries out.

**618 Federal Indirect Costs Administration.** 1 lecture hour. 1 credit. Prerequisite: PAD 609 or permission of the department. Describes and explains the concept of indirect costs as used in federal grants financing. Federal and state regulations are explained and procedures for recording, analyzing, reporting, and claiming reimbursement will be presented.

**619 Management Auditing in Government.** 1 lecture hour. 1 credit. The methods and approaches used in evaluating the adequacy and appropriateness of management controls and the ways in which they are applied in the public agency are examined from operational, management, and performance measurement perspectives.

**621 Organizational Behavior and Management in Government.** Semester course; 3 lecture hours. 3 credits. Prerequisite: PAD 606. The general concepts, principles, and theories of management and organizational behavior as they relate to the administration of governmental units and agencies.

**622 Public Sector Budgeting.** Semester course; 3 lecture hours. 3 credits. Prerequisite: PAD 609. Advanced theory and practice of public agency budgeting. In-depth examination of the role of budgeting in the decision-making process and its impact on policy making. Topics include: alternative budgeting systems, capital planning and budgeting, budget execution, budgeting analysis techniques, and revenue and expenditure forecasting.

**623 Analytical and Evaluation Methods in Public Administration.** Semester course; 3 lecture hours. 3 credits. Prerequisites: URP 671 and permission of the department. A survey of current applications of analytical and evaluative methods of government programs. The course includes the primary methods of evaluating social, financial, and physical programs. Attention is given to individual student program interests. This course relates directly to PAD 625 and PAD 631.

**625 Public Policy Formulation and Implementation.** Semester course; 3 lecture hours. 3 credits. Prerequisites: URP 671 and PAD 606. A consideration of the general modes of decision-making, determination of program goals, allocation of resources, selection of efficiency criteria. Translation of public policy into programmatic functional activities. Classification and examination of various service delivery systems.

**627 Policy Analysis Research.** Semester course; 3 lecture hours. 3 credits. Prerequisites: PAD 623 and 625. The conduct of policy research. The application of research phases including: problem identification, evaluation of goals, results planning, methodology utilization, interpretation of results, and presentation of policy recommendations.

**629 Workshop in Policy Analysis.** Semester course; 3 hours. 3 credits. Making policy analysis work. Emphasizes the use of three policy analysis techniques: program analysis, cost benefit analysis, and the utilization of results.

**631 Seminar on Public Employee Selection.** Semester course; 2 lecture hours. 2 credits. An examination of legislation, sub-legislation, and judicial decisions which define management responsibilities for assuring fair and effective public employee selection will be presented in this course. Course topics include: Federal Uniform Selection Guidelines; the rule of knowledge, skills, and abilities in selection; alternative selection processes; and implementing selection processes.

**632 Public Employee Performance Evaluation.** Semester course; 2 lecture hours. 2 credits. An examination of theories, approaches and legal constraints associated with the evaluation of public employee performance. In-depth treatment is given to approaches which meet Federal Uniform Selection Guidelines standards. Systems based on job-related task analysis, on MBO, and on psychological testing are reviewed. Assessment center approaches are given major treatment.

**636 Personal Liability of Public Employees.** Semester course; 2 lecture hours. 2 credits. An examination of the special legal liabilities and immunities of public employees. Constitutional and tort law are analyzed for personnel liability which affects all public employees with decision-making responsibilities.

**637 Organic Personnel Management.** Semester course; 3 lecture hours. 3 credits. Prerequisite: PAD 607 or equivalent. An examination of current thought, research, and personnel management theory and practice in government which is person-oriented is presented in this course. Topics include: rank-in-the-person personnel systems; career development, executive personnel systems; forecasting human resource needs; individual-

based performance evaluation; employee assistance programs; and special emphasis programs.

**642 Grants Management.** Semester course; 3 lecture hours. 3 credits. Principles and practices of managing federal and state funds and implementing a grant funded program. Topics include: federal grant making process, applying for a grant, developing grant accounting systems, joint funding, disputes, appeals and remedies, and close-out procedures.

**643 Public Employment Policy Analysis.** Semester course; 3 lecture hours. 3 credits. History, scope, and setting of employment programs in the U.S. Examines the systemic and individual factors which affect employment and unemployment. Topics include: history of human resource development and manpower policy, the nature of work, the nature of unemployment, governmental employment programming, and public policy issues.

**644 Human Resource Program Management.** Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 641 or equivalent. Advanced analysis of theory and research related to internal and external factors which influence the management and delivery of service in human resource organizations. Topics include: functions of human resource managers, factors influencing service delivery interorganizational coordination, and management of change in human resource organizations.

**652 Planning, Administration, and the Legal Process.** Semester course; 3 lecture hours. 3 credits. Prerequisites: PAD 601 and permission of the department. Major emphases are on administrative law, legislation, and substantive environmental law. Judicial review of administration actions: notice, hearing, investigative requirements; the planner and administrator as expert witnesses; legislative language; drafting of legislation; legislative process; NEPA; air; water; and water-lands; solid waste; herbicides and pesticides; noise; and critical man-made areas are investigated.

**660 Community Power Dynamics.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of the department. Examination of the location of power in the American community; operational concepts and general methodological approaches defined; empirical findings based on various methodological approaches; conclusions on community political systems and power.

**662 Advanced Topics in Revenue and Taxation.** Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 616 or permission of instructor. An advanced examination of governmental revenue and taxation policies, tax incidence, and alternative funding techniques.

**664 Local Government Administration I - Organization and Staff Functions.** Semester course; 3 lecture hours. 3 credits. Prerequisites: PAD 607 and 609 or permission of the department. An intensive examination of local government staff functions as related to the organization of local governments and their proper management.

**666 Local Government Administration II - Line Functions.** Semester course; 3 lecture hours. 3 credits. Prerequisites: PAD 664 or permission of the department.

An intensive survey of the major functional responsibilities of local government with a special emphasis on the organization, standards, operational imperatives, inter-relationships with other functions, and special management problems of the major line activities of local governments, including small and rural line activities of local governments, including small and rural jurisdictions.

**670 Advanced Public Financial Management.** 3 lecture hours. 3 credits. Prerequisites: PAD 609, ECO 616, or permission of the department. Brings together specialty aspects of public financial management such as economic and political implications, practical skill-building, operational financial administration issues and tactics, and accounting principles and approaches, and integrates these disparate segments of public finance. The emphasis is on policy-level implications and strategies of public financial management strategies of executive planning, analysis, and management of the financial sector of public organizations.

**680 Executive Leadership.** Semester course; 3 lecture hours. 3 credits. Prerequisite: PAD 621 or permission of the department. Explores the aspects of executive leadership and the leader as an agent of change in the organization and among the management core. The emphasis is on research and writing.

**681 Governmental Administrative Decision Making Processes.** Semester course; 3 lecture hours. 3 credits. Identification of alternative decision making processes in public sector management environments. Choosing the proper method for the appropriate management level theory and method for controlling administrative decisions within governmental organizations. Dealing with political, budgetary, and personal constraints in achieving organizational goals.

**682 Advanced Public Personnel Management.** Semester course; 4 lecture hours. 4 credits. Prerequisite: PAD 607 or equivalent. Public personnel management is analyzed in process and systems' perspectives, with specific emphasis on the interrelatedness of discrete system components with other systems. Attention is given to the integration of personnel elements through the development of feed-back systems, positive and negative impacts' analyses and personnel policy development and implementation.

**683 Administrative Ethics.** Semester course; 2 or 3 lecture hours. 2 or 3 credits. The philosophical basis for ethical behavior; nature and administration of legal codes of professional conduct; administrative secrecy; social equity through public programs; the complexity of the relationship between administratively ethical decisions and political culture; and a review of the literature on public service morality.

**691 Topics in Public Administration.** Semester course; 1, 2, or 3 lecture hours. Variable credit. Prerequisite: permission of instructor. Course may be repeated with different topics for a maximum of 9 credits. An in-depth study of a selected topic in public administration. See Schedule of Classes for specific topic to be offered each semester.

**693 Directed Research in Public Administration.**



Semester course; 1 to 6 credits. Prerequisite: permission of instructor, Independent research into public administration problems, issues, applications, and theories related to student's field of concentration.

**697 Public Administration Internship.** 3 credits. Prerequisite: permission of instructor. A professional internship in public service.

## Department of Recreation

### FACULTY

Hartsoe, Charles E. *Professor and Chairman* Ph.D., University of Illinois; history, philosophy, administration.

Howe, Christine A. *Assistant Professor* Ph.D., University of Illinois; research and program evaluation.

Langston, Donnel *Assistant Professor* M.S., University of Illinois; therapeutic recreation and leisure counseling.

Ready, Keith F. *Assistant Professor* Ph.D., Michigan State University; leisure behavior, park planning and management.

Reynolds, Ronald P. *Associate Professor* Ph.D., University of Illinois; therapeutic recreation and social/psychological determinants of leisure.

Wise, Michael S. *Associate Professor* Ph.D., University of Georgia; management of leisure delivery systems and administration.

The purpose of the graduate program in recreation is to prepare administrators, supervisors, and other recreation and park personnel for specialized or advanced responsibilities in public, quasi-public, and/or private agencies engaged in providing recreational and leisure services and programs. The curriculum provides for experiential learning through the analysis of organizations and communities' leisure service delivery systems and seeks to improve the quality of life for today's urban dweller.

The master's degree in recreation requires a minimum of 36 semester hours of graduate study, including a thesis or research project. The courses are grouped as follows:

A. A core of departmental courses required of all students in the program.

This component of the program includes 15 semester hours of required courses designed to equip students with an advanced knowledge of the historical, philosophical, and scientific basis of the recreation and parks field. The seminar in recreation addresses contemporary issues in each of the three areas of concentration within the program and provides an opportunity for independent study. Thesis or project re-

quirements provide additional experience in analysis and problem solving, plus the generation of new knowledge related to the provision of leisure services in today's urban environment.

Specific courses within the core curriculum are as follows:

**REC 601 Conceptual Foundations of Recreation and Leisure Services** (3 semester hours)

**REC 603 Research and Evaluation—Processes in Recreation** (3 semester hours)

**REC 690 Seminar in Recreation** (3 semester hours)

**REC 797 Project Research in Recreation** (6 semester hours)

or  
**REC 798 Thesis** (6 semester hours)

Also, course(s) in inferential statistics for the behavioral and social sciences will be required of students who have not had previous preparation in these techniques.

B. Sets of required foundation courses for each of three optional areas of concentration: leisure service management, recreation and tourism planning, and therapeutic recreation.

In addition to the basic core, students will develop specialized knowledge and professional competence in one of three areas of concentration. A description of each area and its six semester hour foundation module is as follows:

*Leisure Service Management.* This area is designed for students who wish to expand their professional preparation for general administration and leadership in public or private leisure service organizations.

Required courses include:

**REC 602 Organization and Administration of Recreation Systems** (3 semester hours)

**REC 604 Program Management and Development** (3 semester hours)

*Therapeutic Recreation.* This area of specialization is for students who wish to undertake advanced study in preparation for careers in leadership and supervision of recreation programs for disabled persons in residential or community settings. An emphasis is placed on the factors influencing the provision of leisure services for disabled persons in modern society. Required courses include:

**REC 605 Program Development in Leisure Services for Disabled Persons** (3 semester hours)

**REC 606 Current Issues in Leisure Services for Disabled Persons** (3 semester hours)

*Recreation and Tourism Planning.* The

emphasis of this option is toward developing competencies in the analyzing, planning, and marketing of recreation, park, and tourism facilities. The implications and study of total environmental impacts both positive and adverse, are of growing concern to community planners and the travel industry. Therefore, opportunities for theoretical and applied research into the interrelationships of community leisure services planning with community economic development, using tourism as a major tool, abound. Required courses include:

**REC 608 Analysis and Planning for Recreation and Tourism** (3 semester hours)

**URP 671 Planning Methods I: Planning Information Systems and Research Design** (4 semester hours)

C. Supportive courses chosen according to the area of concentration.

Each of the three previously described areas of concentration is designed to incorporate multidisciplinary preparation utilizing the supportive resources of the School of Community and Public Affairs as well as other units of the university. Fifteen hours of course work in related disciplines will be selected with the consent of the student's academic advisor.

## ADMISSION REQUIREMENTS

Admission requirements for the Master of Science degree in recreation include a cumulative grade point average of 2.7 (C+) or better in undergraduate work and a 3.0(B) in the last two full years of undergraduate study; acceptable scores on the verbal, quantitative, and analytical tests of the Graduate Record Examination; and evidence of adequate undergraduate preparation in recreation or a closely related area. In the absence of such academic background and/or experience, applicants may be required to enroll in appropriate undergraduate level courses without graduate credit. Applicants will be evaluated individually by the departmental graduate faculty committee. Minimum admission requirements as outlined above constitute the basis for the evaluation.

## CORRESPONDENCE AND FURTHER INFORMATION

For additional information and applica-

tions please contact the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284, (804) 257-0334.

## GRADUATE COURSES IN RECREATION (REC)

**601 Conceptual Foundations of Recreation and Leisure Services.** Semester course; 3 lecture hours. 3 credits. A study of the development of the recreation and leisure services movement in the United States. Attention will be given to the historical, philosophical, and social bases of recreation and leisure services in today's society. Implications for present and future leisure service delivery planning will be emphasized.

**602 Organization and Administration of Recreation Systems.** Semester course; 3 lecture hours. 3 credits. An analysis of administrative theories and patterns of management appropriate to the establishment and operation of community leisure service programs. Special emphasis will be given to organizational planning, goal setting, financial support, program evaluation, and the role of the administrator in a leisure service setting.

**603 Research and Evaluation Processes in Recreation.** Semester course; 3 lecture hours. 3 credits. Familiarizes student with the scientific approach to inquiry as applied to the study of the phenomenon of leisure. Basic research terminology, methodology, procedures, and concepts are explored with particular reference to the application of empirical investigation to topics of interest to professionals in the field of recreation and parks.

**604 Program Development and Management.** Semester course; 3 lecture hours. 3 credits. Analysis of the individual, political, and societal determinants of recreation programming. Covers the factors influencing leisure behavior and the role of the program supervisor in recreational and leisure service settings. The course also deals with the evaluation of recreation and park programs and with the research functions in recreation programming.

**605 Program Development in Leisure Services for Disabled Persons.** Semester course; 3 lecture hours. 3 credits. This course will provide students with an opportunity to critically examine contemporary models of leisure service programming for disabled persons. Emphasis will be placed upon observation and analysis of medical-clinical custodial, therapeutic community/milieu, and education and training approaches to recreation for handicapped persons.

**606 Current Issues in Leisure Services for Disabled Persons.** Semester course; 3 lecture hours. 3 credits. An examination of contemporary issues affecting the delivery of leisure services and programs to disabled persons. Both the scope and nature of leisure opportunities available to disabled individuals are considered. Special emphasis is placed on the role of the municipal recrea-

tion department in providing leisure opportunities to disadvantaged groups.

**608 Recreation and Tourism Planning.** Semester course; 3 lecture hours. 3 credits. Analysis and planning of recreation and tourism resources in the development of an effective comprehensive leisure services delivery system.

**690 Recreation Seminar.** Semester course; 3 lecture hours. 3 credits. Restricted to second semester graduate students who have completed the research methods course. Individual graduate thesis and research topics will be discussed as will topics of current specialized interest to the recreation field. Each student will review and report on research efforts related to specific problems in their own area of interest.

**797 Research Project.** 6 credits. Prerequisite: REC 603. The research project involves a systematically planned and executed scholarly project committee utilizing an approved methodology for investigating and reporting on a major issue pertinent to the student's interest in the recreation field.

**798 Thesis.** 6 credits. Prerequisite: REC 603. The master's thesis involves a carefully planned and executed research study under the supervision of an advisor and thesis committee utilizing the traditional standards for thesis writing.

## Department of Rehabilitation Counseling

### FACULTY

Gandy, Gerald L. *Associate Professor and Director, Undergraduate Program in Rehabilitation Services* Ph.D., University of South Carolina; individual counseling approaches, rational emotive techniques.

Harber, Harlan E. *Assistant Professor and 504 Compliance Officer* Ph.D., University of Kansas; attitudes and disability, architectural barriers.

Hardy, Richard E. *Professor and Chairman* Ed.D., University of Maryland; Diplomate in Counseling Psychology (ABPP); counseling (both individual and group), substance abuse.

Hutchinson, John D., IV *Associate Professor* M.S., Virginia Commonwealth University; consumerism and advocacy in rehabilitation, independent living in rehabilitation.

Jarrell, George R. *Associate Professor* Ph.D., University of South Carolina; forensic rehabilitation, medical aspects of disability and clinical practice.

Lassiter, Robert A. *Professor* Ph.D., University of North Carolina; vocational evaluation, work adjustment and independent living in rehabilitation.

Lawton, Marcia J. *Assistant Professor and Director, Alcohol and Drug Education/Rehabilitation Program* Ph.D., Northwestern University; alcohol and drug rehabilitation, child psychology.

Luck, Richard S. *Assistant Professor* Ed.D., University of Virginia; rehabilitation administration, measurement and evaluation.

Martin, E. Davis, Jr. *Associate Professor and Assistant*

*Dean* Ed.D., University of Virginia; administration and supervision, research.

Rule, Warren R. *Associate Professor* Ph.D., University of South Carolina; individual counseling approaches, Adlerian lifestyle counseling.

Underwood, J. William, III *Assistant Professor and Coordinator, Work-Study Program* Ph.D., Syracuse University; rehabilitation psychology, individual and group counseling.

Wright, Keith C. *Professor* M.S., Marshall University; introduction to rehabilitation (Professional identity, function, and ethics), community resources.

The rehabilitation counseling program at Virginia Commonwealth University was established in 1955 to provide graduate education in rehabilitation counseling.

This program prepares prospective rehabilitation counselors for employment in state and federal vocational rehabilitation programs and public and private rehabilitation agencies. Graduates work in rehabilitation units in mental hospitals, correctional institutions, public schools, rehabilitation centers, sheltered workshops, adjustment centers, social service agencies, and other organizations serving persons who are mentally, emotionally, socially, or physically handicapped. It also provides advanced training for persons presently employed in agencies and facilities offering services to handicapped individuals.

Emphasis is placed upon professional education for developing the skills and knowledge necessary for effective rehabilitation counseling of handicapped persons. The variety of activities performed by rehabilitation counselors necessitates a program highly diversified in character. In addition to the development of a broad understanding of human behavior, techniques of individual and group counseling, inter-professional relations, vocational appraisal and adjustment, and use of community resources in facilitating rehabilitation of mentally, emotionally, socially, and physically handicapped persons are stressed.

### VOCATIONAL EVALUATION AND WORK ADJUSTMENT SPECIALIZATION

This program emphasis is established to meet the following needs: 1) to provide students (full- or part-time) an opportunity to become effective workers in vocational evaluation and adjustment at entry-level

positions with the state-federal and private rehabilitation facilities; 2) to provide a curriculum plan for employed professional staff of public and private rehabilitation facilities in order for them to reach a high level of competence in their work with severely and multiply disabled people; 3) to offer consultations and to conduct workshops and institutes to improve and extend services to the more severely disabled population of the Richmond area; and 4) to assist facility administrators in planning and implementing new service areas such as independent living in rehabilitation.

Graduates of this specialization will have the opportunity to become employed in state and federal rehabilitation agencies as well as public and private facilities offering vocational evaluation and work adjustment services. The occupational outlook in this field for the present and the future is excellent.

### **INSTITUTES AND WORKSHOPS**

The Department of Rehabilitation Counseling conducts institutes and workshops as part of an on-going in-service training program for employed personnel. The department will continue to conduct such institutes and workshops as long as there is a demonstrated need and funds are available.

### **AWARDS**

The Wade O. Stalnaker Award for Outstanding Achievement is presented annually to a full-time graduate student in the Department of Rehabilitation Counseling. Initiated by the graduating class of 1963, this award was named in honor of the founder of the department, Dr. Wade O. Stalnaker.

The recipient is selected on the basis of meritorious academic scholarship, dedication to the philosophy and concepts of rehabilitation, and extracurricula accomplishments in community services.

### **WORK-STUDY PROGRAM OF PROFESSIONAL EDUCATION IN REHABILITATION COUNSELING**

The purpose of this program is to maintain a comprehensive, coordinated, and fully professional course of study in rehabilitation counseling that is offered on a continuous part-time basis. Classes meet on alternate

weekends, both Fridays and Saturdays, and are offered through the Division of Continuing Studies and Public Service of Virginia Commonwealth University. Friday night classes meet from 7 to 9:40 pm, Saturday classes meet from 8 to 10:40 am and from 11 am to 1:40 pm.

Students may enroll for one or more courses, depending on their needs. Up to nine hours of credit can be earned by qualified students upon satisfactory completion of a full academic year in this program. The work-study academic year runs from September through May.

The specific objective of this training program is to increase substantially the effectiveness of the rehabilitation counseling profession by making a high-quality training program available to presently employed professional workers whose skills and abilities need up-grading and who desire to prepare themselves academically for a career in rehabilitation counseling but are unable to do so on a full-time basis.

This program is not intended to be a supplementary or introductory program. It is designed to be a complete, comprehensive, and sequential program of graduate training leading to a master's degree in approximately four years of qualified part-time students. These students will be unable to meet the graduate residence requirements by completing 12 hours in a calendar year; therefore, their residence requirement shall consist of the completion of nine graduate hours in two academic semesters.

The entire core curriculum in rehabilitation counseling will be included in the offerings over a four-year span of time, with certain supplementary classes that may be necessary in special instances.

### **REGIONAL REHABILITATION CONTINUING EDUCATION PROGRAM**

#### **Purpose of the Training Programs:**

The Regional Rehabilitation Continuing Education Program (RRCEP) is based at the Woodrow Wilson Rehabilitation Center, Fishersville, VA. Programs are targeted upon staff development needs of professionals of general rehabilitation agencies, rehabilitation agencies for the blind, and public and private rehabilitation centers and

facilities in Federal Region III (Delaware, Washington, D.C., Maryland, Virginia, West Virginia, and Pennsylvania). Various methodologies are utilized and a primary objective is to translate theoretical concepts into practical applications in order to facilitate the provision of quality continuing education to professional rehabilitation practitioners who serve the severely handicapped.

A corollary benefit of these programs is the awarding of graduate or undergraduate credit in a post-induction program for newly employed rehabilitation professionals and a field work practicum program. Continuing education units (CEU's) and/or graduate or undergraduate credits are offered in many of the short-term workshops, seminars, and institutes. RRCEP offerings are approved by the Commission on Rehabilitation Counselor Certification for maintenance credit.

#### **Program Content:**

*Post-Induction Training for Rehabilitation Counselors and Related Personnel.* A five-week residential program is held at the Woodrow Wilson Rehabilitation Center which also provides a laboratory setting for the training. Newly employed vocational rehabilitation counselors and related professional staff from agencies and facilities throughout the region are referred for training experiences relating the history, philosophy, and legal bases of vocational rehabilitation; principles, methods, and techniques of rehabilitation counseling; caseload management and the rehabilitation process; medical and psychological aspects of disability; and contemporary concerns in vocational rehabilitation. Six undergraduate or graduate credits from Virginia Commonwealth University are awarded to registered individuals satisfactorily completing the five-week residential post-induction core program.

*Rehabilitation Field Work Practicum.* This 13-week office based activity is an optional companion course to the post-induction core program and is available independently as well. The field experience addresses concerns such as development or referral sources; agency practices; caseload management; utilization of community resources; counseling techniques; and place-

ment of the handicapped. The trainee's supervisor prescribes the content of the field work and shares supervision of the work in progress with the faculty coordinator, usually through a site visit and conference. Three undergraduate or graduate credits from Virginia Commonwealth University are awarded to registered individuals satisfactorily completing the requirements of the field work practicum.

*Techniques and Methodologies in Rehabilitation Supervision.* This core area consists of several training activities in management, supervisory skills and practices, interpersonal relationships between supervisors and practitioners, technical and legal expertise, and quality assurance. Workshops and institutes are offered in:

1. Executive Leadership for Rehabilitation Supervisors;
2. Management Principles for Rehabilitation Supervisors;
3. Women in Rehabilitation Supervision;
4. Supervision of Quality Assurance in Rehabilitation Service Delivery.

*Advanced Counseling Skills.* Workshops and seminars in a variety of theoretical approaches to rehabilitation counseling are offered on a short-term basis. Workshops generally do not exceed three to five days and variable CEU's are awarded. Topical workshop areas include, but are not limited to:

1. Rational Emotive Therapy;
2. Adlerian Lifestyle Counseling;
3. The Art of Helping (Carkhuff Model);
4. Basic Group Counseling, Process, and Procedure;
5. Advanced Group Counseling Skills;
6. Assertiveness Training Skills;
7. Gestalt Techniques and Skills.

*Knowledge Utilization in Rehabilitation.* Institutes, workshops, and conferences are offered in topical areas of recent emphasis and current benefit to professionals in rehabilitation, varying according to developments in research and practice. Linkages with other RSA funded programs, for instance, R and T Centers, RRI's, state agency rehabilitation programs, and other regional rehabilitation continuing education programs, are coordinated to being state of the art information to various target groups of

rehabilitation practitioners. Programs include, but are not limited to:

1. Regional Information Utilization Institute;
2. Legal, Attitudinal, and Recreational Barriers;
3. Prosthetics and Orthotics Training.

Another area under knowledge utilization deals with the publication and dissemination of a monograph series. RRCEP/VCU also produces bibliographies, syllabus outlines, cassette tapes, and information in Braille.

*Program Planning.* Training in this area is geared to the needs and interests of top-level state agency administrative personnel. Institutes of high impact and of about two days' duration are offered. Program planning encompasses the area of agency organization, personnel management, public administration, service delivery, fiscal budgeting and planning, and systematic thinking in the allocation and utilization of resources. A major activity in this core area is the consortium on rehabilitation personnel and training.

*Rehabilitation Facilities Training Program.* Continuing education activities and programs for the staff of state vocational rehabilitation agency operated facilities and centers are coordinated and implemented in a variety of areas. The staffs of private facilities are also eligible to attend appropriate programs.

## **ALCOHOL AND DRUG EDUCATION/REHABILITATION PROGRAM**

Established in 1975 as the Alcohol Education Program, the program changed its name to the Alcohol and Drug Education/Rehabilitation Program (ADERP) in the fall of 1979. This reflects the enlarged scope of the program which has come to include all types of chemical (physical and/or psychological) addiction. The new title of the program also reflects the fact that students progressing through these courses often become aware of their own alcohol/drug problems or those within their families and seek help; thus there is a rehabilitation nature to the educational sequence.

ADERP was established to meet the

following objectives: 1) to define, increase, and evaluate the competencies and skills of professional alcoholism and drug counselors; 2) to increase the scope of knowledge about alcohol and drugs for clinical supervisors, program managers, medical personnel, mental health workers, and those in other fields serving as gatekeepers; 3) to develop and train new personnel for the alcohol and drug field; and 4) to conduct alcoholism and drug rehabilitation research.

The four objectives stated above are being met through the following five tracks: alcoholism counselor, clinical supervisor, program director, medical, and informational. Both workshop and academic courses are designed to meet the objectives through these tracks.

Graduate studies leading to a master's degree are made available to full-time, part-time, or work-study students. A concentration package is also available in the undergraduate curriculum for students who choose the Alcohol and Drug Education/Rehabilitation Option. Graduate and undergraduate programs provide classroom based courses as well as workshops for academic and/or continuing education credit.

Courses are also open to other rehabilitation students as well as business students (in the Personnel Industrial Licensing Program), nursing students, psychology students, and others as electives.

In accordance with the mandate from the Virginia General Assembly for certification of all alcohol and drug counselors in the state, ADERP developed an approved program of education to meet requirements as stated by the Virginia Alcoholism Counselor Certification Committee and is aspiring to meet those more recently established by the Virginia Drug Counselor Certification Committee. Education for certification involves the completion of 400 hours of approved alcohol education which includes the following six areas of competency: communication, knowledge of alcohol use and alcoholism, understanding the recovery process, counseling and treatment, information, and referral and case management skills. This 400-hour educational program consists of 220 contact hours with the appropriate didactic/experiential ratio and 180 prac-

ticum hours which may be fulfilled either through the academic degree program or by successfully completing the progression of seminar and non-degree academic courses.

Instruction addresses a core body of knowledge which is inclusive of the following courses: Overview of Alcoholism and Drug Abuse; Recovery of Alcoholism and Drug Abuse; Treatment of the Alcoholic/Drug Addict with the Significant Others (Family); and Principles, Methods, and Techniques in Treatment of the Alcoholic and Drug Addict (Group Interaction). Also, a focus on direct application of this core body of knowledge (220 hours of didactic and experiential education) is experienced, in the field, by all students before completion of the course sequence as they accomplish Littlejohn's 22 Tasks in a clinical setting under supervision through the Practicum/Internship course.

In addition to the core body of knowledge, areas of special interest are addressed in Crisis Intervention with the Alcoholic and Drug Addict, Prevention, Case Problem Conference, Occupational Alcoholism and Drug Abuse Program Development, and other courses depending on the individual's educational level and area of interest.

ADERP's growth in training through education parallels its initiation and subsequent expansion into the greater Richmond community. Contributions of the program to the community include: multi-disciplinary informational contacts; referrals to various agencies, skilled instructors, and speakers available upon request; knowledgeable counselors who value accountability and professionalism (as seen in those seeking certification and re-certification), exchanges of current trends in treatment and education as transmitted by students doing internship/practicum placements at local agencies. Also included are increased awareness as enhanced by multi-media coverage of workshops and other events; individual rehabilitation of some program participants that return to the community with a message of hope in recovery while supporting AA, Al-Anon or concerned persons programs, and finally, ADERP is a vital part of the community support network.

The Alcohol and Drug Education/Rehabilitation Program has established itself

as a foundation of the educational community as well as the greater Richmond community and the overall state structure where alcohol or drug education/rehabilitation is a new frontier. Information on academic courses and all workshops is available in the ADERP brochures and/or supplements and the university bulletins.

For further information, write or call the Department of Rehabilitation Counseling, Alcohol and Drug Education/Rehabilitation Program, Virginia Commonwealth University, 812 West Franklin Street, Richmond, VA 23284, (804) 257-6233.

### **SPECIALIZATION AREAS**

The Department of Rehabilitation Counseling, through its courses and those in other departments, offers specialization areas to all graduate students within the department. These areas include: 1) mental health rehabilitation; 2) correctional rehabilitation (public offender rehabilitation); 3) vocational evaluation and work adjustment; 4) services to the severely physically handicapped; 5) community resources utilization and development; 6) counseling (individual and group); 7) alcohol and drug rehabilitation; and 8) manpower planning.

Courses provide considerable flexibility for students who wish to emphasize special concerns. Internships are provided in mental health, correctional settings, or other settings (such as vocational evaluation and work adjustment units in various rehabilitation facilities). Students may emphasize working with physically handicapped persons and the development of community resources through special courses such as rehabilitation case studies, occupational information, job analysis and placement, work evaluation techniques, work adjustment techniques, and internship. A course in rehabilitation research is also offered and is usually directed toward a student's area of special interest. Faculty members encourage students to select term papers and research project topics to emphasize areas in which they have the highest level of interest.

All students should note, however, that it is not necessary to specialize or choose a sequence area. This is available only for stu-

dents who wish to become highly specialized in a specific area of rehabilitation.

### ADMISSIONS

Beyond the general graduate school admissions standards, the following procedures and requirements apply:

1. In place of the Graduate Record Examination, applicants may elect to prove their ability to complete graduate studies and gain admittance by completing nine hours of undergraduate courses, earning a 3.0 ("B") average in courses specified by the chairman of the Department of Rehabilitation Counseling.
2. A personal interview with the chairman is required. If this is impractical, the chairman will designate an alternative for a pre-acceptance interview.
3. The Department of Rehabilitation Counseling evaluates the applicant's fitness for a career in rehabilitation counseling. Careful attention is given to previous work experience, academic background, scholarship, and emotional maturity. The application is then reviewed and passed upon by the Admissions Committee.

### TRANSFER CREDIT

A maximum of six semester hours of acceptable graduate credit earned in a degree program at an accredited institution but not applied towards an awarded degree may be transferred and applied toward the M.S. degree. Such credits will be evaluated for acceptance purposes at the completion of nine semester hours of work in the graduate program in rehabilitation.

### CANDIDACY

Admission to graduate study does not constitute candidacy for a degree. Rather, a student who has been admitted to graduate study is advanced to degree candidacy upon the recommendation of the department in which the degree is sought. Advancement to degree candidacy requires that the candidate must have completed between nine and 15 semester hours of graduate study with a minimum grade point average of 3.0; demonstrated clearly the aptitude and ability

to pursue graduate work, including independent study; exhibited a commitment to rehabilitation counseling as a profession; demonstrated promise for a successful career in the field selected in terms of temperament and personality. Admission to degree candidacy is not an automatic process, but rather the application for candidacy is approved by the department only after careful valuation of all pertinent factors.

### REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN REHABILITATION COUNSELING

In addition to general graduation requirements

1. Students must complete a minimum of 39 graduate semester credits, approved by the chairman, exclusive of any credit for supervised clinical practice for rehabilitation counselors or required research with an overall grade point average of 3.0 or above.
2. Application to degree candidacy may be made after students have demonstrated their ability to pursue work of graduate character by satisfactorily completing a semester of residence credits (nine credits minimum; 15 credits maximum) and satisfactorily completing an oral or written examination administered by the chairman. Admission to degree candidacy is given upon certification of acceptable records of achievements by the student's advisor.
3. Students without acceptable experience in the field of rehabilitation must complete supervised clinical practice for rehabilitation counselors under the direction of the faculty and the immediate supervision of a qualified person in an approved agency or facility.
4. All students must pass a comprehensive examination. It is administered by the chairman after students have completed a minimum of 30 graduate credits.
5. Students who have had successful employment in a rehabilitation agency or facility or other successful work experience involving individual case study and adjustment of handicapped per-



sons may, upon approval of the faculty, meet the requirements for supervised clinical practice by successful completion of an additional three graduate semester credits in a research project.

### **SUPERVISED CLINICAL PRACTICE**

Supervised clinical practice in a rehabilitation agency setting is required of all students who have had no previous rehabilitation agency experience. Supervised clinical practice provides an opportunity for students to develop techniques and skills in connection with the total rehabilitation process. It gives them an opportunity for application of theory in the practice of rehabilitation counseling and case management in a rehabilitation setting. Provided under the direction of the faculty and the immediate supervision of qualified personnel in approved rehabilitation agencies or facilities, supervised clinical practice constitutes full-time study for one semester.

Students who have acceptable counseling experience in rehabilitation must either enroll in supervised clinical practice or participate in a special project approved by the chairman.

Voluntary activities or introductory field experience may not be substituted for, nor counted toward, supervised clinical practice.

Numerous agencies and organizations in Virginia and other states have cooperated with the Department of Rehabilitation Counseling to provide students with opportunities for supervised clinical practice. The primary sources of training are state-federal vocational rehabilitation agencies, Veteran's Administration, Employment Security Commission, social service departments, correctional institutions, hospitals, clinics, sheltered workshops, and evaluation centers. The disability areas have included physical (e.g. spinal cord injury, visual impairments, orthopedic disabilities, speech and hearing disorders, etc.), psychiatric, mental retardation, alcoholism, drug addiction, public offenders, the disadvantaged, etc. The student's advisor will be able to provide the names, addresses, and telephone numbers of agency supervisors who have worked with students in the past. Information regarding a

variety of community resource directories is also available.

### **CORRESPONDENCE AND FURTHER INFORMATION**

Further information may be obtained by writing to the chairman of the Department of Rehabilitation Counseling, School of Community and Public Affairs, Virginia Commonwealth University, 812-814 West Franklin Street, Richmond, VA 23284, (804) 257-1132.

### **GRADUATE COURSES IN REHABILITATION COUNSELING (REH)**

**502 History and Techniques of Manual Communication I.** 3 credits. A study of the basic principles of manual communication through non-verbal techniques, eye-contact training, fingerspelling, and basic patterns of American Sign Language Systems. Also a focus on history and development and various methods of communication with deaf persons.

**503 History and Techniques of Manual Communication II.** 3 credits. A review and continued study of the development and techniques of basic sign language with emphasis upon additional sign vocabulary acquisition and improvement of expressive and receptive skills.

**504 Advanced Manual Communication: AMESLAN.** 3 credits. A comprehensive and in-depth study of the American Sign Language (AMESLAN) as an independent language of the deaf with low verbal skills and emphasis on English and sign language idioms not known in most forms of manual communication.

**505 Attitudinal, Access, and Architectural Barriers in Rehabilitation.** 3 credits. Will emphasize legislation concerning non-discrimination, affirmative action, and architectural and transportation barriers. Will review the scope of the problem as well as the A.N.S.I. standards designed to overcome many of the obstacles to full participation in society. The course will involve field and laboratory exercises in handicap awareness. Students will meet with disabled persons to review the variety of mobility and access problems they encounter.

**520 Introduction to Vocational Rehabilitation.** 6 credits. This course provides an intensive five-week exposure to the broad field of vocational rehabilitation. Conducted on the grounds of the Woodrow Wilson Rehabilitation Center, classroom, seminar, and laboratory experiences are employed relative to the full range of physical and mental disabilities. Interaction with the various professional members of the vocational rehabilitation team and with individuals with various disabling conditions is arranged. The rehabilitation counselor's role and function as a member of the team is

stressed. Enrollment is limited to eligible employees of public and private vocational rehabilitation agencies and facilities.

**521 Overview of Alcoholism.** 3 credits. Overview of alcoholism as a progressive, family disease which can be arrested by a multidisciplinary, rehabilitative approach; consideration of the etiology of alcoholism from physiological, psychological, and socio-cultural viewpoints as well as methods of intervention at various stages; description of the highlights of the continuum of care available in the recovery process.

**522 Recovery of Alcoholism.** 3 credits. Exploration of the denial system present in U.S. society which complicates the early intervention and treatment of a progressive, family disease; presentation of new hope for the alcoholic and his family in the attempts being made in certain areas of society to begin the recovery process early; description of approaches proving to be helpful in facilitating the alcoholism professions in guiding the alcoholic and his family from isolation to involvement and integration.

**523 Principles, Methods, and Techniques in Treatment of the Alcoholic.** 3 credits. Prerequisites: REH 521 and 522 or permission of instructor. Integration of principles, methods, and techniques utilized in the recovery process of alcoholism, especially in group work; exploration of various methods and theories as applied to treatment of the alcoholic, with provision for group involvement, co-facilitation, and practice counseling sessions.

**525 Introduction to Rehabilitation.** 3 credits. This course is designed to give the student a comprehensive overview of the rehabilitation process. It emphasizes its historical, philosophical, social, and legal aspects. Special attention is devoted to the professional aspects of rehabilitation counseling, the need for it and the skills and functions of the counselor.

**527 Rehabilitation of the Industrially Injured Client.** Semester course; 3 lecture hours. 3 credits. This course emphasizes the unique needs of the industrially injured client and current methods of rehabilitation and programs available through insurance companies and governmental agencies.

**528 Prevocational Adjustment Practices With Mentally Retarded Persons.** Semester course; 3 lecture hours. 3 credits. This course is designed to acquaint the student with prevocational adjustment practices as these relate to the rehabilitation process. Emphasis will be placed on activities and information and geared toward complete rehabilitation of mentally retarded persons as well as utilization of community resources.

**533 Directed Readings in Rehabilitation.** 3-6 credits. Topical course. Provides an opportunity for students to intensify understanding in one or more areas of rehabilitation through directed readings under supervision of a faculty member. The study experience must be synthesized in a paper and a written or oral examination before a faculty committee.

**538 Rehabilitation and Hearing Impairment.** Semester course; 3 lecture hours. 3 credits. Offers material on rehabilitation aspects of hearing impairments. Covers

the implications of hearing loss and deafness in terms of the size of the hearing impaired population, services available in terms of vocational rehabilitation, and other agency efforts. It also focuses on methods of communication and the understanding of language development. The concept of multiple disabilities will be discussed as well some aspects of mental health and prevention. Offers material on the "deaf community" and emphasizes development of understanding of this special population group.

**539 Current Problems in Rehabilitation.** 3-6 credits. Topical seminar. A study of development and implications resulting from rehabilitation research and demonstration activities. Agency problems related to staff improvement and expansion of rehabilitation services and facilities will also be considered as well as reviews of specific disability problems and trends in rehabilitation.

**540 Directed Readings in Alcoholism.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Opportunity to investigate and pursue in depth a particular concept encountered in the alcoholism concentration courses or to study in detail a particular problem in alcoholism while working in the field; under the direction of the alcoholism personnel in the department.

**551 Treatment of the Alcoholic with Significant Others.** Semester course; 3 lecture hours. 3 credits. Prerequisites: REH 521, 522, and 523, or permission of instructor. Stress on the importance of the family disease concept of alcoholism utilized throughout the concentration series; demonstrations and role-playing of situations involving the alcoholic and significant others provided; discussions of multiple impact family therapy and other approaches developed relevant to the alcoholic.

**559 A Survey of Rehabilitation of Blind and Visually Impaired Individuals.** 3 credits. The purpose of this course is to acquaint the student, rehabilitation counselors, and other personnel working in related areas with problems encountered in the rehabilitation of blind and partially sighted persons.

**561 Work Evaluation Techniques for Rehabilitation.** 3 credits. An in-depth examination of the methods and techniques utilized in determining employment potential and the role of the work evaluator in the rehabilitation process. Specific procedures and approaches are analyzed including the TOWER System, Singer-Graflex System, and other methods currently utilized in rehabilitation services.

**562 Work Adjustment Techniques for Rehabilitation.** 3 credits. An in-depth analysis of methods utilized in overcoming maladaptive worker behavior in rehabilitation services including group process, sheltered workshops, and non-verbal techniques. The role and function of adjustment personnel in the rehabilitation process. Current problems and research in methods of adjustment.

**563 Independent Living in Rehabilitation.** 3 credits. This course will offer students an opportunity to acquire the knowledge and skills necessary for providing ser-

vices to severely disabled people in the area of independent living. Emphasis will be placed on evaluation and adjustment approaches for people who are clients of public and private rehabilitation centers, employment workshops, group homes, and in the emerging centers for independent living in rehabilitation.

**593 Field Work Practicum.** 3 credits. Designed to complement and follow REH 520, this eight-week on-the-job experience is jointly supervised by a university faculty member and by the student's training supervisor in the public or private rehabilitation agency or facility where the student is employed. A choice of exercises is offered with required written reports of each exercise selected. These exercises are programmed to encourage the further integration of concepts, practices, and skills learned in REH 520 with actual agency policy and service delivery. Enrollment is limited to eligible employees of public and private vocational rehabilitation agencies and facilities who have completed REH 520.

**607 Community Resources.** 3 credits. This course emphasizes the means by which the community uses its resources and services to meet the needs of handicapped persons. It provides for study and discussion of the nature and organization of community resources as they relate to rehabilitation, availability of community resources through public and private agencies and facilities including employment potentials, problems in the development and utilization of community resources, observational visits to key agencies, and lectures by representatives of various rehabilitation programs.

**611 Individual Counseling Approaches in Rehabilitation.** 3 credits. This course is designed to acquaint students with various approaches involved in the individual counseling of rehabilitation clients. Emphasis will be placed on principles and techniques which assist individuals to develop a better understanding of vocational, educational, and personal adjustment problems related to severe and multiple disabilities and to make realistic plans regarding solutions to these problems. Audio-visual tape experiences will be offered.

**612 Group Counseling Approaches in Rehabilitation.** 3 credits. This course is designed to acquaint students with various approaches involved in the group counseling of rehabilitation clients. Emphasis will be placed on principles and techniques which promote the development of effective interpersonal communication, decision making, and leadership as they concern vocational, educational, and personal adjustment problems related to severe and multiple disabilities. Audio-video tape experiences will be offered.

**613 Advanced Rehabilitation Counseling Seminar.** 3-9 lecture hours. 3-9 credits. Prerequisites: REH 611 and 612 or permission of instructor. This course is designed to provide an opportunity for students to undertake a more in-depth study of selected approaches to individual and/or group counseling of rehabilitation clients. Principles and techniques relevant to vocational, educational, and personal adjustment problems related to severe and multiple disabilities will be systematically explored and studied. Audio-video tape experiences will be offered.

**623 Occupational Information, Job Analysis, and Placement.** 3 credits. Provides an orientation to occupations and occupational information for rehabilitation counselors, study of the literature on occupations and occupational information, writing the job analyses, visits to selected business and industrial establishments employing handicapped persons, and job analyses related to the employment of handicapped individuals.

**625 Measurement and Evaluation in Rehabilitation.** 3 credits. Consideration will be given to the selection of tests for rehabilitation clients; the determination of need for testing, administering, and interpreting tests; adaptation of tests to special disability groups; suggestions for the integration of test results with the overall rehabilitation diagnosis; the establishment of local norms for rehabilitation clients; the work-evaluation report; and interpretation of test results to client. Tests of achievement, aptitude, intelligence, interest, and personality will be critically examined. Laboratory fee \$4.

**633 Rehabilitation Case Studies.** 3 credits. This course provides for critical analyses of representative rehabilitation cases. Rehabilitation case records are utilized as a basis for presenting an understanding of the handicapped client and his problems; the rehabilitation casework processes and diagnoses; and the provision of services.

**635 Theory and Practice in Prevention of Alcoholism.** 3 credits. Prerequisite: permission of instructor. Utilization of human service agencies and community at large to affect attitude and behavior change concerning the use and abuse of alcohol; development of skills in educating, coordinating, motivating, planning, and implementing in prevention area; project in prevention.

**640-641 Medical Information for Rehabilitation Counselors.** 3-6 credits. This course provides medical information for rehabilitation counselors and introduces students to medical terminology. It provides knowledge of the etiology, prognosis, methods of treatment, effects of disabling conditions, and implications for the rehabilitation counselor. Physician-counselor relationships are emphasized as is the interpretation of medical reports. (This course is offered in cooperation with the Department of Rehabilitation Medicine, Medical College of Virginia of Virginia Commonwealth University.)

**642 Psychiatric Information for Rehabilitation Counselors.** 3 credits. This course provides psychiatric information for rehabilitation counselors so that they may have an understanding of disabling psychiatric conditions as well as the emotional aspects of physical disabilities. It deals with impairments of a mental origin including mental retardation, behavioral disorders, neuroses, and psychoses—both organic and functional, as well as convulsive disorders. Emphasis is placed on physical, emotional, and social factors that contribute to the various mental illnesses.

**643 The Rehabilitated Facility and its Services to the Severely Disabled.** Semester course; 3 lecture hours. 3 credits. This course is designed to offer the student material on the rehabilitation facility and programs of facility services to the severely disabled. Special emphasis will be placed on materials, information, and activities which will enable each student to achieve a comprehensive understanding as to the development and

operation of the facility services by personnel which facilitates the rehabilitation of handicapped persons.

**644 Alcohol and Human Behaviors.** 3 credits. Prerequisites: REH 521, 522, 523 and 695, or permission of instructor. Understanding the significance of behavior as a tool in diagnosing, treating, and/or referring the alcoholic; appreciation of particular cues to observe the predominant behavior associated with living problems and reflected by the alcohol abuser.

**645 Delivery Services to the Alcoholic.** 3 credits. Prerequisites: REH 521, 522, 523, and 691, or permission of instructor. Exposure to the 22 professional tasks of the alcoholism counselor through discussion centered around examples brought into class from clinical experience; understanding how these tasks dealing with the alcoholic and his family apply to different settings; a summary of the other five parts in the alcoholism concentration culminating in a philosophy of the alcoholism counselor.

**650 Occupational Alcoholism and Drug Abuse Program Development.** 3 credits. This course is designed to provide information and data for graduate students on the importance of the effects of alcohol and other drugs in a work setting. Various types of programs used by business, industry, and other organizations to deal with such employees will be presented. The course context was developed to provide the student with the opportunity to gain knowledge and skills necessary to design, implement, and maintain systems to reduce human and productivity losses due to alcoholism/drug addiction and its effects.

**655-656 Seminar in Rehabilitation.** 3-6 credits. Current trends, problems, and developments in rehabilitation are discussed. Students pursue a special interest area such as cultural deprivation, disability determination, work adjustment, work evaluation, etc., and share information and experience mutually with the group. Lectures, reports, and group discussions are utilized.

**657-658 Seminar in Audiology in Rehabilitation.** 3-3 credits. This course provides an orientation to audiology as it applies to the rehabilitation process. It includes history of the education of the deaf and hard of hearing, methods of instruction, diagnostic testing and evaluation, and special lectures pertaining to rehabilitation of the acoustically disabled and problems confronted by the counselor or teacher in providing adequate services to this disability group.

**672 Research in Rehabilitation.** 3-6 credits. The student undertakes a research project with the assistance of a faculty member. He is required to write a paper and pass an examination in order to receive credit.

**681-689 Institutes and Workshops.** Orientation institutes and other short-term training programs are offered for rehabilitation counselors newly recruited to the rehabilitation field and for the further professional development of those already employed. Content will vary according to the aims of the institutes or workshops. Length of time and number of credits are announced prior to each institute or workshop.

**691 Seminar in Special Problems in Rehabilitating Handicapped Persons.** 3-6 credits. Topical seminar. This

course is presented in a series of units. Each unit places emphasis on a special disability group such as paraplegic, deaf and hard of hearing, alcoholic, epileptic, cerebral palsied, cardiac, blind, mentally retarded, mentally ill, drug addict, aged, etc. The incidence and nature of disabilities, psychological factors, vocational problems, and specialized treatment and placement facilities required and techniques of team approach; use of rehabilitation centers and specialized facilities and use of consultants.

**693 Introduction to Field Experience for Rehabilitation Counselors.** 3 credits. This course provides for concurrent field experience. It is designed for students who have no training or experience in interviewing and counseling in rehabilitation settings.

**694 Practicum in Job Placement in Rehabilitation Counseling.** 3 credits. This course provides for actual experience in rehabilitation counselor activities, with emphasis on placement techniques—including itinerary planning, plant surveys, job analysis, placement, and follow-up.

**695 Supervised Clinical Practice in Alcoholism.** Block assignment; 8 credits. Prerequisites: REH 521, 522, and 523. Practical learning by observing and doing the 22 tasks of the alcoholism counselor as outlined in the Littlejohn Report; general direction and supervision by alcoholism personnel within department and direct supervision by a person qualified within the facility to discuss counselor/client problems.

**696-697 Supervised Clinical Practice.** Block assignments; 8 credits. Practical learning by observing and doing. Trainees have many opportunities for the application of theory in the practice of rehabilitation counseling and case management and/or work evaluation and work adjustment in a rehabilitation setting. Training is provided under the general direction and supervision of the faculty and the direct supervision of a qualified person within the agency or facility. Students meet regularly with the clinical practice supervisor within the agency or facility to discuss clients' problems and possible solutions.

**798-799 Thesis.** 1-3 credits. The master's thesis consists of either a carefully planned and executed research undertaking or a detailed and comprehensive report on a supervised clinical practice experience. Generally, a thesis of the latter type in the latter form will carry one credit and will be taken in conjunction with REH 696-697.

## Department of Urban Studies and Planning

### FACULTY

Brown, John C. *Assistant Professor* Ph.D., University of Pittsburgh; urban finance, policy analysis.  
Fonoroff, Allen *Professor and Chairman* J.D., Columbia University Law School, planning law, land use planning.

- Gulak, Morton B. *Associate Professor* Ph.D., University of Pennsylvania; architecture and urban design, urban revitalization and physical planning.
- Moeser, John V. *Associate Professor* Ph.D., George Washington University; metropolitan reform, racial politics.
- Rugg, Robert D. *Associate Professor* Ph.D. University of Ottawa; planning information systems and computer cartography, recreation demand analysis.
- Schexnider, Alvin J. *Associate Professor and Associate Dean* Ph.D., Northwestern University; urban politics, intergovernmental relations.
- Schulz, Peter *Associate Professor* Ph.D., University of Illinois; land use, remote sensing.
- Silver, Christopher *Assistant Professor* Ph.D., University of North Carolina; urban history, housing and neighborhood planning.

The graduate program in urban and regional planning seeks to provide rigorous professional grounding in the theory and methodologies of planning through a curriculum that balances classroom and field experience.

The Master of Urban and Regional Planning (M.U.R.P.) is a two-year degree program requiring 48 semester hours of classwork and six hours of internship. A core of required courses, most of which are taken in the first year, includes:

- Introduction to Urban and Regional Planning
- Problems in Urban and Regional Planning
- Planning Methods I: Planning Information Systems and Research Design
- Planning Methods II: Plan Formulation and Implementation Strategies
- Urbanization and Land Use Theory
- Legal and Legislative Foundations of Planning
- Techniques of Mapping and Cartographic Analysis
- Programming and Budgeting
- Planning Studio I and II

Students may choose a broad program in comprehensive planning, or may elect one of the several specialized areas of study. These areas include:

- Land Use and Environmental Planning
- Urban and Regional Economic Development
- Community Services Planning
- Health Planning.

The emphasis in land use and environmental planning is on problems at the interface between social systems and the physical en-

vironment. It is expected that students specializing in this sequence will graduate with knowledge and skills necessary to prepare land use plans, taking into account the social and economic issues of community development as well as the constraints imposed by the physical environment. This specialization provides exposure to at least one functional aspect of physical planning, such as housing, physical environment, recreation, or transportation.

The specialization in urban and regional economic development is oriented toward students interested in careers ranging from regional and community economic development and human resources planning to fiscal analysis and research planning for metropolitan planning agencies. The focus is on urban and regional economic theory, economic analysis, and formulation of strategies and programs for local economic development.

Students desiring to serve as human service planners or community action planners may specialize in community service planning. This specialization combines planning techniques, law, and politics with studies in community needs assessment, policy analysis, and design of delivery systems in such areas as manpower training, neighborhood organization, and preservation, health, and welfare.

The specialization in health planning has been developed in cooperation with the Department of Health Administration in the School of Allied Health Professions. Students may earn the Master of Urban and Regional Planning degree with intensive training in health care resources and planning techniques as preparation for careers with health planning agencies.

### DUAL DEGREE PROGRAM IN LAW AND URBAN AND REGIONAL PLANNING

A cooperative arrangement with the T. C. Williams Law School makes it possible for students to receive a law degree (J.D.) and an urban and regional planning degree (M.U.R.P.) in four years rather than the five years ordinarily required.

The purpose of the program is to integrate

the two professional curricula, and provide the expertise necessary to apply legal analytical skills and planning methods and analysis to urban and regional policy issues and problems. The dual degree program is designed to equip graduates for a variety of professional positions including staff for legislative committees and government agencies and commissions, government legal staff, private consulting, neighborhood advocacy, directorships of planning and related agencies, and executive aides to elected officials.

Interested students must separately apply for and be admitted to the T. C. Williams School of Law, University of Richmond, and the Department of Urban Studies and Planning, VCU. Students will spend their entire first year in either the School of Law or the Department of Urban Studies and Planning, and their second year in the program not selected in the first year. Fifteen credit hours (one semester of course work) of the planning program will be applied toward meeting the graduation requirements of the School of Law, and 12 credit hours (one semester of course work) in the School of Law will be applied toward meeting requirements of the Department of Urban Studies and Planning.

Upon admission to the dual degree program, every student will be assigned an advisor in each program who will assist in planning the course of studies that will include all of the required courses in each program plus such elective courses as will best serve the interests of the individual student.

Students deciding not to complete the dual degree program must meet all of the regular requirements of the J.D. or M.U.R.P. to receive either degree of their choice.

## RESEARCH AND RELATED ACTIVITIES

Current research of faculty includes:  
 Effects of political organization on architectural styles and land use;  
 Effects of annexation on the political structure of the metropolitan area;  
 Comparative urbanization and planned change;  
 Natural hazards perception in coastal Virginia;

Public school enrollment projection and provision for transportation;  
 Computerized information system for rural planning districts;  
 Impacts of the ward system on delivery of urban services;  
 Contract zoning;  
 Recreation programs in correctional settings;  
 Industrial development and long range economic development planning;  
 Planning for the elderly.

## ADMISSIONS

Beyond the general graduate school admissions standards the following apply:

1. Students must have a minimum of a 2.7 grade-point average (on a 4.0 scale) in their last 60 semester hours of undergraduate work. In addition, a grade-point average of not less than 3.0 must have been maintained in their undergraduate majors. Finally, applicants are expected to receive a minimum score of 400 on each of the categories in the Graduate Record Examination.
2. Students not meeting these requirements may be admitted to the program on a probationary basis. The probationary period shall consist of the first 12 hours of graduate work in which all grades must be no less than "B".
3. Generally, two of the three letters of reference should come from former faculty.
4. The latest dates for submitting application materials are June 1 to be considered for the following September, and December 1 for the following January. However, all candidates — especially those applying for financial aid — are urged to apply before March 1 in order to have the best chance of being accepted or receiving an award of financial assistance for the following academic year. Applicants who submit materials by March 1 will be notified of the decision of the Admissions Committee by mid-April.

### **PART-TIME STUDENTS**

Because virtually all courses may be taken in the evening, the program accommodates both full- and part-time students. Students may also take advantage of courses offered in the summer. Thus, it is possible for a part-time student taking six credit hours per semester to finish the master's degree in four years or less.

### **TRANSFER CREDIT**

Upon acceptance to the program, up to six hours of graduate credits with grades of "B" or above may be applied to the degree if such work is considered relevant by the Admissions Committee.

Students admitted to the graduate program may register for selected courses offered by the T. C. Williams Law School of the University of Richmond. A list of such courses appears on page 190 under the title "Law Electives." No more than nine credit hours of law electives may be transferred, and students must receive a grade of "B" or above in such course work.

### **FINANCIAL AID**

The university maintains a Financial Aid Office which is discussed in Part I of this bulletin.

There is also a limited amount of financial aid provided by the Department of Urban Studies and Planning. Application forms are available from the department for the following forms of aid:

1. Graduate Assistant Positions. Duties involve helping in the instruction of courses in the Department of Urban Studies and Planning and Recreation. The level of support varies according to the work level, financial need, and scholarship.
2. Tuition Scholarships. There are a limited number of tuition scholarships for full-time students.
3. Research Assistant Positions. The stipend and number of positions depend upon the level of sponsored research carried out by the department in each year.
4. Department Assistant. There are funds available for work in the department office. Duties include typing, filing,

and helping with department projects. The pay is by the hour, from ten to 20 hours a week.

5. T. Edward Temple Memorial Scholarship Award. This award of Approximately \$400 to \$500 a year is given to an outstanding graduate student.

### **REQUIREMENTS FOR THE DEGREE OF MASTER OF URBAN AND REGIONAL PLANNING**

(In addition to those listed on page 146).

1. Students must complete a minimum of 54 graduate credits, including 48 credits of course work and six hours of internship.
2. A minimum of at least half of the courses required in the program shall be those designated as exclusively for graduate students; that is, those at the 600 level or above.
3. Although approval is normally granted, students must acquire the approval of their advisors before enrolling for any unspecified elective.
4. In USP 752 Planning Studio II or USP 798 Projects students must obtain a grade of "B" or better on this Final Project to be eligible for the receipt of the M.U.R.P. degree.

### **INTERNSHIP AND PLACEMENT**

The internship is designed to give students practical experience in planning related activities in an institutional context. Normally, the internship is taken during the summer between the first and second year. Permission is necessary from the chairman before the internship is begun.

Students who are already or who have been employed in planning positions may use that experience to satisfy the internship requirement. Approval of such experience by the chairman is required. In those cases where the internship requirement is waived, students are required to complete six additional semester hours of planning course work.

There are many opportunities for internship positions, as well as part-and full-time jobs in planning at all levels of government within the Richmond area. Agencies in which students have found employment in-

clude the planning departments of the city of Richmond; the Richmond Regional Planning District Commission; other regional planning district commissions; and the counties of Henrico, Chesterfield, Goochland, and Prince George. Students have also been employed in state agencies such as the Department of Housing and Community Development, the Water Control Board and the Governor's Council on the Environment.

**CORRESPONDENCE AND FURTHER INFORMATION**

Further information may be obtained by writing to the chairman of the Department of Urban Studies and Planning, Virginia Commonwealth University, 812 West Franklin Street, Richmond, VA 23284, (804) 257-1134.

**CURRICULUM**

<b>I. First Year, First Semester</b>	<i>Credits</i>
USP 514 Techniques of Mapping and Cartographic Analysis . . . . .	2
USP 531 Introduction to Urban and Regional Planning . . . . .	3
USP 633 Urbanization and Land Use Theory . .	3
USP 671 Planning Methods I Planning Information Systems and Research Design . . .	4
 <b>II. First Year, Second Semester</b>	
USP 532 Problems in Urban and Regional Planning . . . . .	3
USP 651 Legal and Legislative Foundations of Planning . . . . .	3
USP 672 Planning Methods II Plan Formulation and Implementation Strategies . . .	4
Electives . . . . .	2-3
 <b>III. Internship</b>	
USP 793 (Normally taken between the first and second year of work but other options are available) . . . . .	6
 <b>IV. USP Second Year</b>	
USP 522 Programming and Budgeting . . . . .	3
USP 751-752 Planning Studio . . . . .	6
or USP 751 Studio I and USP 798 Projects <sup>4</sup>	
Electives <sup>5</sup> . . . . .	17-18
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<sup>4</sup>Prerequisite, all core courses.

<sup>5</sup>Students who select the Land Use and Environmental Planning Option will substitute USP 741 Environmental Management Planning I and take USP 661 Principles of Urban Design, in the second year.

**OPTIONAL SPECIALTIES**

The courses in the optional specialties are taken as electives in the regular curriculum. Thus, a student wishing to specialize would devote most of his first year to required courses, while most of the second year would be devoted to his specialty.

**LAND USE AND ENVIRONMENTAL PLANNING**

<b>Required Courses</b>	<i>Credits</i>
USP 661 Principles of Urban Design . . . . .	3
USP 741 Environmental Management Planning I . . . . .	3
Plus at least three of the following courses . . .	9
BUS 627 Urban Land Development Planning	
USP 652 Planning, Administration, and the Legal Process	
USP 721 Open Space Planning	
USP 732 Metropolitan Circulations Systems	
USP 742 Environmental Management Planning II	
USP 745 Dynamics and Issues in Housing	

**Recommended Electives**

(see bulletin for courses given in alternate years)

USP 571 Introduction to the Study of the Future	
USP 641 Social Change and Community Planning	
USP 682 An Economic Approach to Environmental Issues	
USP 721 Open Space Planning	
USP 731 Economic Development Planning	
USP 746 Housing Development Planning	
USP 782 New Towns Planning	
USP 797 Directed Research	
USP 798 Thesis or Project	

**COMMUNITY SERVICES PLANNING**

<b>Required Courses</b>	<i>Credits</i>
USP 511 Urban Public Policy Making Processes . . . . .	3
USP 536 Urban Poverty Law . . . . .	3
USP 641 Social Change and Community Planning . . . . .	3
<b>or</b>	
USP 512 Metropolitan and Regional Public Management . . . . .	3
Plus any two of the following courses (see bulletin for courses given in alternate years)	6
USP 571 Introduction to the Study of the Future	
USP 721 Open Space Planning	
USP 722 Recreation Systems Planning II	
USP 731 Economic Development Planning	
USP 745 Dynamics and Issues in Housing	
REH 525 Introduction to Rehabilitation	
REH 607 Community Resources	
AJP 612 Public Safety: Policy Issues in Administration of Justice	



AJP 655 Public Safety: Planning Politics of Community-Based Corrections	
SLW 766 Perspectives on Aging	
HAD 614 Health Planning and Policy	15

**URBAN AND REGIONAL ECONOMIC DEVELOPMENT**

Required Courses	Credits
USP 511 Urban Public Policy Making Processes or USP 512 Metropolitan and Regional Public Management . . . . .	3
USP 731 Economic Development Planning. . . . .	3
ECO 616 Advanced Public Finance . . . . .	3
Plus any one of the following: (see bulletin for courses given in alternate years). . . . .	3
USP 522 Programming and Budgeting	
USP 536 Urban Poverty Law	
USP 682 An Economic Approach to En- vironmental Issues	
ECO 532 Manpower Economics	
ECO 611 Concepts of Economics	
ECO 616 Advanced Public Finance (if not taken as a requirement)	
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**HEALTH PLANNING**

Required Courses	Credits
HAD 602 Health Care Organization and Ser- vices . . . . .	3
HAD 624 Health Economics (or equiv.) or. . . . .	3
HAD 662 Health Care Politics and Policy . . . . .	3
HAD 614 Health Planning and Policy . . . . .	3
	12

**Law Electives**

Advanced Real Estate Transactions . . . . .	3
Consumer Protection. . . . .	3
Employment Discrimination Law . . . . .	2
Environmental Law . . . . .	3
Legislation. . . . .	2
Mortgages and Surveyship. . . . .	4
State and Local Taxation . . . . .	3
Community Mental Health Law . . . . .	3

**GRADUATE COURSES IN URBAN AND REGIONAL PLANNING (URP)**

**511 Urban Public Policy-Making Processes.** Semester course; 3 lecture hours. 3 credits. A study of the dynamics of conflict resolution in behalf of and within the urban community; the manner in which competing interests are articulated and aggregated in attempts to shape urban public policy, the various levels, and kinds of governmental machinery designed to resolve the conflicts.

**512 Metropolitan and Regional Public Management.** Semester course; 3 lecture hours. 3 credits. Examines the relationship between metropolitan growth and the

fragmentation of government systems; assesses capacity of fragmented government systems to formulate rational public policy in relation to forces impeding or facilitating political integration of a metropolitan area; evaluates mechanism designed to governmental fragmentation.

**514 Techniques of Mapping and Cartographic Analysis.** Semester course; 1 lecture and 2 laboratory hours. 2 credits. Prerequisite: permission of instructor. Methods of map compilation, map design, geographic base files, and computer cartography in urban planning.

**515 Cartography and Air Photo Interpretation.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. An introduction to the preparation and interpretation of data in cartographic form. Included is the methodology of map making, introductory photogrammetry, object recognition, stereograms, area measurement, and mapping from aerial photos.

**522 Programming and Budgeting.** Semester course; 3 lecture hours. 3 credits. Principles and procedures of budgeting by government units and public agencies as they affect planning, policy making, implementation, and evaluation. Topics covered include an overview of budgeting theory; line item, performance, program, management by objectives, and zero base budgeting.

**531 Introduction to Urban and Regional Planning.** Semester course; 3 lecture hours. 3 credits. Introduction to the history, concepts, and activities of urban planning and their relationship to the ethics and responsibilities of planners.

**532 Problems in Urban and Regional Planning.** Semester course; 3 lecture hours. 3 credits. Regional planning concepts. Trends in urbanization and the planning responses.

**536 Urban Poverty Law.** Semester course; 3 lecture hours. 3 credits. Examines and evaluates developing case law and selected legislation in areas of special concern to low and moderate income groups: legal services, public welfare law, labor law, housing law, family law, consumer law, and criminal procedure.

**540 Historic Preservation in Planning.** Semester course; 3 lecture hours. 3 credits. The course surveys the process of historic preservation which includes the evaluation of sites, identification of architectural styles, the adaptive use of sites and structures, and the various sources available for implementing preservation proposals in government or in the private sector. Preservation is considered as a tool in the planning process and its application to neighborhoods, downtowns, and other city districts is considered.

**551 Local Government Law.** Semester course; 3 lecture hours. 3 credits. Law governing local government operations; especially emphasizing Virginia. Control of the state and local operations, role of commonwealth's attorneys and local governing boards, legal staffs, and related issues.

**552 Urban Transportation Systems.** Semester course; 3 lecture hours. 3 credits. An examination of urban requirements for mobility, transportation systems,

problems of traffic, mass transit, and new concepts for moving people and goods.

**561 Housing and Development Policy.** Semester course; 3 lecture hours. 3 credits. An examination of public policy in housing and development as it has evolved and is evolving in application and practice. The course will focus on the most recent experimentations and adjustments in policy at the national and local levels. Also included are the classic studies of housing and development as a social problem.

**571 Introduction to the Study of the Future.** Semester course; 3 lecture hours. 3 credits. Considers the perspectives, assumptions, and forecasts of futurists and the methods and tools of future research; examines those forces which are presently shaping the future environment and addresses issues of paramount importance in the '80s and '90s.

**581 Land Use and Site Planning.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Principles of land planning and analysis are investigated in both classroom and studio settings. Environmental impacts and the capacity of environmental systems are evaluated in relation to the site requirements of various urban and rural situations. Graphic techniques necessary for applying these principles are described so that the student can develop and evaluate site plans for various purposes and at various scales. Actual site planning exercises are used as a way of grasping the course information.

**633 Urbanization and Land Use Theory.** Semester course; 3 hours. 3 credits. Interregional differences in urbanization, both historically and among nations: introduction to urban systems and urban land use theory, including sociological, economic and political approaches to urban spatial differentiation and urban problems, and implications for institutions and public policy.

**641 Social Change and Community Planning.** Semester course; 3 lecture hours. 3 credits. Analyzes social change and community dynamics as related to social goal setting in urban and regional planning. Deals with urban and metropolitan areas as a system of interacting social groups; techniques of establishing interrelationships between social goals and other planning elements emphasized.

**651 Legal and Legislative Foundations of Planning.** Semester course; 3 lecture hours. 3 credits. Delineates the legal and legislative basis for planning at local, state, and federal levels. Judicial precedents in land use controls are investigated, including private controls, traditional zoning, administration of zoning ordinances, new flexible zoning concepts, development timing and growth controls, exclusionary land use practices, subdivisions controls, and eminent domain.

**652 Planning, Administration, and the Legal Process.** Semester course; 3 lecture hours. 3 credits. Major emphases are administrative law, legislation, and substantive environmental law. Judicial review of administrative actions; notice, hearing, investigative requirements; the planner and administrator as expert witnesses; legislative language; drafting of legislation; legislative process; NEPA: air, water, and water-lands;

solid waste; herbicides and pesticides; noise; and critical man-made areas are investigated.

**661 Principles of Urban Design.** Semester course; 3 lecture hours. 3 credits. Principles of urban design at the micro-and macro-scale. Expression of planning objectives in physical design, with emphasis on the relationship between urban design at various scales and the needs of individuals and groups.

**671 Planning Methods I: Planning Information Systems and Research Design.** Semester course; 4 lecture hours. 4 credits. Research methods applied to problems of planning and public policy. Statistical analysis through multiple regression. Introduction to data sources and methods of survey research. Introduction to data processing and the use of statistical packages for the computer.

**672 Planning Methods II: Plan Formulation and Implementation Strategies.** Semester course; 4 lecture hours. 4 credits. Prerequisite: USP 671. Emphasizes policy analysis, statements, and presentation of policy alternatives; development of strategies to intervene in problem situations; elements of plan formulation; techniques and tools for plan implementation; implementation as an iterative process; and the selection of implementation strategies.

**681 Human Resource Planning.** Semester course; 3 lecture hours. 3 credits. Prerequisite: USP 380 and 480 or permission of instructor. This course entails the application of data analysis and planning techniques to a community's human resource needs. It will provide experience in the preparation of human resource plans and enable students to be involved with government agency activities.

**682 An Economic Approach to Environmental Issues.** Semester course; 3 lecture hours. 3 credits. The effect of externalities in terms of efficiency and equity considerations. The role and problems of benefit cost analysis in decision making. The interrelationship of air, water, and land quality issues is analyzed. The use rate of natural resources, energy consumption, and the steady state economy and their impacts are evaluated.

**691 Topics in Urban and Regional Planning.** Semester course; 1, 2, or 3 credits. Students will have an opportunity to examine in detail some question of significance in the field of urban and/or regional planning. Due to the changing subject matter to be treated in this course, permission of the instructor is required. Consult the Schedule of Classes for the specific topic to be offered each semester.

**721 Open Space Planning.** Semester course; 3 lecture hours. 3 credits. An examination of the demand for and value of open space, such as natural, agricultural, and recreational areas, in the context of urban and regional planning. Open space as a city-forming device and as a positive land use. Standards and criteria for development and performance of open space systems. Strategies for conservation of open space within urban regions.

**722 Recreation Systems Planning.** Semester course; 3 lecture hours. 3 credits. General principles of planning and development of local and regional recreation areas and facilities. Investigation of standards relative to size,

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location, and programs. Review of national and statewide outdoor recreation plans, and trends in recreation development. A practical exercise in recreation planning to be completed in the field.

**731 Economic Development Planning.** Semester course; 3 lecture hours. 3 credits. Examines current theories of economic development as they relate to low income groups, political jurisdictions, and metropolitan-wide economic systems. Emphasis on the structuring of economic development strategies for metropolitan areas that encourage the imbalance between high growth peripheral areas and the inner city area of decline.

**732 Metropolitan Circulation Systems.** Semester course; 3 lecture hours. 3 credits. Examination of urban activity systems and their requirements for mobility. Explores the impact of technological change in communication and transportation modes on access and circulation patterns.

**741, 742 Environmental Management Planning.** Semester course; 3 lecture hours. 3,3 credits. Defines the impact of urban activities on the natural environment within a metropolitan context and stresses dependency relationships between man-made and natural environments. Applies resources and management concepts to the use of land, air, and water.

**745 Dynamics and Issues in Housing.** Semester course; 3 lecture hours. 3 credits. Examines and evaluates current problems in urban housing within the dynamics of metropolitan development.

**746 Housing Development Planning.** Semester course; 3 lecture hours. 3 credits. Housing planning as a distinct subfield of urban planning, emphasizing means of linking planning concepts with implementation. The means of articulating housing policies at the state, regional, and local levels are analyzed.

**751-752 Planning Studio.** Continuous course; 6 studio hours. 6 credits. Individual student projects intended to give the student experience in applying theory and methodology gained from the second year course offerings to solve selected planning problems. USP 798 Projects is an acceptable substitute for USP 792 Planning Studio II. Consent of instructor and chairman required for this substitution.

**782 New Towns Planning.** Semester course; 3 lecture hours. 3 credits. Extensive evaluation of new towns and planned unit development (PUD) concepts and experiences; changes in communication and transportation technology, changes in employment requirements

as they will affect future life styles; and anticipated shifts in local requirements or urban functions (Not offered every year, consult the class schedule.)

**793 Planning Internship.** 6 credits or two semesters, 3 credits each. Prerequisite: approval of department chairman. Eight to ten weeks full-time equivalent participation in a public or private planning-related agency. Grading on a "pass-fail" basis.

**797 Directed Research.** 1-3 credits. May be repeated for a total of six credits. Prerequisites: permission of instructor and graduate standing. Independent research into planning problems, issues, and theories.

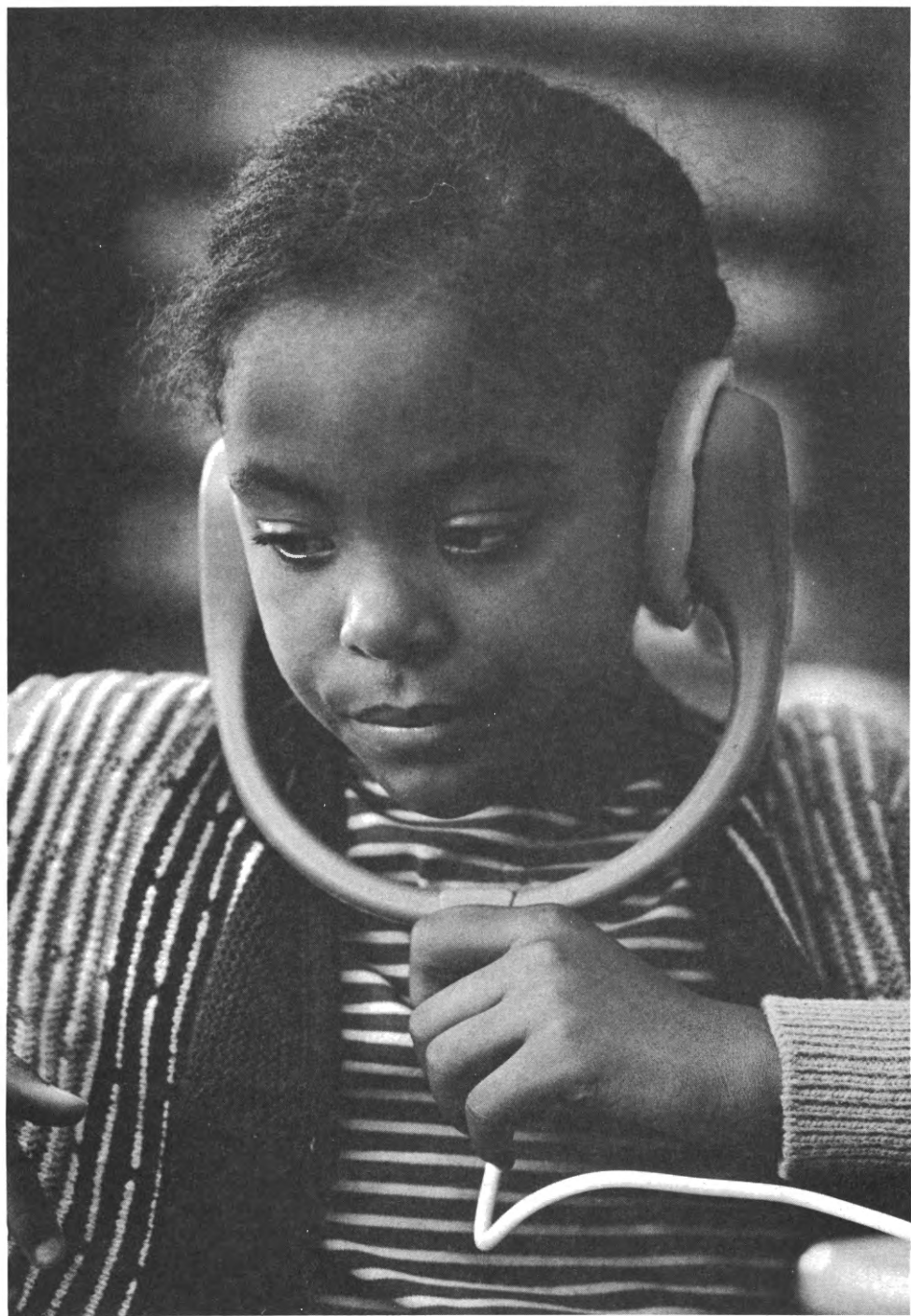
**798 Thesis or Projects.** 2-6 credits. Prerequisites: permission of instructor and appropriate research methods course. Planning, preparation, completion, and presentation of a thesis or project. USP 798 Projects is an acceptable substitute for USP 752 Planning Studio II. Consent of instructor and chairman required for this substitution.

For descriptions of courses in other departments, see that department's listings.

## Center for Public Affairs

Ralph Hambrick, Director  
Jennifer Lantrip, Assistant Director for Development  
John C. Pignato, Assistant Director of Continuing Education

The Center for Public Affairs is a newly created unit in the School of Community and Public Affairs designed to provide university-based assistance to federal, state, and local government and other publicly oriented organizations through applied research, continuing education and training, and technical assistance. The center does not grant degrees, but does work closely with academic departments. Student involvement through employment and individual and class projects is encouraged as opportunities are developed. Among other activities, the center is sponsoring a graduate curriculum concentration in Human Resource Development/Manpower in cooperation with the Department of Public Administration.



## **PART VIII—School of Education**

### **ADMINISTRATIVE OFFICERS**

**CHARLES P. RUCH**  
Dean

**WILLIAM J. JUDD**  
Assistant Dean

**C. GORDON KEESEE, JR.**  
Director of Student Services

**JOHN S. OEHLER, JR.**  
Director of Continuing Education

**RIZPAH L. WELCH**  
Director of Educational Development Center  
Complex

**A. GAYNELLE WHITLOCK**  
Assistant Dean

The School of Education was established in 1964 as a part of Richmond Professional Institute. At that time the school granted bachelor's degrees in elementary education only and offered courses required for certification in some secondary fields.

Today, the School of Education offers various programs leading to the master's degree. Programs in administration and supervision, adult education, counselor education, distributive education, elementary education, English/English education, library/media, physical education, and special education are available. The School of Education's graduate programs emphasize field-based teaching experiences and research to enable students to tailor their courses of study to meet individual needs and professional interests.

The School of Education is accredited by

the Virginia Department of Education, the Southern Association of Schools and Colleges, the National Council for Accreditation of Teacher Education, and holds membership in the American and Virginia Associations of Colleges of Teacher Education.

### **PURPOSE**

The School of Education is committed to providing relevant programs responsive to the needs of various educational agencies and, at the same time, improving and enhancing the professional skills of its students. Primary purposes of the school are: to provide quality professional education which develops and refines teacher competencies in light of continuous social change; to nurture among faculty and students a deep involvement in educational research and scholarly activity which improves instructional procedures, assists school systems and agencies in identifying and solving educational problems, and enhances and extends knowledge of the field of education; and to provide continuing professional support services to public school systems and agencies in the Richmond metropolitan area and surrounding cities and counties.

## **FACILITIES**

The majority of the facilities of the School of Education are housed in Oliver Hall, which is designed to provide laboratory and activities centers for development of curriculum materials as well as the more traditional lecture classrooms.

The Teacher Resource Center is a multimedia materials development unit serving the entire school and includes a handsaw, drill press, assorted tools, latex enamels, a dry mount press, cardboard, and lumber. With these basic supplies plus a reference shelf of curriculum ideas, students are encouraged to build classroom learning centers, hand-built furniture, or other materials of instructional value for the classroom. Available also are collections of teacher materials on such topics as multicultural programs, mainstreaming, and metric education usage. Media and photography laboratories, including a TV/micro-teaching facility, offer students a setting to plan, develop, and criticize their own instructional strategies and materials.

A multi-sided, open-spaced area on the fourth floor is designed for a number of creative teaching activities. This laboratory classroom lends itself to dance movement demonstrations, art work displays, dramatic presentations, and symposiums on prominent education topics.

Throughout the building are demonstration classrooms, where students are able to work with area children in an instructional role and to be observed firsthand by instructors and classmates who evaluate the effectiveness of teaching strategies.

Other facilities utilized by the School of Education are the Child Study Center, the Day Care Center, the Reading Center, and the Adult Learning Center. At each center, students work with members of the community, faculty, and other students to foster educational growth. Taken together they form a complex of practicum locations for the comprehensive study of educational problems at any age.

Graduate work at VCU enables students to engage in or continue teaching experiences in local school systems or agencies in addition to the on-campus facilities. Such experiences allow students the opportunity to

apply their learning in actual educational situations.

## **ORGANIZATION**

The chief administrative office for the school is the Office of the Dean. The school is organized into the Divisions of Educational Services; Educational Studies and Adult and Vocational Education; Health and Physical Education; and Teacher Education.

## **OFFICE OF STUDENT SERVICES**

The Office of Student Services serves as a center for information, materials, and applications necessary for certification and endorsement of educational personnel in Virginia. Coordination of placement for practicums, student teaching, internships, and externships is administered by this office. Student teachers and externs are placed primarily in the school systems of the city of Richmond; Henrico, Chesterfield, and Hanover Counties; and increasingly in Goochland, Powhatan, and New Kent Counties as well as the city of Petersburg.

Application forms and deadline dates are available in the Office of Student Services.

This office also coordinates information about and the administration of several national testing programs including the College Level Examination Program (CLEP), the Medical College Admissions Test (MCAT), the National Teacher Examinations (NTE), and the Graduate Record Examinations (GRE). Finally, the Office of Student services is responsible for the distribution and collection of all materials regarding application to graduate study in the School of Education.

## **OFFICE OF CONTINUING EDUCATION AND FIELD SERVICES**

The Office of Continuing Education and Field Services coordinates all offerings in the area of continuing education for the school. Off-campus offerings and in-service training opportunities include day-long in-service events, a series of structured workshops designed for certificate renewal or graduate credit, credit or non-credit courses, degree programs, and field studies and evaluation projects

## EDUCATIONAL DEVELOPMENT CENTERS COMPLEX

The School of Education sponsors a number of service programs which are designed to support the degree programs. They provide major clinical resources for students and faculty. The educational development centers complex brings together a coordinated network of the following training/service units: the University Reading and Study Skills Center; the University Child Study Center; the Adult Learning Centers; and the University Day Care Center and Kindergarten. Each provides assistance to individuals while providing a basis for on-campus training and research.

The Reading Center has a multiple role. It provides reading improvement instruction specifically for incoming freshmen whose test scores indicate a need for basic skills improvement, and for other college students whose study skills need to be refined. In addition, the Reading Center performs a service to the community by offering diagnostic and remedial aid to children. Another role is that of giving students practical experience in working with children who need diagnosis and remedial assistance.

The Child Study Center sponsors three primary services: (1) opportunities for guided activities with children to enhance the professional education of prospective teachers, psychologists, and social workers, with particular emphasis on practicum experiences for students in the School of Education; (2) services available in local systems; and (3) provision of a research base for the comprehensive study of children.

The Reading and Child Study Centers also serve as materials centers for teacher trainees. Through these centers students are provided an opportunity to see and use a variety of instructional and testing materials.

A well-equipped Adult Learning Center provides unique opportunities for students and other clientele. The center is housed on the Academic Campus and utilizes the latest advances in educational technology and individualized instruction where flexible scheduling is featured. Remedial and enrichment noncredit study programs are offered in a variety of areas to VCU employees and college students.

Activities through the Day Care Center

are designed to provide quality services for children of working parents. One purpose of the center is to provide quality day care for the children of university employees and students. When space permits, non-university associated families may use its facilities. Additionally, the Day Care Center provides practicum experiences for students on both campuses.

## CERTIFICATION FOR EDUCATIONAL PERSONNEL

All graduate programs in the School of Education are approved by the Virginia Department of Education. Virginia is a member of the National Association of State Directors of Teacher Education and Certification (NASDTEC), which has a national reciprocity agreement for teacher certification. Certification is based in part on successful completion of an approved program developed in response to nationally recognized standards. All graduate programs within the School of Education have approved program status and are a part of the NASDTEC Certification Reciprocity Agreement.

Scores on the National Teacher Examinations (NTE) are required for the initial issuance of the Virginia teacher's certificate. An applicant for an initial certificate must take the Common Examinations and, in addition, an Area Examination in any field in which initial certification is sought. In those few fields where an Area Examination is not available through the Educational Testing Service, only the Common Examinations are required of candidates. The NTE requirements are in addition to all other requirements for certification. The NTE should normally be taken during the latter part of the term of expected graduation from the university.

Scores from the NTE should be reported by students to Virginia Commonwealth University and the Virginia Department of Education. These scores must be on file with the Office of Student Services, School of Education before a recommendation for certification can be sent to the Virginia Department of Education—Teacher Certification Division. Further information may be obtained from the faculty advisor or the Office of Student Services, School of Education.

## **POST-MASTER'S DEGREE OPPORTUNITIES**

The school has an articulation agreement with the College of William and Mary in the area of counselor education. The basic purposes of the articulation agreement that established this program are to enhance the offerings in counseling at both institutions, create flexibility in course options for students, and to expand the resources available to students at both institutions. The degree is a Doctor of Education and will be awarded by William and Mary.

All students applying for admission to the doctoral program will apply directly to William and Mary and will be required to meet the admissions criteria and procedures of William and Mary. A joint faculty committee of the Division of Psychological Foundations and Services (W and M) and the Division of Educational Services, Counselor Education (VCU) will examine applications for consideration for the Admissions Committee, School of Education, The College of William and Mary.

The curriculum in the program is quite flexible, allowing students to pursue their special interests. The major areas of concentration are

- Student Personnel Services in Higher Education
- Community College Counseling
- Agency and Community Counseling
- Secondary School Counseling and Guidance
- Elementary School Counseling and Guidance
- Marriage and Family Counseling

## **FINANCIAL AID**

Financial aid is available for full-time students. Scholarships and assistantships are awarded on the basis of scholarship and need. Scholarships can be awarded only to students who are legal residents of Virginia; assistantships may be awarded to non-residents. All applicants for financial aid must be admitted to a graduate program and attending full time. Scholarships awarded usually range from \$250 to \$1,000 for the academic year. The deadline for making application is August 15, and forms may be obtained from the Office of Student Services.

## **DEGREE PROGRAMS**

The School of Education grants one of three master's degrees to candidates completing all appropriate degree requirements. A Master of Education degree is offered in nine areas: administration and supervision, adult education, counselor education, distributive education, elementary education, library/media, mathematics education, special education-emotionally disturbed, special education-learning disabilities, and special education-mental retardation. A Master of Science degree is offered in physical education and a Master of Arts degree in English/English education. A Ph.D. in urban services will be offered starting in the fall of 1982, subject to the final approval of the State Council on Higher Education.

## **ADMISSION**

Any student holding an earned baccalaureate degree from an institution acceptable to Virginia Commonwealth University may take appropriate graduate level courses. However, only six semester hours of appropriate graduate credit may be transferred toward a degree. This regulation applies whether the courses have been taken at Virginia Commonwealth University prior to admission or whether the courses are accepted on transfer from another institution.

Admission to a degree program involves admission to both graduate study in the School of Graduate Studies and to a specific degree program. Some individual degree programs have admission requirements beyond the general school requirements. Applicants complete one set of credentials specifying the degree program to which they are seeking admission.

## **PROCEDURES**

The Office of Student Services is the distribution and collection office for all materials related to graduate program admission in the School of Education. An admission packet containing all materials needed to apply for graduate study may be obtained from the Office of Student Services, School of Education, Oliver Hall, Room 2087, Virginia Commonwealth University, Richmond, VA 23284.



Completed materials, transcripts, test scores, and all inquiries regarding admission should be directed to this office.

Upon receipt of all materials, the applicant's credentials will be reviewed by the Admissions Committee, composed of one representative from each division, with the director of student services serving as chairman.

### **GENERAL ADMISSION REQUIREMENTS**

The admission decision will be made on an overall analysis of the following:

1. A minimum grade point average of 2.8 on a 4.0 point scale on the last 60 semester hours of undergraduate academic study.
2. A minimum acceptable score on the Graduate Record Examinations or Miller Analogies Test as specified in the requirements of the degree program to which the applicant is seeking admission.
3. An interview with the applicant may be required by the core faculty to which the applicant is seeking admission.
4. An applicant whose grade point average is below 2.4 on a 4.0 point scale on the last 60 semester hours of undergraduate course work and a less than acceptable score on the designated standardized examination will be rejected.

### **ELIGIBILITY FOR PROVISIONAL ADMISSION WITH CORE FACULTY APPROVAL**

1. Applicants whose grade-point average during the last 60 semester hours of undergraduate course work falls between 2.4 and 2.79 on a 4.0 point scale would be considered for provisional admission based on the strength of scores on the designated admissions examination or other evidence of potential as determined by the core faculty.
2. Applicants whose scores fall below the minimum acceptable score on the Graduate Record Examination or Miller Analogies Test would be eligible only for provisional admission as determined by the core faculty.
3. The core faculty will review each provi-

sional status application. In the review process, an interview with the applicant may be required. Additional qualifications, as defined by the core faculty, will also be considered at the time of review.

4. Applicants who accept admission on provisional status must take a minimum of three graduate level courses (nine semester hours) designated by their advisor.
5. A provisionally admitted student who earns a "C" or below in the first nine hours of course work designated by the advisor is no longer eligible to continue as a degree-seeking student in that core program.

### **SPECIFIC PROGRAM REQUIREMENTS**

#### **Programs in the Division of Educational Services**

**1. Administration and Supervision.** Applicants should have a minimum of two years successful teaching or equivalent experience. Ordinarily, the applicant will have an undergraduate degree which qualifies the applicant for professional certification as a teacher.

**2. Counselor Education.** Applicants anticipating endorsements as guidance counselors in Virginia public schools should hold a valid professional teaching certificate and a minimum of one year's teaching experience.

**3. Special Education.** The programs in special education require that students applying for admission have a valid professional teaching certificate in an area of special education or meet that requirement prior to the granting of a Master of Education degree. For the program in learning disabilities, applicants must have a minimum of two years' successful teaching experience. For the program in emotional disturbance, one year of teaching experience is recommended, and a personal interview with program faculty is required. The *pre-school* handicapped program requires two years of teaching experience.

#### **Programs in the Division of Teacher Education**

Applicants should hold a valid professional teaching certificate in an area of

elementary education or meet that requirement prior to the granting of a Master of Education degree.

Secondary Education (mathematics education or English/English education) applicants must hold a valid professional teaching certificate in the appropriate field or complete all certification requirements prior to the granting of a Master of Education degree.

### **Programs in the Division of Health and Physical Education**

Applicants who are currently in or planning to enter the teaching profession should hold a valid professional teaching certificate in physical education or meet that requirement prior to the granting of the Master of Science degree. For students who did not major in physical education at the baccalaureate level, certain courses and experiences at the undergraduate level may be required prior to admission to full graduate status.

### **Programs in the Division of Educational Studies**

#### **Adult Education**

No specific program requirement

#### **General program requirements**

All students must maintain a 3.0 grade-point average on courses required by the degree program. Students who receive a grade of "C" or below on more than two of the total courses required by the degree program will be automatically dropped from that program.

## **GENERAL DEGREE REQUIREMENTS**

The recommendation to confer a Master of Education or Master of Science degree is made by the faculty upon satisfactory completion of all degree requirements. These include successful completion of an approved plan of study, admission to candidacy, successful completion of a comprehensive examination, and a completed application for graduation. Each step is discussed below.

### **I. Program of Study**

An approved program of study consisting of no fewer than 33 semester hours of

graduate credit is required for the master's degree in the School of Education. The distribution of credit is as follows:

- A. Foundations (nine hours distributed as outlined below).
- B. Program (minimum of 15 hours). Each candidate will complete at least 15 hours of graduate credit in a field of concentration as approved by the student's advisor.
- C. Electives. Each candidate may take electives that are related to the field of study or which will provide balance and breadth in the total program. Specific electives must be approved by the student's advisor.
- D. Thesis or additional credit. These may be required in a specific degree program.

**Foundations Requirements.** All students will complete nine semester hours of work selected from approved courses in these foundational areas. Students must select one three-hour course from each of the following areas: human development and learning; cultural, historical, and philosophical; and research. Courses meeting the foundations requirement include:

- A. Human Development and Learning
  - EDU 602 Adolescent Growth and Development
  - EDU 603 Seminar in Child Growth and Development
  - EDU 605 Psychology in the Schools
  - PSY 607 Advanced Educational Psychology
  - EDU 609 Learning Strategies for the Classroom
- B. Cultural, Historical, and Philosophical
  - EDU 601 Philosophy of Education
  - EDU 607 Social Foundations of Education
  - EDU 608 History of Western Education
  - EDU 612 Education and the World's Future
  - EDU 614 Contemporary Educational Thought
- C. Research
  - EDU 606 Review of Research
  - EDU 660 Methods of Research
  - PHE 602 Development of Research Techniques in Physical Education

**Transfer Credit.** A degree program in the School of Education is a carefully determined sequence. For this reason, transfer credit is not encouraged. A maximum of six semester hours of acceptable graduate credit earned from an appropriately accredited institution may be transferred and applied to degree programs in the School of Education. This regulation applies to graduate courses taken at Virginia Commonwealth University and to courses from other accredited institutions.

Disposition of transfer credits offered by the applicant will be made by core faculty or a representative committee of the core following admission to candidacy.

As a general rule, continuing education courses taken at institutions other than Virginia Commonwealth University will not be transferred.

Admitted students may transfer up to six hours of credit, if they receive the approval of their advisor and department chairman *prior* to taking the credit.

**Student Program Planning.** Before enrolling in any graduate courses following admission to a program of study, students must complete and have approved a program plan. The program plan, developed cooperatively by students and their advisors and filed in the Office of Student Services, will outline the sequence of experiences students will include in their degree programs. *No departure from this proposed program of study will be permitted without the student's written request and the approval of the student's advisor and the division chairman. This request must be filed with the Office of Student Services in the School of Education.*

## II. Admission to Candidacy

Admission to graduate study does not constitute candidacy for a degree. Rather, students who have been admitted to graduate study are advanced to degree candidacy upon the recommendation of the division in which the degree is sought.

- A. Advancement to degree candidacy requires that students must have completed at least nine but not more than 15 semester hours with a minimum grade point average of 3.0.

- B. At least nine of the 15 hours being considered must have been taken in the core program from which students are seeking degree candidacy.
- C. The core faculty or a representative committee of the core will review each application submitted for candidacy. Additional qualifications, as defined by the core faculty, will also be considered at the time of review.
- D. Following the review, students will be notified in writing regarding candidacy status.

Advancement to degree candidacy requires that candidates must have completed at least nine but no more than 15 semester hours of graduate study with a minimum grade point average of 3.0; clearly demonstrated the aptitude and ability to pursue graduate work, including independent study; exhibited a commitment to education as a profession; and demonstrated promise for a successful career in the field selected in terms of temperament and personality. Specific courses may be required prior to application for candidacy. Admission to degree candidacy is not an automatic process, but rather the application for candidacy is approved by the division only after careful evaluation of all pertinent factors. Only students who have been admitted to candidacy may pursue additional work toward the degree.

## III. Comprehensive Examination

- A. All students in a graduate program in the School of Education must take a written comprehensive examination of at least three hours duration prior to receiving the degree.
- B. Written examinations will be given on the first Saturday in November, the fourth Saturday in March, and the second Saturday in July. Students must notify the division of their intention to take the exam at least 30 days prior to the published date. All comprehensive examinations must be taken on dates indicated except for religious or health reasons. Any exceptions must be approved in advance by the division chairman.
- C. A minimum of three faculty members, designated by the core, will evaluate

each examination independently. Satisfactory performance on the comprehensive examination requires approval of two of the three evaluators.

- D. Any student failing the comprehensive examination must have a joint conference with at least two core faculty members, one of whom is the student's advisor, before taking the comprehensive examination again.
  - 1. During the conference the core faculty members may recommend additional academic preparation and/or competencies which must be met by the student prior to re-taking the comprehensive examination.
  - 2. The student will be notified by letter of the recommendations made by the core faculty in the conference.
- E. The student will have only two opportunities to take the comprehensive examination.
- F. Failure to pass the comprehensive examination the second time will result in the student being dropped from the degree program.

**IV. Application for Graduation**

Students who expect to complete their

degree requirements by the end of a semester or summer session are required to file an application for degree. Applications are available from the Office of Enrollment Services-Academic Records and must be submitted by students to their advisors no later than the dates indicated in the calendar appearing in the *front* of this bulletin. Students should allow time for conferences with their advisors and should note that applications require the approval of the division chairman and dean.

**SPECIFIC DEGREE REQUIREMENTS**

A degree program in the School of Education is a carefully determined sequence of courses and experiences. Each program is individually designed within degree requirements, through the cooperative efforts of the students and the advisor, and must be filed in the Office of Student Services. The following materials explicate the usual degree course requirements; however, they are not a substitute for the advisement process. No program of study will be considered final until it has been approved by an advisor and filed in the Office of Student Services.

**Steps to Completing a Master's Degree**

STEP	WHEN	WHERE
1. Admission	0—6 Hours	Office of Student Services
2. Program of studies	0—6 Hours	With advisor, approved by division chairman
3. Candidacy	9—15 Hours	Application approved by advisor, program faculty, chairman, Office of Student Services
4. Comprehensive examination	30 semester hours or beyond	Application to Division Office
5. Externship or internship	Usually last semester of course work	Application from Office of Student Services
6. Application for graduation	Last semester of course work. Deadline in current bulletin	Application from registrar approved by advisor, division chairman, dean's office and returned to registrar's office

## PH.D. IN URBAN SERVICES<sup>1</sup>

The Ph.D. program in urban services is interdisciplinary in curriculum, design, and management, and will serve a variety of special audiences. The program is organized into the following four tracks:

1. *Educational Leadership Development*—for line administrative personnel who provide continuing leadership in urban school unit.
2. *Instructional Leadership Development*—for staff administrative personnel in urban school units and members of the State Department of Public Instruction, who provide continuing leadership.
3. *Human Resource Development Leadership*—for staff trainers in non-school, business, and industry who provide continuing leadership and training for management and employees in the urban setting.
4. *Urban Services Leadership*—for persons employed in positions in the urban community requiring less traditionally delineated preparation such as, but not limited to, crisis center directors, mental health and mental retardation personnel, and community agency administrators.

Each track will utilize curriculum and resources of the various schools of VCU. Applicants to the program are expected to be leadership personnel interested in increasing their responsibilities in school and agency settings. Applicants must have earned a master's degree in an appropriate profession or discipline related to a specific curriculum track in this program. Preference will be given to applicants who occupy positions of organizational leadership and have responsibility (or demonstrate potential) for administering, planning, conducting, and evaluating service programs.

The entrance requirements listed below reflect the aims of the program to provide continued academic growth for practitioners living in the community. The entrance requirements consist of a series of indicators which serve to predict an applicant's poten-

tial for successfully completing doctoral work. No indicator stands alone and the university takes into account many facets beyond those traditionally considered. The program's philosophy is one of seeking excellence through an admission process which realizes that many applicants are practicing professionals whose experience and achievements must be recognized.

Enrollment in the program is open to all otherwise qualified persons without regard to age, race, sex, religion, physical handicap, or national origin, and admission requirements are in full compliance with all applicable federal and state statutes, orders, and regulations. Admission is highly competitive and preference is given to qualified applicants who demonstrate serious purpose, scholastic excellence, superior preparation, and appropriate experience for the program.

## APPLICATION PROCESS

Admission decisions rest with the faculty of the program and are made only on the basis of a complete application packet. Applicants wishing admission to the program are responsible for submitting all parts of the admission packet (described below) by February 1 of the year they intend to enter the program.

The Admissions Committee will review all completed admission packets and choose the most qualified candidates to participate in the final selection process.

This process consists of personal interviews and a short essay written in conjunction with the interview process. Once interviews are complete, all applicants for admission will be notified of their status. Fewer than 25 persons will be admitted each year. Admission for the group entering in the fall takes place once a year, and student will be notified by April 15. There will be no other admission periods.

To be selected for the personal interview portion of the admission process, an applicant will have attained a cumulative grade point average of at least 3.4 on all graduate work attempted or above average scores on the Aptitude Section of the Graduate Record Examination. No one facet of data will

<sup>1</sup>To begin fall 1982, subject to final approval of the State Council of Higher Education for Virginia.

automatically determine an admission decision.

Students interested in obtaining admission packets for the program may do so by contacting the Office of Enrollment Services, Graduate Admission, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284, (804) 257-0334, or the School of Education, Office of Student Services, 1015 West Main Street, Richmond, VA 23284, (804) 257-1296. Questions concerning the specifics of the program or requests for advisement should be directed to the latter office.

### **ADMISSION PACKET AND ENTRANCE REQUIREMENTS**

Applicants for admission to this program must complete an admission packet. To be considered for admission, applicants must submit:

#### **Academic Criteria**

1. A completed VCU Graduate School Application Form.
2. Two official and up-to-date copies of all transcripts of the applicant's undergraduate and graduate record indicating that the applicant has earned a master's degree from an accredited college or university.
3. Official and current scores for the Aptitude Section of the Graduate Record Examination. Advanced test scores are not required but may be submitted. A Graduate Record Examination indicates reasoning ability at a given point in time. If applicants have taken the examination more than five years prior to the year of expected admission, they must re-take the examination. Older scores may also be submitted, and the Admission Committee will consider time elapsed since last formal schooling, occupational success, and leadership ability.

#### **External Criteria**

1. A professional vita indicating educational and occupational experience, evidence of leadership potential, etc. Applicants must present evidence of sustained experience in leading, administering, planning, or evaluating programs

and personnel in varied positions that are directly related to the chosen program track. This experience may come from professional civic, religious, fraternal, or advocacy organizations.

Evidence may also include letters of recognition, awards, dates of positions, job responsibilities, supervisor's evaluations, important knowledge that came from the position, publications, and professional memberships.

2. Completed forms from three references. Applicants must submit:
  - a. Names, addresses, and telephone numbers of three persons qualified and willing to rate the applicant's intellectual and leadership ability. If the applicant has attended school within the last three years, at least one of the references should be academic. Each of these persons will complete a form rating the applicant in a number of personal and academic areas. Submission of these names constitutes permission to contact these persons by telephone anytime during the admission decision process.
  - b. In addition to these three names, the applicants should submit the name, address, and telephone number of their current occupational supervisor. This person will be contacted by a representative of the Admission Committee and informed as to the full scope and requirements of the doctoral program. The supervisor is expected to support the applicant's educational goals and be willing to provide released time for externship and other program related activities.

#### **Self-Expression**

Applicants are required to submit a written statement, as part of the admission packet, which discusses personal career goals, the manner in which this doctoral program enhances these goals, and what the applicants will contribute to this program. Applicants should treat this statement as a summary of goals and talents which goes beyond and does not duplicate the other submitted materials.

Once the application packet is complete,

the packet will be reviewed by the program Admission Committee which will decide which applicants will proceed to the final admission stage.

### FINAL ADMISSION STAGE

Applicants chosen for the final stage of the admission process will be invited to the university to be interviewed by program faculty. In addition to the interviews, applicants will write a brief essay on a topic assigned at the interview. Applicants will be given at least two weeks notice as to interview date, time, and place.

### DELAYED ADMISSION

Anyone admitted for a particular year may request delay of one year for entrance to the program. Normally this request will be granted. Individuals requiring a further delay will be required to reapply for admission. The request for delayed admission must be transmitted in writing to the doctoral program director and should state the reasons for the request and the date that the individual plans to begin the program.

### TRANSFER CREDIT

The university policy concerning transfer credit is found in Part I of this bulletin. Transfer credit refers to graduate courses taken after the awarding of a master's degree and prior to admission to this program, whether taken at VCU or another accredited university. Note that credits earned for one degree cannot be applied to another degree. The rules for transferring credit to this program are:

1. There are no substitutes for the core courses, externship, or dissertation.
2. *Graduate credit* earned prior to the awarding of a master's degree is not transferable.
3. Students may apply up to nine credits (no more than six of which may have been taken at VCU) applicable to another accredited graduate program toward the concentration or cognate areas. These credits must be acceptable by the offering institution toward its own graduate programs.
4. Each request for transfer credit must stipulate the program component to

which it applies with attendant reasoning. Requests for transfer and substitution for a specific research or concentration course must include course syllabus, reading list, instructor's name, and any other pertinent material. Each request for transfer credit must be approved by the program director and must be judged appropriate for the development of the student's concentration or cognate area.

- a. Transfer credit requests must be made to the program director upon acceptance into the program. An applicant may make such a request as part of the request for acceptance into the program.
  - b. To be valid for application to the program, transfer credit must have been taken no more than seven years prior to completion of all requirements (except the dissertation) for awarding the degree.
5. Admitted students are required to petition the doctoral program director for permission to study at other universities. Such petitions should include the name of the school, a course description, offering professor, and a statement on how the proposed course relates to the concentration or cognate area.

Students wishing exceptions to these transfer rules must petition the Program Advisory Committee through their advisors and the program director. Their recommendations are submitted to the Graduate School for final action.

## Division of Educational Services

### FACULTY

- Beale, Andrew V. *Professor* Ed. D., University of Virginia; counseling, career development, and parent education.
- Beers, Carol S. *Assistant Professor* Ed.D., University of Virginia; language development.
- Blankenship, M. Elise *Associate Professor* Ed.D., University of Houston; perceptual and cognitive processing in learning disabilities, delivery systems for special education.
- Bost, William A. *Professor* Ed.D., George Peabody College; managerial communications, educational improvement strategies.
- Brown, Fredda A. *Assistant Professor* Ph.D., Universi-

ty of Kansas; severely handicapped, group instructional strategies.

Duncan, Jack A. *Professor* Ed.D., University of Georgia; group procedures, communications.

Fallen, Nancy H. *Professor* Ed.D., University of Maryland; assessment, pre-school handicapped.

Fleming, Robert S. *Emeritus Professor* Ed.D., New York University; curriculum development, education and the arts.

Fuhrmann, Barbara S. *Associate Professor* Ed.D., University of Massachusetts; adolescence, group work.

Garner, Howard G. *Associate Professor* Ph.D., University of Florida; special education, behavior disorders.

Giacobbe, George A. *Assistant Professor* Ph.D., University of Georgia; special education, behavior disorders.

Gumaer, James *Associate Professor* Ed.D., University of Florida; group counseling, counseling with children.

Hill, Ada D. *Assistant Professor* Ed.D., American University; mainstreaming, mental retardation.

Johnson, Lesley S. *Assistant Professor* Ed.D., Temple University; program and curriculum development, international librarianship.

Judd, William J. *Associate Professor* Ph.D., Syracuse University; educational media.

Keesee, C. Gordon, Jr. *Professor* Ed.D., University of Virginia; counselor education, educational measurement

Lambie, Rosemary A. *Assistant Professor* Ed.D., University of Kansas Medical Center; special education-emotional disturbance, educational administration.

Lokerson, Jean E. *Associate Professor* Ph.D., University of Maryland; language and learning disabilities, clinical diagnosis and teaching.

Orelove, Fred P. *Assistant Professor* Ph.D., University of Illinois; severely retarded, physically impaired.

Pajak, Edward F. *Assistant Professor* Ph.D. Syracuse University; organizational theory, supervision of instruction.

Ruch, Charles P. *Professor* Ph.D., Northwestern University; organizational analysis and development.

Schneider, Frederick C. *Assistant Professor* Ed.D., Temple University; instructional design.

Schwieder, Arthur W. *Assistant Professor* Ed.D., Temple University; educational media.

Seyfarth, John T. *Associate Professor* Ed.D., University of Tennessee; developmental aspects of teachers' beliefs about their work, personnel management in schools.

Sharman, Charles C. *Associate Professor* Ed.D., University of Virginia; public school finance, public school administration.

Sparks, Howard L. *Professor* Ed.D., Teachers College, Columbia University; special education.

Vacca, Richard S. *Professor* Ed.D., Duke University; educational law.

Welman, Paul *Associate Professor* Ph.D., University of Wisconsin; severely handicapped, vocational-career education.

Welch, Rizpah *Professor* Ed.D., Indiana University; special education, language development.

Whitlock, A. Gaynelle *Associate Professor* Ph.D., University of Virginia; counselor education.

Wood, Judy W. *Assistant Professor* Ph.D., University of Southern Mississippi; mainstreaming, mental retardation.

Graduate programs in this division include Master of Education degrees in administration; supervision; guidance and counseling; and in the special education areas of mental retardation, learning disabilities, behavior disorders (emotionally disturbed), and early childhood handicapped. Special concentrations are also available in classroom guidance, vocational technical education, and library/media. A joint program with the School of Social Work provides a dual certification for both counselor and visiting teacher. Also available through the School of Social Work is a cooperative certification program in school social work.

The basic programs leading to a Master of Education degree in mental retardation, learning disabilities, or behavior disorders (emotionally disturbed) assume that students hold an initial educational certificate. Students who are not certified may enter the program and receive both the master's degree and initial certification by taking additional courses. Successful completion of the degree programs leads to endorsement in mental retardation, learning disabilities, or behavior disorders (emotionally disturbed).

In the graduate program in mental retardation, particular attention is focused on research and development in the area of mental retardation. Varied theories and experiences are provided as a means of fostering greater understanding of curriculum development, supervision, school administration, and the role of the school in our culture. The core of the preparation program in mental retardation centers around providing skills in the diagnostic/prescriptive area. This program will require approximately two years of full-time study for completion.

The graduate program in learning disabilities has been designed to develop and define the competencies of teachers for work with learning disabled students in resource and self-contained settings at all levels and in a variety of cultural environments. Professional skills emphasized in the basic program include the abilities to recognize educational



and social problems in students with learning disabilities, to formulate effective individualized instructional programs using a variety of methodologies, and to consult productively with appropriate personnel in the development of maximum educational opportunities for learning disabled students. Concentrations within the master's degree program allow graduates to 1) develop in-depth knowledge of learning disabilities, 2) focus on the learning disabled adolescent, or 3) become skilled as educational diagnosticians. Endorsement in other areas may be initiated or completed with careful advisement and planning. For details see the M.Ed. program in special education-learning disabilities which follows.

The master's degree program in behavior disorders is designed to provide teachers the professional competencies needed to work in resource or crisis rooms, self-contained classrooms, or residential settings. In developing these competencies, the program focuses on specific teaching strategies used in the diagnosis and remediation of behavior and learning problems associated with the emotionally disturbed. Additionally, the program endeavors to develop skills in promoting positive parental and professional interactions. An innovative field-based component is available to selected full-time graduate students including extensive externship experiences with pupils in a continuum of special education settings. Work in the field-based component is provided through courses which integrate daily experiences with current research and theory.

The master's degree program in the area of early childhood handicapping conditions is a sequentially planned series of courses and clinical experience designed to equip experienced teachers with the necessary skills and knowledge to effectively teach young handicapped children. Requirements for admission include the Collegiate Professional Certificate and two years of successful teaching experience with elementary or special education children.

**M.Ed. PROGRAM IN  
ADMINISTRATION AND  
SUPERVISION**

<b>Administration Option</b>	<i>Credits</i>
Foundations Core (9 semester hours)	

EDU 606 Review of Research (Leadership) . . . . .	3
EDU 609 Learning Strategies for the Classroom . . . . .	3
(Cultural, Historical, Philosophical) . . . . .	3
Program Core (21 semester hours)	
ASE 600 Public School Administration . . . . .	3
ASE 610 School and Community Relations . . . . .	3
EEL 600 Curriculum Development . . . . .	3
ASE 611 School Law . . . . .	3
ASE 602 Seminar in Elementary School Administration or ASE 603 Seminar in Secondary School Administration . . . . .	3
ASE 601 Supervision of Instruction . . . . .	3
EDU 700 Externship . . . . .	3
Electives from Related Areas (9 semester hours) (Select any three of the following)	
EDU 502 Guidance . . . . .	3
COE 603 Group Procedures . . . . .	3
EDU 551 Survey of Special Education . . . . .	3
ASE 640 Public School Finance . . . . .	3
ASE 641 School Personnel Administration . . . . .	3
BUS 633 Issues in Labor Relations . . . . .	3
BUS 641 Organizational Behavior . . . . .	3
EDU 649 Educational Media: Theory and Practice . . . . .	3
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**Dual Major Option—  
Administration and Supervision**

Administration majors wishing dual certification in administration and supervision must complete requirements in administration foundations and program core and in addition select ASE 620 Evaluation of Instruction for Supervisors and a three-hour graduate course in media. In addition, they are required to select six hours from the general electives described in the administration electives. This dual certification option requires a 42 semester hour degree program.

<b>Supervision Option</b>	<i>Credits</i>
Foundations Core (9 semester hours)	
EDU 606 Review of Research (Leadership) . . . . .	3
EDU 609 Learning Strategies for the Classroom . . . . .	3
(Cultural, Historical, Philosophical) . . . . .	3
Program Core (21 semester hours)	
ASE 600 Public School Administration . . . . .	3
EDU 531 Creative Teaching . . . . .	3
EEL 600 Curriculum Development . . . . .	3
ASE 601 Supervision of Instruction . . . . .	3
EDU 648 Preparation of Instructional Materials . . . . .	3
ASE 620 Evaluation of Instruction . . . . .	3
EDU 700 Externship . . . . .	3
General Electives (9 semester hours) (Select any three of the following)	
EDU 502 Guidance . . . . .	3
EDU 504 Film as a Teaching Medium . . . . .	3

EDU 507 Educational Media: Utilization . . . . .	3
EDU 509 TV in the Classroom . . . . .	3
COE 603 Group Procedures . . . . .	3
EDU 534 Photography in Instruction . . . . .	3
EDU 551 Survey of Special Education . . . . .	3
ASE 640 Public School Finance . . . . .	3
ASE 641 School Personnel Administration. . . . .	3
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**Dual Major Option—  
Supervision and Administration**

Some supervision majors may wish dual certification in supervision and administration. In such cases, these students must complete the requirements for the supervision core and also complete ASE 610 School and Community Relations and ASE 611 School Law. In addition, they are required to elect six hours from the general electives described in the supervision program. This dual certification option requires a 42 semester hour degree program.

<b>Vocational-Technical Education Option</b>	<i>Credits</i>
Foundations Core (9 semester hours)	
EDU 606 Review of Research . . . . .	3
EDU 609 Learning Strategies for the Classroom. . . . .	3
(Cultural, Historical, Philosophical). . . . .	3
Program Core (33 semester hours)	
ASE 610 School and Community Relations. . . . .	3
EDU 615 Curriculum Development . . . . .	3
EDU 619 Organization and Administration of Vocational-Technical Education . . . . .	3
ASE 600 Public School Administration. . . . .	3
ASE 611 School Law . . . . .	3
ASE 602 Seminar in Elementary School Administration or	
ASE 603 Seminar in Secondary School Administration . . . . .	3
ASE 601 Supervision of Instruction . . . . .	3
EDU 659 History and Philosophy of Vocational-Technical Education . . . . .	3
EDU 663 Curriculum Development in Vocational-Technical Education . . . . .	3
EDU 665 Supervision of Instruction in Vocational-Technical Education . . . . .	3
EDU 700 Externship. . . . .	3
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Supervisors may wish to seek dual certification as school librarians as well as supervisors. Alternatively, supervision students may wish to develop competence in instructional media. In addition to the foundations and four required supervision courses, students selecting either alternative must select 18-21 hours from the library/media courses available.

<b>Library/Media Option (Certification)</b>	<i>Credits</i>
Foundations Core (9 semester hours)	
EDU 606 Review of Research (Leadership) . . . . .	3
EDU 609 Learning Strategies for the Classroom . . . . .	3
(Cultural, Historical, Philosophical). . . . .	3
Program Core (30-33 semester hours)	
EDU 615 Curriculum Development . . . . .	3
ASE 600 Public School Administration. . . . .	3
ASE 601 Supervision of Instruction . . . . .	3
ASE 620 Evaluation of Instruction . . . . .	3
<sup>2</sup> EDU 507 Educational Media: Utilization. . . . .	3
<sup>2</sup> EDU 595 Reference and Bibliography . . . . .	3
<sup>2</sup> EDU 596 Library Organization . . . . .	3
<sup>2</sup> EDU 597 Cataloging and Classification . . . . .	3
<sup>2</sup> EDU 672 Internship. . . . .	3
EDU 528 Children's Literature . . . . .	3
EDU 533 Adolescent Literature . . . . .	3
	39-42

<b>Educational Media Option (Non-certification)</b>	<i>Credits</i>
Foundations Core (9 semester hours)	
EDU 606 Review of Research (Leadership) . . . . .	3
EDU 609 Learning Strategies for the Classroom . . . . .	3
(Cultural, Historical, Philosophical). . . . .	3
Program Core (30 semester hours)	
EDU 615 Curriculum Development . . . . .	3
ASE 600 Public School Administration. . . . .	3
ASE 601 Supervision of Instruction . . . . .	3
ASE 620 Evaluation of Instruction for Supervisors . . . . .	3
EDU 507 Educational Media: Utilization . . . . .	3
EDU 509 TV in the Classroom . . . . .	3
EDU 534 Photography in Instruction . . . . .	3
EDU 648 Preparation of Instructional Materials. . . . .	3
EDU 649 Educational Media: Theory and Practice . . . . .	3
EDU 651 Topics-Media Center Development . . . . .	3
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<b>M.ED. PROGRAM IN COUNSELOR EDUCATION</b>	<i>Credits</i>
Foundations Core (9 semester hours)	
Program Core (24-27 semester hours minimum)	
EDU 502 Introduction to Guidance . . . . .	3
COE 601 Theories of Counseling . . . . .	3
COE 602 Practicum Techniques of Counseling . . . . .	3
COE 605 Career Information and Exploration . . . . .	3
COE 606 Assessment Techniques for Counselors . . . . .	3
COE 603 Group Procedures in Counseling . . . . .	3
COE 604 Practicum: Group Procedures in Counseling . . . . .	3
EDU 672 Internship . . . . .	3
COE 610 Guidance in the Elementary School . . . . .	3
COE 611 Guidance in the Middle School. . . . .	3
General Electives . . . . .	3-6
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<b>M.ED. PROGRAM IN COUNSELOR EDUCATION</b>	<i>Credits</i>
<b>Classroom Guidance Concentration</b>	
Foundations Core (9 semester hours)	
Program Core (18 semester hours minimum)	

<sup>2</sup>Required for Certification in School Library.

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EDU 502 Introduction to Guidance . . . . .	3
COE 601 Theories of Counseling	
<b>or</b>	
EDU 514 Parent-Child Relations	
<b>or</b>	
An approved elective . . . . .	3
COE 605 Career Information and Exploration . . .	3
COE 603 Group Procedures in Counseling . . . . .	3
EDU 662 Educational Measurement and Evaluation . . . . .	3
COE 621 Guidance Seminar . . . . .	3
General Electives . . . . .	6
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**M.ED. PROGRAM IN COUNSELOR EDUCATION**

**Dual Certification: Counselor and Visiting Teacher** *Credits*

Foundations Core (9 semester hours)	
Program Core (18-21 semester hours minimum)	
EDU 502 Introduction to Guidance . . . . .	3
COE 601 Theories of Counseling . . . . .	3
COE 605 Career Information and Exploration . . .	3
COE 606 Assessment Techniques for Counselors .	3
COE 603 Group Procedures in Counseling . . . . .	3
EDU 672 Internship . . . . .	3
COE 610 Guidance in the Elementary School . . .	3
Visiting Teacher:	
Program Core (15 semester hours minimum)	
EDU 568 Psycho-Educational Diagnosis of Children	

**or**

LDS 600 Characteristics of the Learning Disabled.	3
SLW 601 Fundamentals of Social Case Work . . . .	3
SLW 703 Social Work Practices in Communities and Organizations . . . . .	3
SLW 750 Social Work Practice in School Settings .	3
SLW 615 Dynamics of the Family	

**or**

SLW 767 Social Work Practice and Policy in Child Welfare . . . . .	3
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**M.ED PROGRAM IN SPECIAL EDUCATION—MENTAL RETARDATION**

**(Limited to students holding endorsement in mental retardation)**

*Credits*

Foundations Core (9 semester hours)	
Program Core (21 semester hours)	
MRT 600 Language Development of Severely Handicapped Children . . . . .	3
MRT 601 Curriculum Design for the Mentally Retarded . . . . .	3
ASE 623 Administration and Supervision of Special Education . . . . .	3
EDU 700 Externship . . . . .	6
EDU 701 Thesis or two approved courses . . . . .	6
Restricted Electives from Related Areas . . . . .	6
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**M.ED. PROGRAM IN SPECIAL EDUCATION—LEARNING DISABILITIES**

*Credits*

Foundations Core (9 semester hours)	
(Must include PSY 607 Advanced Educational Psychology) . . . . .	
Basic Specialization Core . . . . .	18
EDU 551 Introduction to Special Education . . . . .	3
EDU 568 Psycho-Educational Diagnosis . . . . .	3
LDS 600 Characteristics of the Learning Disabled	3
LDS 601 Methods of Clinical Teaching . . . . .	3
EDU 700 Externship: Learning Disabilities . . . . .	6
Related Areas Core (Select two courses from a restricted list, with advisement) . . . . .	
Concentration Core (6-12 semester hours)	
Intensive Learning Disabilities Concentration (Select two courses with advisement)	6
Educational Diagnostician Concentration (12 semester hours)	
LDS 620 Advanced Educational Diagnosis of Developmental Processes . . . . .	3
LDS 621 Advanced Educational Diagnosis of Learning Problems . . . . .	3
EDU 700 Externship: Educational Diagnostician .	3
(Restricted Elective) . . . . .	3
Adolescent Learning Disabilities Concentration . .	6
LDS 611 Teaching the Learning Disabled Adolescent . . . . .	3
(Restricted Elective) . . . . .	3
	39-45

**M.ED. PROGRAM IN SPECIAL EDUCATION—BEHAVIOR DISORDERS (Emotionally Disturbed)**

*Credits*

Foundations Core (9 semester hours)	
Program Core (33 semester hours)	
<sup>1</sup> EDU 551 Introduction to Special Education . . . .	3
<sup>1</sup> EDU 568 Psychoeducational Diagnosis . . . . .	3
EMO 600 Characteristics of the Behavior Disordered . . . . .	3
EMO 601 Teaching the Behavior Disordered . . . .	3
EMO 602 Classroom Management of the Behavior Disordered . . . . .	3
EMO 603 Human Interaction in Teaching . . . . .	3
<sup>1</sup> EDU 566 Remedial Reading . . . . .	3
EDU 700 Externship: Behavior Disorders . . . . .	6
EDU 701 Thesis or two approved electives . . . . .	6
(Students who choose to do a thesis must complete EDU 660 Methods of Research as a foundations course; students who do not do a thesis must complete EDU 606 Review of Research.)	
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**M.ED. IN EARLY CHILDHOOD HANDICAPPED**

*Credits*

Foundations Core (9 semester hours)	
Program Core (30 semester hours)	
Specific Endorsement Requirements	

<sup>1</sup>May be waived if equivalent taken at undergraduate level.

EDU 551 Introduction to Special Education  
or  
EDU 565 Young Children With Special Needs  
EDU 674 Assessment of Young Handicapped  
Children . . . . . 3  
MRT 610 Teaching Strategies for the Severely  
Handicapped . . . . . 3  
EDU 603 Seminar in Child Growth and  
Development (completed as a foundations  
course)  
EDU 676 Instructional Program for Pre-school  
Handicapped Children . . . . . 3  
EDU 671 Parent-Professional Partnership . . . . 3  
EDU 675 Case and Program Management for  
Teachers for the Pre-school Handicapped. . . . 3  
EDU 700 Externship . . . . . 6  
EDU 701 Thesis or two courses at the 600 level or  
above . . . . . 6  
Electives from Related Areas  
EDU 538 Orientation to Speech and Language  
Disorders . . . . . 3  
EDU 558 Characteristics of the Physically  
Handicapped . . . . . 3  
EDU 570 Medical Aspects of Crippling Condi-  
tions. . . . . 3  
EDU 575 Cross Cultural Communication. . . . . 3  
EDU 578 Creative Rhythmic Movement. . . . . 3  
EEL 622 Programs in Early Childhood . . . . . 3  
EDU 648 Preparation of Instructional Materials  
MRT 600 Language Development in the Severely  
Handicapped . . . . . 3  
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McMillan, James H. *Assistant Professor* Ph.D., North-  
western University; research methods, social  
psychology of education.  
Ozmon, Howard A. *Professor* Ed.D., Columbia  
University; philosophy of education, educational  
futures.  
Ramey, Walter S. *Assistant Professor* Advanced Cer-  
tificate (Degree), University of Illinois; voca-  
tional/technical education administration.  
Schumacher, Sally A. *Associate Professor* Ph.D.,  
Washington University; educational and  
ethnographic research and evaluation, curriculum  
and program evaluation.  
Sherron, Ronald H. *Professor* Ph.D., University of  
North Carolina; adult learning, program evaluation.  
Strandberg, Warren D. *Professor* Ph.D., Northwestern  
University; philosophy of education, cultural founda-  
tions of education.

This division offers two graduate pro-  
grams leading to a Master of Education  
degree. The Master of Education degree is  
awarded in adult education and distributive  
education.

Generally, students entering one of the  
graduate programs in the division are required  
to possess an appropriate certificate for  
public school teaching. Students who do not  
hold the appropriate certificate must com-  
plete all certification requirements through  
program planning of their graduate work. It  
is possible to take program courses and to  
engage in program experiences at the  
graduate level which meet both degree and  
certification requirements. Under such cir-  
cumstances, graduate students may take ad-  
ditional undergraduate or graduate work for  
certification while pursuing the graduate  
degree program.

**Adult Education**

The adult education program is designed  
to provide professional growth experiences  
that will increase the skills and under-  
standing needed to plan, implement,  
manage, and evaluate educational programs  
for adults. Opportunities exist to design  
individual programs of study with emphasis  
in the following areas: adult literacy train-  
ing, continuing education, community col-  
lege education, vocational-technical train-  
ing, health sciences, allied health services,  
human resource development, religious  
education, correctional institution educa-  
tion, educational gerontology, and educa-  
tional media.

**Division of Educational Studies**

**FACULTY**

Bailey, James W. *Professor* M.Ed., University of  
Chicago; human development and learning, human  
sexuality education.  
Briggs, Frances M. *Professor* Ph.D., University of  
North Carolina; educational psychology and English  
education.  
Craver, Samuel M. *Associate Professor and Acting  
Head* Ph.D., University of North Carolina; history  
and philosophy of education.  
Ely, Vivien K. *Professor* Ed.D., North Carolina State  
University; distributive education and curriculum  
development.  
Hephner, Thomas A. *Associate Professor* Ph.D., Ohio  
State University; vocational education and cur-  
riculum and instruction.  
Jacobs, Brian C. *Assistant Professor* Ph.D., University  
of Minnesota; vocational education and distributive  
education.  
Lavery, John W. *Associate Professor* Ed.D., Michigan  
State University; human resource development,  
adult education and community college.  
Linder, Fredric I. *Assistant Professor* Ph.D., State  
University of New York; human development and  
learning, research evaluation.  
Londoner, Carroll A. *Associate Professor* Ph.D., In-  
diana University; adult learning and human resource  
development.

**M.ED PROGRAM IN ADULT EDUCATION**

	<i>Credits</i>
Foundations Core (9 semester hours)	
Program Core (15 semester hours)	
ADE 600 Adult Education Movement . . . . .	3
ADE 601 The Adult Learner . . . . .	3
ADE 602 Instructional Strategies for Adults . .	3
ADE 603 Adult Program Management and Evaluation . . . . .	3
ADE 604 Adult Education Seminar . . . . .	3
Electives . . . . .	12
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**Distributive Education**

Because the teaching of distributive education often involves active participation of community businesses and agency representatives, a primary objective of the graduate program in distributive education is the development of the ability to analyze community needs and to plan, organize, promote, and administer adult distributive education programs.

Courses are geared to equip students with advanced instructional techniques designed to increase competency in the selection and use of media and teaching materials.

**M.ED. PROGRAM IN DISTRIBUTIVE EDUCATION**

	<i>Credits</i>
Foundations Core (9 semester hours)	
Program Core (15 semester hours)	
Professional Courses (9 semester hours)	
Selected from:	
DIE 500 Techniques of Coordination in Distributive Education . . . . .	3
DIE 501 Distributive Education Adult Programs .	3
DIE 600 Improvement of Instruction in Distributive Education . . . . .	3
DIE 601 Materials and Methods in Project Construction . . . . .	3
DIE 603 Supervisory Leadership in Distributive Education . . . . .	3
EDU 618 Curriculum Construction . . . . .	3
Program Specialty Options . . . . .	6
Selected from:	
<b>Vocational Educational Administration</b>	
EDU 619 Organization and Administration in Vocational-Technical Education . . . . .	3
EDU 659 History and Philosophy of Vocational- Technical Education . . . . .	3
EDU 663 Curriculum Development in Vocational-Technical Education . . . . .	3
EDU 665 Supervision of Instruction in Vocational-Technical Education . . . . .	3
<b>Community College Education</b>	
ADE 610 Community College History and Development . . . . .	3

ADE 611 The Community College Student . . . . .	3
ADE 612 Community College Organization and Administration . . . . .	3
ADE 613 Community College Staff Develop- ment and Supervision . . . . .	3
<b>Adult Education</b>	
ADE 600 Adult Education Movement . . . . .	3
ADE 601 The Adult Learner . . . . .	3
ADE 602 Instructive Strategies for Adults . . . . .	3
ADE 604 Adult Education Seminar . . . . .	3
Electives . . . . .	9
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**Vocational-Technical Education**

Vocational-technical education certification courses are available that meet Virginia's vocational education requirement for supervisory positions in vocational education. Certification requirements for these positions were changed July 1, 1975. A Postgraduate Professional Certificate is mandatory for full certification. For additional information, interested individuals should contact Dr. Vivien K. Ely, 257-1332.

**Educational Studies**

The division also offers service courses at both the undergraduate and graduate levels to all existing programs in the School of Education. At the graduate level the division offers courses which fulfill the foundations requirements of all the master's degree programs. Educational studies include the following areas of concentration in education: the philosophical, psychological, historical, and cultural aspects of education, and educational research and evaluation.

**Graduate Courses in Educational Studies**

EDU 601 Philosophy of Education	
EDU 602 Adolescent Growth and Development	
EDU 603 Seminar in Child Growth and Development	
EDU 604 Urban Education	
EDU 605 Psychology in the Schools	
EDU 606 Review of Research	
EDU 607 Social Foundations of Education	
EDU 608 History of Western Education	
EDU 609 Learning Strategies for the Classroom	
EDU 612 Education and the World's Future	
EDU 614 Contemporary Educational Thought	
EDU 641 Independent Study	
EDU 651 Topics in Education	
EDU 660 Research Methods in Education	
EDU 661 Educational Evaluation: Models and Designs	
EDU 662 Educational Measurement and Evaluation	

## Division of Health and Physical Education

### FACULTY

- Davis, Robert G. *Associate Professor* Ph.D., University of Maryland; elementary physical education.
- Dintiman, George B. *Professor* Ed.D., Columbia University; anaerobic training, fitness, diet, weight control.
- DeMeersman, Ronald *Assistant Professor* Ph.D., Indiana University; exercise physiology, kinesiology.
- Groves, Barney *Associate Professor* Ph.D., Florida State University; fitness, intramural sports.
- Pennington, Jude C. *Assistant Professor* Ph.D., Florida State University; administration and supervision.
- Pratt, LeEtta *Assistant Professor* Ed.D., Oregon State University; health education, school health.
- Schiltz, Jack H. *Associate Professor* Ed.D., Columbia University; motor learning, aquatics.
- Stone, Stephen *Assistant Professor* Ph.D. Texas A and M University; health.

The graduate program in health and physical education seeks to provide an opportunity for students to achieve their potential as professionals. Specific goals of the department are to provide knowledge, application, and practical experiences which will improve teaching ability and enhance student attitude toward the education profession in general and physical education in particular. Students are encouraged to concentrate electives to develop specialization in the areas of elementary physical education, secondary/college physical education, movement sciences, athletic care and training, health or administration and supervision. (This leads to certification as either a principal or supervisor.)

The Master of Science degree in physical education assumes that applicants hold state certification; however, students who plan to enter the teaching profession may obtain certification in health and physical education (K-12) while pursuing a graduate degree in physical education.

### Credits

Foundations Core (9 semester hours)	
Human development, learning, cultural, historical, and philosophical courses . . . . .	6
PHE 602 Development of Research Techniques . . . . .	3
Program Core . . . . .	9
PHE 600 Seminar in Motor Learning Performance . . . . .	3
PHE 601 Movement Physiology . . . . .	3
EDU 681 Investigations and Trends in Teaching . . . . .	3
Concentrations . . . . .	6

Elementary:	
PHE 612 Administration and Supervision of Physical Education . . . . .	3
PHE 500 Motor Development of Young Children . . . . .	3
Secondary:	
PHE 611 Mechanical Analysis of Human Motion . . . . .	3
EDU 599 Administration and Supervision of Physical Education . . . . .	3
Movement Sciences—exercise physiology:	
PHE 610 Exercise Physiology: Instrumentation and Techniques . . . . .	3
PHE 611 Mechanical Analysis of Human Motion . . . . .	3
Movement Sciences—motor learning: . . . . .	3
(Two courses selected from approximately 10 offerings)	
Administration and Supervision:	
(Joint 36-credit program with the Department of Educational Leadership and Personnel Development leading to Virginia certification as a principal or supervisor)	
Athletic Care and Training:	
PHE 521 Athletic Care and Training . . . . .	3
PHE 621 Sports Medicine . . . . .	3
Health:	
HEN 500 Teaching Health in the Public Schools . . . . .	3
EDU 594 Topics in Health Education . . . . .	3
Study and Electives . . . . .	9
EDU 641 Directed Independent Study . . . . .	3
EDU 701 Thesis . . . . .	6
Elective #1 . . . . .	3
Elective #2 . . . . .	3
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## Division of Teacher Education

### FACULTY

- Baker, Stanley E. *Associate Professor* Ed.D., Teachers College, Columbia University; student/teacher interaction during reading instruction, reading habits and attitudes of reading teachers.
- Boraks, Nancy *Associate Professor* Ph.D., University of Colorado; peer impact on learning, ethnographic study of adult learning.
- Brittain, Mary M. *Assistant Professor* Ph.D., University of Miami; psycholinguistics of reading, assessment of reading achievement.
- Busby, Doris W. *Associate Professor* Ed.D., University of Illinois; cognition and learning styles of young children, formation of values and attitudes among young minority children.
- Davis, Michael D. *Assistant Professor* Ph.D., University of Illinois; development of student teachers, issues in teacher education.
- Duncan, Patricia H. *Associate Professor* Ed.D., University of Georgia; research in written composition in the elementary grades, perceptual factors and reading.
- Fulton, Joan L. *Associate Professor* Ed.D., University of Virginia; effects of instructional strategies on intellectual development, theoretical model in instructional method of concept construction.
- Goggin, William F. *Assistant Professor* Ed.D., University of Virginia; teaching writing.

Gross, Ena *Assistant Professor* Ph.D., Georgia State University; the use of hand-held calculators in learning mathematics—grades 3-8, the teaching and evaluating of mathematical problem-solving.

Hodges, James O. *Associate Professor* Ph.D., University of Colorado; interdisciplinary cooperation in social science education, teaching strategies and techniques in social studies evaluation.

Lohr, Michael C. *Associate Professor* Ed.D., University of Virginia; activities in the teaching of secondary mathematics, learning theory in the teaching of mathematics.

McLeod, Alan M. *Professor* Ed.D., University of Virginia; adolescent literature (teaching literature), teaching writing.

Pieper, Alice M. *Associate Professor* Ph.D., University of Maryland; parenting, early childhood assessment.

Reed, Daisy F. *Assistant Professor* Ed.D., Teachers College, Columbia University; classroom management, mainstreaming.

Rezba, Richard J. *Associate Professor* Ph.D., Indiana University; reading in the content areas of math and science, consequence evaluation measures.

Richardson, Judy S. *Assistant Professor* Ph.D., University of North Carolina; reading in content areas, remedial and beginning secondary and adult readers.

Swyers, William *Associate Professor* Ed.D., University of Georgia; middle school curriculum

Tarter, Martin A. *Associate Professor* Ed.D., University of Virginia; photography and teaching of the social studies and the humanities (visual literacy and heightened awareness), economic education and dealing with controversial issues.

Van de Walle, John *Associate Professor* Ph.D., Ohio State University; concept development in early childhood mathematics, instructional strategies for elementary school mathematics—problem-solving and computation.

Zaret, Esther, *Professor* Ph.D., University of Wisconsin; curriculum theory, openness in teaching.

The Division of Teacher Education offers graduate work leading to four degree programs: M.Ed. in elementary education; M.Ed. in mathematics education; M.Ed. in reading; and M.A. in English/English education. In some programs students may meet both degree and certification requirements by completing the approved graduate program sequence with additional graduate or undergraduate work, as planned with a program advisor.

**M.Ed. in Elementary Education**

The M.Ed. in elementary education offers four areas of concentration: curriculum and instruction, early childhood education, mathematics education, and teaching in content areas. In some instances, students completing the appropriate approved program may be recommended for certification as

early childhood teacher NK-3 or elementary teacher 4-7.

**Curriculum and Instruction Concentration**

The curriculum and instruction concentration is designed for the generalist in elementary education, typically the master teacher seeking to extend and enrich professional skills. Students participate in a sequenced program of courses and related field activities.

**M.ED. IN ELEMENTARY EDUCATION**

<b>Concentration in Curriculum and Instruction</b>	<i>Credits</i>
Phase I. . . . .	
Foundations . . . . .	9
Program Core. . . . .	6
EDU 615 Curriculum Development . . . . .	3
EDU 617 Instructional Models . . . . .	3
Phase II. Courses and Field Experiences . . . . .	15-18
EDU 613 Educational Change . . . . .	3
EDU 618 Curriculum Construction. . . . .	3
EDU 600 Organizing for Effective Classroom Instruction . . . . .	3
EDU 672 Internship (1-6 credits of supervised field experience related to one or more courses in Phase II) . . . . .	1-6
Select one:	
EDU 620 Designing Modular Instructional Packages. . . . .	3
or	
Any advanced level content course in <i>VCU Graduate Bulletin</i> with approval of advisor . . . . .	3
Phase III Integration . . . . .	6
EDU 621 Curriculum Seminar . . . . .	3
EDU 700 Externship. . . . .	3

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**Early Childhood Education Concentration**

The early childhood concentration is designed for classroom teachers, educational supervisors, and child care professionals who work with young children in a variety of living and learning settings. It offers graduate students the opportunity to expand and refine competencies in these areas:

1. Developmental and learning processes of young children.
2. Settings and curricula for early childhood education.
3. Social and cultural contexts of education for young children.

**M.ED. IN ELEMENTARY EDUCATION**

<b>Concentration in Early Childhood Education</b>	<i>Credits</i>
Phase I. . . . .	
Foundations . . . . .	9

Program Core.....	6
EDU 615 Curriculum Development .....	3
EDU 617 Instructional Models .....	3
Phase II. Courses and Field Experiences .....	18
The Child (choose two).....	6
EDU 565 Young Children with Special Needs .....	3
EEL 620 Creative and Cognitive Development in Young Children .....	3
EEL 621 Child Study and Assessment in Early Childhood.....	3
Early Childhood Curricula and Programs.....	9
EEL 622 Programs in Early Childhood Education Select two:	3
EEL 623 Implementing and Administering Programs for Young Children.....	3
EEL 624 Young Child and the Curriculum .....	3
or	
Any advanced level content course in <i>VCU Graduate Bulletin</i> with approval of advisor	
Social Context of Early Childhood Education (choose one) .....	3
EEL 625 Cross Cultural Perspectives in Child Rearing and Early Education .....	3
EEL 626 Teachers and Parents: Partners in Early Childhood Education .....	3
Phase III. Integration .....	6
EDU 621 Curriculum Seminar .....	3
EDU 700 Externship .....	3
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**Mathematics Education Concentration**

The mathematics education concentration is intended for experienced teachers in elementary and middle schools who wish to expand competencies in the teaching of mathematics. Courses and field experiences expose students to recent trends and research implications, uses of new materials and technology, and diagnostic and remedial teaching strategies. Workshop and internship experiences augment formal course instruction.

**M.ED. IN ELEMENTARY EDUCATION**

<b>Concentration in Mathematics Education</b>	<i>Credits</i>
Phase I.....	15
Foundations .....	9
Program Core.....	6
EDU 615 Curriculum Development .....	3
EDU 617 Instructional Models .....	3
Phase II. Courses and Field Experiences .....	12
EEL 611 Mathematics Education in the Elementary School .....	3
EDU 569 Diagnosis and Remediation in Mathematics .....	3
EDU 500 Workshop in Education.....	3
Choose one:	
EDU 681 Investigations and Trends in Teaching ..	3
EDU 641 Independent Study (approved by core faculty) .....	3

EDU/MAT 554 Application of Computers in the Teaching of Mathematics .....	3
Phase III. Integration .....	9
EDU 621 Curriculum Seminar .....	3
EDU 700 Externship.....	6
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**Content Teaching Concentration**

The content teaching concentration permits students to develop competencies in several disciplines. Knowledge and skills acquired in each area are integrated with field experiences permitting application of new concepts and methods. Students develop a field-related portfolio which provides a culminating product for materials developed as an outgrowth of program activities.

Students seeking initial teaching certification, NK-3 or 4-7, may satisfy some of their requirements through this concentration. Additional course work may be needed for collegiate professional certification.

**M.ED. IN ELEMENTARY EDUCATION**

<b>Concentration in Teaching in Content Areas</b>	<i>Credits</i>
Phase I.....	15
Foundations.....	9
Program Core .....	6
EDU 615 Curriculum Development .....	3
EDU 617 Instructional Models .....	3
Phase II. Courses and Field Experience (choose at least one course each from three of the four content areas (9-15 credits))	
<b>Language Arts/Reading:</b>	
EDU 525 Language Arts in Elementary School	3
EDU 526 The Teaching of Reading.....	3
REA 603 Seminar in Dynamics of Reading Readiness .....	3
REA 604 Reading Instruction in the Content Areas .....	3
<b>Mathematics:</b>	
EDU 522 Teaching Elementary School Mathematics.....	3
EDU 569 Diagnosis and Remediation in Mathematics.....	3
EEL 611 Mathematics Education in the Elementary School .....	3
<b>Science:</b>	
EDU 517 Teaching Elementary School Science	3
EDU 518 Curriculum Planning in Elementary Science.....	3
<b>Social Studies:</b>	
EDU 591 Teaching Social Studies in the Elementary School .....	3
EEL 610 Theory and Practice in Social Studies	3
With approval of the advisor, choose two addi- tional courses from above listing or from the courses below (0-6 credits):	
EDU 529 Movement Education .....	3
EDU 507 Educational Media: Utilization .....	3



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EDU 528 Children's Literature II . . . . .	3
EDU 531 Creative Teaching in the Elementary School . . . . .	3
EDU 578 Creative Rhythmic Movement . . . . .	3
EDU 604 Urban Education . . . . .	3
EDU 609 Learning Strategies for the Classroom . . . . .	3
EDU 648 Preparation of Instructional Materials . . . . .	3
EDU 662 Educational Measurement and Evaluation . . . . .	3
EDU 681 Investigation and Trends in Education . . . . .	3
EDU 618 Curriculum Construction . . . . .	3
EDU 620 Designing Modular Instructional Packages . . . . .	3
Other graduate courses emphasizing the improvement of teaching may be selected with the approval of the advisor.	
Phase III. Integration. . . . .	6
EDU 621 Curriculum Seminar . . . . .	3
EDU 700 Externship. . . . .	3
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**M.A. IN ENGLISH/ENGLISH EDUCATION**

For information on the master's degree in English/English Education, see Interdisciplinary and Cooperatively Offered Graduate Degrees.

**M.ED. IN MATHEMATICS EDUCATION**

The mathematics education degree program is offered in conjunction with the Department of Mathematical Sciences in College of Humanities and Sciences. Students may enroll who are, or wish to become, middle school, secondary school, or community college teachers of mathematics.

The program provides experienced secondary school teachers of mathematics opportunities to extend their mathematical and teaching skills. It also affords those persons who have completed a baccalaureate degree in mathematics an opportunity to pursue professional education studies. The program allows for extended study in the areas of mathematics, statistics, computer science, and professional education.

Program requirements differ for each student, since they are determined by educational background and future aspirations. A *sample* degree program for students in mathematics education is listed below.

**SAMPLE M.ED. PROGRAM IN MATHEMATICS EDUCATION**

	<i>Credits</i>
Foundations Core . . . . .	9
Program Core . . . . .	18
MAT 507-508 Analysis I and II . . . . .	6
MAT 511 Applied Linear Algebra . . . . .	3
MAT 521 Number Theory . . . . .	3
EDU 681 Investigation and Trends in Teaching . . . . .	3
Electives . . . . .	6
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**M.ED. IN READING**

A cooperative arrangement has been established with Virginia State University to permit selected, qualified students to complete the M.Ed. in reading. Up to 12 semester hours from an approved list may be transferred from the cooperating institution. Interested students should contact the Division of Teacher Education.

The Master of Education in reading is designed to provide prospective reading specialists with a program of sequential and integrated experiences in areas of the reading curriculum ranging from pre-school to adult levels. Students will gain an understanding of the developmental and diagnostic processes involved in teaching reading and will become familiar with the resource and supervisory functions which are part of the specialist role. The M.Ed. in reading is an approved certification program (K—12) for students who meet Virginia State Department of Education requirements.

**M.ED. PROGRAM IN READING**

	<i>Credits</i>
Foundations Core . . . . .	9
Program Core (18 semester hours minimum) . . . . .	18
REA/EDU 526 Teaching of Reading . . . . .	3
EDU 600 Analysis and Correction of Classroom Reading Problems . . . . .	3
(Prerequisite, REA/EDU 526 or EDU 549)	
EDU 672 Internship in Reading . . . . .	3
(REA 600 and EDU 672 must be taken concurrently)	
EDU 700 Externship in Reading . . . . .	3
(Prerequisite EDU 526, 549, 672, or REA 600)	
Elect from:	
EDU 525 Language Arts in the Elementary School . . . . .	3
EDU 549 Developmental Reading in the Secondary School . . . . .	3
REA/EDU 566 Remedial Reading . . . . .	3
REA 601 Psycholinguistics and the Language Arts Curriculum . . . . .	3

REA 602 Teaching Adults to Read . . . . .	3
REA 603 Seminar in the Dynamics of Reading Readiness . . . . .	3
REA 604 Reading Instruction in the Content Areas . . . . .	3
EDU 606 Review of Research . . . . .	3
Complete undergraduate or graduate level study in each of the following areas (one course in each area):	
Measurement and Evaluation	
EDU 568 Psycho-Educational Diagnosis . . . . .	3
EDU 662 Educational Measurement and Evaluation . . . . .	3
Child or Adolescent Psychology	
EDU 602 Adolescent Growth and Development . . . . .	3
EDU 603 Seminar in Child Growth and Development . . . . .	3
Psychology of Personality, Cognition, or Learning (exclusive of psychology and human development requirements at the collegiate professional endorsement level.)	
EDU 506 Psychology in the Classroom . . . . .	3
EDU 609 Learning Strategies for the Classroom . . . . .	3
PSY 509 Psychology of Personality . . . . .	3
PSY 603 Seminar in Social Psychology . . . . .	3
PSY 507 Abnormal Psychology . . . . .	3
PSY 607 Advanced Educational Psychology . . . . .	3
PSY 528 Mental Hygiene . . . . .	3
Child/Adolescent Literature	
EDU 528 Children's Literature II . . . . .	3
EDU 533 Adolescent Literature . . . . .	3
General Electives . . . . .	6
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**GRADUATE COURSES IN EDUCATION (EDU)**

- 500 Workshop in Education.** Semester course; 1-3 credit hours repeatable to 6 credit hours. Designed to focus on a single topic within a curriculum area, the workshop offers graduate students exposure to new information strategies and materials in the context of a flexible instructional framework. Activities emphasize a “hands-on” approach with direct application to the educational setting.
- 501 Working with the Student Teacher.** 1-3 credits. A focus on the role of the cooperating teacher during the student teaching experience. Overview of techniques for working with student teachers and evaluating student teacher performance.
- 502 Introduction to Guidance.** Semester course; 3 lecture hours. 3 credits. An introductory course for all students in counselor education. The course is designed for both elementary and secondary counselors and is a prerequisite to all other courses offered by the department of counselor education. It includes a survey of pupil personnel services and places special emphasis on those services associated with the guidance program.
- 503 Guidance for Exceptional Children.** Semester course; 3 lecture hours. 3 credits. An introduction to guidance strategies for assisting exceptional children.

Special attention is given to the interrelationships of home, school, and community resources.

**504 Film as a Teaching Resource.** Semester course; 3 lecture hours. 3 credits. Exploring the film as a teaching resource. The course is designed to familiarize the students with thought-provoking films. Over 50 films will be presented. Especially helpful for the English teacher will be the exploration of the relationship between film and fiction. The humanities teacher will find a repertory of films on topics relating to historical and social questions useful.

**507 Survey of Educational Media.** Semester course; 3 lecture hours. 3 credits. Introduces the role of educational media and technology in the instructional process. Emphasizes the systematic design of instruction and the selection, evaluation, and utilization of media. Basic production skills and equipment operation are developed within a framework of designing appropriate learning activities.

**509 TV in the Classroom.** Semester course; 3 lecture hours. 3-6 credits. Video taped teaching-learning materials for specified learner outcomes will be designed and produced. Educational broadcasting and the use of commercial broadcast programs will be examined.

**514 Parent-Child Relations.** Semester course; 3 lecture hours. 3 credits. A methods course in parent-child communications and problem solving. Designed to enable parents and professionals to understand and relate more effectively with children.

**517 Science Education in the Elementary School.** Semester course; 3 lecture hours. 3 credits. A course designed to renew and/or expand teachers’ knowledge and skills in the teaching of science in the classroom and the community. New materials and methodologies will be examined in the light of current trends, research findings and professional recommendations.

**522 Mathematics Education in the Elementary School.** Semester course; 3 lecture hours. 3 credits. A course designed to renew and/or expand classroom teacher’s knowledge and skills in the teaching of mathematics. New materials and methodologies will be examined in the light of current trends, research findings and professional recommendations.

**525 Language Arts in Elementary School.** Semester course; 3 lecture hours. 3 credits. Teaching techniques and materials for the developmental teaching of communication skills. Students will explore significant research and current literature related to content, organization, and instruction in language arts for the elementary school.

**528 Children's Literature II.** Semester course; 3 lecture hours. 3 credits. A survey of classic and current children’s books, reference resources, journals, and media. An exploration of the creative utilization of literature resources for children from nursery to grade seven. Includes a focus on meeting related needs of children with special problems.

**529 Movement Education.** Semester course; 3 lecture hours. 3 credits. For teachers of early childhood and elementary education. Emphasis given to the role of

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movement in the educational program, and movement theory and its applications for curriculum and learning. Major consideration will be given to motor development in young children and its implications for positive self-concepts.

**531 Creative Teaching in the Elementary School.** Semester course; 3 lecture hours. 3 credits. Designed for early childhood and elementary teachers and administrators. Diversified experiences drawn from various curriculum areas, including the arts. Focus on the creative process and the role of the teacher in fostering creativity.

**534 Photography in Instruction.** Semester course; 3 lecture hours. 3 credits. Skills with cameras, films, papers, and other photographic equipment and materials. The use of these materials as tools for teaching and the skills for preparation of instructional resources will be discussed and practiced.

**535 Problems of Social Studies Instruction.** Semester course; 3-6 credits. Prerequisite: permission of instructor and appropriate teaching experience. An in-depth investigation into the nature of and alternatives to problems encountered by students while teaching. Developing and evaluating instructional alternatives will be stressed.

**538 Orientation to Speech and Language Disorders.** Semester course; 3 lecture hours. 3 credits. An introduction to the history, scope, and trends in the field of speech pathology to include terminology, systems of classifications, and concepts of etiology, diagnosis, and therapy.

**543 Teaching High School Foreign Language.** Semester course; 3 lecture hours. 3 credits. To provide insight into effective secondary school foreign language instruction and to afford opportunities to the participants to upgrade their foreign language skills in listening comprehension and speaking. Attention will be given to materials, methods, and techniques. Time will be available to observe an experienced teacher using the methods and techniques taught.

**544 The Middle School Curriculum.** Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 300 and 301 or PSY 301 or 302, or permission of instructor. The course will focus upon an inquiry into the curriculum decision-making process as it relates to the education of pre- and early adolescents in the middle school.

**546 Competency Based Vocational-Technical Education.** Semester course; 3 lecture hours. 3 credits. A study of the principles and characteristics of competency-based vocational-technical education as related to vocational subject area catalogs developed by the Vocational-Technical Education Consortium of States (V-TECS). General topics include performance objectives, criterion-referenced measures, prerequisite skills, and module development.

**549 Development Reading in the Secondary School.** Semester course; 3 lecture hours. 3 credits. For prospective and practicing secondary school teachers. The course explores theoretical concepts in learning and reading, and the translation of these concepts into

specific teaching procedures for students in the secondary school.

**550 Foreign Language Performance and Program Evaluation.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Assessing student's listening, speaking, reading, and writing skills and knowledge of culture. Evaluating the effectiveness of the school's foreign language programs and instruction.

**551 Introduction to Special Education.** Semester course; 3 lecture hours. 3 credits. Initial graduate offering for special education majors. Includes review and discussion of all handicapping conditions. Analysis of major issues in special education such as least restrictive environment, labeling, nondiscriminatory testing, and impact of legislation and court cases on the field.

**552/ENG 552 Teaching English as a Foreign Language.** Semester course; 3 lecture hours. 3 credits. To provide students who plan to teach English to people whose native language is not English with the techniques used in teaching foreign languages. Contrastive analysis of morphology, phonology, and syntax is used to isolate areas of difficulty in learning English.

**554/MAT 554 Applications of Computers in the Teaching of Mathematics.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: college calculus course or permission of instructor. Introduction to computers and programming using the language, BASIC. Applications of the computer in algebra, geometry, trigonometry, statistics, and calculus.

**555 Geography in Social Studies Curriculum.** Semester course; 3 lecture hours. 3 credits. A survey of geographic concepts and processes as a basis for examining curricular projects for and developing instructional approaches to geography as part of the social studies curriculum.

**558 Introduction to Physically Handicapped.** Semester course; 3 lecture hours. 3 credits. Graduate elective for special education majors. Review of a variety of physically handicapping conditions. Analysis of major issues such as architectural engineering, equipment adaptations and modifications, and new advances in treatment and prevention.

**560 Teaching the Disadvantaged.** Semester course; 3 lecture hours. 3 credits. Exploration of the nature and needs of disadvantaged children with emphasis on implication for teaching.

**561 Reading Foundations: Sociological/Psychological Perspectives.** Semester course; 3 lecture hours. 3 credits. The purpose of this course is to provide a basic understanding of the theories, processes, and methodologies of reading instruction. Multidisciplinary, multi-cultural aspects of reading instruction are stressed. Topics of particular importance to the classroom teacher are emphasized.

**564 Teaching the Gifted.** Semester course; 3 lecture hours. 3 credits. Curriculum development and organization of activities for the gifted at different maturational levels with specific attention given to program content, materials, resources, and guidance.

**565 Young Children with Special Needs.** Semester course; 3 lecture hours. 3 credits. An overview of the nature and needs of young children with special needs, the rationale for early intervention, and available resources. This is a course for teachers and personnel in health professions and other related fields.

**566 Remedial Reading.** Semester course; 3 lecture hours. 3 credits. A study of reading efficiency. The course includes diagnosis of reading difficulties of all age groups, administration and interpretation of individual reading diagnostic tests, and organization of reading instruction for individuals or small groups.

**568 Psycho-Educational Diagnosis of Children.** Semester course; 3 lecture hours. 3 credits. An examination of standardized tests and informal techniques and their application in educational settings. Skills needed for administration, interpretation, and application of such techniques in the development and understanding of individualized educational programs (IEPs) are developed.

**569 Diagnosis and Remediation in Mathematics.** Semester course; 3 lecture hours. 3 credits. For classroom and resource teachers working with children whose arithmetic achievement is significantly lower than grade-level placement or expectancy level; designed to attack learning problems in arithmetic at the child's level and to aid teachers in the sequential development of skills and concepts.

**571 Education of Self.** Semester course; 3 lecture hours. 3 credits. An exploration in a group setting of personal concerns of identity, relationship, and power. Participants are assisted in identifying their concerns, discovering their patterns of emotional and behavioral responses, examining the consequences of these patterns, and generating and "trying on" alternative behaviors, thus examining awareness of strategies for learning about self and others. The course provides preparatory training for small group leadership and/or teaching, utilizing humanistic education constructs, techniques, and procedures.

**573 Introduction to Learning Disabilities.** Semester course; 3 lecture hours. 3 credits. An overview of the learning disabled student within the educational setting through readings, discussion, simulations, and guided field experiences. Recommended for teachers and other personnel who seek the understanding and skills to cope with learning problems in their own setting. Not for program majors or endorsement.

**575 Cross-Cultural Communications.** Semester course; 3 lecture hours. 3 credits. An experimentally-oriented seminar for persons preparing for or in careers demanding close working relations with numbers of differing cultural-ethnic backgrounds, primarily white/black. Supported by out-of-class readings and exercises, the seminar will focus on attitudes, opinions, and self-perceptions operative within the seminar and on relating these to race relations' problems and change strategies within the larger society.

**578 Creative Rhythmic Movement.** Semester course; 3 lecture hours. 3 credits. A study of the importance and place of movement and music in a school program, and the uses of these media in teaching. Emphasis will be

placed upon music as an accompaniment for movement and movement as an accompaniment for music. Attention will be given to analysis, improvisation, and creativity.

**591 Social Studies Education in the Elementary School.** Semester course; 3 lecture hours. 3 credits. A course designed to renew and/or expand the knowledge and skills of the classroom teacher in the teaching of social studies. Curriculum emphasis on the development of knowledge, skills, values, and attitudes will be examined in the light of professional recommendations, current trends, and research findings.

**594 Topical Seminar.** Semester course; 1-3 variable credits, repeatable up to 6 credits. A seminar intended for group study by students interested in examining topics, issues, or problems related to teaching and learning.

**595 Reference and Bibliography.** Semester course; 3 lecture hours. 3 credits. A study and evaluation of basic reference books and other bibliographical material most frequently used to answer reference questions in a library, including applications of computer technology.

**596 Library Organization and Administration.** Semester course; 3 lecture hours. 3 credits. A study of fundamental methods, routines, and procedures in the acquisition, preparation, and circulation of books and other materials for libraries. Special emphasis is on the school library.

**597 Cataloging and Classification.** Semester course; 3 lecture hours. 3 credits. A basic course in cataloging and classifying library materials. Practice is given in using classification systems, subject headings, filing rules, and the use and adaptation of printed cards and cataloging aids.

**598 Media Center Development.** Semester course; 3 lecture hours. 3 credits. No prerequisites. The development and operation of a comprehensive library/media center require a broad range of professional skills. This course will provide library/media professionals with knowledge and practice in the design and evaluation of media facilities and an understanding of the specific administrative and supervisory skills needed to operate a comprehensive library/media center.

**599 Administration and Supervision of Physical Education.** Semester course; 3 lecture hours. 3 credits. Guides for administrative and supervision policies and problems in physical education. Observation techniques, standards for judging instruction, the supervisory conference, cooperative supervision. Emphasis placed upon the common problems met by administrators and supervisors.

**600 Organizing for Effective Classroom Instruction.** Semester course; 3 lecture hours. 3 credits. Designed to assist teachers in becoming effective classroom organizers. Emphasis on the theory and application of instructional planning, behavior control, classroom environment, instructional materials, and teaching models. (For elementary and secondary teachers.)

**601 Philosophy of Education.** Semester course; 3 lecture hours. 3 credits. A study of basic philosophies which

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have contributed to the present-day educational system. Attention will be given to contemporary philosophies having an impact on planning for future programs.

**602 Adolescent Growth and Development.** Semester course; 3 lecture hours. 3 credits. Contemporary learning theories and their implications for teaching the adolescent learner. Emphasis will be placed on specific problems of adolescent growth and development as they relate to the learning situation.

**603 Seminar in Child Growth and Development.** Semester course; 3 lecture hours. 3 credits. Intensive study of child growth and development and application of this knowledge. Emphasis on current research.

**604 Urban Education.** Semester course; 3 lecture hours. 3 credits. A study of urban environment and its influences on urban learners. Includes investigations of urban schools and other significant urban educational institutions and settings; problems and prospects for urban educational development and the practical and theoretical bases for appropriate program development.

**605 Psychology in the Schools.** Semester course; 3 lecture hours. 3 credits. To provide knowledge and application of psychological principles to school settings. Includes learning, development, measurement, and evaluation as related to pupil learning, teacher behavior, counselors, and other school personnel.

**606 Review of Research.** Semester course; 3 credits, repeatable to nine credits. Application of research findings to a specific educational area of study. Emphasis is on the consumption and utilization of research findings rather than the production of research evidence.

**607 Social Foundations of Education.** Semester course; 3 lecture hours. 3 credits. A study of significant social issues involved in the development and operation of schools and other educational institutions and processes.

**608 History of Western Education.** Semester course; 3 lecture hours. 3 credits. This course will explore the development of educational thought and practice from ancient times to the present, with special attention being given to the major issues confronting American education since its beginning.

**609 Learning Strategies for the Classroom.** Semester course; 3 lecture hours. 3 credits. A study of learning strategies used in classrooms including examination of concepts and issues related to the teaching-learning process. Materials and curriculum will be discussed in so far as they relate to principles of learning.

**612 Education and the World's Future.** Semester course; 3 lecture hours. 3 credits. An examination of education as it relates to future changes in other areas: population, energy, transportation, family, etc. The course will consist of readings dealing with educational change as well as a series of modules where students will engage in futures exercises, games, and projects.

**613 Educational Change.** Semester course; 3 lecture hours. 3 credits. Developing the skills for planned program change through the use of systematic inquiry, systems analysis, and systems approaches through

systems concepts. Provides opportunities for students to develop "mini (classroom) changes" or "macro (school district) changes" through the use of systems.

**614 Contemporary Educational Thought.** Semester course; 3 lecture hours. 3 credits. This course will be devoted to a critical examination of educational ideas and programs emanating from contemporary writings on education. Students will be encouraged to develop critical skills of analysis in examining such writings utilizing historical and philosophical perspectives.

**615 Curriculum Development.** Semester course; 3 lecture hours. 3 credits. A basic graduate course in curriculum development. Curriculum decision-making is examined in relation to foundation areas, content areas and current educational trends. Various conceptions of curriculum are explored.

**617 Instructional Models.** Semester course; 3 lecture hours. 3 credits. An examination of instructional models with a focus on their analysis and adaptation to learning environments and school curriculum.

**618 Curriculum Construction.** Semester course; 3-6 lecture hours. 3-6 credits. A study of curriculum problems with special attention given to the organization and preparation of teaching units. The course is individualized to meet student needs and nature of study.

**619 Organization and Administration of Vocational-Technical Education.** Semester course; 3 lecture hours. 3 credits. The analysis of administrative practices associated with the organization and administration of occupational programs at the secondary and post-secondary levels. Specific areas of study involve leadership, personnel management and evaluation, financial management, public relations, and responsibility to superordinates and subordinates.

**620 Designing Modular Instructional Packages.** Semester course; 3 lecture hours. 3 credits. A study of the theory underlying simulation and instructional packages. Modular instructional packages will be developed with emphasis on their proper use as an instructional strategy.

**621 Curriculum Seminar.** Semester course; 3 lecture hours. 3 credits. A study of curriculum theory, research, and practice for advanced students. The seminar is an opportunity for students to integrate previous course work and professional experiences in curriculum.

**641 Independent Study.** Semester course; 1-6 credits, repeatable to nine credits. An individual study of a specialized issue or problem in education. Determination of the amount of credit and permission of the instructor and department chairman must be procured prior to registration. Cannot be used in place of existing courses.

**648 Preparation of Instructional Materials.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 407/507 or permission of instructor. Development of materials for the classroom with an emphasis on determining medium, designing the message, producing the material, and evaluating the effect. The design of these materials will be predicated on the learning modes and instructional styles.

**649 Educational Media: Theory and Practice.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 407/507 or permission of instructor. An analysis of educational media with emphasis on the use of media in instructional design and development of teaching strategies.

**650 Instructional Television.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 509 or permission of instructor. Use of instructional design and production skills to carry the development of an instructional idea to a finished product.

**651 Topics in Education.** Semester course; 1-3 credits, repeatable to nine credits. A course for the examination of a specialized issue, topic, readings, or problem in education. Check with department for specific prerequisites.

**659 History and Philosophy of Vocational-Technical Education.** Semester course; 3 lecture hours. 3 credits. An historical review of factors which influenced the development of vocational-technical education, including its social, economic, and philosophical foundations. An analysis will be made of certain world-of-work assumptions as well as significant legislation which has given direction and focus to vocational education in the United States.

**660 Research Methods in Education.** Semester course; 3 lecture hours. 3 credits. Designed to provide an introductory understanding of educational research and evaluation studies. Emphasizes fundamental concepts, procedures, and processes appropriate for use in basic, applied, and developmental research. Includes developing skills in critical analysis of research studies. Analyzes the assumptions, uses, and limitations of different research designs. Explores methodological and ethical issues of educational research. Students either conduct or design a study in their area of educational specialization.

**661 Educational Evaluation: Models and Designs.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 660 or permission of instructor. A comprehensive review of the major evaluation theories and models including their focus, assumptions, designs, methodologies, and audiences in educational policy-making and program development. Designed for students to gain an understanding of alternative procedures of educational evaluation, an in-depth knowledge of at least one theoretical approach to evaluation, and skills in interpretation of evaluation studies for policy and in developing an evaluation design for their area of specialization.

**662 Educational Measurement and Evaluation.** Semester course; 3 lecture hours. 3 credits. To provide an understanding of basic concepts of educational measurement and evaluation. Includes development, interpretation, and use of norm-referenced and criterion-referenced measures, standardized instruments, and qualitative assessments applicable to a wide variety of educational programs and settings. Students study in-depth measurement and/or evaluation procedures in their specialization. Course is a prerequisite for more advanced courses in research and evaluation.

**663 Curriculum Development in Vocational-Technical**

**Education.** Semester course; 3 lecture hours. 3 credits. A study of the elements of curriculum development (objectives, learning experiences, outcomes) and staff leadership requirements needed for the identification, development, implementation, and evaluation of occupational programs. Emphasis will be given to vocational advisory committees, methods of instruction, developing competencies, and meeting labor market needs.

**665 Supervision of Instruction in Vocational-Technical Education.** Semester course; 3 lecture hours. 3 credits. A study of the principles of supervision and their application to occupational programs. Emphasis is given to administrative responsibilities associated with teacher selection, growth, and evaluation; the guidance and counseling program; curriculum improvement; in-service education; and educational leadership.

**671 Parent/Professional Partnership.** Semester course; 3 lecture hours. 3 credits. A course to provide theory and practice relevant to helping parents and other family members work with their handicapped child. This course will address the need to provide supportive counseling services, necessary community resources information, and specific training techniques for families with handicapped individuals. The legal rights of parents and their handicapped child will also be emphasized.

**672 Internship.** 1-6 credits, repeatable to nine credits. Designed to study and integrate theory with practice; in clinical settings component supervised by university faculty. Includes seminars, conferences, selected reading, course projects, and other activities designed and evaluated by student and supervising faculty.

**674 Assessment of Young Handicapped Children.** Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 551 or 565. Designed to provide experiences which will equip the student with skills, attitudes, and understandings needed for identification and effective use of appropriate assessment procedures for developing individualized educational programs and instructional plans.

**675 Case and Program Management for Preschool Teachers of the Handicapped.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. A course reflecting the provisions of state and federal laws applicable to programming for handicapped children below age five and those follow-up procedures which assure a continuum of appropriate services. Addressed to the identification of administrative tasks which are unique to the preschool handicapped population and administrative practices which contribute to effective programming.

**676 Instructional Programming for Preschool Handicapped Children.** Semester course; 3 lecture hours. 3 credits. An examination of teaching procedures in preschool handicapped programs with specific attention given to 1) curriculum planning and development and 2) environmental planning and development for preschool handicapped. A secondary emphasis will be placed on developing the student's awareness of her/his own resources in curriculum planning.

**681 Investigations and Trends in Teaching.** Semester course; 3 credits, repeatable to nine credits. A course designed to familiarize teachers and prospective teachers with recent trends and developments in course content, strategies for organizing learning experiences, and in presenting course material in their classrooms. Laboratory experience may be incorporated where appropriate.

**682 Curriculum Development in Science Education.** Semester course; 3 lecture hours. 3 credits. A course for science teacher developed curriculum innovations which emphasize the initiation of formal and informal classroom work on current scientific trends, as well as special classwork and laboratory programs.

**700 Externship.** Semester course; 1-6 credits, repeatable to nine credits. Prerequisite: permission of department. Off-campus planned experiences for advanced graduate students designed to extend professional competencies; carried out in a setting, under supervision of an approved professional. Plan of work designed by extern with prior approval of the offering department. Externship activities monitored and evaluated by university faculty. State certification or equivalent may be required for some externships.

**798 Thesis.** Semester course; 1-6 credits, repeatable to six credits. A research study of a topic or problem approved by the student's supervisory committee and completed in accordance with acceptable standards for thesis writing.

## GRADUATE COURSES IN ADMINISTRATION (ASE)

**600 Public School Administration.** Semester course; 3 lecture hours. 3 credits. An overview of the theory and practice of public school administration. Emphasis will be placed on the roles of school boards, superintendents, principals, and supervisors at the elementary and secondary levels. Appropriate field-based experiences relating theory to practice.

**601 Supervision of Instruction.** Semester course; 3 lecture hours. 3 credits. An advanced course in modern concepts of supervision on the elementary and secondary levels. Modern theories and practices of instruction will be examined. Appropriate field-based experiences relating theory to practice will be included.

**602 Seminar in Elementary School Administration.** Semester course; 3 lecture hours. 3 credits. Problems and issues in elementary school leadership. Major responsibilities of the elementary school principal. Enrollment limited to specialists in administration.

**603 Seminar in Secondary School Administration.** Semester course; 3 lecture hours. 3 credits. Problems and issues in secondary school leadership. Major responsibilities of the secondary school principal. Enrollment limited to specialists in administration.

**610 School and Community Relations.** Semester course; 3 lecture hours. 3 credits. New concepts and specific techniques in school-community relations for teachers; involvement in educational planning; involvement in community planning; and an examination of evaluative

projects for community use. Appropriate field-based experiences relating theory to practice will be included.

**611 School Law.** Semester course; 3 lecture hours. 3 credits. Legal aspects of school administration which include constitutional and statutory provisions and court decisions.

**620 Evaluation of Instruction for Supervisors.** Semester course; 3 lecture hours. 3 credits. Designed to develop skills and knowledge for the evaluation of instructional personnel and educational programs. Identification of appropriate criteria, procedures for collecting information, and evaluation processes for the purpose of aiding educational personnel involved in staff development including staff assignment, promotion, and tenure decisions. Introduction to program evaluation procedures, basic evaluation concepts, and processes appropriate for utilization as programs are initiated and implemented.

**632 Administration and Supervision of Special Education.** Semester course; 3 lecture hours. 3 credits. Practices and problems in providing school programs for handicapped and gifted children in both urban and rural communities are discussed.

**640 Public School Finance.** Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing. A study of theories, policies, and expenditures of school funds. Special attention will be given to the practice of educational finance within the public school structure. The course will include such topics as the school budget, financial accounting, purchasing and supply problems, school equipment, and school insurance.

**641 School Personnel Administration.** Semester course; 3 lecture hours. 3 credits. A study of the personnel function in educational organizations. Designed to explore techniques and problems of staff-personnel relationships in contemporary education.

**642 Organization and Administration of Guidance Services.** Semester course; 3 lecture hours. 3 credits. A study of organizational principles and procedures necessary for the effective administration of guidance services. Consideration is given to procedures used in establishing guidance programs or modifying existing ones (or both), including the study of various community resources that can contribute to more effective guidance services.

**643 The Community School.** Semester course; 3 lecture hours. 3 credits. The development and utilization of the community school concept will be examined. Community-wide use of school facilities and the involvement of the total community in the learning process will be studied. Emphasis will be placed on the physical plant design, organizational structure, staffing, and curriculum of the community school. The utilization of the community school to implement "life-long learning" will be stressed.

## GRADUATE COURSES IN ADULT EDUCATION (ADE)

**600 The Adult Education Movement.** Semester course; 3 lecture hours. 3 credits. The historical development of

the adult education movement will be traced. Important events, laws, and personalities will be studied with emphasis on the philosophical foundations and social imperatives inherent in the concept of life-long learning. The effect of adult education history on the present will be analyzed with particular emphasis on future trends.

**601 The Adult Learner.** Semester course; 3 lecture hours. 3 credits. The physiological, psychological, and socio-economic characteristics of adults will be studied. Particular emphasis will be placed on the differences between socio-economic groups and the changes that occur with aging. The special characteristics of the disadvantaged and deprived will be analyzed. Relevant learning theories and their implications for adult education will be explored.

**602 Instructional Strategies for Adults.** Semester course; 3 lecture hours. 3 credits. Prerequisite: ADE 601. Systematic curriculum development models and specific teaching techniques that are effective with adults will be studied. Emphasis will be placed on individualizing instruction and the use of multi-media strategies. The specific concepts of media centers, learning centers, and programmed learning will be explored. Special attention will be given to techniques for the disadvantaged and undereducated.

**603 Adult Program Management and Evaluation.** Semester course; 3 lecture hours. 3 credits. Various administrative theories and patterns of management appropriate for adult programs as well as management principles and techniques will be studied. Emphasis will be placed on program promotion, staff recruitment, in-service training, student personnel services, and program evaluation. The various evaluation models will be studied. Formative evaluation will be stressed to improve instructional strategies, validate student diagnosis and placement, and to restate program objectives.

**604 Adult Education Seminar.** Semester course; 3 lecture hours. 3 credits. Restricted to second semester graduate students. Current problems in adult education are identified and discussed. Each student will review and report on research that is related to the problems identified. Emphasis will be on the synthesis and application of skills and knowledge gained in current and prior graduate courses.

**610 The Community College, Its History and Development.** Semester course; 3 lecture hours. 3 credits. Educational philosophy and its implementation will be reviewed to find the relationship and justification for the establishment of two year institutions of higher education. Particular emphasis will be placed on the evolution of the comprehensive community college.

**611 The Community College Student.** Semester course; 3 credits. A study of the community college student as a developing individual and as a learner. Assessment and evaluation of the special problems of the community college student and the institutional opportunities for humanizing instruction and student services will be emphasized.

**612 Community College Organization and Administration.** Semester course; 3 credits. Organizational pat-

terns, administrative theories, and practices as applied to community college education.

**613 Community College Instructional Staff Development and Supervision.** Semester course; 3 credits. Study and evaluation of faculty supervision and professional growth needs. Emphasis is placed upon the identification and analysis of the duties, responsibilities, and factors involved in the supervision of instructional programs and on designing staff development activities at the community college level.

**615 Legal and Fiscal Aspects of Community College Education.** Semester course; 3 lecture hours. 3 credits. The legal framework of community college education. Federal, state, and local statutory and constitutional provisions bearing on administrative relationships with faculty and students. Funding sources, policies, and procedures.

**620 Human Resource Development.** Semester course; 3 lecture hours. 3 credits. General investigation and overview of the training function in educational, business, industrial, governmental, and voluntary organization. An overview of the history and literature of HRD; roles of the HRD practitioner; the relationship of training to organizational effectiveness; and the various special settings of HRD.

**621 Skills Development for Human Resource Development.** Semester course; 3 lecture hours. 3 credits. This course is designed to develop a variety of the special skills that the HRD practitioner may expect to employ as a trainer. Skills training will be provided for small group leadership, management, career development, and other areas of current interest.

**622 Human Resource Development Program Design.** Semester course; 3 lecture hours. 3 credits. This course builds on the student's knowledge of adult learning strategies and emphasizes the special factors which are peculiar to designing, conducting, and evaluating training programs in organizations. Particular attention will be given to job analysis, special populations in organizations, preparation of training documents, and measuring the cost-effectiveness of training results.

**630 Education and Aging.** Semester course; 3 lecture hours. 3 credits. A study of the educational implications of the aging process on the design, development delivery, and evaluation of programs for older adults. Educational characteristics of adults during later maturity (55 and older) and various types of programs available will be examined.

## GRADUATE COURSES IN COUNSELOR EDUCATION (COE)

**510 Non-Written Communications Skills for Pharmacists.** Semester course; 3 lecture hours. 3 credits. No prerequisites. This course is designed to provide basic non-written communications skills for pharmacists. Students will be provided with an overview of the skills to be learned, a demonstration of the skills, and opportunities to practice the skills under supervision. The primary focus of the course will be on experimental activities designed to build effective non-written communications skills for pharmacists.



**601 Theories of Counseling.** Semester course; 3 lecture hours. 3 credits. The theories upon which counseling is based will be presented, with particular attention placed on the research underlying the theories. The primary focus will be on providing students with a theoretical foundation upon which to base their counseling techniques.

**602 Practicum: Techniques of Counseling.** Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 502 and COE 601 or permission of instructor. A study and application of a variety of counseling techniques employed in the counseling relationship. Emphasis will be placed on counseling skill development.

**603 Group Procedures in Counseling.** Semester course; 3 lecture hours. 3 credits. Introduction to the group process, group counseling, and group guidance contrasted and defined; basically theoretical.

**604 Practicum: Group Procedures in Counseling and Guidance.** Semester course; 3 lecture hours. 3 credits. Utilization of small-group interaction as a vehicle to explore techniques and procedures common to human relations study. Focus on the teaching of interpersonal effectiveness, behavior objective identification, and developing of experiences relevant to leadership, communication skills, decision making, and development in effective or humanistic education.

**605 Career Information and Exploration.** Semester course; 3 lecture hours. 3 credits. Designed to provide the potential counselor with an understanding of theoretical approaches to career development grades K-adult. Emphasis will be given to the relationship between counselor and student(s) in the career exploration and decision-making process. A review of occupational, educational, and personal-social information resources will be made.

**606 Assessment Techniques for Counselors.** Semester course; 3 lecture hours. 3 credits. An examination of individual and group tests will be made. Particular attention will be given to tests of intelligence, aptitude, achievement, interest, and personality. Emphasis will be placed on the importance of careful selection, appropriate administration, skilled interpretation, and effective use of assessment instruments used by counselors.

**610 Guidance in the Elementary School.** Semester course; 3 lecture hours. 3 credits. An examination of basic counseling and guidance approaches for working with children. Emphasis will be given the development role of the elementary school counselor. Specific methods for individual counseling, group counseling, and classroom guidance will be discussed and practiced.

**611 Guidance in the Middle School.** Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 502 and COE 601. An intensive study of the guidance and counseling programs and strategies that best meet the needs of adolescents. The course is both theoretical and practical, with students expected to spend 15 hours on site in a middle school guidance office.

**620 Student Personnel Services in Higher Education.** Semester course; 3 lecture hours. 3 credits. Prerequisites: COE 601 and ASE 642. A course which focuses at-

ention on administration decision making and problem solving in the area of student personnel services. Emphasizes the case study approach; students will participate in various administrative experiments requiring the employment of administrative theory and practice.

**621 Guidance Seminar.** Semester course; 3 lecture hours. 3 credits. Prerequisite: open to advanced students with permission of instructor. An advanced course designed to provide a means for intensive study of guidance services. The approach will be to integrate the knowledge and skills from the various disciplines as they relate to the work of the counselor.

## GRADUATE COURSES IN ELEMENTARY EDUCATION (EEL)

**610 Critical Investigations in Social Studies Education.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 491 or permission of instructor. Assuming a knowledge of basic content and techniques in the teaching of social studies in elementary and middle schools, this course conducts a critical examination of various curriculums and methodologies from the standpoint of current research, philosophical positions, and relevant learning theory.

**611 Critical Investigations in Mathematics Education.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 422/522 or permission of instructor. A critical investigation of current and appropriate learning theories, instructional activities, programs, and manipulative materials applicable to mathematics education in the elementary school. This course assumes an overall knowledge of the more prominent techniques and materials used to teach mathematics in elementary and middle schools. Students will undertake in-depth critical studies of alternative curricula, materials, and strategies based on experience, learning theory, and research findings.

**620 Creative and Cognitive Development in Young Children.** Semester course; 3 lecture hours. 3 credits. Prerequisites: graduate standing; completion of Phase I of M.Ed. in elementary education, concentration in early childhood education. EDU 603 prerequisite. Application of theories of creative and cognitive development in the teaching of young children.

**621 Child Study and Assessment in Early Childhood Education.** Semester course; 3 credits. Prerequisites: completion of Phase I of M.Ed. in elementary education, concentration in early childhood education. Investigation and application of methods of observing, recording, and interpreting the behavior of young children. Review of criterion and norm-referenced measures for assessing capacities and needs in early childhood education . . . as a baseline for prescribing/providing appropriate activities.

**622 Programs in Early Childhood Education.** Semester course; 3 lecture hours. 3 credits. Prerequisites: graduate standing; completion of Phase I of M.Ed. in elementary education, concentration in early childhood education. Review of historical seeds of early childhood education programs. Analysis of current prototypes, center and home-based, for infants and young children as a basis of program development and evaluation.

Visits to model programs, whenever possible. Overview of current research on programs in early childhood education. Required of all students in the early childhood education option.

**623 Implementing and Administering Programs for Young Children.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EEL 622. This course is designed to provide the student with fundamental knowledge and skills in the implementation, supervision, and administration of educational programs in schools, centers, and homes for infants and young children. A problems approach will be utilized with emphasis on creative management and evaluative processes.

**624 Young Child and the Curriculum.** Semester course; 3 lecture hours. 3 credits. Prerequisites: graduate standing; completion of Phase I of M.Ed. in elementary education, concentration in early childhood education. Translation of curriculum development principles into appropriate curricular programs for young children. Impact of recent research on these curricula. Consideration of child development as related to planned activities and expected outcomes.

**625 Cross Cultural Perspectives in Child Rearing and Early Education.** Semester course; 3 lecture hours. 3 credits. Prerequisites: graduate classification; completion of Phases I and II of the M.Ed. in elementary education concentration in early childhood education. Analysis of the impact of linguistic patterns, child rearing techniques, and socialization processes on the education of young children in various cultural settings.

**626 Teachers and Parents: Partners in Early Childhood Education.** 3 lecture hours. 3 credits. Prerequisites: graduate standing; completion of Phase I of M.Ed. in early childhood education. A focus on the impact of parents in the education of young children and the role of the early childhood specialist working "in partnership" with these parents. Overview of research and prototype programs. Field based projects.

## GRADUATE COURSES IN EMOTIONALLY DISABLED (EMO)

**600 Characteristics of the Behavior Disordered.** Semester course; 3 lecture hours. 3 credits. This course focuses on the nature of children and youth described as behavior disordered/emotionally disturbed with emphasis on the biophysical, sociological, and psychological factors which relate to their educational needs. Related topics include school identification and assessment procedures, classifications of disorders, and treatment approaches.

**601 Teaching the Behavior Disordered.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EMO 600. The course provides an in-depth study of instructional strategies and organization of activities for behavior disordered/emotionally disturbed children and youth including curriculum, media, materials, and physical environment. Skills are developed to plan and deliver instruction in a variety of educational settings including resource rooms, self-contained classes, and residential programs.

**602 Classroom Management of the Behavior Disor-**

**dered.** Semester course; 3 lecture hours. 3 credits. An in-depth analysis of strategies and techniques used in the management of behavior disordered/emotionally disturbed children and youth. Individual and group management of the behavior disordered in elementary through secondary educational settings will be discussed. Open only to advanced graduate students in the area of behavior disorders or with permission of instructor.

**603 Human Interaction in Teaching.** Semester course; 3 lecture hours. 3 credits. The course focuses on interpersonal relationships and communications between teachers, students, parents, and administrators. Communication and consultation skills are developed through role playing and simulations. Affective and personality variables in teacher-student interactions are explored.

## GRADUATE COURSES IN ENGLISH/ENGLISH EDUCATION (ENE)

**601 Young Adult Literature.** Semester course; 3 lecture hours. 3 credits. An extended examination of literature written for young adults, of literature appealing to adolescents, of literature appropriate for young people in middle schools and high schools. The course focuses on the content, characteristics, and teaching of such literature.

**603 Teaching English to Minority Groups.** Semester course; 3 lecture hours. 3 credits. A study of the problems confronted when teaching English to students from minority groups, with attention given to the importance of non-standard dialects and of preserving cultural uniqueness. Some emphasis will be placed on the student for whom English is a second language.

**632 Applied English Linguistics.** Semester course; 3 lecture hours. 3 credits. Application of linguistic theories and methods to selected teaching problems, such as teaching English grammar and usage, teaching English as a second or foreign language, or teaching standard English to students who speak different dialects. May be repeated for credit.

**634-635 Seminar and Internship in the Community College.** Continuous course; 2 lecture and 4 laboratory hours. 3-8 credits. Observation and practice of instructional techniques in English courses in the community college on all levels from developmental studies through college transfer courses, culminating in the student's acceptance of full responsibility for teaching a composition or reading course under the general supervision of a community college division chairman.

**636 Teaching of Communication.** Semester course; 3 lecture hours. 3 credits. A study of traditional and modern instructional strategies for teaching various forms of communication but with primary emphasis on the teaching of composition and secondary emphasis on reading and speech. The validity of strategies will be tested in the student's own writing.

**637 Mass Media and the Teaching of English.** Semester course; 3 lecture hours. 3 credits. A study of the use of the mass media in the English classroom. Emphasis will

be on teaching methods designed to take advantage of the student's awareness of the media. Special attention will be given to television and film.

**643 Teaching Basic Writing Skills.** Semester course; 3 lecture hours. 3 credits. The emphasis of this course will be on developing the student's ability to teach fundamental writing skills. It will include such topics as diagnosis of writing problems, strategies for correcting problems, and methods for evaluating progress.

## GRADUATE COURSES IN HEALTH EDUCATION (HED)

**500 Teaching Health in the Public Schools.** Semester course; 3 lecture hours. 3 credits. Minority health issues, family influences, teenage attitudes, and signs of progress in health behavior are examined in this course. School health programs, including remedial, classroom instruction, and environmental aspects of school life are also considered.

**505 Adolescent Medical and Social Problems.** Semester course; 3 lecture hours. 3 credits. Seminar designed to acquaint those individuals working with an age group from 12 to 21 of the normal physiological and psychological development and medical and adjustment problems. This material will be presented by a series of lectures and case presentations with group participation. Topics will include drug abuse, under-achievers, sex education, emotional problems, constructive challenges for the adolescent, education for the adolescent, and the effect of these problems on families of the adolescent.

**510 Sex Education for Teachers.** Semester course; 3 lecture hours. 3 credits. Principles, methods, and content of sex education programs. Designed for teachers and counselors who are concerned with helping children and adolescents understand their sexuality and prepare for successful personal relationships with people.

## GRADUATE COURSES IN LEARNING DISABILITIES (LDS)

**600 Characteristics of the Learning Disabled.** Semester course; 3 lecture hours. 3 credits. The nature and needs of the learning disabled with emphasis upon psychological and behavioral characteristics as related to educational needs.

**601 Methods of Clinical Teaching.** Semester course; 3 lecture hours. 3 credits., Prerequisites: EDU 468, 568, and LDS 600. Specific methodologies for teaching children with identified precognitive and cognitive learning disabilities using developmental, remedial, and compensatory approaches.

**611 Teaching the Learning Disabled Adolescent.** Semester course; 3 lecture hours. 3 credits. Prerequisite: LDS 600 and 601 or permission of instructor. An advanced course in identifying, diagnosing, and remediating academic learning problems in the adolescent. Explores the organization, selection, and implementation of compensatory programs and methods under the impact of cognitive, motivational, curricular, social, and vocational factors.

**620 Advanced Educational Diagnosis of Developmental**

**Processes.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 568 or permission of instructor. An advanced course in the assessment and diagnosis of educationally relevant developmental processes in exceptional students, including perception, cognition, language, and socialization. Develops skill in utilization and interpretation of educational purposes. Must be taken concurrently with Clinical Experience.

**621 Advanced Educational Diagnosis of Learning Problems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 568 or permission of instructor. An advanced course in the assessment and diagnosis of educationally relevant learning skills in exceptional students, including language arts, mathematics, behavioral, vocational, and related skills. Develops skills in utilization and interpretation for educational purposes. Must be taken concurrently with Clinical Experience.

**630 Techniques of Remediating Specific Language Disabilities.** Semester course; 3 lecture hours. 3 credits. Prerequisites: REA 566 and EDU 568. Advanced course in techniques for the remediation of specific language disabilities with emphasis on reading problems. Includes interpretation of diagnostic reports and the presentation and evaluation of a variety of specific remedial methodologies.

**631 Aural Rehabilitation.** Semester course; 3 lecture hours. 3 credits. A detailed review in techniques for teaching lip reading and auditory training for the hearing-impaired child.

## GRADUATE COURSES IN MENTALLY RETARDED (MRT)

**556 Introduction to Mental Retardation.** Semester course; 3 lecture hours. 3 credits. Initial graduate offering for special education majors concentrating in mental retardation. Includes review and discussion of all ages, functioning, and levels of the mentally retarded. Analysis of major issues in mental retardation such as deinstitutionalization, need for community services, sterilization, client advocacy, and new advances in treatment and prevention.

**600 Language Development in the Severely Handicapped.** Semester course; 3 credits. Prerequisite: permission of instructor. An intensive study of the development sequence of language acquisition and strategies for language intervention with the severe and profoundly mentally retarded and other severely handicapped children.

**601 Curriculum Design for the Mentally Retarded.** Semester course; 3 credits. Prerequisites: EDU 461/561 and 467/567. An examination of issues and strategies required in selecting and developing curriculum for the mentally retarded. Emphasis on four components: the content and behavior from resources used in teaching particular topics, the instructional design and procedures, and ways of managing instruction for the mentally retarded.

**610 Teaching Strategies for the Severely Handicapped.** Semester course; 3 lecture hours. 3 credits. This course is designed to provide instruction in teaching methods

for individuals with severe behavior, learning, or emotional handicaps. Emphasis will be placed on instructional program development, task analysis, and methods of precision teaching.

**611 Vocational and Occupational Adjustment for Exceptional Children.** Semester course; 3 lecture hours. 3 credits. An orientation to occupations, occupational information, and problems of adjustment for the handicapped with emphasis on the mentally handicapped. Emphasis is also placed upon implications of vocational and occupational adjustment problems for curriculum. Selected visitations to employing agencies are an integral part of the course.

## GRADUATE COURSES IN PHYSICAL EDUCATION (PHE)

**500 Motor Development of Young Children.** Semester course; 3 lecture hours. 3 credits. This course will deal with the development of small children, pre-school, kindergarten, and first-grade children, through physical education. Emphasis will be on the construction of a program of motor development for each of these three groups. The programs will be based on the research findings in such areas as perceptual-motor development, motor learning, educational psychology, and others. Those students and teachers in the fields of physical education, special education, and elementary education should find this course useful in developing programs of motor development for their students.

**514 Physical Education for Special Populations.** Semester course; 3 lecture hours. 3 credits. No prerequisites. This course is designed to provide fundamental information to students at the graduate level on physical education programming of impaired, disabled, and handicapped children. Course content focuses on programming techniques and methods that are most effective in meeting the specific physical education needs of the individual child. Emphasis is on the Public Law 94-142 provisions currently affecting physical education programming for special populations; in particular, the development of specially designed physical education programs on individualized education programs and providing programming in the "least restrictive environment."

**521 Athletic Care and Training.** Semester course; 3 lecture hours. 3 credits. The course is designed to give the student insight and understanding into the basic principles in the care and prevention of athletic injuries. Course content includes emergency first aid techniques, mechanisms of athletic injuries with an anatomical and kinesiological analysis of common injuries, and preventive and protective techniques.

**600 Seminar in Motor Learning Performance.** Semester course; 3 lecture hours. 3 credits. Analysis of early patterns of behavior and the development of physical skills in childhood, adolescence, and adulthood. Consideration of differences in motor proficiency and factors affecting the acquisition of motor skills and concepts of motor learning with reference to the improvement of instructional practices.

**601 Movement Physiology.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Physiological pro-

cesses in relation to bodily exercises in every day life and sports activities. Physiological changes in the human organism due to movement. Investigation and application of research to physical education. Students must design, conduct, and complete a research study.

**602 Development of Research Techniques in Physical Education.** Semester course; 3 lecture hours. 3 credits. Theory and techniques involved in the analysis and interpretation of data pertinent to research in physical education. Basic statistics applied to data encountered in physical education research. Student must design, conduct, and write a pilot study.

**610 Exercise Physiology: Instrumentation and Techniques.** Semester course; 1 lecture and 4 laboratory hours. 3 credits. Designed to integrate practical and theoretical aspects of exercise physiology; experiences will benefit the physical educator, the coach, the athletic trainer, and the physiologist. Units include setting up and operating a movement physiology laboratory and techniques of open-circuit spirometry, closed-circuit spirometry, blood chemistry, and anthropometrics.

**611 Mechanical Analysis of Human Motion.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. Anatomical relationships dealing with arthrology, myology, neurology, and physical principles as applied to mechanical and kinesiological interpretation of normal, abnormal, and growth and development functions. Students must design, conduct, and complete a research study.

**612 Administration and Supervision of Physical Education.** Semester course; 3 lecture hours. 3 credits. Guides for administrative and supervision policies and problems in physical education. Observation techniques, standards for judging instruction, the supervisory conference, cooperative supervision. Emphasis placed upon the common problems met by administrators and supervisors.

**613 General Motor Ability Evaluation.** Semester course; 2 lecture and 2 laboratory hours. 3 credits. The theory of the construction of evaluative instruments in physical education with emphasis on a critical examination of existing measurement devices. Emphasis on the use of measurement as a tool for improving physical education programs.

**614 Motor Assessment for Special Populations.** Semester course; 3 lecture hours. 3 credits. Prerequisites: PHE 514 or permission of instructor. This course is designed to provide students with basic information regarding motor tests and observational instruments that assess and evaluate special populations. The content of the course will focus on the analysis of these tests as to their 1) main components and items purporting to measure these components; 2) administration, i.e., time, administrator's experience, group size, validity and reliability, and standardization; and 3) use in establishing and monitoring annual goals and short-term objectives for a handicapped child's individualized education program.

**621 Sports Medicine.** Semester course; 3 lecture hours. 3 credits. Prerequisite: PHE 521 or permission of instructor. The course is designed to give students

knowledge in the advanced principles of prevention and treatment of athletic injuries. The course includes advanced first aid techniques and the more sophisticated means of athletic care and prevention. Students are exposed to such modalities as mechanical therapies, thermal therapy, cryotherapy, hydrotherapy, and electrotherapy. One major component of the course deals with therapeutic exercise and its use in the rehabilitation of the injured athlete.

## **GRADUATE COURSES IN READING (REA)**

**600 Analysis and Correction of Reading Problems.** Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 561 or 549. An analysis of factors relating to reading disability. Diagnostic testing procedures and instructional strategies appropriate for the reading specialist in clinical and classroom settings will be emphasized. Must be taken concurrently with EDU 672.

**601 Psycholinguistics and Language Arts Curriculum.** Semester course; 3 lecture hours. 3 credits. An investigation of the psychological processes involved in language behavior and the relationship of these processes to the teaching of the basic communication skills.

**602 Teaching Reading to Adults.** Semester course; 3 lecture hours. 3 credits. An examination of strategies appropriate for teaching adult readers functioning at levels ranging from beginning to college level. Basic reading concepts, skills, and adult reading methods and materials are analyzed. Focus is on adapting teaching techniques for use with adults in various organizational patterns.

**603 Seminar in Dynamics of Reading Readiness.** Semester course; 3 lecture hours. 3 credits. Intensive study of the emotional, social, intellectual, and physical factors involved in development of pre-reading and beginning reading skills. Emphasis on current research and teaching methodology.

**604 Reading Instruction in the Content Areas.** Semester course; 3 lecture hours. 3 credits. Emphasis of the course is on preparing teachers to apply skills and methods of reading instruction to content areas in elementary and secondary school curricula. The course will include theoretical bases and methodology for incorporating reading skills within content areas of instruction.

## **GRADUATE COURSES IN VOCATIONAL TECHNICAL EDUCATION (Distributive Education) (DIE)**

**500 Techniques of Coordination in Distributive Education.** Semester course; 3 lecture hours. 3 credits. Developing cooperative relationship with resources in the community, selecting and developing training stations, placement of students, and assisting job adjustment.

**501 Distributive Education Adult Programs.** Semester course; 3 lecture hours. 3 credits. The place of continuing education in the total responsibilities of the teacher-coordinator; planning, organizing, promoting, administering, and evaluating the adult program; selection and training of adult instructors. Basic course for teacher-coordinators.

**600 Improvement of Instruction in Distributive Education.** Semester course; 3 lecture hours. 3 credits. Prerequisite: DIE 405 or equivalent experience. Curriculum adaptation, use of appropriate methods, application to secondary school, and adult programs.

**601 Materials and Methods in Project Instruction.** Semester course; 3 lecture hours. 3 credits. Development of specific related vocational curriculum materials for non-cooperative distributive education classes at the secondary level.

**602 Career Education Concepts.** Semester course; 3 lecture hours. 3 credits. Designed to familiarize students with curriculum methods and procedures necessary to implement career education. Emphasis on roles of school personnel and community agencies in career education programs.

**603 Supervisory Leadership in Distributive Education.** Semester course; 3 lecture hours. 3 credits. The role of the supervisor in distributive education; principles of creative supervision; organization for observation, guidance, and training of teacher-coordinators.

**604 World of Work Seminars.** 1-3 lecture hours. Variable credit per seminar, maximum nine credits. Repeatable field seminar designed to familiarize school personnel with current information necessary to assist students in making appropriate and enlightened career choices. Developed in cooperation with business, industry, military, and other facets of our economy to explore career options, includes classroom as well as field experiences.



# **PART IX—School of Nursing**

## **ADMINISTRATIVE OFFICERS**

JOAN F. BROWNIE, R.N., B.S., M.S., Ph.D.  
Dean

## **HISTORY**

The School of Nursing originated in 1893 as part of the University College of Medicine. Since then, the educational program has evolved from a basic diploma program to multiple programs at the baccalaureate and master's degree levels. In addition, three nurse practitioner programs, an active research program, continuing education opportunities, and a cooperative outreach program in graduate education with the University of Virginia School of Nursing have been developed.

The School of Nursing takes pride in its long history of service to the profession of nursing and its record of accomplishments. Through high standards of quality education and performance in the practice of nursing, the School of Nursing continues to be a leader in nursing education in Virginia.

## **PHILOSOPHY**

The graduate program is based on the philosophy and is committed to the goals of the School of Nursing and the university. Differentiation between the undergraduate and graduate programs is reflected in the philosophy and purpose of graduate educa-

tion, the characteristics of graduates, and the program objectives.

The School of Nursing believes that graduate education is professionally-oriented and is built upon general and professional baccalaureate study in which nursing is included in upper division offerings.

Graduate education in nursing focuses on the integration of three processes: transmission, utilization, and development of knowledge. Through advanced study in a specialized role of the student's choice, emphasis is placed on a synthesis of theory and process which is utilized in professional nursing. The graduate program is designed to develop the scholarship and leadership potential of those involved. Advanced study emphasizes analysis and synthesis of knowledge from diverse areas of learning combined with systematic investigation of the concepts underlying nursing and leadership roles in changing environments and complex health care systems.

The program's purpose is to prepare nurses to develop and implement nursing practice area through assumption of a primary role as clinical specialist, teacher, supervisor, nurse practitioner, or administrator.

## **GRADUATE PROGRAMS IN THE SCHOOL OF NURSING**

The School of Nursing offers programs of

Nursing of Children  
Community Health  
Nursing

study leading to the Master of Science degree. Programs combining major study in a clinical area with a minor functional area of psychiatric-mental health are:

Major	Minor	Approximate Length
Community Health Nursing	Teaching Supervision Clinical	3 Sem 1 SS
	Specialization	3 Sem 1 SS
Maternal and Infant Nursing	Teaching Clinical	3 Sem 1 SS
	Specialization Psych-Mental Health	3 Sem 1 SS 3 Sem 1 SS
Medical-Surgical Nursing	Teaching Clinical	3 Sem 1 SS
	Specialization Psych-Mental Health	3 Sem 1 SS 3 Sem 1 SS
Nursing of Children	Teaching Clinical	3 Sem 1 SS
	Specialization Psych-Mental Health	3 Sem 1 SS 3 Sem 1 SS
Psychiatric-Mental Health Nursing	Teaching Clinical	4 Sem
	Specialization	4 Sem

Programs combining major study in a clinical area with preparation as a nurse practitioner are:

Major	Nurse Practitioner	Approximate Length
Community Health Nursing	Family Nurse Practitioner	4 Sem 1 SS
Maternal and Infant Nursing	OB/GYN Practitioner	4 Sem 1 SS
Nursing of Children	Pediatric Nurse Practitioner	4 Sem 1 SS

Continuation of the Nurse Practitioner areas of study is contingent upon the availability of fiscal resources.

Programs combining major study in nursing services administration with a minor in clinical area are:

Major	Minor	Approximate Length
Nursing Services Administration	Medical Surgical Nursing Maternal; Infant Nursing Psych-Mental Health Nursing	4 Sem 1 SS

### ADMISSION REQUIREMENTS AND PROCEDURES

The purpose of admission requirements and procedures is to encourage applications from competent students and to insure selection of those whose ability, education, and motivation qualify them to pursue successfully graduate study in nursing.

To be considered for admission applicants must have:

1. A Bachelor of Science in nursing or a program equivalent to MCV/VCU School of Nursing with an upper division major in nursing from an NLN accredited school.
2. Acceptable scores on the Graduate Record Examination (Scholastic Aptitude Test only).
3. Current license to practice as a registered nurse. For enrollment in the program students must have licensure in Virginia and professional liability insurance.
4. References from the applicant's undergraduate program in nursing and from employment.
5. A personal interview may be requested.

Preference will be given to applicants with a minimum of one year of practice within the past five years.

Admission to study as a nurse practitioner in the graduate program requires, in addition, a minimum of one year of practice in a related area and a personal interview. Preference will be given to applicants from an area in need of primary health care and/or who have a commitment from a physician to provide a preceptorship or employment.

Admission to the major in nursing services administration requires, in addition, experience in nursing practice and management including mid-level responsibility for personnel management, program planning, and budget, such as is usually contained in positions of head nurse and supervisor. A personal interview is expected.

Applications and catalogues can be obtained from the Office of Enrollment Services, Graduate Admissions, Virginia Com-



monwealth University, 821 West Franklin Street, Richmond, VA 23284.

Additional program information and advisement can be obtained through the assistant dean for the graduate program, School of Nursing, Box 567, MCV Station, Richmond, VA 23298.

Applications are reviewed and acted upon by the School of Nursing. Applicants will be notified of action by the dean of the School of Graduate Studies. Applicants who are granted any provisional admission are responsible for satisfying the provision or may be subject to dismissal. Applicants should accept an admission offer in writing and submit a tuition deposit of \$50 to the director of enrollment services. The tuition deposit is not refundable but will be applied to tuition during the first semester of enrollment in courses. Applications not completed by June 1 for the fall semester and November 1 for the spring semester may not be processed in time for registration. Applicants whose applications arrive late may be considered for enrollment as special students, but there is no assurance that they will be accepted into a degree program.

### **SPECIAL STUDENTS**

Students who are not applicants for the degree may be admitted to individual courses. Permission to register for courses is at the discretion of the School of Nursing.

### **ENROLLMENT**

Students may begin study during fall, spring, or summer sessions. Students are advised, particularly if beginning in spring or summer, to discuss with their advisors the availability of sequential courses. Once admitted, students are expected to abide by enrollment policies of the School of Graduate Studies.

### **SCHOLARSHIPS, GRANTS, LOANS**

Applications for financial assistance must be filed for all forms of financial assistance, including traineeships. These applications may be obtained from the Financial Aid Office, Virginia Commonwealth University, Box 244, MCV Station, Richmond, VA 23298.

Limited financial assistance is available

through traineeships administered by the School of Nursing. A copy of the application for financial assistance should be filed with the dean.

### **GRADUATION REQUIREMENTS**

To be a candidate for the degree of Master of Science in nursing, students must be recommended by the faculty and must:

1. Complete all requirements for the prescribed curriculum within five calendar years of the first registration for work to be credited toward the degree.
2. Earn at least a "B" grade in all nursing courses.
3. Earn at least a cumulative average of 3.0 in all work presented for graduation.
4. Conform to School of Nursing policies in respect to pass-fail grading for course work or thesis study.
5. Present a satisfactory defense of the thesis at oral examination at least two weeks before the commencement exercises at which the student expects to receive the degree.
6. Submit five or more copies of the thesis prepared according to the standards approved by the University Graduate Council.

The degree will be granted only after all requirements have been fulfilled, all fees to the university have been paid, and bound copies of the thesis have been submitted. Degrees are not granted in absentia unless written request is made to the assistant dean for graduate program and permission is granted.

### **ACADEMIC REQUIREMENTS**

1. All full-time graduate students are expected to register for a minimum of 12 semester hours credit per semester, including research.
2. Utilizing the university grading system, no student may proceed in the program with a GPA less than 3.0 or with a grade of less than "B" in any nursing course without the approval of the assistant dean for the graduate program.
3. An advisor for each student is ap-

pointed by the appropriate department chairman. That advisor will assist the student in program planning and registration procedures.

4. Each student will select, with the approval of the department chairman, a thesis committee comprised of no less than three university faculty. One member must be outside the major department and may be outside of the School of Nursing. The thesis committee chairman is selected from the graduate faculty of the School of Nursing but not necessarily from the student's major department.
5. The thesis committee will monitor the design and conduct of the research, the preparation of the thesis, and serve as moderators in examination of the thesis.
6. The thesis is examined by the student's thesis committee and the additional moderator appointed from the graduate faculty of VCU.
7. Each moderator shall receive a copy of the candidate's thesis and shall decide on its acceptability. The moderators may confer with each other before making their decision.
8. On approval of the thesis, the student appears for a final oral examination by the thesis moderators. The final examination shall be open to the faculty, and its time and place together with the candidate's name, department, and title shall be announced at least ten days in advance.
9. A favorable vote of the examining committee with no more than one negative vote shall be required to pass the oral examination. All moderators will attend and will cast a vote.

**MASTER OF SCIENCE DEGREE  
Program Requirement—Clinical  
Major**

Major

NUR 500 Contemporary Nursing . . . . . 3 credits  
Advanced Clinical Courses. . . . . 12-14 credits  
Support Courses—one or two courses with from 5-7  
credits related to the clinical major.

Minor:

Nursing Practicum . . . . . 5 credits  
Support Courses . . . . . 9 credits

Research:

NUR 590—Methods of Research . . . . . 3 credits  
NUR 690—Research Seminar. . . . . 1 credit  
NUR 895—Thesis. . . . . 6 credits

Undergraduate statistics is required prior to admission, or statistics must be completed for thesis study. Specific advanced clinical courses and support courses will be determined by the major department. Requirements for nurse practitioner study will be found in the program descriptions for community health nursing and maternal-child nursing. Requirements for the nursing administration program will be found in the section describing that program.

**TRANSFER CREDIT**

Students may arrange to take 12 of the required credits at another institution and transfer these to VCU. It is imperative to obtain approval for such courses before enrolling in them. Acceptance toward degree requirements of credits earned prior to admission is at the discretion of the School of Nursing and will not exceed 12 credits.

**MASTER OF SCIENCE DEGREE  
PROGRAMS**

**Community Health Nursing**

The major in community health nursing is organized to include theoretical knowledge about the physical, behavioral, and sociocultural factors that influence human behavior in health and illness. The advanced clinical content in nursing includes opportunities to apply theories and modalities of treatment in family nursing and in meeting health needs of populations and defined community groups. Emphasis is on the identification and practice of innovative roles in nursing within the context of a changing health care system. Related courses in other fields basic to the specialty are selected for their contribution to the major. Students may select a sequence of courses in disciplines related to an area of special interest within the broad scope of community health nursing and develop this area in their

clinical practice and research. Graduate study in education, administration, and family nurse practice is shared with graduate students from fields other than nursing.

### **Family Nurse Practitioner**

Students enrolled in the family nurse practitioner major will complete the following courses in addition to the requirements for the community health nursing major: NUR 501, 601, 616, 617, 618, and graduate physiology. Students who select the family nurse practitioner program are eligible to apply for certification by the Virginia Boards of Nursing and Medicine.

### **Maternal-Child Nursing**

The majors in maternal and infant nursing and nursing of children provide an eclectic approach to the study of childbearing, childbearing, and the growth years of the life cycle. Emphasis is on the family as a socializing unit in which each member interacts with and affects every other member in their achievement of developmental tasks and responses to situational crises. The nurse's role in assessing, monitoring, maintaining, and promoting health adaptation in resolving these crises is stressed.

In order to achieve an effective level of nursing intervention in a variety of settings, the program is organized to include theoretical knowledge in physical, behavioral, and sociocultural factors that influence human responses along the health-illness continuum. Emphasis is placed also in increased self-understanding and skillful synthesis of theory in clinical practice areas and research.

### **Obstetric-Gynecologic or Pediatric Nurse Practitioner**

Students enrolled in the nurse practitioner major will complete the following courses in addition to the requirements for the MCN major. Obstetric-gynecologic nurse practitioner: NUR 501, 601, 636, 637, 638; pediatric nurse practitioner: NUR 501, 601, 646, 647, 648, and graduate physiology.

### **Medical-Surgical Nursing**

MCV Hospitals' patients are drawn from

both urban and rural areas of Virginia. The complexity of their illnesses provides a wealth of experiences for students of medical-surgical nursing. Opportunity to move out into the community, as well as to study within the hospital complex, offers students breadth as well as depth of preparation.

The focus of the graduate program in medical-surgical nursing is on both physiological and psychosocial problems. The advanced nursing courses concentrate on a variety of health-illness situations which individuals experience. Students select their own learning situations and have the opportunity to engage in independent study in each advanced course.

Students electing the teaching option have the opportunity to participate with undergraduate faculty in planning, organizing, implementing, and evaluating undergraduate student experiences. Actual practice in classroom and clinical laboratory teaching is provided under guidance. A microteaching session affords opportunity for student self-evaluation and improvement.

Students electing clinical specialization may select a focus from among the subspecialties in medical-surgical nursing for in-depth study and concentrated clinical practice. Practicing clinical specialists from MCV Hospitals are available for consultation which affords students the option to work in concert with those in actual practice.

### **Psychiatric-Mental Health Nursing**

Students achieve a measure of expertise toward meeting both professional and personal goals through a program of education which is individually planned. Practice in clinical settings is selected on the basis of goals. Individual supervision is appropriate to the particular clinical situations. Students have access to teams of multidisciplinary experts with whom to work in planning and implementing care for individual clients and their families and for persons and/or groups in the community. Opportunities for students to participate in seminars, conferences, and information sessions with scholars in residence are ongoing activities within the School of Nursing.

**NURSING SERVICES ADMINISTRATION**

This program prepares graduates to assume top level management positions in the area of nursing services administration. Approximately 56 credits from courses in the School of Business, School of Allied Health Professions, Department of Health Administration, and the School of Nursing and a thesis are required. Students engage in learning experiences related to the practice of administration in nursing. The focus of the course of studies is both theoretical and experiential and seeks to promote the integra-

tion of administrative and nursing sciences. Emphasis is placed upon systematic methods of investigation including the preparation and conduct of a research study. Practica are planned individually to capitalize upon student background and to promote growth.

**COURSE REQUIREMENTS**

The following courses are required components of programs of study leading to the Master of Science degree. Additional courses (\*) will be selected from areas related to the major area of study.

**COURSE SELECTION BY MAJOR AREA OF STUDY**  
**Courses Listed are Required Courses**

	<b>Community Health Nursing</b>	<b>Maternal Infant</b>	<b>Nursing of Children</b>	<b>Medical Surgical</b>	<b>Psychiatric-Mental Health</b>
<b>MAJOR</b>					
Core Course . . . . .	NUR 500	NUR 500	NUR 500	NUR 500	NUR 500
Advanced Clinical . . . . .	NUR 610 NUR 611	NUR 531 NUR 632 NUR 633	NUR 531 NUR 642 NUR 643	NUR 620 NUR 621	NUR 551 NUR 652 NUR 653 NUR 656 NUR 657 *
Major Support (2 courses or 5-7 credits) . . .	BIS 521 *	BIO 539 *	BIO 539 *	BIO 539	*
Research . . . . .	NUR 590 NUR 690 NUR 895	NUR 590 NUR 690 NUR 895	NUR 590 NUR 690 NUR 895	NUR 590 NUR 690 NUR 895	NUR 590 NUR 690 NUR 895
<b>MINOR</b>					
Teaching Practicum . . . . .	NUR 693	NUR 693	NUR 693	NUR 693	NUR 693
Support Courses . . . . .	Three courses from such areas as philosophy of education, learning theories, teaching strategies, curriculum, development, or evaluation.				
<i>or</i>					
Clin. Spec. Pract . . . . .	NUR 694	NUR 694	NUR 694	NUR 694	NUR 694
Support Courses . . . . .	Three courses from such areas as organizational theory group process, teaching strategies, social organization, community planning, etc.				
<i>or</i>					
Supervision Practicum . . . . .	NUR 695	NA	NA	NA	NA
Support Courses . . . . .	Three courses from such areas as organizational theory, administrative theory, community planning, community organization.				
Nurse Practitioner . . . . .	NUR 616 NUR 617 NUR 618	NUR 636 NUR 637 NUR 638	NUR 646 NUR 647 NUR 648	NA	NA

\* Additional support courses will be selected from areas of study related to the major.  
 Nurse practitioner courses are completed in lieu of a minor area of study.

Support .....	BIO 539	BIO 539	BIO 539
Core.....	NUR 501	NUR 501	NUR 501
	NUR 601	NUR 601	NUR 601

### Nursing Services Administration

This course of study includes courses in the School of Business; School of Allied Health Professions; Department of Health Administration; and School of Nursing. Recommended are the following:

See graduate bulletin for course descriptions

BUS 607	NUR 621 or other clinical sequence
BUS 608	NUR 500
BUS 624	NUR 590
HAD 602	NUR 690
HAD 603	NUR 895
HAD 609	NUR ____
HAD 611	
HAD 658	

Seminar in Nursing Services  
Administration I, II, III. (Information about  
these courses available upon request.)

### CLINICAL FACILITIES

A variety of urban and rural organizations and agencies including community, medical center, and state hospitals; public health services, private clinics and offices, federal and state centers, and departments are available for clinical study. These facilities provide generalized and specialized in-patient and ambulatory services for maternal and child health, psychiatric-mental health, medical and surgical treatment, geriatrics, and oncology. Selection of specific facilities for student experience is based upon the needs of the individual student and the services available within the facility. Students are encouraged to identify facilities which represent services within their clinical area of study.

### FACULTY

Brownie, Joan *Professor of Nursing and Dean* Ph.D., State University of New York at Buffalo; health manpower policy, evaluation of patient care.

Collins, Judith *Associate Professor* M.S., Boston University; sexuality during pregnancy, vaginitis.

Crummette, Beauty D. *Associate Professor of Nursing* Ph.D., University of Pittsburgh; asthma in children, nutrition in children, activity levels in infants and children.

Exley, Ethelyn E. *Associate Professor of Nursing* Ed.D., Ball State University; human genetics, primary nursing.

Francis, Gloria M. *Professor of Nursing* Ph.D., University of Pennsylvania; institutionalization, human separation and deprivation.

Henry, JoAnne K. *Assistant Professor of Maternal-*

*Child Nursing* Ed.D., University of Virginia; stress in primiparous women, stress in graduate students.

Kissinger, Jeanette F. *Associate Professor of Medical-Surgical Nursing* Ed.D., University of Virginia; hypertension, health behavior.

Lavecchia, Carolyn C. *Assistant Professor* M.S., University of Tennessee; stress in women.

Mark, Barbara A. *Assistant Professor of Nursing Services Administration* Ph.D., Case Western Reserve University; organization effectiveness, multi-disciplinary health care teams.

Millen, Dianne L. *Assistant Professor* M.N., University of California-Los Angeles; respiratory nursing, values and ethics.

Munjas, Barbara A. *Professor of Psychiatric-Mental Health Nursing* Ph.D., University of Pennsylvania; chronic mental illness behavior and intervention.

Olgas, Marya *Associate Professor and Chairman* *Medical-Surgical Nursing* Ph.D., New York University; body image, nursing science.

Repp, Eleanor C. *Professor of Nursing* Ed.D., Columbia University; faculty workload, predictors of academic science, chronic obesity.

Spaulding, Margaret R. *Professor and Chairman, Maternal-Child Nursing* Ed.D., Columbia University; parental infant bonding, obesity.

Stern, Christa E. *Assistant Professor of Community Health Nursing* Dr. P.H., Tulane University; organizational development and human relations, community health administration.

Strauss, Sarah S. *Assistant Professor of Maternal-Child Nursing* Ph.D., University of Washington; developmental disabilities, stress and coping.

Tauer, Kathleen *Assistant Professor* M.N., University of California-Los Angeles; respiratory nursing, values and ethics.

Tyzenhouse, Phyllis *Associate Professor and Chairman, Community Health Nursing* Dr.P.H., University of Pittsburgh; cardiovascular epidemiology, environmental health.

Yingling, Doris B. *Professor and Dean Emeritus,*

*School of Nursing Ed.D., University of Maryland; gerontological activities and historical research.*

## **GRADUATE COURSES IN NURSING (NUR)**

The course descriptions provided here are for the major in nursing and are restricted to students in this major. Please see other sections in this bulletin for courses in other schools and departments. Lecture hours may be used as seminar in which case the hours are doubled.

**500 Contemporary Nursing.** 3 lecture hours. 3 credits. 1, S. Prerequisite: BSN or equivalent degree. A core course designed to provide knowledge of theories, practices, and procedures common to nursing prior to specialization. All graduate students will participate in seminar course in conjunction with lectures. It is required prior to any course in the area of specialization with the exception of NUR 551 which is taught concurrently.

**501 Introduction to Health Assessment.** 3 lecture and 4 clinical hours. 4 credits. Prerequisite: BIO 539 or permission of instructor.

**531 Maternal-Child Nursing Concepts.** 2 lecture hours. 2 credits. I. Prerequisite or co-requisite; NUR 575. In-depth study of key concepts in the childbearing and childrearing years which have implications for nursing action in both maternity nursing and nursing of children. Emphasis is placed on childbearing and childrearing as a continuum within which health-oriented crisis situations occur in varying frequencies. These crisis situations have potentially disorganizing effects on the family unit. Appropriate nursing action to assist the family in reestablishing equilibrium will be covered.

**551 Advanced Psychiatric-Mental Health Nursing.** 1 lecture and 2 clinical hours. 2 credits. I. Prerequisite or co-requisite; NUR 575. Focuses on interpersonal interaction based on a theory of human values in which concepts such as identity, acceptance and esteem, communication, autonomy, and authenticity are stressed. Theory related to systems analysis used to study the milieu. Content provides basis for the care of individual patients and use of the nursing process within the therapeutic community.

**590 Methods of Research.** 3 lecture hours. 3 credits. Prerequisite: statistics preferred. Focus is on the methods and processes of systematic investigation; critical analysis of studies; and relationships among theory, research, and practice, leading to the development of a thesis proposal.

**591 Special Topics.** 1-3 credits. I, II, S. Independent study of specific topics in nursing covered briefly in the more general courses.

**592 Directed Study in Nursing.** 1-3 credits. I, II, S. Prerequisite: permission of instructor. Independent study in a specific area of nursing developed under the supervision of a member of the graduate faculty.

**610 Advanced Community Health Nursing.** 2 lecture and 8 clinical hours. 6 Credits. II. Prerequisite: NUR 500. Advanced concepts and theories basic to the study of individuals and families in the community. Advanced nursing practice in examining selected conceptual frameworks for family analysis and nursing intervention is provided through intensive work with families encountering problems on an illness-wellness continuum.

**611 Advanced Community Health Nursing.** 2 lecture and 8 clinical hours. 6 credits. I. Prerequisite: NUR 500, 610. Theories and concepts basic to health needs of populations and of change strategies related to community organization and action for health. Clinical practice with families and selected community health planning groups focuses on the role of the nurse as a change agent.

**616 Assessment and Clinical Judgement in Family Nurse Practice I.** 6 lecture and 8 clinical hours. 8 credits. Prerequisite: BIO 539. Didactic content taught by a multidisciplinary faculty covers common physical, mental, and developmental problems presented by children and adults in ambulatory settings. Supervised practice include history taking, physical examination, screening and diagnostic procedures, and interpretation of selected laboratory findings.

**617 Assessment and Clinical Judgement in Family Nurse Practice II.** 5 lecture and 12 clinical hours. 8 credits. Prerequisite; NUR 616. Didactic content taught by multidiscipline faculty continues to increase student's competency in identifying health illness status of children and adults in ambulatory settings. Supervised practice covers increasing responsibility for accuracy and breadth of assessment and clinical judgments. Practice includes experiences with family nursing where advanced theory on family dynamics, counseling, teaching, and coordination as practiced by the specialist in community health nursing are synthesized with the assessment and clinical judgment skills of the nurse practitioner.

**618 Management of Common Health Problems of Children and Adults in Family Nurse Practice.** 1 lecture and 20 clinical hours. 6 credits. Prerequisite: NUR 617. Focuses on development of management component of the family nurse practitioner role through working with a physician or family nurse practitioner developing primary care. The student develops a caseload of families, assists in developing positive health behavior, evaluates responses to management plans, and experiences the role of family nurse practitioner in the health care system.

**620 Advanced Medical Surgical Nursing.** 2 lecture and 8 clinical hours. 6 credits. II. Prerequisites: NUR 500, BIO 539, or equivalent. In-depth study of adult human responses to acute and chronic illness. Focus is on selected psychosocial concepts and theories, their implication for and application in clinical practice.

**621 Advanced Medical Surgical Nursing.** 2 lecture and 8 clinical hours. 6 credits. I. Prerequisites: NUR 500, BIO 539, or equivalent. In-depth study of selected physiological responses of adult with acute and chronic

illness. Focus is on implication for and application in clinical practice.

**632 Advanced Maternal-Infant Nursing I.** 1 lecture and 8 clinical hours. 5 credits. II. Prerequisites: NUR 500, 531. Theory and practice are directed toward the concepts that the care of the mother and her newborn is a continuous integrated process, centered on the family in interaction with the physical and social environment.

**633 Advanced Maternal-Infant Nursing II.** 1 lecture and 8 clinical hours. 5 credits. I. Prerequisites: NUR 500, 531. Theory and practice are directed toward study of normal and abnormal physiological and psychosocial patterns associated with intrapart and postpartal periods of pregnancy. Emphasizes assessing, planning, implementing, and evaluating comprehensive nursing care.

**636 Primary Health Care in OB-GYN Nursing.** 5 lecture and 8 clinical hours. 7 credits. Prerequisites: NUR 500, 531, 632, BIO 539. Focuses upon identification and management of common physical, mental, social, and developmental problems presented by women in the areas of maternity and gynecologic primary care.

**637 Primary Health Care in Nursing Practicum I.** 1 lecture and 16 clinical hours. 5 credits. Prerequisite: NUR 636. This course is designed to provide the student with intensive clinical experience in the areas of maternity and family planning for clients in primary care.

**638 Primary Health Care in Nursing Practicum II.** 1 lecture and 16 clinical hours. 5 credits. Prerequisite: NUR 636, continuation of NUR 637. This course is designed to provide continued intensive clinical experience and an opportunity to integrate the functional role of nurse practitioners with advanced nursing theory. May be taken concurrently with NUR 637.

**642 Advanced Nursing of Children I.** 1 lecture and 8 clinical hours. 5 credits. II. Prerequisites: NUR 500 and 531. An eclectic approach to the nursing care of infants, toddlers, and preschool children. The family is included as the primary socializing agent of the child. Relationships among family members and with outside support systems are analyzed. Emphasis is placed on attaining and maintaining health and preventing illness. Behaviors typically expressed during periods of stress and adaptation are included and interventions are discussed. The laboratory provides opportunities for applying the nursing process in the care of children and families.

**643 Advanced Nursing of Children II.** 1 lecture and 8 clinical hours. 5 credits. I. Prerequisite: NUR 500 and 532. An eclectic approach to the nursing care of children through the study of the important theories and ideas related to child development and health care needs and the application of this information in the nursing care of the school age children and adolescents.

**646 Primary Health Care in Pediatric Nursing.** 5 lecture and 6 clinical hours. 7 credits. Prerequisites: NUR 501, 531, 601, 642, 643, BIO 539. Prepares the student to provide primary care for children and families in collaboration with a physician.

**647 Primary Health Care in Pediatric Nursing Practicum I.** 1 lecture and 16 clinical hours. 5 credits. Prerequisite: NUR 546. Designed to provide intensive clinical experience with preceptor collaboration in the areas of health promotion and maintenance and treatment of the child with acute or chronic illness.

**648 Primary Health Care in Pediatric Nursing Practicum II.** 20 clinical hours. 5 credits. Prerequisite: NUR 546. Designed to provide further intensive clinical experience with preceptor collaboration in the areas of health promotion and maintenance and treatment of the child with acute or chronic illness.

**652 Advanced Psychiatric-Mental Health Nursing.** 2 lecture and 8 clinical hours. 6 credits. II. Prerequisite: NUR 551. A continuation of the study of human values and of specific psychiatric nursing concepts such as anxiety and fear. Provides theory dealing with the study of families and family therapy. Clinical practicum provides additional depth in the care of an individual patient and his family and in the care of groups of patients. Practicum may cut across clinical and/or agency boundaries according to individual interest and needs of the student.

**653 Advanced Psychiatric-Mental Health Nursing.** 2 lecture and 8 clinical hours. 6 credits. I. Prerequisite: NUR 551, 652. Focuses on the synthesis of previously learned psychiatric nursing theory and material from related areas in the assessment of community dynamics and potentials as they affect the mental health of persons within the community. Focus of the clinical practicum is upon community living.

**655 Group Seminar.** 1 lecture hour. 1 credit. I. Series of group seminars designed to promote theoretical understanding of group dynamics and psychotherapies in terms of objectives and techniques. Opportunities provided for personal growth through sensitivity training. First seminar focuses on experiential learnings of group and self dynamics.

**656 Group Seminar.** 1 lecture hour. 1 credit. II. Prerequisite: consent. Designed to provide theoretical understanding of such group dynamics as process, content, pressure, and feedback.

**657 Group Seminar.** 1 lecture hour. 1 credit. I. Prerequisite: consent. Devoted to objectives and techniques involved in the various group psychotherapies, including such groups as supportive, guidance, insight-oriented, encounter, marathon sensitivity training, couples and family therapy.

**690 Research Seminar in Nursing.** 1 lecture hour. 1 credit. II. Prerequisite: NUR 590. Examines practical problems in the implementation of nursing research.

**691 Special Topics in Nursing.** 1-3 credits. Prerequisite: permission of instructor. Focuses upon problems, issues, or practice in nursing. Topics may include historical, contemporary, or emerging phenomena relevant to the growth and development of nursing or its practice.

**692 Independent Inquiry in Nursing.** 1-3 credits. Prerequisite: permission of instructor. Independent study, in-

vestigation, or research developed and conducted with guidance by graduate faculty.

**693 Teaching Practicum.** 1 lecture and 8 clinical hours. 5 credits. I, II. Prerequisite: 6 credits education courses and 10 credits nursing courses. Concentrated study in classroom and clinical teaching content. Supervised practice teaching is provided with undergraduate nursing students under the direction of master teachers.

**694 Selected Clinical Practicum.** 1 lecture and 8 clinical hours. I. Prerequisite; methods of research, statistics, 10 credits in nursing courses. Concentrated study and clinical practicum directed toward clinical specialist preparation in the major area of interest.

**695 Practicum in Supervision.** 1 lecture and 8 clinical hours. 5 credits. I. Prerequisite: third semester standing. Philosophy, purposes, and elements of the social role of the contemporary supervisor as a developer of human resources and as a functioning member of organizational structures taught through selected supervised practice.

**895 Thesis.** 6 credits. Required of all students, the master's thesis constitutes carefully planned and executed research under the supervision of an advisor and in conjunction with a thesis committee. The student writes and presents the required thesis in the area of clinical nursing interest.





## Part X—School of Pharmacy

### ADMINISTRATIVE OFFICERS

JOHN S. RUGGIERO, M.S., Ph.D.

Dean

GRAHAM C. WINDRIDGE, Pharm.D., Ph.D.

Assistant Dean

### HISTORY

When the Medical College of Virginia opened its doors on November 5, 1838, pharmacy was taught as a part of the medical course. Although the General Assembly of Virginia amended the charter in 1879 to permit the institution to confer the degree of graduate of pharmacy upon properly qualified individuals, college records indicate that there were two graduates in pharmacy as early as 1876.

The School of Pharmacy was officially established in 1898; the University College of Medicine had a school of pharmacy when it opened in 1893. The two-year curriculum gave way to a three-year program in 1925, and in 1932 the school required four years of college work and a B.S. degree was awarded. In 1960 the program lengthened to the current five-year course leading to a Bachelor of Science in pharmacy degree. In 1975, authority was granted to offer to selected students a six-year program leading to the Doctor of Pharmacy degree.

The authority to award graduate degrees in the pharmaceutical sciences was granted by the Graduate Council in 1952. Depart-

ments in the school currently direct work leading to the M.S. and Ph.D. degrees in pharmaceutical chemistry, pharmaceutics, and pharmacy administration. These programs provide the preparation and research experience for academic, governmental, and industrial careers.

### FACILITIES

The School of Pharmacy is located in McGuire Hall on the Medical College of Virginia Campus. It shares this building with the Department of Pharmacology of the School of Basic Sciences. In the fall of 1983 the School of Pharmacy will occupy a new building which is currently under construction. Location in a major health science center provides excellent opportunities for interdisciplinary research, and access to clinical facilities. The school is well equipped for graduate research.

### PROGRAMS IN PHARMACEUTICAL/MEDICINAL CHEMISTRY

The Department of Pharmaceutical Chemistry offers programs leading to the M.S. and Ph.D. degrees in pharmaceutical chemistry. Students may select programs emphasizing organic medicinal chemistry, pharmaceutical analysis, or physical pharmaceutical chemistry.

All students will complete the following core courses along with those elective courses deemed necessary to the student's program by the student's advisor. These electives may include courses outside the department.

Organic Pharmaceutical Chemistry —  
PHC 403-404

Advanced Medicinal Chemistry—PHC  
506 or 607

Research Techniques—PHC 526

Seminar (each semester)—PHC 690

Biochemistry—BIC 503-4

Pharmacology—PMC 403

Advanced Organic Chemistry—CHE 604

At the present time the research interests of the department include: synthesis and biological evaluation of new compounds, determination of relationships between chemical structure and biological activity, studies on modes of drug action, theoretical studies on structure-activity relationships of drugs including the use of molecular orbital theory and molecular connectivity, rational design of new drugs and studies on drug metabolism. Drug classes under investigation include antineoplastics, hypocholesteremics, neurotransmitter antagonists, peptide antibiotics, psychotropic agents, antihypertensives, and platelet aggregation inhibitors.

## PROGRAMS IN PHARMACEUTICS AND PHARMACY ADMINISTRATION

The Department of Pharmacy and Pharmaceutics offers programs leading to the M.S. and Ph.D. degrees in pharmaceutics and pharmacy administration. Advanced degrees in pharmaceutics and pharmacy administration do not provide eligibility for licensure as a pharmacist. Persons interested in advanced professional programs in pharmacy are referred to the School of Pharmacy section of the Medical College of Virginia Campus bulletin where the Doctor of Pharmacy (Pharm.D.) program is described.

Students may elect to pursue a joint Pharm.D.-Ph.D. program. Such students must apply to and be accepted to both programs separately.

Graduate students majoring in pharmaceutics may select programs emphasizing biopharmaceutics, pharmacokinetics, or

physical pharmacy. These students take suitable courses outside the department in the areas of basic sciences, mathematics and statistics, computer use, and chemistry. The selection and scope of these will depend on student needs and research interests.

Graduate students majoring in pharmacy administration may select programs emphasizing practice management or the drug selection process. Suitable outside courses may include statistics, computer use, hospital and health care management, and business management. At the present time, the research interests of the department include: bioavailability studies, factors governing release of drugs from solid dosage forms, micellar nature of drug solutions, drug-protein binding interactions, effects of saturated and competitive metabolism on pharmacokinetics, clinical pharmacokinetics including computer modeling of pharmacokinetics in man and use of individual pharmacokinetic parameters in optimizing dosage regimens, development of analytical methodology for drugs in biological fluids, neonatal, pediatric, and geriatric pharmacokinetics, design and management of pharmacy-related health service systems, drug prescribing, and utilization studies.

## ADMISSION REQUIREMENTS

The requirements for admission to graduate programs are described in the School of Basic Sciences section of this bulletin. Additional requirements concerning undergraduate education are imposed upon applicants to graduate programs in the School of Pharmacy.

Admission to graduate programs in pharmaceutical/medicinal chemistry is open to students having a bachelor's degree in pharmacy, chemistry, or a related science. Admission to graduate programs in pharmaceutics and pharmacy *administration* normally requires a bachelor's degree in pharmacy. However, applicants with degrees in chemistry, biology, or engineering may qualify in specific programs in pharmaceutics.

Acceptance is based upon undergraduate performance, satisfactory scores on the Graduate Record Examination, letters of

recommendation, and, where applicable, TOEFL scores.

Applications for admission, as specified in the School of Basic Sciences section of this bulletin, should be sent to the Chairman, Graduate Admissions Committee, Department of Pharmaceutical Chemistry or Department of Pharmacy and Pharmaceutics, School of Pharmacy, Virginia Commonwealth University, Box 581, MCV Station, Richmond, VA 23298.

### REGISTRATION

While most students register for the first semester, beginning in August, arrangements may be made to initiate graduate work at other times during the academic year.

### FINANCIAL ASSISTANCE

Graduate students in the School of Pharmacy may receive support via teaching assistantships, research assistantships, or fellowships. The American Foundation for Pharmaceutical Education provides support to eligible applicants for graduate study in the pharmaceutical sciences. All students, regardless of the level or the source of support, are required, as a part of their graduate education, to obtain teaching experience in lecture and laboratory.

### THE STUDENT'S ADVISOR AND GRADUATE COMMITTEE

The departmental graduate coordinator will advise students until a permanent advisor has been chosen. During their first semester, new graduate students are required to arrange interviews with each graduate faculty member of their major department to discuss research projects. Students will select an advisor and a research project, and report the selection to the appropriate departmental committee. The advisor will arrange for the appointment of the students' graduate committees. The responsibilities of the advisor and the graduate committee are described in the School of Basic Sciences section of this bulletin.

### REQUIREMENTS FOR GRADUATE DEGREES

Graduate students in the School of Phar-

macy must satisfy the degree requirements described in the School of Basic Sciences section of this bulletin (p. 116). In some cases more stringent requirements are imposed and these are described in detail in graduate student rules which are issued to all students.

All graduate students are required to attend seminars in their own department and are encouraged to attend seminars of interest in other departments. Students are required to present seminars satisfactory to the faculty. Normally, students will present one seminar per year.

Graduate students are expected to devote maximum effort to the pursuit of their education. During normal working hours, graduate students are expected to be working on their research projects when they are not in class. Graduate students who are progressing satisfactorily may be granted permission by the chairman of their department to take outside employment during evenings or weekends.

### ORGANIZATIONS

Rho Chi, the national honorary pharmaceutical society has a chapter at MCV. Membership in this society is open to graduate students in the School of Pharmacy who meet the society's scholastic standards.

The Society of Sigma Xi Chapter at VCU brings in outstanding scholars for its lecture program. Graduate students who have demonstrated a marked aptitude for research in the field of pure or applied science may be elected to associate membership in the society.

Professional associations which meet locally include the Virginia Pharmaceutical Association and the Virginia Section of the American Chemical Society.

Pharmacy fraternities with chapters at MCV are Kappa Epsilon, Kappa Psi, and Phi Delta Chi.

## Department of Pharmaceutical Chemistry

### FACULTY

Boots, Marvin R. *Associate Professor* Ph.D., University of Kansas; synthetic medicinal chemistry.  
Glennon, Richard A. *Associate Professor* Ph.D., State

## 242 School of Pharmacy

University of New York at Buffalo; synthetic medicinal chemistry.

Kier, Lemont B. *Professor and Chairman* Ph.D., University of Minnesota; theoretical medicinal chemistry.

Richard, Alfred J. *Professor* Ph.D., Clark University; physical properties of liquids and of solutions of macromolecules.

Soine, William H. *Assistant Professor* Ph.D., University of Kansas; analytical medicinal chemistry.

Stubbins, James F. *Professor* Ph.D., University of Minnesota; design and synthesis of new drugs.

van't Riet, Bartholomeus *Associate Professor* Ph.D., University of Minnesota; complexing ability of antitumor agents.

Windridge, Graham C. *Associate Professor and Acting Dean* Ph.D., University of California; peptide chemistry.

### GRADUATE COURSES IN PHARMACEUTICAL CHEMISTRY (PHC)

A few 400 level courses (PHC 403, 404, 411, 412, 413, and 414) have been approved for select students to apply towards this degree. Students must have permission from their advisors to register for these undergraduate courses.

**506 Advanced Medicinal Chemistry I.** 3 lecture hours. 3 credits. A study of pharmacodynamics, theories relating to drug action, and the general principles of drug design.

**521 Drug Assaying.** 2 lecture and 4 laboratory hours. 4 credits. A consideration of the chemical assaying of U.S.P. and N.F. preparations, including synthetic and naturally occurring drugs.

**526 Research Techniques in Pharmaceutical Chemistry.** 0-2 lecture and 2-8 laboratory hours. 1-4 credits. The theory and application of classical and instrumental techniques used in pharmaceutical research are presented.

**531 Medicinal Chemistry for Nurse Anesthetists I.** 4 lecture hours. 4 credits. A review of the principles of organic chemistry and bio-organic chemistry with emphasis on the concepts necessary for an understanding of PHC 532.

**532 Medicinal Chemistry for Nurse Anesthetists II.** 3 lecture hours. 3 credits. Prerequisite: PHC 531 or equivalent. A series of lectures covering the structure-activity relationships, metabolism, and mechanism of action of selected agents.

**607 Advanced Medicinal Chemistry II.** 3 lecture hours. 3 credits. A study of the structure-activity relationships and mode of action of selected groups of drugs.

**622 Stereochemistry.** 2 lecture hours. 2 credits. A study of the number and kinds of stereoisomers of organic

compounds, the differences in chemical and physical properties between stereoisomers.

**632 Heterocyclic Chemistry.** 3 lecture hours. 3 credits. A series of lectures covering a number of the more important heterocyclic systems.

**681 The Ultracentrifuge.** 2 lecture hours. 2 credits. The optical systems of the ultracentrifuge are discussed, as well as the applications of the ultracentrifuge in the study of the properties of macromolecules such as proteins and nucleic acids.

**690 Departmental Research Seminar.** 1 lecture hour. 1 credit. In addition to reports that are presented by students, staff, and visiting lecturers, current problems and developments in pharmaceutical and medicinal chemistry are discussed.

**691 Special Topics in Pharmaceutical Chemistry.** 1-4 lecture hours. 1-4 credits. Lectures, tutorial studies, and/or library assignments in selected areas of advanced study not available in other courses or as a part of the research training.

**697 Directed Research in Pharmaceutical Chemistry.** 1-15 credits. Research leading to the M.S. or Ph.D. degree.

## Department of Pharmacy and Pharmaceutics

### FACULTY

Barr, William H. *Professor and Chairman* Ph.D., University of California at San Francisco; clinical pharmacokinetics, mechanisms of absorption.

Garrettson, Lorne K. *Associate Professor* M.D., Johns Hopkins University; age dependent pharmacokinetics.

Hepler, Charles D. *Associate Professor* Ph.D., University of Iowa; motivation and work behavior, drug prescribing.

Kline, Berry J. *Associate Professor* Ph.D., University of Wisconsin; biopharmaceutical analysis.

Pierpaoli, Paul G. *Associate Professor* M.S., University of Michigan; operations research, hospital management.

Poynor, Wesley J. *Assistant Professor* Ph.D., University of Texas at Austin; pharmacokinetics, application of computer technology to pharmacy practice.

Smith, Harold L. *Associate Professor* Ph.D., Medical College of Virginia; drug protein binding.

Wood, John H. *Professor* Ph.D., Ohio State University; biopharmaceutics, kinetics of saturable and competitive metabolism.

### GRADUATE COURSES IN PHARMACY AND PHARMACEUTICS (PHA)

**531 Pharmaceutical Product Development.** 2 lecture and 4 laboratory hours. 4 credits. A study of the pharmaceutical, physicochemical, biopharmaceutical, and engineering principles and technology underlying the development of various pharmaceutical dosage forms for hospitals and industry.

**532 Pharmaceutical Product Development.** 2 lecture and 4 laboratory hours. 4 credits. A continuation of PHA 531.

**601 Advanced Pharmaceutical Product Development.** 3 lecture and 4-10 laboratory hours. 5-8 credits. An advanced study of the pharmaceutical, physicochemical, and engineering principles and technology underlying the development of various pharmaceutical dosage forms.

**602 Advanced Pharmaceutical Product Development.** 3 lecture and 4-10 laboratory hours. 5-8 credits. A continuation of PHA 601.

**608 Clinical Radiopharmacy.** 1 lecture and 2 laboratory hours. 2 credits. Students receive training in the safe use, preparation, calibration, quality control, and clinical diagnostic use of current and investigational radiopharmaceuticals in nuclear medicine practice. Emphasis will be placed on obtaining patient medication histories for the evaluation of agents capable of in vivo and in vitro radioisotopic test modification.

**611 Advanced Physical Pharmacy.** 3 lecture and 0-4 laboratory hours. 3-5 credits. Detailed application of physicochemical principles to areas of pharmaceutical interest, including colloids, rheology, phase rule, complexation, kinetics, drug stability, and micromeritics.

**612 Advanced Physical Pharmacy.** 3 lecture hours. 0-4 laboratory hours. 3-5 credits. A continuation of PHA 611.

**621 Advanced Biopharmaceutics and Drug Disposition.** 2 lecture hours. 2 credits. Study at the advanced level of the relationships between the physicochemical properties of a drug and dosage form and the absorption, distribution, elimination, and pharmacological effects of the drug. Current theory and methodology involved in solving problems at the research level are emphasized.

**622 Clinical Pharmacokinetics.** 2 lecture and 0-2 laboratory hours. 2-3 credits. The application of current pharmacokinetic theory to clinical problems involved in optimizing and monitoring drug use in patients. Particular attention is given to adjustment of drug dosage in individual patients with impaired drug elimination due to renal and hepatic dysfunction.

**624 Pharmacokinetics.** 2 lecture hours. 2 credits. An advanced treatment of the kinetics of drug absorption, distribution and elimination utilizing mathematical models, analog, and digital computers for analysis of linear and non-linear biologic systems.

**625 Biopharmaceutic Assay.** 2 lecture and 2-6 laboratory hours. 3-5 credits. Theory and laboratory practice for systematic quantitative and qualitative analysis of drugs and metabolites in body fluids and tissues. Emphasis is on modern analytical methodology used in pharmacokinetic and biopharmaceutic studies.

**626 Biopharmaceutic Assay.** 2 lecture and 6-10 laboratory hours. 5-7 credits. A continuation of PHA 625 with particular emphasis on the identification of drug metabolites.

**631 Advanced Hospital Pharmacy Management.** 3 lecture hours. 3 credits. Major issues and problems related to the effective management and coordination of a contemporary institutional pharmacy service program are discussed largely in the context of hospital organizational structure and dynamics. Emphasis is placed on the social, political, and economic forces impinging on the modern hospital organization and its pharmacy service programs.

**632 Advanced Hospital Pharmacy Management.** 3 lecture hours. 3 credits. The planning and development of a total program in institutional drug use control is stressed with emphasis on modern human and fiscal resource management theories and applications. Current management problems unique to institutional pharmacy practice are stressed.

**690 Pharmacy Research Seminar.** 1 lecture hour. 1 credit. Required of all graduate students in pharmacy.

**691 Special Topics in Pharmacy.** 1-4 lecture hours. 1-4 credits. Presentation of subject matter is by lectures, tutorial studies, and/or library assignments in selected areas of advanced study not available in other courses or as part of the research training.

**697 Directed Research in Pharmacy.** 1-15 credits. Research leading to the M.S., Pharm.D., or Ph.D. degree.



## PART XI—School of Social Work

### ADMINISTRATIVE OFFICERS

ELAINE Z. ROTHENBERG

Dean

GRACE E. HARRIS

Associate Dean

ROBERT L. SCHNEIDER

Assistant Dean

FLORENCE SEGAL

Director of Continuing Education

L. DIANE BERNARD

Director, Ph.D. Program in Social Policy and Social Work

### FACULTY

Adler, Martin D. *Professor* Ph.D., University of Pittsburgh; social policy, mental health.

Bernard, L. Diane *Professor* Ph.D., Bryn Mawr College; social work education, human behavior.

Beverly, David P. *Associate Professor* D.S.W., Catholic University of America; social work manpower, social policy.

Biggerstaff, Marilyn, A. *Associate Professor* D.S.W., University of Southern California; social work manpower, aging.

Bloom, Martin *Professor* Ph.D., University of Michigan; evaluation methodology, primary prevention.

Carlton, Thomas O. *Associate Professor* D.S.W., University of Pennsylvania; medical social work, specialized curriculum development in health.

Falck, Hans S. *Professor* Ph.D., Syracuse University; philosophy of science and social work methodology, integration of social psychology and psychoanalytic concepts.

Forbes, David C. *Assistant Professor* M.S.W., Adelphi University; social welfare, organizations and community development.

Green, Robert G. *Assistant Professor* Ph.D., Virginia Polytechnic Institute and State University; family theory and therapy, marriage and divorce.

Harris, Grace E. *Professor* Ph.D., University of Virginia; organizational theory, social administration and planning.

Hinchman, Madison G. *Assistant Professor* D.S.W., University of Southern California; crisis intervention, children, adolescents, and family.

Jimenez-Vazquez, Rosa *Assistant Professor* M.A., University of California at Los Angeles; social planning and community organization, Hispanic women.

Koerin, Beverly B. *Assistant Professor* M.S.W., Virginia Commonwealth University; social policy, family and child welfare.

Kolevzon, Michael S. *Associate Professor* D.S.W., University of California; family therapy, social work education.

Miller, Jaclyn *Assistant Professor* Ph.D., University of Texas; cognitive styles, social work education.

Moore, Mordean T. *Assistant Professor* Ph.D., Brandeis University; models of community development, black community values, community mental health.

Roth, Edna F. *Professor* D.S.W., Smith College; autism in children, family theory.

Rothenberg, Elaine Z. *Professor* M.S.S., Smith College; social work practice, curriculum development.

Russell, Dojelo C. *Professor* D.S.W., Catholic University of America; social work curriculum, faculty advising.

Saunders, David N. *Associate Professor* Ph.D., Bryn Mawr College; alcohol and driving, alcohol and youth.

Schneider, Robert L. *Associate Professor* D.S.W., Tulane University; gerontology, social administration.

Schrieberg, Charlotte S. *Associate Professor* M.S.S.W., Richmond Professional Institute; aging, social policy.

Schwartz, Martin S. *Professor* Ed.D., Columbia University; clinical social work, mental health.

Scotch, Bernard C. *Professor* Ph.D., Brandeis University; community development, professional manpower issues.



Seaberg, James R. *Associate Professor* Ph.D., University of Wisconsin-Madison; child welfare, social services effectiveness.

Segal, Florence Z. *Associate Professor* M.A., University of Chicago; human sexuality, part-time social work education.

Singer, Mark J. *Assistant Professor* Ph.D., University of Illinois; spouse abuse, social work education, effects of fathering on child and adolescent development.

Walker, Ruby C. *Assistant Professor* M.S.W., Richmond Professional Institute; family practice, the black aged.

Wells, Mabel G. *Associate Professor* Ph.D., Bryn Mawr College; child welfare, family practice.

Wompierski, Claire E. *Associate Professor* D.S.W., University of Pennsylvania; school social work research, evaluation research.

## HISTORY AND LOCATION

The School of Social Work was established in 1917 as the Richmond School of Social Work and Public Health, which later became the first unit of Richmond Professional Institute. The school developed initially in response to community manpower needs to work with World War I veterans and their social and health problems. Subsequent development of the school has expanded into all areas of human service.

With the creation of Virginia Commonwealth University in 1968, the School of Social Work was established as a unit of the university's Academic Campus. The Raleigh Building at 1001 West Franklin Street houses faculty offices, a student lounge, and the Stuart J. Gluck Memorial Reading Room. The School of Social Work is the oldest school of its kind in the South.

Richmond provides a unique setting for social work education. The population of the metropolitan area is approximately 600,000 persons. As a community, Richmond is in a period of exciting economic and social growth, permitting varied opportunities for community study and field instruction. As the capital of Virginia, Richmond offers educational opportunities in many state government agencies concerned with the development and provision of social services. Proximity to Washington, D.C., allows additional practica opportunities with either federal agencies or with national organizations. The existence of a large number of social agencies in the area permits students to participate in the delivery and

development of a wide range of social services.

## PROFESSION OF SOCIAL WORK

Social work is a profession that assists people in the prevention and resolution of problems of human living. It provides services to those who seek more satisfying and productive lives, and helps communities to organize services to contribute to the welfare of all citizens. In addition to these traditional concerns, social workers are increasingly involved in the administration of direct human service programs, in the development of public policy, in research programs, and in teaching. Qualified social workers are in demand in every area of professional practice.

In order to achieve the profession's goals of human well-being and social justice, social workers provide a variety of services in many different organizations. Social work is usually practiced in social welfare agencies and in social work departments at host settings. Social workers with graduate degrees serve as faculty in universities offering social work programs. Social workers are needed to work with mentally ill, emotionally disturbed, delinquent, mentally retarded, physically ill, handicapped, and economically and socially deprived children and adults. They are sought for service in schools, courts, hospitals, clinics, and in agencies that seek to detect and prevent delinquency and child neglect.

Community centers, psychiatric and general hospitals, and service centers for the aged also seek qualified social workers and offer varied career opportunities. Equally challenging opportunities exist in public and private agencies that deal with problems of housing and urban renewal, public health, community mental health, social welfare planning and fund-raising, race relations, and many other concerns that become especially acute both in the changing neighborhoods of large cities and in depressed rural and industrial areas.

Social work practice is designed to enrich the quality of life by enabling individuals, groups, and communities to achieve their greatest potential development. The overall aim of the School of Social Work at Virginia

Commonwealth University is to provide professional education to meet these needs.

### **EDUCATIONAL PROGRAMS**

The School of Social Work offers a four-year curriculum leading to the Bachelor of Social Work degree, a two-year graduate professional curriculum leading to a Master of Social Work degree, and a Ph.D. program in social policy and social work.

### **BACCALAUREATE SOCIAL WORK PROGRAM**

The School of Social Work offers a four-year program leading to a Bachelor of Social Work degree.

The B.S.W. program is accredited by the Commission on Accreditation of the Council on Social Work Education. The objectives of the baccalaureate program are to prepare students for beginning social work practice and graduate social work education. A description of the baccalaureate program may be found in the *Academic Campus Undergraduate Bulletin of Virginia Commonwealth University*. A copy of the bulletin may be obtained by writing to the Office of Enrollment Services, Undergraduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, Va. 23284

### **MASTER OF SOCIAL WORK PROGRAM**

At Virginia Commonwealth University, a graduate professional curriculum accredited by the Commission on Accreditation of the Council on Social Work Education and leading to the Master of Social Work degree, is offered through the School of Social Work. Changing manpower needs in the social work field indicate that students at the graduate level need to be prepared as specialists in a particular field of social service delivery. The recent expansion of knowledge in the human sciences as well as the complexity of social service delivery systems also require that students concentrate in depth in one area to achieve the knowledge and skill necessary to practice in these intricate systems.

The curriculum of the Master of Social

Work program is designed to prepare social workers who are able to demonstrate:

1. Specialized knowledge and skill in the provision of services within a major social services delivery system (adult and juvenile justice, family/public social services, health, mental health/mental retardation).
2. Competence in one method of social work practice (social casework, social group work, social planning, social work administration); beginning knowledge and skill in a second, related method of practice; and knowledge and appreciation of other methods of practice.
3. Knowledge of the profession and its evolution; sensitivity to critical professional issues; and commitment to its purposes, values, and ethics.
4. Ability to assess problems confronted in practice through scientifically grounded procedures.
5. Commitment and ability to participate in the development of strategies and policies and to ameliorate social problems.
6. Ability to integrate and use in practice, knowledge of individual behavior and social structure.
7. Understanding of the interdependence of professional disciplines and skill in collaboration with others to achieve welfare objectives.
8. Self-awareness; self-discipline; and accountability to clients, to the profession, and to society.
9. Ability to distinguish between what is known and what is not known and commitment to continued learning and contribution to knowledge.
10. Appreciation of the contributions to society of cultural and ethnic diversity and ability to identify and counteract discrimination.

### **ADMISSION TO MASTER'S DEGREE PROGRAMS**

Students interested in full-time study are admitted to the M.S.W. program in the fall of each year. Part-time students are admitted throughout the year. Since space in each class is limited, it is advisable for prospective

students to apply as early as possible during the academic year preceding anticipated enrollment. Ordinarily firm decisions in admissions are concluded by mid-May.

### **Admission Requirements**

Each applicant for admission must hold a bachelor's degree from a college or university approved by the appropriate regional accrediting body. Neither the content nor the major subjects of the undergraduate program is rigidly prescribed. It is desirable, however, for applicants to have studied some of the following subjects: history, political science, economics, cultural anthropology, sociology, biology, psychology, and English.

The school has particular interest in the recruitment and admission of minority group students. Special recruitment efforts have been developed toward this end.

The minimum academic requirement for eligibility for admission is the attainment of a 2.7 ("B-") grade point average on a 4.0 scale for the last 60 hours of academic work. Exceptions may be made for practitioners who have received the baccalaureate degree at least five years previously and who obtained a 2.5 grade-point average, or for students with unusual qualifications.

Within the policies established by the University Graduate Council, determination of eligibility for admission is made by a school admissions committee which considers scholarship ability, academic background, work experience, if any, and personal qualities that indicate potential to meet the requirements of the social work profession.

The same admission procedures apply to part-time students or returning or transfer applicants from other universities.

At the time of notification of admission, the full-time applicant is required to pay a non-refundable deposit of \$50. This fee is applicable toward university fees. Application forms are available from the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

### **MASTER OF SOCIAL WORK DEGREE REQUIREMENTS**

The M.S.W. degree requires the comple-

tion of 60 credits of graduate study. The first 30 credits may be taken in one academic year on a full-time basis or may be extended to a maximum of four years on a part-time basis. The first 30 credits represents the foundation year of the program and covers major concepts in human behavior, social policy, ethnic and cultural diversity and the major method selected by the students, as well as other interventive methods. Students are grouped by areas of specialization in the second year. This year is designed for the study of more specific knowledge of the social service delivery system as it relates to human behavior, social policy, research, and practice. Students are usually in a practicum two days each week during the foundation curriculum and three days each week during the second academic year.

### **Field Instruction**

Field instruction is an integral part of the curriculum of the School of Social Work. Under professional supervision, the student integrates into practice the knowledge, attitudes, and skills studied in the total curriculum. Field Instruction placements in the four specialized service delivery systems are available in Richmond and in other Virginia communities. Included are juvenile learning centers, adult correctional facilities, family service agencies, community mental health centers, hospitals, schools, treatment centers for children, social service bureaus, alcohol services, and planning agencies.

Students may be assigned to placements which are a distance from Richmond (e.g. Norfolk, Washington, D.C., Staunton). Arrangements for travel and accommodations must be made by students at their own expense. Students who reside in communities outside of Richmond may request field placement there.

### **Academic Status**

A minimum of one year of full-time study, a minimum grade point average of 3.0 ("B") on a 4.0 scale over the entire period of study, a total of 60 credits in the two-year or 39 credits in the advanced standing program, and demonstrated ability in social work practice are required for graduation with a Master of Social Work degree.

Students must have completed the 30 credits of the first year curriculum and have a 3.0 average to continue into the second year.

Students with less than a 3.0 average may apply to return after an absence of one year.

Students with less than a 3.0 average at the end of the first year, who take courses in the summer sessions and raise the average to 3.0, may petition for return without a year's absence. However, each student's situation will be considered individually and a student may still be required to take a leave of absence for one year.

Students who receive a grade of "C" or below in six credits of course work anytime during the first 30 credits of study, or a grade of "C" or below in 20 percent or more cumulatively in succeeding semesters, will be dropped automatically from the program without regard to grade point average (GPA).

Students who receive a "C" (2.0) in the first semester of field instruction may continue in the program. In each subsequent semester, however, a minimum of "B" (3.0) in field instruction will be required for successful completion of the MSW Program.

At all times, students must show acceptable professional behavior to be retained in the graduate program.

### **Residency Policy**

During the last 30 semester hours of credit of the Master of Social Work degree, students are required to take a minimum of 12 credit hours during consecutive fall and spring semesters and be registered for field instruction for each of these semesters.

### **PART-TIME MASTER OF SOCIAL WORK PROGRAM**

The school welcomes qualified persons who seek to participate in its part-time program. Part-time students are admitted throughout the year and must meet the same requirements for admission as full-time students. Applicants are expected to plan the completion of all requirements for the degree program. Students who enter the program may take the first 30 credits required for a Master of Social Work degree on a part-time basis. Students must complete the

last 30 hours of credit in the full-time program in Richmond and maintain a 3.0 average on a 4.0 scale. All requirements for the degree must be completed within five years.

Most courses required in the part-time program are available through the VCU evening and summer sessions. Off-campus credit courses are also provided in Bristol, Fairfax, Lynchburg, and Roanoke, Virginia. Part-time students may register for day courses, if space is available.

### **ADVANCED STANDING PROGRAM**

An advanced standing program is available to a selected group of students. This program leads to a Master of Social Work degree upon completion of a minimum of 39 credit hours which can be completed in a summer session followed by an academic year with a concurrent field practicum.

Each student's curriculum is individually planned to recognize previous social work education and to insure a balanced graduate program.

### **Admission to Advanced Standing Program**

Each applicant for admission to the advanced standing program must hold a bachelor's degree from an undergraduate social work program accredited by the Council on Social Work Education. This program usually begins in early June, continues through the summer, and culminates with graduation the following May. Applications should be submitted in the fall preceding the intended cycle of attendance. Ordinarily admission decisions are concluded by March. The minimum academic requirement for consideration for admission to the advanced standing program is the attainment of a 3.0 ("B") grade point average for the last 60 hours of academic work.

For information and applications, please write to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

### **COOPERATIVE PROGRAM WITH PRESBYTERIAN SCHOOL OF CHRISTIAN EDUCATION (PSCE)**

In this program, the first year of study is

completed at PSCE and the second year at the School of Social Work in order to meet the requirements for the degree of Master of Arts and Christian Education. Students may spend an additional year at the School of Social Work and meet the requirements necessary for the Master of Social Work degree.

Applications for admissions must be made to each institution separately. Those interested should write to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

### **DUAL DEGREE PROGRAM IN LAW AND SOCIAL WORK**

Through a cooperative arrangement with the T.C. Williams Law School, selected students in either school may pursue a four-year curriculum of graduate study leading to the degrees of Master of Social Work and Juris Doctor. The program is established in recognition of the role of public law in social and economic life.

The purpose of the dual degree program is to prepare professionals who will be versed in the values, knowledge, and skills of both fields, bringing an integrated base of competency to the resolution of human and social problems.

Applicants must successfully meet the admissions requirements of both schools, and upon admission will be assigned an advisor in each school. Students in the dual degree program may begin the course work in either school, with the sequence of courses being determined by the point of entry.

The normal time required for completion of the integrated four-year curriculum is one academic year less than if each degree were taken separately. Elective courses will enable students to select areas in law and in social work which meet their particular interests. Interested persons should contact the Admissions Office of the T.C. Williams Law School, University of Richmond, VA 23173 and the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

### **SOCIAL WORK EDUCATOR PROGRAM**

A second-year concentration is offered to

selected students who have specific interests in preparation for teaching careers at the community college or baccalaureate level of education for social work. The program is open to students who demonstrate substantial scholarly attainment and effective social work practice skills during the first year of graduate study. Students admitted to this concentration may have specialized in any of the methods described elsewhere during their first year of study. Students in this concentration complete all courses required for system and method specialization plus additional courses specific to teaching and social work education. During the fourth semester students complete a practicum in teaching in which they carry responsibility for an undergraduate course in social work. For further information, students should contact their advisors.

### **SCHOOL SOCIAL WORK PROGRAM**

Through a collaborative program with the School of Education at the university, students may meet standards for certification as school social workers, in addition to meeting all requirements for the Master of Social Work degree. Students interested in certification as school social workers should contact their advisors during the first semester of their program and may complete the requirements within 60 credits.

### **SYSTEM OF SPECIALIZATION— MASTER OF SOCIAL WORK 1982-83**

All Master of Social Work students are required to concentrate their studies within one social service delivery system and in one major method of social work practice. Social service delivery system concentrations are available in four areas: the adult and juvenile justice system, health system, family/public social services system, and mental health and mental retardation system. Students are required to select one major method from among social casework, social group work, social planning, or social work administration. Each concentration is described below.

At the time of admission students are required to choose a major method of social work practice. Selection of a social service delivery system takes place before entry into the second year as a full-time student.

## SOCIAL SERVICE DELIVERY SYSTEMS

**Adult and Juvenile Justice System.** The justice system is charged by society to deal with behavioral deviance from socio-legal norms and standards. It is concerned with adults charged with criminal offenses and juveniles charged with either criminal or status offenses. The system encompasses a variety of settings which relate to offenders from the point of arrest or petition through final discharge from the system. These settings include courts, juvenile learning centers, adult correctional facilities, agencies charged with administering probation and parole services, half-way houses, state departments of corrections and youth services, and planning agencies such as Law Enforcement Assistance Administration. Social workers may work in the system as direct service workers, supervisors, staff developers, program evaluators, planners, or administrators.

**Family/Public Social Services System.** The family as a system is defined by the functions it performs. As the primary social and emotional unit in society, the family functions to meet the changing needs of its members of affection, subsistence, socialization, and in the utilization of other social institutions. In this context, public and private social agencies provide economic supports and social services to prevent family breakdown or destitution, to maximize effective social functioning of the family, and to meet special needs of persons deprived of family membership. These public and private agencies include agencies which meet basic family welfare needs for income, housing, employment, and education; family agencies which clearly identify the family as a unit of service and provide counseling to individuals and families; agencies which deal primarily with children and youth affected by family breakdown or dissolution; agencies which offer supportive services to families with aged members or to individual aged persons; and agencies which interact with larger divisions of society to identify family needs, plan and develop services, and act to promote equitable distribution of political, social, and economic resources which affect the quality of family life. Social workers provide counseling services to individuals

and families. They also work as supervisors of direct service workers, staff developers, family life educators, consultants, administrators, social planners, and program evaluators.

**Health System.** Focus in the health system is on a health-to-illness continuum. The maintenance of health is a basic need of all individuals and illness is a major social problem which can disturb patterns of individual and family functioning, produce emotional strain for patients and their families, and cause economic and social distress. The health system is concerned with prevention of illness, care for those who become ill, and restoration of sick and disabled persons to maximum health and social functioning. Health related agencies include general and special hospitals and clinics; health departments on state and local levels; health planning agencies; community health centers, child development centers; nursing and convalescent homes; family planning, abortion, and sex counseling programs; health maintenance organizations; health advocacy and consumer agencies; and vocational rehabilitation programs. As part of a multidisciplinary team, social workers provide direct social services to patients and their families or serve as consultants, educators, administrators, planners, or program evaluators.

**Mental Health/Mental Retardation System.** The mental health and mental retardation system has responsibility for care and treatment of persons with retardation and emotional impairment and for prevention of mental retardation and mental illness. Both of these conditions are major social problems which impose severe emotional, social, and financial burdens upon individuals, their families, and their communities. Mental health organizations include state institutions for the mentally ill and/or the mentally retarded; community mental health centers; and public and private hospitals, mental health clinics, child guidance clinics, rehabilitation centers, half-way houses, and sheltered workshops. Persons served may manifest relatively mild emotional problems to severe psychosis, mild to severe mental impairment, and either chronic or acute illness. As a part of a multidisciplinary team, social workers provide direct social services to pa-

tients/clients and their families or serve as consultants, supervisors, planners, administrators, or program evaluators in the organizations and agencies that the system comprises.

**SOCIAL WORK METHODS**

**Social Casework.** Casework as a method contributes to individual and family development, prevention of social impairment, restoration of effective social functioning, and realization of potential for responsible and satisfying social living. Social casework centers on the establishment and utilization of a helping relationship unique assessment of the individual's and family's problems within the context of their situation, treatment, termination, referral and transfers, interventions on behalf of clients, and contributions to the client's ability to achieve his own and society's purposes. Students selecting social casework as their major method will be required to take social group work as their secondary method.

**Social Group Work.** Social group work is a method of social work practice that aims to help people help each other in the enhancement of their social functioning and the achievement of self-actualization through the use of group experience and to help groups function effectively and responsibly in the fulfillment of the purposes. The social group work method is used in services that help restore effective social functioning, prevent social impairment, and develop optimum individual potential in social relations. The curriculum covers the study of the various aspects of group life; the meanings of group experiences for the group as a whole and for the individual members; and methods of facilitating the process of group

and individual development. Students selecting social group work as their major method will be required to take social casework as their secondary method.

**Social Planning.** Social planning as a major method emphasizes problem-solving skill in the sense of creating, initiating, and maintaining community institutions and services that can effectively provide for the social environmental needs of the public being served. The social planning includes the study of the various organizations that make up the social welfare system, methods, and processes of social planning. Among these are methods of organizing people to achieve community objectives, defining the planning task, selection of goals and priorities, decision-making, coordination of services, and change strategies. Those selecting social planning as a major social work method will be required to select social work administration as their secondary method.

**Social Work Administration.** Students electing social work administration as a major method focus upon the assumption of responsibilities as social service agency administrators or subadministrators in either public or private agencies. The emphasis is on the organizational problems that confront administrators in relation to professional mandates and business principles involved in meeting the overall social work professional imperative, that is, the efficient use of social service organization and personnel in the resolution of social problems at the individual or community level. Students selecting administration as their major method will be required to take social planning as their secondary method. Admission to social work administration is limited to those applicants with a minimum of three years' experience in the social service field or some equivalent.

**COURSE REQUIREMENTS FOR THE MASTER OF SOCIAL WORK DEGREE**

Specific courses required of students may differ depending upon the choice of concentration in a social service delivery system and/or the choice of a major method of social work practice. The following courses and semester outlines will indicate the specific courses according to the various delivery systems or major methods.

**TWO YEAR PROGRAM**

**First Year, Fall Semester**

Individual in Society, SLW601 ..... All Students ..... 3 Credits

Foundations of Social Policy, SLW602 . . . . .	All Students . . . . .	3 Credits
Methods I Course . . . . .	By Method . . . . .	3 Credits
Fundamentals of Social Casework, SLW604 . . . . .	All Casework Majors	
Fundamentals of Social Group Work, SLW605 . . . . .	All Group Work Majors	
Fundamentals of Social Planning, SLW606 . . . . .	All Social Planning Majors	
Fundamentals of Social Services Administration, SLW607 . . . . .	All Administration Majors	
Secondary Method Course. . . . .	By Method . . . . .	3 Credits
Fundamentals of Social Casework, SLW604 . . . . .	All Social Group Work Majors	
Fundamentals of Social Group Work, SLW605 . . . . .	All Casework Majors	
Fundamentals of Social Planning, SLW606 . . . . .	All Administration Majors	
Fundamentals of Social Services Administration, SLW607 . . . . .	All Social Planning Majors	
Field Instruction I, SLW693 . . . . .	All Students . . . . .	3 Credits
	<b>TOTAL</b>	<b>15 Credits</b>

**First Year, Spring Semester**

Black Experience/Racism, SLW650 . . . . .	All Students . . . . .	3 Credits
Social Structure and Human Behavior, SLW651 (Prerequisite SLW601) . . . . .	All Students . . . . .	3 Credits
Methods II Course. . . . .	By Method . . . . .	3 Credits
Social Casework II, SLW654 (Prerequisite SLW604). . . . .	All Casework Majors	
Social Group Work II, SLW655 (Prerequisite SLW605). . . . .	All Group Work Majors	
Social Planning II, SLW656 (Prerequisite SLW606). . . . .	All Social Planning Majors	
Administration II, SLW657 (Prerequisite SLW607). . . . .	All Administration Majors	
Methods Course . . . . .	By Method . . . . .	3 Credits
Social Work Practice in Communities and Organizations, SLW666 . . . . .	All Casework and Group Work Majors	
Social Work Practice with Individuals and Groups, SLW664 . . . . .	All Social Planning and Administration Majors	
Field Instruction II, SLW694 (Prerequisite SLW693) . . . . .	All Students . . . . .	3 Credits
	<b>TOTAL</b>	<b>15 Credits</b>

**Second Year, Fall Semester**

Methods III. . . . .	By Method . . . . .	3 Credits
Casework III—Family Welfare, SLW714 (Prerequisite SLW604–654). . . . .	All Family/Welfare Casework Majors	
Casework III—Health, SLW724 (Prerequisite SLW604–654) . . . . .	All Health Casework Majors	
Casework III—Justice, SLW734 (Prerequisite SLW604–654) . . . . .	All Adult and Juvenile Justice Casework Majors	
Casework III—MH/MR, SLW744 (Prerequisite SLW604–654) . . . . .	All MH/MR Casework Majors	
Social Group Work III, SLW755 (Prerequisite SLW605–655) . . . . .	All Group Work Majors	
Social Planning III, SLW756 (Prerequisite SLW606–656) . . . . .	All Social Planning Majors	
Administration III, SLW757 (Prerequisite SLW607–657) . . . . .	All Administration Majors	
Social Policy Course (Prerequisite SLW602) . . . . .		3 Credits
Social Welfare Policies and Services for Individuals and Families, SLW712 . . . . .	All Family Service and Welfare Majors	
Social Policy and Health Care, SLW722 . . . . .	All Health Majors	
Adult and Juvenile Justice Policies and Programs, SLW732 . . . . .	All Adult and Juvenile Justice Majors	
MH/MR Policy Services, SLW742 . . . . .	All MH/MR Majors	
Human Behavior Course (Prerequisite SLW601). . . . .		3 Credits
Dynamics of the Family, SLW711. . . . .	All Family Service and Welfare Majors	



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Physical Illness and Handicaps, SLW721 . . .	All Health Majors	
Person in Justice System, SLW731 . . . . .	All Adult and Juvenile Justice Majors	
Emotional Disorders, SLW741 . . . . .	All MH/MR Majors	
Foundation of Social Research, SLW 703 . . . . .	All Students . . . . .	3 Credits
Field Instruction III, SLW793 (Prerequisite SLW693-694) . . . . .	All Students By System . . . . .	3 Credits
	<b>TOTAL</b>	<b>15 Credits</b>

**Second Year, Spring Semester**

Field Research, SLW713, 723, 733, or 743 (Prerequisite SLW703) . . . . .	All Students . . . . .	3 Credits
Elective in System . . . . .	All Students . . . . .	3 Credits
Electives (2) . . . . .	All Students . . . . .	6 Credits
Field Instruction IV, SLW794 (Prerequisite SLW693-694-793) . . . . .	All Students by System . . . . .	3 Credits
	<b>TOTAL</b>	<b>15 Credits</b>

**Ph.D. Program in Social Policy and Social Work**

The doctoral program in social policy and social work is designed to prepare persons in the development, implementation, and evaluation of programs and policies concerned with various social problems and to prepare social work educators well grounded in research, theory, and teaching methods.

Each student is expected to choose one of the following areas of specialization: social policy analysis, applied social research, program administration, or social work education.

**ADMISSION TO THE PH.D. PROGRAM**

Applicants to the program must have an earned master’s degree in social work or a related discipline. In addition, applicants who wish to specialize in clinical social work education (a subspecialty of social work education) must have had the equivalent of a minimum of three years of clinical social work experience. The Graduate Record Examination Aptitude Test is required of all applicants. A combined score of 1000 on the verbal and quantitative sections is expected.

Applicants for full-and part-time study will be judged by the same criteria. While it is possible to combine a limited amount of course work with outside employment, students are expected to commit themselves to one year of full-time study prior to beginning work on a dissertation.

Students interested in testing their capacity for doctoral work, or those whose application materials have not as yet been com-

pleted for review by the Admissions Committee, may be admitted as special students on a conditional basis. Students admitted under this status may take up to six credits and must be formally admitted by the end of the semester in which they enrolled if credit is to be applied to the doctoral degree. Satisfactory performance as a special student does not assure admission as a regular degree-seeking student.

For application materials and additional information, write to the Doctoral Program in Social Policy and Social Work, 1001 West Franklin Street, Virginia Commonwealth University, Richmond, VA 23284.

**REQUIREMENTS FOR THE PH.D. DEGREE**

A minimum of 36 credit hours of course work beyond the master’s degree plus a minimum of 18 credit hours of dissertation research is required. Up to six credit hours may be granted for courses completed in a Ph.D. program at another university. There is no foreign language requirement. Other requirements are detailed below.

1. **Core Curriculum.** The core curriculum which is required of all students consists of the following courses (18 credits):
  - SPW 701-702 Research Methods I and II
  - SPW 706 Social Theory and Public Policy
  - SPW 708 Behavioral Science Theory for Social Work Practice
  - SPW 711 Origin and Development of Social Welfare Policy
  - SPW 715 Social Work Practice Theory

A graduate level course in social statistics is required. It may be taken concurrently with SPW 701, but will not be counted toward the 36 credits required for the degree.

Students are expected to complete the core curriculum before moving on to more specialized course work. Full-time students would ordinarily complete the core in their first year.

2. **Concentration.** The concentration consists of at least 18 hours of specialized courses designed to prepare the student for a career in one of the four specialty areas (social policy analysis, applied social research, program administration, or social work education). In collaboration with a faculty advisor, each student will plan a program of study to gain intensive knowledge of at least one problem area. In addition to seminars and courses offered by the program, students are encouraged to enroll in appropriate courses in other schools and departments of the university, with approval of their advisor.
3. **Internship and Practicum.** Students without formal experience in human service programs will be required to complete an internship under faculty supervision in an appropriate agency setting. Students in the social work education concentration will be expected to complete a teaching practicum. Those in social work education may also be required to complete an individually designed practicum.
4. **Directed Research.** Students will be expected to participate in applied research projects under faculty supervision before they start work on their dissertations. These projects will provide students with practical experience in research on topics related to their areas of interest.
5. **Admission to Candidacy.** Students are admitted to candidacy when their Graduate Advisory Committee certifies that all pre-dissertation degree requirements, including comprehensive examinations, have been satisfied, and that students are prepared to proceed to the dissertation.
6. **Dissertation.** After admission to candidacy students will proceed to propose,

complete, and defend their dissertations. Students are required to enroll for at least 3 credits of dissertation research every semester (excluding summer) between the comprehensive examination and completion of the dissertation requirement. The dissertation must represent independent research and should contain original material, results, and interpretations.

## GENERAL INFORMATION

### Financial Assistance

Although financial assistance is limited, some funds are available. No prospective student should refrain from seeking admission to the school because of financial reasons alone.

**Traineeships.** States, through their departments of public welfare, mental health, corrections, and rehabilitation may have programs to assist individuals in securing professional education. They may be consulted locally.

The school also administers and awards federal and university traineeships for qualified students. However, since funds available through the School of Social Work are limited, applicants are strongly urged to seek other sources to finance their education.

**Federally Guaranteed Loans.** See "Student Financial Assistance" in Part I of this bulletin.

**H. H. Hibbs Loan Fund.** The H. H. Hibbs Loan Fund was established by the School of Social Work Alumni Association for short-term emergency needs. Alumni, faculty, and friends of the school are encouraged to contribute to it. Enrolled full-time students who wish to apply for a loan should discuss this with their faculty advisor and the assistant dean.

**Research and Teaching Assistantships.** Research and teaching assistants may be available to doctoral students. Additional information is available from the director of the Ph.D. program.

## WAIVERS

Waivers of required courses may be granted without credit. Students seeking the

waiver of a course should petition the chairman of the particular M.S.W. curriculum system in which the course for which they seek waiver is offered or petition the director of the Ph.D. program. After an evaluation, students will be informed of decisions to grant or refuse waivers.

Students seeking the transfer of graduate credits from other accredited universities or from departments of VCU must contact the assistant dean in order to follow the proper procedures.

Additional policies and procedures governing the educational programs of the School of Social Work may be found in the School of Social Work Student Handbook which is distributed at the time of matriculation.

### **CONTINUING EDUCATION PROGRAM**

The Department of Continuing Education in the School of Social Work offers a variety of lectures, institutes, and workshops as part of the school's commitment to enhance social work practice and broaden educational experiences for students, social workers, field instructors, and others in social service delivery systems. State, regional, and local agencies and institutions frequently identify educational and training needs in content or skill areas for selected staff members. The Department of Continuing Education, through contractual arrangements, contributes expertise in designing and implementing short-term training courses.

The school offers continuing education units (CEU's) to participants through the Division of Continuing Studies and Public Service at Virginia Commonwealth University. In addition to existing university funds, grants to the school have been available from the National Institute of Mental Health; Council on Social Work Education; Virginia Department of Mental Health and Mental Retardation; State Office on Volunteerism; Virginia Division of Drug Abuse Control; Virginia Department of Welfare; U.S. Department of Health and Human Resources; U.S. Social and Rehabilitation Service; Council on Criminal Justice of the Virginia Division of Justice and Crime Prevention which support continuing education offerings.

Offerings of the Department of Continu-

ing Education are planned throughout the year and are available throughout Virginia. For further information about specific continuing education courses, inquiry should be addressed to the director of continuing education, School of Social Work, Virginia Commonwealth University, 1001 West Franklin Street, Richmond, VA 23284.

### **STUART J. GLUCK MEMORIAL READING ROOM**

Established by alumni, family, and friends of Stuart J. Gluck, a small collection of social work publications is housed in the Stuart J. Gluck Memorial Reading Room located in Room 7 of the Raleigh Building.

### **ALUMNI ASSOCIATION**

The School of Social Work Alumni Association actively supports the program of the school with the president serving as a member of the Advisory Board. The association established the H. H. Hibbs Loan Fund and continues to contribute to the support of it. The Stuart J. Gluck Memorial Reading Room is administered by the association. The association has quarterly meetings with the spring meeting being held during the Annual Conference of the Virginia Council on Social Welfare.

#### **Alumni Association Officers, 1981-82**

Frederick Pond  
President  
Frank A. Sansone  
Vice-President  
Michael J. Mastropaolo  
Secretary  
Betty Phillips  
Treasurer

### **MASTER OF SOCIAL WORK STUDENT ASSOCIATION**

The Student Association is the organization of students enrolled in the school, established for the purposes of facilitating communication among students and between the student body and the school. It provides a means by which student concerns and ideas can be formulated and acted upon. Also, it enables students to conduct a variety of social and other activities throughout the year.

This organization plays a vital role in the

educational process. Student contributions to the governance and curriculum of the school are of value to both the institution and the students. Participation in the decision-making process is accomplished through student representation on committees. The faculty and the students work closely throughout the year to meet the needs of graduate social work education. Students participate as full members of many committees within the school.

### **MASTER OF SOCIAL WORK Student Association Officers 1981-82**

Maurice Fisher  
President  
Mark Lyman  
Vice-President  
Shakay Kazarian  
Secretary  
Amanda Cummings  
Treasurer  
Bobby O'Donnell  
Co-ordinator of Student Life

### **Black Student Association**

The Black Student Association was established to create and maintain an atmosphere of unity and brotherhood among black students in the School of Social Work. It serves to assist the students in their personal and professional growth and development. Membership in this organization helps students to develop a keen awareness of the acute needs of the black community and the active role that must be assumed by the dedicated black professional social worker in promoting the general welfare of black citizens. To attain these goals, the organization utilizes the educational process and related experiences of students at the school and in field work. Students are encouraged to participate in all phases of the academic environment. Black students are expected to maintain membership in and are members of the Student Association of the school.

### **Black Student Association Officers 1981-82**

Karen Starks  
President  
Millicent Nesmith  
Vice-President  
Carlin Pegram  
Secretary  
Letitia Pannill  
Treasurer

Mary Cain  
Executive Committee Representative

### **DOCTORAL STUDENT ASSOCIATION**

The Doctoral Student Association meets on a regular monthly basis, and students participate actively in the governance of the doctoral program and School of Social Work. The association functions with elected members to all standing committees within the school. There is no hierarchy of officers with the exception of a yearly elected convener/coordinator. In 1981-82, Mr. James Roger Brown served as the convener/coordinator.

### **MASTERS DEGREE COURSES IN SOCIAL WORK (SLW)**

**601 Individual in Society.** 3 credits. Theoretical perspectives on human growth and development. Human behavior as a continuum from the so-called normal to the most disordered. Interrelationships between the psychological, physical-biological, and sociological forces that shape the formation of the self. The variety of ways in which growth and development proceed, particularly in relation to racial, ethnic, and cultural differences. Impact of social forces such as group membership, community life style, and institutional racism on human behavior.

**602 Foundations of Social Policy.** 3 credits. Basic knowledge about policy development and assessment and a foundation for analysis of specialized social service delivery systems. Policy development and evaluation as structured by: evolving definitions of human rights; the law as it defines rights and duties of individuals, social agencies, and society; values as definers of social problems and policies; and resources as opportunities and constraints, including money, manpower, facilities, and effects of institutional racism. Skill in application of selected models for analysis of current social welfare policies and programs.

**604 Fundamentals of Social Casework.** 3 credits. Introduction to basic theories, principles, and skills of social casework practice and processes: the giving and taking of help; the establishment and utilization of the casework relationship; referral; intake and diagnostic assessment; treatment; transfers and termination; interventions on behalf of clients; and the limits of social casework. Examination of past life experiences and current stresses in relation to identification of the unique characteristics of each individual and assessment of the individual's problems within the context of general principles. Special emphasis on the professional use of self, the common core of social casework practice, and the person-in-situation.

**605 Foundations of Social Group Work.** 3 credits. The values, objectives, and principles of social group work practice. All major aspects of group life, with emphasis

on the purposes, content, and forms of various group experiences. The meanings of these experiences for the group as a whole and for the individual members. Special emphasis on the beginning process in working with groups. Introductions to knowledge and skill in the use of program content in working with groups. The worker's role in facilitating the processes of group and individual development.

**606 Fundamentals of Social Planning.** 3 credits. Social planning by community decision-making organizations (welfare organizations, city, regional, state, and federal planning and service agencies); methods of planning; consumer advocacy; defining the planning task; selection of goals and priorities; decision-making; interorganizational exchange; coordination of services; planning problems in developing specialized services; and change strategies for racial and ethnic minorities. Consumer participation in the planning process; role of the worker in alternative methods of community organization practice.

**607 Fundamentals of Social Work Administration.** 3 credits. Introduction to administration in social work settings. Knowledge and research about leadership theory. Directing techniques. Communication networks. Organizational representation. Systems analysis. Change-in-organization models. Authority and professional function in bureaucratic settings. Motivation theory.

**650 Racism and the Black Experience.** 3 credits. Examination of the experience of blacks in the context of American society as a framework for analysis and understanding of racism as a socially determined phenomenon. Emphasis on understanding of and sensitivity to institutional structures and individual behaviors included in the concept of racism. Analysis of the influence of race and ethnicity on the various processes in which clients, social workers, and social agencies engage. Development of indices of racism and strategies for its elimination.

**651 Social Structure and Human Behavior.** 3 credits. The behavior of the individual as a member of a community with an emphasis on community functions and institutions as they impact on the person. Concepts of socialization, the network of social systems, social control, social participation, social role, mutual support, and social stratification. Examination of variations in communities in relation to such factors as race, income, social status, religion, and ethnicity as a means of understanding the diverse ways in which a community's activities are manifested in its institutional patterns and how these differences affect behavior.

**654 Social Casework II.** 3 credits. Re-examination in depth and breadth of the helping process with special emphasis on practice settings and human behavior concepts relevant to social service delivery system specializations. In-depth examination of problems clients present and subsequent refinement of casework intervention with emphasis on the influence of biopsychosocial factors, illness and disease, family dynamics, and ethnicity in practice. Crisis intervention and short-term treatment.

**655 Social Group Work II.** 3 credits. The group's opera-

tional patterns and processes, the worker's role in enabling the group to achieve its purposes, including analysis of the processes of group formation, group goal-achieving, group relations, group development, and group termination. Differential assessment of target populations and racial/ethnic factors. The use of program content in the goal-achieving process. Small group theory and research related to social group work practice.

**656 Social Planning II.** 3 credits. Rational, political, and value considerations related to feasible planning for social change. Problem-solving activity in relation to the design, funding, and evaluation of social service delivery systems. Fund-raising, grantsmanship, determination of need, Program Evaluation Review Technique system, cost comparison analysis, program design, and program evaluation.

**657 Administration II.** 3 credits. Design of control systems. Budgeting processes. Program evaluation and research. Organizational planning steps. Inter- and intraorganizational coordination. Negotiation skills. Conflict resolution. Goal setting. Roles of administrators in human resources settings.

**661 Profession of Social Work.** 3 credits. Sociology of social work and its uniqueness as a profession. Changing purposes in response to changing social conditions and needs. Viability of its values and ethics within its philosophical base. Nature of professional identity and responsibility. Issues of accountability, professional commitment, social responsibility, racism, manpower, advocacy, and social change. Trends in education for social work.

**664 Social Work Practice with Individuals and Groups.** 3 credits. Introduction to basic theories and principles of social casework and social group work practice and processes. Emphasis on utilization in planning and organizational contexts. The worker's role in facilitating group and individual development. The establishment and utilization of the helping relationship. The components of casework processes and the role of the worker. All major aspects of group life, with emphasis on the purpose, content, and forms of various group experiences.

**666 Social Work Practice in Communities and Organizations.** 3 credits. Knowledge of the dynamics of organizational behavior and structures as they relate to effective service delivery. Beginning skill in applying various administrative concepts, e.g., supervision, communication, delegation, division of labor, and staff development, to direct service agencies. Skill in utilizing social planning concepts, e.g., assessment of needs, interorganizational exchange, coordination of services, and funding. Knowledge of social planning processes by community organizations and alternative methods of achieving social policy goals. Emphasis on the importance of utilizing community resources to enhance the functioning of the direct service agency and the community itself.

**691 Topical Seminar.** 3 credits. A seminar on current, specialized areas of interest to social work. Content offered will be reflective of current issues in the field. Par-

ticular topics for study in any one semester will be determined jointly by the students and the faculty instructor.

**692 Independent Study.** 1-4 credits. The student will be required to submit a proposal for investigating some area or problem in social work not ordinarily included in the regular social work curriculum. The results of the student's study will be presented in a report. Open with faculty approval. A maximum of four independent study courses may be included in a student's educational program.

**693 Field Instruction I.** 3 credits. Integration and application of core course and field learning as an accountable representative of a social agency. Basic knowledge, attitudes, and skills necessary for responsible professional social work practice in a selected service delivery system. Educational emphasis on the active use of content from all areas of the curriculum.

**694 Field Instruction II.** 3 credits. Continuation of field instruction and learning as an accountable representative of a social agency, with emphasis on the integration and active use of content from all areas of the curriculum. Emphasis on the integration and application of system specific knowledge and attitudes and on the development of skills required for professional social work practice in a selected service delivery system.

**695 Block Field Instruction.** (for part-time students only) 6 credits. Integration and application of core and system specific content as an accountable representative of a social agency. Knowledge, attitudes, and skills necessary for responsible professional practice in a selected service delivery system. Educational emphasis on the active use of content from all areas of the curriculum.

**703 Foundations of Social Research.** 3 credits. Use of scientific method in the development of theory and practice for social work. Examination of the methodology of scientific investigation, including technologies of research design, probability theory, and statistical inference. Information storage and retrieval systems and scientific communication skills for information dissemination and consumption. Problem identification, hypothesis testing, and evaluation of effectiveness of alternatives. Review and testing of research efforts for application and communication.

**711 Dynamics of the Family.** 3 credits. Definition and function of the family as a biological-sociopsychological unit in American society. Individual growth and development in family life. Significance of family in socialization and nurturing. Development of family style. Impact on the person of family interactions. Impact of changing male/female roles, sexual mores, and new forms of family experience. Diversity of family life in terms of racial and ethnic differences. Interaction of the family with other social institutions, including public welfare agencies, schools, and agencies offering leisure time activities. Impact of social and community processes on individual and family functioning.

**712 Social Welfare Policy and Services for Individuals and Families.** 3 credits. Analysis of policy, program, and service developments in the public and private sectors which impact on the lives of individuals and

families. Legal bases and current issues relevant to system components in the public and private sectors; auspices, funding patterns, and resource distribution. Policy development as structured by: the shifting context of American values and philosophy; economic needs and opportunities; employment, income, and living standards; the roles of social, economic, and political institutions; and the incidence and impact of racism and social factionalism.

**713 Research in the Family Public Social Services System.** 3 credits. Prerequisite: SLW 703 Examination of alternate designs available for research in agencies and programs which serve the family group. Evaluation of direct service and program outcomes in family service settings. Interconnection of research with other curriculum content and with field practice.

**714 Casework III: Family Service and Welfare.** 3 credits. Family dynamics and family centered casework in both the public and private sector with focus on the integration of human behavior principles, knowledge of this system, and casework method at an advanced level. Relevance of various theoretical frameworks of family dynamics for casework knowledge, principles, and skills. Joint and conjoint interviewing, the marital relationship as a focus for treatment, family life education, family treatment, work with the aged, one-parent families, child placement, and adoptions. Concrete services within the framework of casework practice and collaboration with other disciplines. Impact of race, ethnicity, and social class in both the genesis and treatment of family problems. Pertinent research findings that illuminate practice.

**715 Family Theory and Family Therapy: A Social Work Perspective.** 3 credits. Prerequisite: Casework III, Group Work III, or permission of instructor. Emphasis on a conceptual base for the practice of family therapy. Attention to developments in the field; examination of cases which illustrate the practice of family therapy. Extension of knowledge and practice for family specialists; theoretical base and practice applications of family therapy for non-family specialists.

**716 Perspectives on Aging.** 3 credits. Identification, analysis, and evaluation affecting the aging, including analysis and evaluation of their social needs in relation to the environment and available resources. Emphasis on social isolation, community apathy, the dynamics of the composite population, and their effects on the elderly. Attention to the aged as a minority population.

**717 Social Work Practice in School Setting.** 3 credits. History of social work in schools. Issues in social work practice in public school settings, social influences of school and community, alternatives to traditional education, rights of students, public personnel team approach, social worker's role in relation to other school disciplines.

**718 Social Work Practice and Policy in Child Welfare.** 3 credits. Prerequisites: Method III and Policy II or permission of instructor. Examination of types of problems which bring children and adolescents to social service settings. Study of specialized techniques and skills necessary for work with children, adolescents, and their families. Attention to bio-psycho-social developmental

aspects of child-rearing and child-care services. Emphasis on laws, policies, and approaches governing child welfare services, including current policy and practice issues with attention to socio-economic, cultural, racial, and sex variables.

**721 Physical Illness and Handicaps.** 3 credits. Physical health and illness and the emotional and social stress placed upon individuals and families when physical illness and handicaps are present. Psycho-social factors in the etiology and effects of illness and other physical handicaps. Specific disease states, including medical terminology, and the emotional behavior related to specific physical disabilities. Physical illnesses and handicaps which are significant at various life stages. Human sexuality and dysfunctioning in the sexual area. Social conditions and ethnic and racial differences as they contribute to health problems. Physical factors in the cause and treatment of alcoholism and drug abuse. Role of the health system as an influence on the behavior of the person in that system.

**722 Social Policy and Health Care.** 3 credits. Analysis of the purposes, functions, and structures of the health care system at the federal, state, and local level. Policy development in the public and private sectors of the system as structured by movements and counter-movements within the health professions; professional organizations and related business organizations; the varieties of health related programs and services, shifting values regarding access to health care services, including the influence of individual and institutional racism and consumerism; funding patterns and resource distribution; and standard setting. Analysis of existing structures, proposed legislation, and issues within the context of the social right to quality health care, ranging from prevention to after-care.

**723 Research in the Health System.** 3 credits. Prerequisite: SLW 703 Current research issues and problems relevant to social work in the health system. Emphasis on the relationship between research and its use in social work practice in health settings. Execution and presentation of an independent research project.

**724 Casework III: Health System.** 3 credits. Application of human behavior and casework principles in the health system. Basic concepts of illness such as stress, psychosocial, and psychosomatic influences and the impact of race, social class, and ethnicity on states of health and illness. Behavior and practice in relation to specific disease entities such as cancer, heart disease, et al. Impact of illness on families and practice implications. Primary and secondary prevention and the particular health problems of the aging and dying. Role of the social worker in public and private secondary settings, principles of collaboration in an interdisciplinary field, and use of community resources. Research findings which illuminate practice and define further study areas.

**725 Advanced Seminar in Direct Practice in the Health System.** 3 credits. Prerequisites: SLW 721 and 724 or 755 or permission of instructor. Intensive study of direct social work practice in health settings. Emphasis on the conceptualization of a theoretical base for direct social work practice in health, including integration of biopsychosocial theory, practice theory and methods. In-

depth case presentation and analysis. Attention to the dimensions of direct social work practice in health settings, including traditional and innovative approaches, social work consultation, and a heightened sense of identity as a social worker in the health system.

**726 Issues in Health Care and Health Social Work.** 3 credits. Prerequisite: second-year standing for M.S.W. program students or permission of instructor. Student-centered exploration and study of selected issues in health care and health social work. In-depth analysis and presentation of issues of primary concern. Explication of implications for clinical and macro social work practice in multidisciplinary health settings.

**727 The Health Client as Consumer and Advocate.** 3 credits. Prerequisite: fourth semester standing or permission of instructor. Impact of the health consumer movement on professional autonomy and control; analysis of the effects of emerging patient rights (legal and social) on the relationships of health service consumers and providers at the micro and macro levels. Examination of the definition and promotion of consumer involvement in the planning, implementation, and evaluation of health services by government (executive, legislative, judicial) and the health professions, including social work. Alternative models of consumer participation and control at the micro and macro levels, and the promotion of client self-determination in health care.

**728 The Interdisciplinary Team in Health Practice.** 3 credits. Prerequisite: second-year standing for M.S.W. program students or permission of instructor. Exploration, definition, and analysis of interdisciplinary health team approaches to work with ill and disabled clients. Study the roles and functions of participants on interdisciplinary health teams emphasis on similarities and differences between social work and other disciplines as members of health teams; opportunities for and obstacles to effective service delivery by health teams. Development of a framework for interdisciplinary health team practice.

**729 The Hospital as a Social Institution.** 3 credits. Prerequisite: second-year M.S.W. program standing or permission of instructor. Examination of the hospital as an organization; the phenomenology of patient and client roles and the social construction of illness. Focus on the sick role as membership in the hospital structure, and on role occupants—patients, clients, staff, administrators as members of the larger community. Presentation of a conceptual framework outlining the structural properties of the hospital from the standpoint of “processing” the sick person and an institutional view of illness management. Attention to non-American structures and practices. Identification of the role of social work in hospitals.

**731 Person in the Justice System.** 3 credits. Definitions of deviant, anti-social, and criminal behavior. Etiology of socially unacceptable behavior. Theoretical positions in relation to deviant behavior. Explicit and implicit theoretical components of the various treatment modalities found in the justice system. Effect of personal and institutional racism on psycho-social functioning. Prison experience as a force in development of a changed life style.

**732 Adult and Juvenile Justice Policies and Programs.** 3 credits. Analysis of the purposes, functions, and structures of the adult and juvenile justice systems, legal and economic bases of the current system, analysis of the system, and the relationship of the parts of the system to one another. Policy development as structured by selected movements and counter-movements in American criminology, penology, forensic psychiatry, and social welfare, including: institutional and non-institutional policies and programs; adult and juvenile system components; law as it relates to system clients; problems in system reform; and systemic and institutional racism. Current system-related issues ranging from arrest to probation and parole.

**733 Research in the Justice System.** 3 credits. Prerequisite: SLW 703. Review of research in the justice system. Emphasis on evaluation research and use of research findings by social workers in the justice system. Development of an independent research project by the student in the macro or micro areas of social work practice in the justice system.

**734 Casework III: Adult and Juvenile Justice System.** 3 credits. Integration of human behavior theory, knowledge of the justice system, and casework practice at an advanced level. Practice in authoritative secondary and transitional settings. Emphasis on various conceptual frameworks and the emerging treatment interventions developing from this knowledge, such as behavior modification, contract approaches, therapeutic community, and family therapy. Interventions with families of persons in the system. Interdisciplinary functioning, collaboration, and use of community resources. Impact of race, ethnicity, and social class. Research findings pertinent to behavior and practice.

**735 The Adolescent and Delinquent Behavior.** 3 credits. Prerequisite: fourth semester standing or permission of instructor. Emphasis on psychosocial-sexual development inclusive of family and peer relationships; social tasks and behavioral manifestations with particular reference to anti-social responses; racism and poverty as structural variables in the development and definition of anti-social and delinquent behavior. Examination and analysis of current status of adolescents in terms of social requirements and limitations and varying responses of the adolescent within the context of an historical perspective.

**739 Social Work and the Law.** 3 credits. Prerequisite: Method III or permission of instructor. Overview of fundamental principles of Anglo-American law; structure and function of legal system and its professional membership. Lawyers and their working relationship with social workers. Emphasis on client centered problems encountered in confrontation with the legal community and the role social workers can play in helping clients deal with those encounters. Attention to issues relative to client needs as welfare rights, consumer protection, mental health treatment, family related law, and discrimination relative to education, housing, employment, health care. Legal issues confronting social work, such as confidentiality, licensing, advocacy, witnessing.

**741 Emotional Disorders.** 3 credits. Definition of the concepts of mental health, mental illness, and mental

retardation, with a view of mental health and mental illness as a continuum. Etiology of emotional disorders and social deviance. Traditional classification systems and newer approaches in use of clinical practice. Alcoholism and other substance abuse in terms of he physiological, psychological, and sociological components of causation, behavior, and treatment. Causes of and treatment modalities in mental retardation and behavior patterns of the mentally retarded. Comparative theories and therapeutic approaches. Impact of racial and ethnic differences on emotional disorders and social deviance. Effect of mental health and the larger community on the behavior of the person.

**742 Mental Health and Mental Retardation Policy and Services.** 3 credits. Analysis of the purposes, organization, and public and private programs of federal, state, and local mental health and mental retardation system components. Policy development as structured by social responses to mental illness and mental retardation, including institutional and non-institutional policies and programs; shifting social values and attitudes; the law as it relates to the rights of the system's clients; forensic psychiatry; the socio-economic status of the system's clients; including the impact of racism and poverty; citizen and consumer participation; and funding patterns and resource distribution. Analysis of current and proposed mental health and mental retardation legislation relating to needs ranging from prevention to after-care.

**743 Research in the Mental Health/Mental Retardation System.** 3 credits. Prerequisite: SLW 703. This course builds upon the foundation research course with primary emphasis on the application of research skills to MH/MR and substance abuse. Students will be expected to complete a research project and reports (both written and oral) based upon original research, previous research studies, or literature review.

**744 Casework III: Mental Health and Mental Retardation.** 3 credits. Application of principles of behavior and casework to problems of mental illness, emotional disorders, and mental retardation in children and adults. Theoretical approaches for understanding the relationship between differential diagnosis and selection of treatment interventions. Knowledge, principles, and skills of particular relevance for this system, including crisis intervention, milieu therapy, psychotropic drugs, social competency, behavior modification, and work with families. Impact of ethnicity and social class. Interdisciplinary functioning, collaboration, and interdigitiation with traditional and emerging community resources. Pertinent research findings in human behavior and casework.

**745 Family Practice in the Mental Health/Mental Retardation System.** 3 credits. Prerequisites: SLW 741 and 744 or 755 or permission of instructor. Focus on the impacts, knowledge, and skills essential to help families which have a member suffering from acute or chronic conditions which fall within the system.

**746 The Mentally Retarded and Their Families.** 3 credits. Prerequisite: Method III or permission of instructor. The concept of mental retardation in historical perspective and the different approaches to defining and understanding it. Biological, psychological, social, and



societal correlations of mental retardation and the effects of its incidence on the family system; needs and resources of individuals and families. Policies and programs, with focus on the role and potential of social work methods vis-a-vis the mentally retarded and their families in prevention, intervention, and enhancement.

**747 Social Work Intervention with Children and Adolescents in Mental Health Settings.** 3 credits. Prerequisites: SLW 741 and Method III or permission of instructor. This course is designed for students who are interested in further developing their knowledge, acumen, and techniques of social work intervention with children and adolescents in mental health and mental retardation settings.

**748 Group Therapy in Mental Health Settings.** 3 credits. Prerequisite: SLW 741 or permission of instructor. This course is designed for students who are interested in developing an understanding of group therapy and its use in the mental health/mental retardation system. The course will concentrate on theoretical assumptions as well as experiential applications of group therapy principles as they are utilized in the MH/MR settings. Current research and reports from the literature, case records, and experiential exercises will be major teaching vehicles. Psycho-dynamic and ego-psychological theories will be the conceptual base for the course content.

**749 Social Work Intervention in Substance Abuse.** 3 credits. Exploration of major theoretical contributions to the field of substance abuse. Introduction and exploration of pharmacology of drugs and alcohol including stimulants, depressants, and opiates. Introduction and exploration of alcoholism from the disease concept as well as specific knowledge of substance abuse from the mental health point of view. The students shall become sensitized to controversial issues of substance abuse with emphasis on implications for practice. The students will be exposed to background information on history, theories, definitions, areas of controversy, research findings, and treatment modalities as related to substance abuse. Social work intervention will be emphasized. Case material, lectures, and group discussion will be major teaching vehicles.

**750 Advanced Casework Practice in Mental Health Settings.** 3 credits. Prerequisites: SLW 654, 744 or permission of instructor. The course will deepen students' theoretical base in terms of both casework and psychodynamic theory. Special attention to the identification of and utilization in treatment of ego functions, defense mechanisms, transference, and counter-transference. It will reinforce and deepen concepts relative to intensive casework treatment, aid in the establishment of an identity as a clinical social worker, and help to define the parameters of clinical social work treatment.

**751 Social Work Crisis Intervention and Planned Short Term Treatment in MH/MR/SA Services.** 3 credits. Prerequisites: Method III and SLW 741 or permission of instructor. The social work practice of crisis intervention and planned short-term treatment in mental health, mental retardation, and substance abuse services. Conceptual and theoretical aspects of the differential use of

crisis intervention and planned short-term treatment by social workers with clients with various emotional disorders within the context of mental health services. Direct intervention; consultation; collaboration; and service delivery issues will be explored. Active involvement in critically developing ongoing knowledge of the subject area.

**755 Social Group Work III.** 3 credits. The perception, evaluation, and interventive actions of the worker in relation to individual performance in the group. Focus on individual contributions to, and gains from the group process. Role of the worker in helping individuals use group relations to meet their common and differential needs in social functioning. *Behavioral Knowledge* practice in relation to social and psychological criteria for the individual social functioning in the group. Knowledge of member's needs and strengths in relation to target populations and racial and ethnic factors. The use of program content in social group work practice. Differential use of method in specific delivery systems is analyzed, and pertinent research findings in human behavior and group work incorporated.

**756 Social Planning III.** 3 credits. Continuation of SLW 635, involving the completion of a problem-solving assignment in planning related to the design, funding, and evaluation of a specialized human resources delivery system. Utilization of social policy analysis and research methodology in planning. Peer review and interchange of analyses. Differential use of method in specialized systems.

**757 Administration III.** 3 credits. Knowledge and skill in administrative supervision. Use of authority and power. Personnel evaluation. Manpower utilization. Staff development. Planning of training programs. The role of middle-management in human resources settings. Recruiting. Differential use of method in specific delivery systems.

**761 Images of Man.** 3 credits. Prerequisite: SLW 651, 711, 721, 731, 741, or permission of instructor. Exploration of major theoretical contributions to the study of the person and analysis of the relationship between these theoretical models and their application to treatment and their implications for the effectiveness of clinical intervention. Examples of surveyed theoretical models include the works of such major figures as Freud, Adler, Rank, Sullivan, Bateson, The Third Force, and emerging Family Systems theorists. Emphasis on the life experiences of the theorist as it impinges upon and interacts with the cognitive approaches to the study of human personality. Integration of life experiences, theoretical models, and clinical intervention modes into an integrated approach to professional practice.

**762 Human Sexual Behavior.** 3 credits. Prerequisites: SLW 651, 711, 721, 731, 741, or permission of instructor. Exploration of human sexual development biologically, psychologically, and socially. Examination of theory; male and female development; variations in sexual expression. Current issues, including abortion and fertility.

**763 Advanced Group Methods for Social Workers.** 3 credits. Prerequisite: SLW 605 or permission of in-

structor. An advanced course in group methods for students whose primary method is social casework. Not for group work majors. Expansion and intensification of practice base provided in first course in social group work. Emphasis on achievement of greater sophistication and mastery in: group counseling methodology, role play and discussion leadership methods, evaluation of group and individual behavior, leader role in facilitating group development, and individual gain. Application of group work methods to family group and to various settings. The relation of group work to group psychotherapy and the sensitivity-encounter movement.

**764 Social Group Work IV.** 3 credits. Prerequisite: SLW 655 or permission of instructor. The final course in a series of method courses for social group work majors. Integration and application of group work practice theory in relation to a variety of other contingent factors in social work practice including: supervision of group leaders; the process of group work consultation; methods of team collaboration with other disciplines; the relation of group work to group psychotherapy; and the sensitivity-encounter movement. The application of group work to family group counseling and to varied target populations by age, sex, ethnicity, agency purpose, and client need. Use of groups for crisis intervention. Explaining group work to other professions. Methods of self-evaluation in group work practice.

**765 Supervision.** 3 credits. Prerequisite: Method III or permission of instructor. Task components and responsibilities in supervision of the social worker. Emphasis on a conceptual framework for supervision, including knowledge base, methods, and skill in supervision. Attention to affirmative action programs in social service delivery systems.

**766 Program Evaluation.** 3 credits. Methods, problems, and research findings related to the evaluation of social welfare programs. Research design options and methodologies available for program evaluation. Organizational and administrative contexts in which evaluation activities are initiated, supported, disseminated, and utilized. Data processing and the roles of data analysis and the computer in the evaluation of social welfare programs.

**769 Women's Issues and Social Work Practice.** 3 credits. New perspectives on women and their changing roles as these affect social work practice, direct and indirect ways sexist attitudes are acquired and conveyed, *effects of changing female roles on human behavior theory* and its application, development of new life styles, social work theories and their relevance to today's world, current women's issues, and the social worker's role as counselor and advocate.

**777 Seminar in Social Work Education I.** 3 credits. Base course for the education concentration. Dimensions and demands of the faculty role in social work education. Systems of higher education. History and issues in social work education. Curriculum and course design, including development of objectives, pre-assessment, instructional methods, and evaluation.

**778 Seminar in Social Work Education II.** 3 credits. Continued focus on teaching methods and skills in rela-

tion to students' concurrent teaching experience. Faculty rights and responsibilities. Students' rights. Advising, field liaison, and field instruction roles. Accreditation of educational programs in social work.

**791 Topical Seminar.** 3 credits. A seminar on current, specialized areas of interest to social work. Content offered will be reflective of current issues in the field. Particular topics for study in any one semester will be determined jointly by students and the faculty instructor.

**792 Independent Study.** 1-4 credits. The student will be required to submit a proposal for investigating some area or problem in social work not ordinarily included in the regular social work curriculum. The results of the student's study will be presented in a report. Open with faculty approval. A maximum of four independent study courses may be included in a student's educational program.

**793 Field Instruction III.** 3 credits. Continuation of field instruction and learning as an accountable representative of a social agency with emphasis on the application of system-specific knowledge and social work practice skill development. Emphasis on the integration of human behavior and research content for students with concentrations in social casework and social group work practice, and social policy and research content for students with concentrations in administration and social planning. Particular attention to application of knowledge and the development of skill necessary for professional social work practice in a secondary method.

**794 Field Instruction IV.** 3 credits. Continued integration and application of knowledge and learning required for professional social work practice in a specific delivery system. Emphasis on the refinement of methodological skills required for entry into professional practice.

**795 Practicum in Social Work Education.** 3 credits. Prerequisites: SLW 777 and concurrent enrollment in SLW 778. Required for all students in the social work educator preparation program. Experiential learning in undergraduate education for social work with mentorship by a faculty member of the host college or university. Demands and responsibilities of the faculty office, including course preparation and teaching.

## DOCTORAL COURSES IN SOCIAL POLICY AND SOCIAL WORK (SPW)

**701 Research Methods I.** 3 lecture hours. 3 credits. Prerequisite: graduate standing in social policy and social work or permission of the program. Concentrated study of the principles of research design in experimental and non-experimental social research. The logic of science, research design, sampling, and measurement will be considered within the context of applied research settings.

**702 Research Methods II.** Semester course; 3 lecture hours. 3 credits. Prerequisite: SPW 801. Study of principles and problems in the implementation of social research designs. Data collection, measurement issues,

and analysis procedures will be considered in a variety of research contexts.

**706 Social Theory and Public Policy.** Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing in social policy and social work or permission of the program. An examination of the theoretical component of public policy on the macro and micro levels. The structure of theoretical arguments is examined, and prominent theoretical perspectives and developments are reviewed.

**708 Behavioral Science Theory for Social Work Practice.** Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing in social policy and social work or permission of the program. This course will survey the major theoretical approaches which examine the psychological determinants of behavior. Emphasis will be on those approaches which have particular relevance for direct social work practice, that is work with individuals, families, and small groups.

**711 Origin and Development of Social Welfare Policy.** Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing in social policy and social work or permission of the program. A conceptual approach to the development of social welfare policy, viewed from sociological, historical, and evaluative contexts.

**715 Social Work Practice Theory.** Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing in social policy and social work or permission of the program. This course will integrate social and behavioral theories with the variety of practice modalities utilized in social work practice with individuals, families, and small groups.

**716 Contemporary Issues in Social Work Education.** Semester course; 3 credits. Prerequisites: SPW 701, 702, 708, and 715 or permission of instructor. Major controversies which have emerged or may be anticipated in social work education currently and in the near future. Depending on their resolution the impact on social work education will be considered. The over-arching framework will be the place of professional education within the academic institution.

**729 Program Evaluation for Social Welfare Practice.** Semester course; 3 credits. Prerequisites: SPW 701 and 702 or permission of instructor. Design options in program evaluation for social welfare. Statistical procedures as related to design options. Models of program evaluation and the interface of such models with design options. The politics of program evaluation for social welfare, including strategies for producing research, dissemination of findings, and the use of findings for organizational planning and change.

**730 Methodological Issues in Social Policy Research.** Semester course; 3 seminar hours. 3 credits. Prerequisite: SPW 801 or permission of instructor. Examination of several major social research studies, with special attention to their design and associated data analysis techniques. The interactions between statistical methodology and economic and political constraints in the conduct of social policy research will be emphasized.

**731 Child Welfare Policy and Research.** Spring semester; 3 seminar hours. 3 credits. Prerequisite: SPW 801 and SPW 811 or permission of instructor. Examina-

tion of a wide range of federal, state, and local policy issues related to the child welfare area of human services.

**732 Social Psychology of Organizations.** Spring semester; 3 lecture hours. 3 credits. An examination of social psychological processes and their effects on the behavior, attitudes, and social relations of individuals operating within a human service organizational context.

**733 Seminar in Energy Policy Analysis.** Semester course; 3 lecture hours. 3 credits. Prerequisite: course work in a natural or physical science. A study of the formulation and implementation of energy policy in its social context. Scientific aspects of energy distribution and production will be reviewed, and interrelationships among social structures and energy use patterns will be examined in comparative perspective. Problems in the development of energy policies in the United States and social implications of policy alternatives will be considered.

**791 Topical Seminar.** Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Study of the current state of knowledge and research within a specialized area of concern to social policy and social work. May be repeated for credit.

**792 Independent Study.** Semester course; 1, 2, or 3 credits. May be repeated for a maximum of 6 credits, which count toward the 36 required credits. May then be taken for an additional 1-12 credits to accommodate the need for continuous enrollment required of all students between completion of required course work and passage of the comprehensive examinations. Prerequisite: permission of the program. Independent reading and study in selected areas under the supervision of a member of the faculty.

**793 Teaching Practicum for Doctoral Students.** Semester course; 3-6 credits. Prerequisite: completion of core courses—SPW 701, 702, 706, 708, 711, and 715 or permission of instructor. Required for all students specializing in clinical social work education; available to other doctoral students who fulfill prerequisites and secure permission of instructor.

**797 Directed Research.** Semester course 1-6 credits. May be repeated for credit. Pre-dissertation research project under faculty supervision.

**898 Dissertation Research.** Semester course; 1-18 credits. May be repeated for credit. Prerequisite: successful completion of comprehensive examinations. Students are required to complete 18 credit hours. May be taken for additional credits until dissertation is formally accepted.

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Gertrude Jackson, Field Instructor

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BSW Program  
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Beverly Koerin, Field Instructor

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Student Development Counseling Center  
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Retardation  
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Jane Rhyne, Director—Adult Development  
Center

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Cynthia Smith, Field Instructor

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Phyllis Brieolenbaugh, Field Instructor

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(Richmond)

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Peter Williams, Field Instructor

Virginia Home  
(Richmond)

Walton Pettit, Director  
Deb Atno, Field Instructor  
Joe Mason, Field Instructor  
Sally Beverly, Field Instructor

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(Richmond)

Wilda Ferguson, Director and  
Field Instructor

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(Richmond)  
Harold Batchelder, Director of Social Services  
Sue Stauffer, Field Instructor

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Herbert Shiroma, Administrator  
Delores Polakoff, Field Instructor

Westbrook Psychiatric Hospital  
(Richmond)  
Charles Davis, Director  
Robert McCrary, Field Instructor  
Nancy Pawelski, Field Instructor

Western State Hospital  
(Staunton)  
William Burns, Acting Director  
Brendan Buschi, Director of Social Services  
Steve Herskovitz, Field Instructor

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Amelia Bakunas, Field Instructor

Woodburn Center for Community Mental Health  
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Jenny Craig, Director of Training  
Carolyn Larson, Field Instructor  
David Florence, Field Instructor

Young Women's Christian Association  
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Joel Kirsch, Director

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Mentor

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Gary Smith, Coordinator  
R. Ann Myers, Mentor

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Virginia Commonwealth University  
(Richmond)  
Edward A. McSweeney, Ph.D., Director  
Marcia Harrigan, Mentor  
Beverly Koerin, Mentor

Virginia State University  
(Petersburg)  
Jean Cobbs, Ed.D., Director of  
Social Work Program and Mentor



## Part XII—Interdisciplinary and Cooperatively Offered Graduate Degrees

### MASTER OF INTERDISCIPLINARY STUDIES

#### FACULTY

Sharp, Nicholas A., Director Non-Traditional Studies, Ph.D., Ohio State University; English Renaissance. Advisory Committee: Boyd Berry, Ph.D.; Marilyn Biggerstaff, D.S.W.; Sharon Jones, Ph.D.; Otto Payton; Ph.D.

The Master of Interdisciplinary Studies (M.I.S.) Program offers students a coherent method of combining regular graduate studies in two or more selected disciplines. It is intended for students who wish to pursue a clearly defined, multi-disciplinary program rather than a professional curriculum or a specialization in a traditional discipline.

The M.I.S. Program is a cooperative venture between Virginia Commonwealth University and Virginia State University. Students admitted to the M.I.S. Program at VCU will complete a minimum of nine hours of course work in Virginia State University classes.

#### PROGRAM DESCRIPTION

Before entering the program, students identify two or more disciplines in which to pursue graduate courses. They then complete regular graduate courses within each of the chosen disciplines, plus additional electives in other fields. When regular course work is completed, they select a special proj-

ect for additional study and complete three to six credits of approved independent study, special topics, directed study, or thesis.

#### ADMINISTRATION

At Virginia Commonwealth University the M.I.S. Program is administered by the director, Non-Traditional Studies in the Division of Continuing Studies and Public Service. The director works closely with an advisory committee composed of graduate faculty from several disciplines.

#### ADMISSION

To be admitted to the M.I.S. Program at VCU, students must provide the following specific requirements in addition to the general requirements for graduate admissions stated earlier in this bulletin:

- 1) an overall minimum 2.80 GPA (on a 4.0 scale) in the last 60 credits of undergraduate work or, in some cases, a minimum of 3.0 GPA in at least nine hours of graduate work;
- 2) a statement explaining (a) the kind of interdisciplinary curriculum desired and (b) specific areas of study intended.

Applications for admission may be obtained from the Office of *Enrollment Services*, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin

Street, Richmond, VA 23284, or in the Office of Non-Traditional Studies, 901 West Franklin Street, Room 105, Richmond, VA 23284.

### DEGREE REQUIREMENTS

In addition to the general requirements stated earlier in this bulletin, Master of Interdisciplinary Studies students must complete the following requirements:

- 1) a minimum total of 39 graduate semester credits, including (2) and (3) below;
- 2) 3-6 semester credits of approved directed research, independent study, special project, or thesis work;
- 3) at least nine and not more than 15 graduate level semester credits (not including requirement 2 above) in each of at least two disciplines. No more than 15 credits in any one discipline (exclusive of the directed research, independent study, special project, or thesis requirement) may be applied toward an M.I.S. degree. No more than nine credits in business and/or economics courses may be applied to an M.I.S. degree.

### TRANSFER CREDITS

Up to six semester credits of graduate courses may be transferred into the M.I.S. Program from institutions other than Virginia Commonwealth University and Virginia State University. All such transfer credits, however, must conform to the regulations stated earlier in this bulletin.

Students in the M.I.S. Program must complete at least nine credits of their programs at Virginia State University. They may take these courses either on the main campus of Virginia State University in Petersburg or at an off-campus location, including VCU courses taught in the Richmond area.

## Department of English and Division of Teacher Education

### FACULTY

Armour, Robert A. *Professor* Ph.D., University of Georgia; film.

- Beacham, E. Walton *Associate Professor* M.F.A., University of Arkansas; poetry.
- Berry, Boyd M. *Associate Professor* Ph.D., University of Michigan; Renaissance, Milton.
- Bloom, Lynn Z. *Professor and Chairman* Ph.D., University of Michigan; American literature, biography, composition.
- Booth, Mark W. *Assistant Professor* Ph.D., Harvard University; eighteenth century British.
- Brown, E. Allan *Professor Emeritus* Ph.D., University of North Carolina.
- Coppedge, Walter R. *Professor* Ph.D., Indiana University; Shakespeare, English Renaissance drama.
- Dance, Daryl C. *Associate Professor* Ph.D., University of Virginia; American literature.
- Duke, Elizabeth F. *Associate Professor* Ph.D., University of Iowa; linguistics, American literature.
- Duke, Maurice *Professor* Ph.D., University of Iowa; American literature, editing, professional and creative writing.
- Fine, Richard A. *Assistant Professor* Ph.D., University of Pennsylvania; American studies.
- Gallant, Christine C. *Assistant Professor* Ph.D., University of Minnesota; romanticism.
- Griffin, Claudius W. *Associate Professor* Ph.D., Indiana University; teaching composition, Shakespeare.
- Hanson, John H. *Assistant Professor* Ph.D., State University of New York at Buffalo; literature and psychology.
- Harkness, Marguerite *Assistant Professor* Ph.D., State University of New York at Binghamton; twentieth century British, nineteenth century British.
- Hedgepath, Chester M., Jr. *Assistant Professor* Ed.D., Harvard University; modern and contemporary literature.
- Henry, Nathaniel H. *Professor Emeritus* Ph.D., University of North Carolina.
- Kinney, James J. *Assistant Professor* Ph.D., University of Tennessee; rhetoric and composition.
- Laban, Lawrence F. *Assistant Professor* Ph.D., Indiana University; British prose fiction.
- Longest, George C. *Associate Professor* Ph.D., University of Georgia; Southern literature, realism.
- Mangum, A. Bryant *Assistant Professor* Ph.D., University of South Carolina; early twentieth century American.
- Miller, Michael I. *Assistant Professor* Ph.D., University of Chicago; linguistics.
- Morse, Charlotte C. *Associate Professor* Ph.D., Stanford University; Middle English literature, Medieval studies.
- Pendleton, James D. *Professor* M.A., University of North Carolina; playwriting.
- Priebe, Richard K. *Associate Professor* Ph.D., University of Texas at Austin; African literature, folklore.
- Reynolds, Elizabeth R. *Professor* Ph.D., University of South Carolina; Medieval studies.
- Sange, Gary R. *Assistant Professor* M.F.A., University of Iowa; poetry writing, modern poetry.
- Scura, Dorothy M. *Associate Professor* Ph.D., University of North Carolina, Chapel Hill; American literature, composition.

- Sharp, Nicholas A. *Assistant Professor* Ph.D., Ohio State University; Renaissance.
- Whitesell, J. Edwin *Professor Emeritus* Ph.D., Harvard University.
- Woodlief, Ann M. *Assistant Professor* Ph.D., University of North Carolina; American literature.

### TEACHER EDUCATION FACULTY

- Baker, Stanley E. *Associate Professor* Ed.D., Teachers College Columbia University; student/teacher interaction during reading instruction, reading habits and attitudes of reading teachers.
- Boraks, Nancy *Associate Professor* Ph.D., University of Colorado; peer impact on learning, ethnographic study of adult learning.
- Brittain, Mary M. *Assistant Professor* Ph.D., University of Miami; psycholinguistics of reading, assessment of reading achievement.
- Duncan, Patricia H. *Associate Professor* Ed.D., University of Georgia; research in written composition in the elementary grades, perceptual factors and reading.
- Goggin, William F. *Assistant Professor* Ed.D., University of Virginia; teaching writing.
- McLeod, Alan M. *Professor* Ed.D., University of Virginia; adolescent literature (teaching literature), teaching writing.
- Richardson, Judy S. *Assistant Professor* Ph.D., University of North Carolina; reading in content areas, remedial and beginning secondary and adult readers.
- Tarter, Martin A. *Associate Professor* Ed.D., University of Virginia; photography and teaching social studies and the humanities (visual literacy and heightened awareness), economic education and dealing with controversial issues.

The Department of English, in conjunction with the Division of Teacher Education, offers a program leading to a Master of Arts degree in English/English Education with four areas of emphasis or concentration.

The program provides maximum flexibility by allowing each student, in consultation with the student's graduate committee, to select the concentration which will best develop the student's competence in those areas most relevant to scholarly and professional objectives.

Programs leading to the Master of Arts degree in English/English Education:

1. **COMMUNITY COLLEGE TEACHING**—designed for the candidate who is seeking or continuing a career in the community colleges.
2. **INTERDISCIPLINARY HUMANITIES**—designed for the candidate who is seeking a broad knowledge of the literature of several cultures. (For courses

available in this option see the director of graduate studies in English.)

3. **ENGLISH EDUCATION**—designed for the candidate who is teaching, or who plans to teach, in middle and secondary schools. Candidates must meet certification regulations prior to graduation.
4. **LITERATURE OR LITERATURE AND LINGUISTICS**—designed for the candidate who desires intensive work in English or American literature or linguistics beyond the bachelor's level, or for the candidate who plans to pursue the Ph.D. degree in any of these fields.

### ADMISSION REQUIREMENTS

In addition to the general requirements for admission to graduate programs in the School of Graduate Studies (Part I of this bulletin), the College of Humanities and Sciences, and the School of Education, the following requirements, established by the English/English Education Graduate Committee, represent the minimum acceptable standards for admission:

1. A baccalaureate degree in an area appropriate to the degree program;
2. A grade point average that is indicative of the applicant's ability to pursue successfully a graduate degree;
3. Three recommendations from persons who are qualified to give information concerning the applicant's probable success in graduate school; and
4. Completion of the Graduate Record Examinations.

### DEGREE REQUIREMENTS

The English/English Education program consists of a minimum of 30-33 semester credits. After these credits have been attained, students shall be examined over their courses and research as the Graduate Committee recommends. Students may also wish to present a thesis or project, credit for which shall be determined by the Graduate Committee.

### GRADUATE COURSES IN ENGLISH (ENG)

**531 Literary Criticism.** Semester course; 3 lecture hours. 3 credits. A study of the fundamental concepts involved in the practice of criticism. Some attention is given to



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the historical development of criticism, but the primary focus is on its methods and aims.

**553 Studies in Linguistics.** Semester course; 3 lecture hours. 3 credits. A general introduction to one area of linguistic study, such as pronunciation, grammar, stylistics, dialects, usage standards, lexicography, onomastics, or semantics. May be repeated for credit.

**561 Medieval Literature.** Semester course; 3 lecture hours. 3 credits. A survey of major works of British literature in the Middle Ages with some attention to continental influences upon both Old English and Middle English works. The study will include poetry, prose, and drama from *Beowulf* to *Morte d'Arthur*. Some reading in modern English translation, some in Middle English.

**563 Renaissance Literature.** Semester course; 3 lecture hours. 3 credits. A survey of British poetry, prose, and drama written in the sixteenth and seventeenth centuries. Attention will be divided among major figures—such as More, Marlowe, Spenser, Shakespeare, Donne, Jonson, Milton, and minor authors.

**565 Eighteenth Century and Romantic British Literature.** Semester course; 3 lecture hours. 3 credits. A survey of British literature in the eighteenth and early nineteenth centuries. Readings of poetry, drama, and prose in the successive eras of Pope, Johnson, Burns, and Wordsworth.

**567 Victorian and Modern British Literature.** Semester course; 3 lecture hours. 3 credits. A survey of the literature of Victorian and twentieth century Britain. Major figures such as Carlyle, Tennyson, Browning, Arnold, Dickens, Eliot, Newman, Conrad, Joyce, Yeats, Shaw, and Auden will be the main focus of the course. Minor figures, especially as they represent literary movements or transitions in style or subject, will also be considered.

**571 American Literature I.** Semester course; 3 lecture hours. 3 credits. A survey of the literature of the United States from the Puritan period through the Romantic period.

**572 American Literature II.** Semester course; 3 lecture hours. 3 credits. A survey of the literature of the United States from the Age of Realism through the Contemporary period.

**600 Advanced Writing and Research Reporting.** Semester course; 3 workshop hours. 3 credits. The study and practice of advanced academic and professional writing and research reporting techniques. The course will focus on preparation of such projects as technical reports, theses and dissertations, grant proposals, and articles for publication in either humanistic or scientific disciplines. The course will be addressed to the specific fields of the students enrolled.

**605 Introduction to Literary Scholarship.** Semester course; 3 lecture hours. 3 credits. An introduction to the forms and practice of modern literary research and criticism. Attention will be paid to bibliographical and textual criticism and to the most commonly employed approaches of literary historians and critics in English and American literature.

**611 The Writer in His Own Time.** Semester course; 3 lecture hours. 3 credits. A study of the biographical, intellectual, and sociological influences on a selected British or American writer and his work. The course is designed to discover how the external factors of a writer's life are absorbed and transmuted into art by drawing upon the resources of other disciplines when relevant. May be repeated for credit.

**614 Major Works of Literature.** Semester course; 3 lecture hours. 3 credits. A study of the aesthetic backgrounds, composition, and continuing interpretation of a selected work of English or American literature generally regarded as a classic. The intent of the course is to comprehend as fully as possible the literary work of art through studying the aesthetic influences upon it and by applying various critical approaches to it. May be repeated for credit.

**617 Major Literary Modes.** Semester course; 3 lecture hours. 3 credits. A study, through the analysis of selected literary works of several genres, of modes which are useful to understand and judge literature. The study may draw upon the literature of many nations in English translation. The following modes are examples of those which may be studied: the heroic mode, the tragic mode, the comic mode, the ironic mode. May be repeated for credit.

**620 Patterns in Literary Thought.** Semester course; 3 lecture hours. 3 credits. A study of significant recurring intellectual attitudes and concepts which have found expression in literature and shaped the development of literary style and thought. The study will draw upon the literature of many nations in English translation. May be repeated for credit.

**624 Literature in Society.** Semester course; 3 lecture hours. 3 credits. A study of the ways in which literature often reflects, supports, and influences political and philosophical movements in society. Creative literature—primarily English and American—will be studied in terms of its response to or effect upon social issues. May be repeated for credit.

**627 Literary Genre.** Semester course; 3 lecture hours. 3 credits. A study of a literary genre, such as poetry, fiction, or drama. May be repeated for credit.

**651 Topics in Teaching Composition.** Semester course; 1-3 lecture hours. 1-3 credits. A course for the examination of a specialized issue, topic, or problem in teaching composition.

**661 Themes in Interdisciplinary Studies.** Semester course; 3 lecture hours. 3 credits. A study in depth of a theme, topic, or concept involving two or more disciplines. May be repeated for credit.

**692 Independent Study.** 1-3 hours. Variable credit; maximum six credits. To be offered each semester. Prerequisite: permission from department chairman. For students in English/English Education to pursue, in depth, a particular problem or topic about which an interest or talent has been demonstrated.

**798-799 Thesis.** Continuous course. 1-3 credits per course. Credits and hours to be arranged. Preparation

of a thesis or project based on independent research or study and supervised by a graduate advisor.

## SELECTED UNDERGRADUATE COURSES

After consultation with the student's advisor, a graduate student may take an undergraduate course listed below if the student has not previously taken a course covering the subject matter. No more than two 400-level courses from this list may be used toward the graduate degree. Consult the *Academic Campus Undergraduate Bulletin* for a description of the courses.

- ENG 401 Shakespeare
- ENG 402 Chaucer
- ENG 403 Milton
- ENG 446 Nonstandard Urban Dialects
- ENG 449 Introduction to Linguistics
- ENG 450 Transformational Grammar
- ENG 451 History of the English Language
- ENG 452 Teaching English as a Foreign Language

**GRADUATE COURSES IN ENGLISH EDUCATION (EDU, ENE, or REA)** For descriptions of these and other appropriate education courses see page 216.

- EDU 549 Developmental Reading
- EDU 681 Investigations and Trends in Teaching—English
- EDU 700 Supervised Externship—English
- EDU 701 Thesis
- ENE 601 Young Adult Literature
- REA 601 Psycholinguistics and the Language Arts Curriculum
- REA 602 Teaching Reading to Adults
- REA 604 Reading Instruction in the Content Areas

## CROSS LISTED COURSES IN ENGLISH/EDUCATION (ENG/ENE)

**631 Teaching English To Minority Groups.** Semester course; 3 lecture hours. 3 credits. A study of the problems confronted when teaching English to students from minority groups, with attention given to the importance of non-standard dialects and of preserving cultural uniqueness. Some emphasis will be placed on the student for whom English is a second language.

**632 Applied English Linguistics.** Semester course; 3 lecture hours. 3 credits. Application of linguistics theories and methods to selected teaching problems, such as teaching English as a second or foreign language, or teaching standard English to students who speak different dialects. May be repeated for credit.

**634-635 Seminar and Internship in the Community College.** Continuous course; 2 lecture and 4 laboratory hours. 3-3 credits. Observation and practice of instructional techniques in English courses in the community college on all levels from developmental studies through

college transfer courses, culminating in the student's acceptance of full responsibility for teaching a composition or reading course under the general supervision of a community college division chairman.

**636 Teaching of Communication.** Semester course; 3 lecture hours. 3 credits. A study of the traditional and modern instructional strategies for teaching various forms of communication but with primary emphasis on teaching composition and secondary emphasis on reading and speech. The validity of strategies will be tested in the student's own writing.

**637 Mass Media and the Teaching of English.** Semester course; 3 lecture hours. 3 credits. A study of the use of mass media in the English classroom. Emphasis will be on teaching methods designed to take advantage of the students' awareness of the media. Special attention will be given to television and film.

**643 Teaching Basic Writing Skills.** Semester course; 3 lecture hours. 3 credits. Emphasis on developing the student's ability to teach fundamental writing skills, including such topics as diagnosis of writing problems, strategies for correcting problems, and methods for evaluating progress.

## Master of Science Program in Gerontology

### FACULTY

Arling, Gregory *Associate Professor (Virginia Center on Aging, Director)*<sup>1</sup> Ph.D., University of Illinois; social psychology, family support systems, health care policy.

Egelhoff, William F. *Assistant Professor* M.B.A., Harvard Business School; business administration, theology of aging, political issues in aging.

Harkins, Elizabeth B. *Assistant Professor (Virginia Center on Aging)*<sup>1</sup> Ph.D., Duke University; evaluation research long-term care, health manpower.

Harkins, Stephen *Associate Professor* Ph.D., University of North Carolina; pain and age, memory changes with age, evoked potentials.

McAuley, William J. *Assistant Professor (Virginia Center on Aging)*<sup>1</sup> Ph.D., Pennsylvania State University; demography of aging, housing, formal and informal support systems.

Osgood, Nancy J. *Assistant Professor* Ph.D., Syracuse University; leisure and aging, retirement.

Parham, Iris A. *Associate Professor and Chairman of the Department of Gerontology* Ph.D., University of Southern California; cognitive changes with age, depression.

Romaniuk, Jean G. *Assistant Professor (Virginia Center on Aging)*<sup>1</sup> Ph.D., University of Wisconsin-Madison; creativity, evaluation research.

Romaniuk, Michael *Assistant Professor* Ph.D., University of Wisconsin-Madison; reminiscence, mental health, counseling.

Williams, Sherwood *Associate Professor (Virginia Center on Aging)*<sup>1</sup> Ph.D., Washington State University; sociology.

<sup>1</sup>Department in parentheses indicates joint appointment.

The gerontology curriculum is a multidisciplinary program established in 1976 which offers the Master of Science degree. The program is situated in the Office of Research and Graduate Affairs to utilize professional assistance from departments on both campuses.

The major purpose of the program is three-fold: (1) to train qualified professionals to work in administrative, planning, service delivery, and instructional/staff development positions in programs and services for the elderly at the national, state, and local levels; (2) to provide an opportunity for those studying in other disciplines, and whose work will encompass service to the aged, to integrate their own training with a comprehensive knowledge/understanding of the aging process; and (3) to stimulate the design and execution of gerontological research across multiple disciplines.

There are six concentration areas in gerontology:

**EDUCATION TRACK**—This area of concentration is designed for students interested in teaching/training careers in gerontology. Students electing this track will be prepared to provide instruction to university or community college students, the lay public, professional service providers, and older people.

**HEALTH CARE ORGANIZATION AND PLANNING TRACK**—(In conjunction with the Department of Health Administration) Upon completing this track, students will have a foundation of knowledge in health care organization, health planning, health policy, and a macro perspective of the financing of health care. In addition, students will have developed skills in policy analysis and the use of economic tools. Finally, students will broaden their understanding of the political, legal, and ethical issues involved in health care organization and planning.

**PSYCHOGERIATRIC TRACK**—This area of concentration, developed jointly with the Department of Psychology, is designed for students interested in working with those older adults and their families who are experiencing psychological difficulty. Students electing this track will be prepared to provide assistance directly to the elderly and their families as well as to consult and train professional and paraprofessionals to provide

more effective mental health services. Training is provided through a combination of specialized didactic instruction and structured field experience in providing direct services, consultation, and education.

**PUBLIC ADMINISTRATION TRACK**—Students who elect to pursue courses in the public administration track, developed jointly with the Department of Public Administration, will, after completion of course work, be able to plan, organize, report, control, and budget for public programs in aging. Grant writing and program evaluation skills will be developed as well.

**SOCIAL SERVICES TRACK**—This track concentrates on developing specialized knowledge and skills in the provision of services to the elderly; basic understanding and skills in at least one method of social work practice; commitment and ability to participate in the development of strategies and policies relevant to amelioration of social problems of the elderly; ability to integrate and use in practice knowledge of individual behavior and social structure with particular reference to the needs of the elderly.

**RESEARCH TRACK**—This track is designed for students who would ultimately like to pursue a Ph.D. in the social/behavioral sciences. (All students who elect the research track must complete a thesis.) Students will obtain a strong background in experimental psychology research design and methodology and a broad background in life-span developmental theory.

The 42-hour degree program includes 18-21 hours of courses in gerontology, 18 hours in the chosen concentration area, and six credits for thesis (or a thesis option).

### ADMISSION POLICY

The program will be open to qualified students who have earned a baccalaureate degree from an accredited college or university or the equivalent, maintained a minimum grade-point average of 3.0 and have satisfactory scores on the Graduate Record Examinations. A successful work experience may strengthen the admission credentials of applicants with marginal records.

Because of the diversity of undergraduate

majors, candidates for the gerontology program must present evidence of successful completion of *undergraduate* courses in the following areas:

1. biological science—minimum of six semester hours
2. psychology—minimum of three semester hours
3. sociology/anthropology-social work—minimum of three semester hours
4. statistics, research methods, or equivalent—minimum of three semester hours (topics covered in this undergraduate course should be equivalent to those outlined for Statistics 213, 214 in the *Academic Campus Undergraduate Bulletin*).

Candidates for admission who do not meet these requirements will be expected to complete the required undergraduate course work or to pass challenging examinations by the end of the first year.

#### **REQUIREMENTS AND PROCEDURES FOR ADMISSION**

A. Applicants must follow the application procedure stated in Part I of this bulletin.

B. Applicants must submit a letter stating reasons for wanting to enter graduate study in gerontology at Virginia Commonwealth University.

Send all application materials to the Office of Enrollment Services, Graduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, Richmond, VA 23284.

#### **TRANSFER AND WAIVER OF COURSE CREDITS**

Students who have completed graduate work in other graduate departments, whether at Virginia Commonwealth University or another university, may transfer no more than 12 credit hours work at "B" level if such work is considered relevant by the Program Admissions Committee. Also, a maximum of six hours of graduate credits accrued at a "B" level as a "special student" at Virginia Commonwealth University may be applied to the degree upon recommendation of the Program Admissions Committee.

Transfer credits for graduate work at

other institutions will be evaluated at the time of full admission to the program. To have credits transferred, students are required to prepare a synopsis of each graduate course that is to be transferred for review by the faculty. Each synopsis will include the name of texts used in the course and a specific listing of topics and material covered. Students may also apply for waivers of specific requirements in a similar manner.

#### **MASTER'S THESIS**

1. The master's thesis is an option for students entering with a bachelor's degree. Students may elect either a six-credit thesis or 6 hours of graduate course work to meet the 42-hour requirement. Thesis credit shall be six semester hours.

2. Each student shall arrange with a member of the gerontology program to serve as the chairman of the thesis committee. With the chairman's approval, at least two additional committee members will be selected. At least two of the members must be from the gerontology program.

The thesis chairman will monitor and advise during thesis development. The student will take the major role in actual data collection. The thesis should be a publishable piece of research that makes some contribution to the field of gerontology.

#### **Written Comprehensive Examination**

A written comprehensive examination is required after completion of all required course work and before the student begins a practicum (field experience).

The comprehensive examination will be scheduled three times a year (early in the fall and spring semester and once in the summer.)

#### **Practicum (field experiences)**

Field experiences, with the supervision arranged by the director and program faculty, constitute an additional requirement. These experiences are intended to develop practical understanding, skills, attitudes, and values essential for working with the aged in a variety of settings.

The practicum will involve a 600-hour placement (one semester full-time or two

semesters half time). Each student must submit a practicum proposal (prepared with the assistance of the advisor) which must be approved prior to beginning the practicum.

For those already employed in the field of gerontology, an approved special project may be substituted for the field experience placement. Those students who are working full-time in a job outside the field of aging may also submit a proposal for review which may allow for their continued employment, yet fulfilling this important requirement.

### GRADUATE COURSES IN GERONTOLOGY (GTY)

All students must successfully complete the following 21 hours of core courses:

**601 Biological and Physiological Aging.** 3 credits. Biological theories of aging: cellular, physical, systemic, and sensory change; health maintenance.

**602 Psychology of Aging.** 3 credits. Psychological adjustment in old age; special emphasis on personality, cognitive, and emotional development; life-crises associated with the aging process. (Students must complete Social Sciences Research Methods before taking this course).

**603 Social Science Research Methods Applied to Gerontology.** 3 credits. Application of social science methods and techniques to study of the aged: data sources, types of problems encountered; data analysis; research reporting; use of research findings.

**604 Problems, Issues, and Trends in Gerontology.** 3 credits. Application of knowledge in analysis of problems confronting aged persons; social issues and legislation; service delivery programs; current trends in gerontology.

**605 Social Gerontology.** 3 credits. This course will focus on the socio-psychological and sociological aspects of aging. Various socio-psychological and social theories of aging will be discussed. The course will provide a broad overview of several general topics such as the demography of aging, politics and economics of aging, and cross-cultural aspects of aging. The course will offer an in-depth analysis of particular role changes which accompany aging (i.e., retirement, widowhood, institutionalized).

**606 Aging and Human Values.** 3 credits. Identification and analysis of value systems of the aged, exploration of religious beliefs; death and dying; moral, ethical and legal rights; human values and dignity.

#### Elective Courses

**610 Introduction to Gerontology.** 3 credits. A survey of the field of aging with attention to physical, psychological, social, economic, and cultural ramifications of age.

**612 Recreation, Leisure, and Aging.** 3 credits. An analysis of the quality and quantity of leisure in maximizing the quality of life for the older person. Focus

will be placed on: concepts of leisure; the interrelationship of leisure service delivery systems and other supportive services; the meaning of leisure to the elderly in the community and within institutional settings; and innovative programming.

**615 Aging and Mental Disorders.** 3 credits. The course deals with common psychological disorders and problems of late life, their etiology, methods of evaluating psychological status, and intervention strategies which have been used successfully with older persons. Topics include epidemiology of psychological disorders and mental health service utilization; late-life stressors and crises; psychology of health, illness, and disability; techniques and procedures in the evaluation of the older adult; functional and organic disorders; institutionalization; individual, group, and family therapy; behavioral techniques; peer counseling and crisis intervention; and drugs and the elderly.

**616 Maintenance and Rehabilitation in Late Life.** 3 credits. Considers practical approaches to maintaining function and use of daily activities, simple procedures, and techniques in counteracting common physical changes prevalent in later life.

**690 Independent Studies.** 1-3 credits. Directed independent study in depth of a particular problem or topic in gerontology about which an interest or talent has been demonstrated.

**699 Topical Seminar.** 3 credits. Seminars on specialized areas of gerontological interest. Examples of special topic courses taught in previous years: •Aging and the Black Community, GTY 699E, 3 credits. Systematic overview of patterns of aging among blacks; economics, family patterns, residential environment. •Nutrition and Aging, GTY 699E, 3 credits. Focus on nutritional problems of the elderly, physiological and psychological effects of diet modifications. •Psychophysiology and Neurobiology of Aging, 3 credits. Focuses on age differences and changes in anatomy and physiology of the autonomic and central nervous systems. •Psychology of Health and Health Care, 3 credits. Focuses on factors in the etiology, course and treatment of illness; patient/practitioner relationship; patient compliance, psychosocial issues in terminal care.

**699 Community/Community Services and the Aged.** 3 credits. The first part of the course will provide a conceptual/theoretical overview of community focusing on the ecological, psychological, and social dimensions of community. The community study methodology will be discussed in detail. The latter part of the course will focus on communities of the aged including for example, a look at HUD funded housing for the elderly, age-segregated retirement communities, and other environments designed specifically for the elderly. Various community services for the aged will be discussed in the course as well.

**641 Survey of Psychological Assessment and Treatment of the Older Adult.** 3 credits. A combination didactic and skills training course; review of major treatment strategies and techniques for utilization with the older adult client with emphasis on group, individual, and paraprofessional delivery system; evaluation of crisis intervention and consultation team approaches; lectures, demonstrations, and classroom practice of actual treatment techniques.

**642 Practicum in Clinical Geropsychology.** 3 credits. An initial practicum geared as an entry to the team practicum experience; focus on familiarizing the student with mental health service delivery systems for the elderly in the Richmond community; rotation through a limited number of facilities such as nursing homes, retirement centers, nutrition sites, emergency hotline services for the elderly, and various agencies involved in de-institutionalization; possible extended placement in a particular facility.

**701/702 Thesis.** 3-6 credits. A research study of a topic or problem approved by the thesis committee and completed in accordance with the acceptable standards for thesis writing.

## Master of Science Program in Geriatric Physical Therapy

Geriatric Physical Therapy is a joint program offered by the Department of Physical Therapy and the Master of Science program in Gerontology culminating in a Master of Science degree in Physical Therapy with a specialty in Geriatric Physical Therapy.

### FACULTY

The combined graduate faculties of physical therapy and gerontology.

### ADMISSIONS AND GENERAL ACADEMIC POLICY

See Graduate School rules and Department of Physical Therapy.

### PURPOSE

Graduates may prepare for positions in teaching, administration, clinical practice, or research related to the problems of the aged population, including positions as chief physical therapists in any kind of facility dealing with geriatric patients, where they could provide leadership in service, research, and teaching.

### CURRICULUM

<b>Core Curriculum:</b>	<i>Credits</i>
PHT 590 Physical Therapy Seminar (2 semesters)	2
PHT 591 Research Process . . . . .	2
GTY 601 Biological and Physiological Aging . . . . .	3
GTY 602 Psychological Aspects of Aging . . . . .	3
GTY 605 Social Gerontology . . . . .	3
BIS 521 Statistical Principles or BIS 511-12 . . . . .	3-6
PHT 520 Clinical Specialty Practicum . . . . .	3-9
PHT 690 Research in Physical Therapy . . . . .	9-12
	<hr/> 28-40

<b>Electives:</b>	<i>Credits</i>
GTY 604 Problems, Issues, and Trends in Gerontology . . . . .	3
GTY 606 Aging and Human Values . . . . .	3
GTY 690 Independent Study . . . . .	1-3
PHT 501 Electromyographic Kinesiology . . . . .	3
PHT 502 Biomechanics . . . . .	3
PHT 505 Pathokinesiology *** . . . . .	4
PHT 506 Therapeutic Kinesiology *** . . . . .	3
PHT 540 Special Topics in Physical Therapy . . . . .	1-4
AHP 573 Teaching in Health Professional Schools . . . . .	3
AHP 574 Health Teaching Practicum . . . . .	1-6
AHP 582 Supervision in Allied Health Professions . . . . .	3
AHP 583 Administrative and Supervisory Practicum . . . . .	1-9
HCM 510 Health Care Organization and Aging . . . . .	3
*** Highly recommended	
Minimum credits for graduation: 48 credits	

The clinical practicum (PHT 520), the thesis research (PHT 690) and, if elected, the administrative and supervisory practicum (AHP 583) will be done at the Chesterfield County Nursing Home. The teaching practicum (AHP 574), if elected, will be done in the undergraduate physical therapy curriculum, both on campus and at the nursing home. All practica will be supervised by academic faculty.

The thesis committee will include, as a minimum, two physical therapy faculty and one gerontology faculty. Basic science, medical, or other faculty may be added when warranted by the thesis topic.

Students will meet all general requirements for graduation specified in the *Graduate Bulletin* of Virginia Commonwealth University and the School of Allied Health Professions.

## Certificate Program in Aging Studies

The Certificate in Aging Studies program was designed primarily to meet the needs of persons who are already working with the elderly but who have no academic training in gerontology. The certificate program provides students with a comprehensive overview of gerontology and stimulates the application of gerontological research to problems in applied areas.

The certificate program is also a *minor option* for graduate students in other disciplines.

**REQUIREMENTS FOR ADMISSION**

Candidates for admission into the Certificate Programs in Aging Studies would offer the following credentials:

- A baccalaureate degree from an accredited college or university or its equivalent.
- An acceptable grade-point average.

**PROGRAM OF STUDIES**

The certificate program of studies would require successful completion of 17 credit hours of work comprised of the following courses now offered in the gerontology graduate curriculum:

1. The Biology of Aging, Psychology of Aging, and Social Gerontology will form the basic core of the certificate program.
2. Following the completion of these three core courses, students may choose two elective gerontology courses after consultation with their faculty advisors. Advisors counsel students as to the courses which would best suit their educational training needs. Students may choose from: Aging and Human Values; Topical Seminar; Independent Studies; Problems, Issues, and Trends in Gerontology; Recreation, Leisure, and Aging.
3. In addition to the completion of these prescribed courses, each candidate for a Certificate in Aging Studies would be required to satisfactorily complete a project in gerontology on a subject approved by the faculty. This project may be a comprehensive literature review, a research project, and training or demonstration project. Students would register for a two-credit course in Independent Studies (GTY 690).

**AWARDING OF THE CERTIFICATE**

Upon successful completion of the total program here described, as well as, maintaining a 3.0 average, students are awarded a Certificate in Aging Studies.

**RELATIONSHIP TO THE M.S. PROGRAM IN GERONTOLOGY**

The Certificate in Aging Studies program is designed to meet the needs of those individuals who desire graduate training in

gerontology but who do not desire the full completion of the master's program. This program is complementary to the M.S. program. Certificate students who wish to enter the M.S. program must make formal application and abide by the admission requirements outlined in this bulletin.

**Graduate Programs in Statistical Areas**

- See degree programs or tracks in statistics in the following departments or programs:
  - Biostatistics (M.S., Ph.D.)—School of Basic Sciences
  - Master of Science Degree in Business (concentration in Quantitative Methods)—School of Business
  - Mathematical Sciences (M.S. with specialization in statistics or statistical computing)—College of Humanities and Sciences

**GRADUATE COURSES IN STATISTICS**

**Biostatistics (BIS)**

- BIS 511-512 Methods of Statistical Analysis
- BIS 515 Biostatistical Data Management
- BIS 516 Biostatistical Consulting
- BIS 521 Statistical Principles of Health Care Information
- BIS 524 Statistical Computing
- BIS 530(S) Elements of Biometry
- BIS 537 Sampling
- BIS 538 Epidemiology and Population Research
- BIS 546 Linear Statistical Models
- BIS 547 Nonparametric Statistics
- BIS 580 Applied Biostatistical Research
- BIS 590 Biostatistics Seminar
- BIS 600 Special Topics in Biostatistics
- BIS 641 Advanced Statistical Inference
- BIS 642 Methods of Multivariate Analysis

BIS 650 Design and Analysis of  
Response Surface Ex-  
periments  
BIS 690 Research in Biostatistics

**School of Business**

BUS 624 Statistical Elements of  
Quantitative Manage-  
ment  
BUS 632 Statistical Analysis  
BUS 648 Managerial Decision  
Making  
BUS 656 Applied Multivariate  
Methods  
BUS 669 Forecasting Methods  
BUS 790 Doctoral Seminar  
ECO 612 Econometrics

**Mathematical Sciences**

CSC 500 Computer Methods for  
Research (Programming  
and Survey of Statistical  
Packages such as SAS  
and SPSS)

MAT 503 Introduction to  
Stochastic Processes  
MAT 603-604 Advanced Probability  
Theory  
STA 513-514 Mathematical Statistics  
STA 523 Nonparametric  
Statistical Methods  
STA 533 Applied Linear Regres-  
sion  
STA 543-544 Statistical Methods  
STA 613-614 Stochastic Processes  
STA 623 Discrete Multivariate  
Analysis  
STA 643 Topics in Statistics

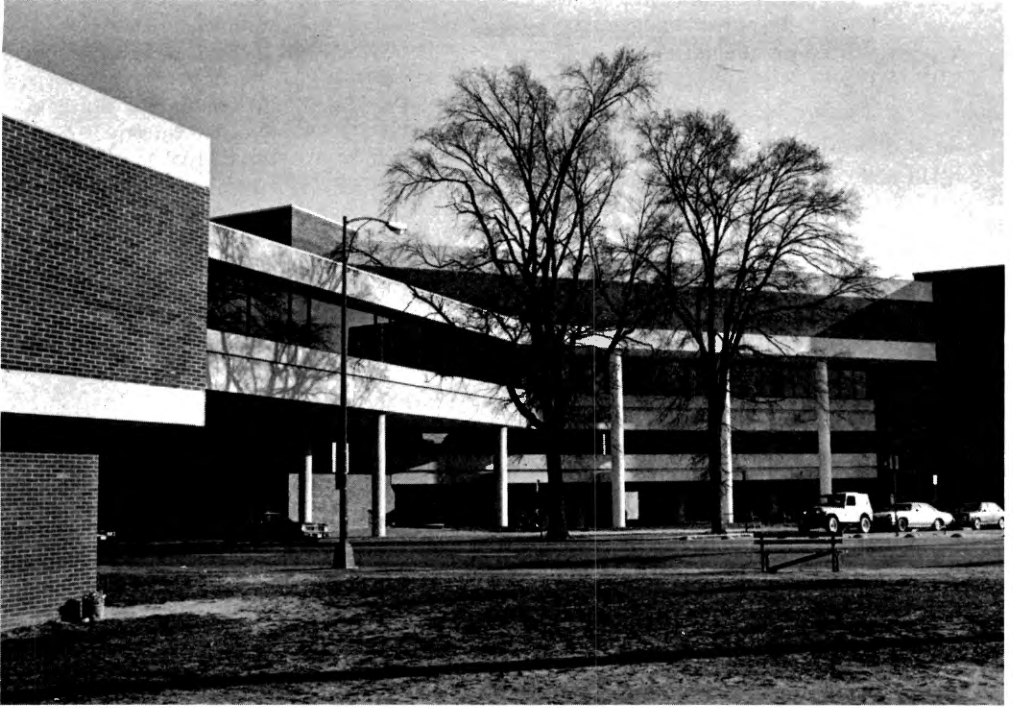
**Psychology**

PSY 609 Design of Psychological  
Experiments  
PSY 627 Statistics in  
Psychological Research

**Sociology**

SOC 608 Advanced Statistical  
Methods  
SOC 623 Causal Analysis





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## PRIVACY RIGHTS OF PARENTS AND STUDENTS

Provisions for the release of information concerning students, including the rights of access by students and others to education records maintained by Virginia Commonwealth University, are as follows:

### A. Release of Personally Identifiable Student Information

It is the policy of Virginia Commonwealth University that "personally identifiable information," other than "directory information" from a student's education records, will not be disclosed, without the written consent of the affected student, to any party or organization which does not have a legitimate right of access to the information. The persons or organizations which are deemed to have legitimate rights of access are:

1. Virginia Commonwealth University officials and staff, and university academic excellence and honor societies, fraternities, and sororities which have a designated faculty advisor. Requests from such officials or organizations shall be directed to the appropriate office and proper identification will be required. Access will not be granted unless it is determined that the person or organization is deemed to have a legitimate educational interest, which is defined as having some reasonable relationship to instruction, supervision, administration, or other similar responsibility of this university.
2. Appropriate persons in connection with a student's application for or receipt of financial aid.
3. Appropriate federal or state education authorities.
4. Organizations conducting studies for, or on behalf of, Virginia Commonwealth University, for the purpose of assisting the university in the accomplishment of its stated mission and purpose; provided, however, that such information will be used only by such organizations and will be destroyed when no longer needed for the intended purpose. The director of the Office of Enrollment Services approve requests of this nature.
5. Accrediting organizations.
6. Parents of a dependent student, as defined in Section 152 of the Internal Revenue Code. (Note: Husbands and wives are not entitled to obtain records of their spouses without the consent of the spouse, regardless of dependency.)
7. In compliance with judicial order or subpoena, after the university has made a reasonable effort to notify the student.
8. Appropriate persons in connection with an emergency if such knowledge is necessary to protect the health or safety of a student or other persons.

**NOTE:** Custodians of student records will maintain a record of all individuals and agencies which have requested or obtained access to a student's record (except those listed in A(1) and (6) above). This record will specifically in-

dicate the legitimate interest that the person or agency had in obtaining the information, and the information made available will be limited to that necessary to satisfy such demonstrated needs. In addition, custodians will, prior to the release of "personally identifiable information" from a student's record, obtain assurances that the information will be used only for the purpose for which the original disclosure is made and that there will be no further disclosure without the student's consent.

### B. Definitions:

1. **Education Records.** "Education records" are defined as those records, files, documents, and other materials which (1) contain information directly related to a student; and (2) are maintained by Virginia Commonwealth University or by a person acting for the university. They do *not* include (1) personal notes and other such information which is in the sole possession of the maker and which is not accessible or revealed to any other individual; (2) records available only to law enforcement personnel; (3) employment records; (4) medical, psychological, and psychiatric, records which are disclosed only to individuals providing treatment and which can be made accessible to the student's personal physician or other appropriate person of the student's choice; or (5) information collected on a person who is no longer a student at Virginia Commonwealth University and which pertains to activities or accomplishments that occurred after the person ceased to be a student at VCU (e.g., records of the accomplishments of alumni). A list of education records maintained by the university and the location thereof is available in the Office of Enrollment Services.
2. **Student.** A "student" is any person who is or has been enrolled at Virginia Commonwealth University, and with respect to whom education records are maintained by the university, and includes a parent of a "dependent student," as defined in Section 152 of the Internal Revenue Code.
3. **Directory Information.** "Directory information" includes the following: a student's name, mailing address and telephone number, local address and telephone number, semesters of attendance, load status (full- or part-time), date of admission, date of graduation, school, major and minor fields of study, whether or not currently enrolled, classification (freshman, sophomore, etc.), type of degree being pursued, honors, awards, degree received, weight and height of members of athletic teams, and whether the student has participated in officially recognized activities and sports sponsored by the university. At the time of registration, and not later than 14 days after the beginning of a term, the student may submit to the Office of Enrollment Services/Academic Records a written request that directory information pertaining to that student not be released. This request is effective

only for the one semester and must be renewed at the beginning of each academic term.

4. *Access.* Access to an education record signifies the right to inspect one's records and includes the right to obtain copies of that record.

C. *Procedure for Gaining Access to Education Records*

To obtain access to one's records, a student must advise the custodian of the records of his or her desire to examine such records. If desired, the student may also request an explanation and/or copies of such records. A reasonable fee will be charged for copies provided. Examination will be permitted under conditions which will prevent alteration or mutilation of the record. A student must present proper identification upon the request of the custodian of the records.

If the student believes the record content to be inaccurate, he or she may submit a request to amend the record. Normally, such matters will be satisfactorily resolved in the course of informal discussions with the student. When agreement cannot be reached, a written challenge as to the accuracy of the record may be presented to the record custodian, who will provide a response to the student within a period of 45 days. If the student's request is not granted, the student will also be advised of his or her right to a hearing. The student may then submit a written request for a hearing to the dean of student life, who will refer the matter to the University Hearing Board. The normal procedures established for the Hearing Board will govern such appeals. If the appeal is denied, the student may submit to the University Hearing Board a written explanation to be inserted into the record.

*NOTE:* This procedure does not provide for a hearing to contest an academic grade.

D. *Limitations on Rights of Access*

A student is not entitled access to:

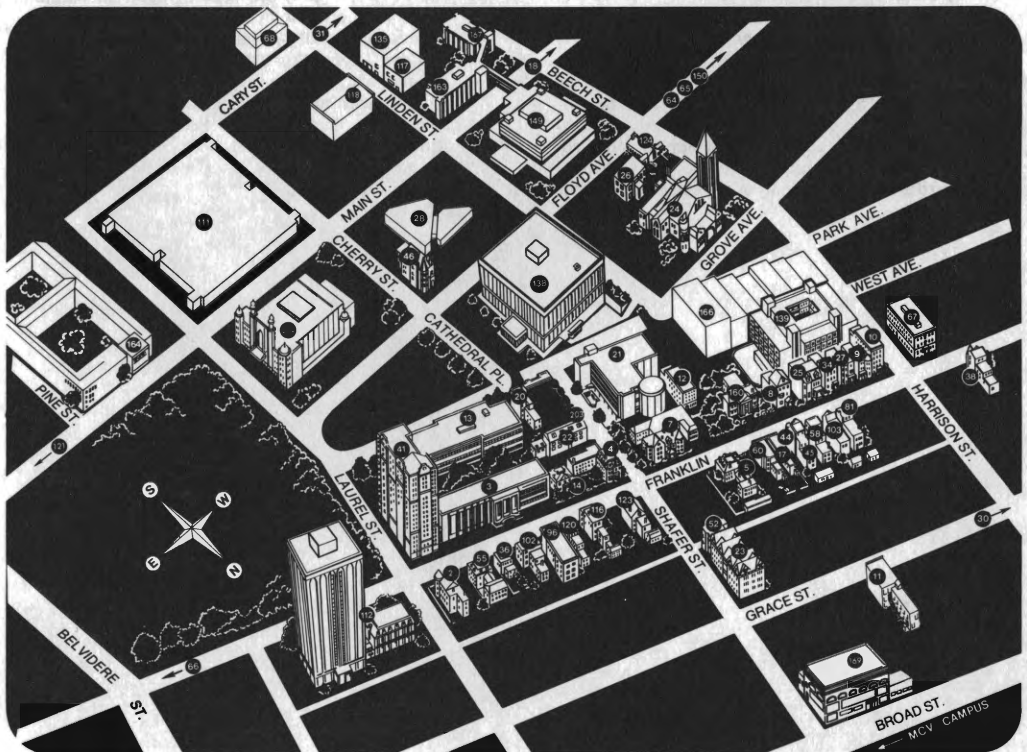
1. Financial records of parents or any information therein.
  2. Confidential letters and statements of recommendation which were placed in the education records prior to January 1, 1975, as well as those received subsequent to that date when the student has specifically waived, in writing, his or her right to examine or review said letter(s) or statement(s).
  3. Medical and/or psychiatric records, when the attending physician has made a part of the record a written statement that in his or her opinion, the review of the records by the person who is the subject of the record would not be in the best interests of said person.
- E. The university retains all rights to the student's academic record and may withhold transcripts of the record because of unfulfilled obligations to the university.
- F. These guidelines are promulgated pursuant to Section 438, Pub. L. 90-247, Title IV, as amended, 88 stat. 571-574 (20 U.S.C. §1232g); and the regulations promulgated by the Secretary of Health, Education, and Welfare as published in the *Federal Register* on Thursday, June 17, 1976. A student who feels that the university has failed to comply with applicable regulations is entitled to file a complaint with the Secretary of Health, Education, and Welfare.



## 294 Campus Maps

### Code Building

- |    |   |     |   |     |   |
|----|---|-----|---|-----|---|
| 2  | Williams House, 800 W. Franklin St.               | 31  | 1004 W. Cary St.  | 118 | 25 S. Linden St.  |
| 3  | Franklin Street Gymnasium,<br>817 W. Franklin St. | 34  | Bowe House, 917 W. Franklin St.                                   | 120 | Harrison House, 816 W. Franklin St.   |
| 4  | Founders Hall, 827 W. Franklin St.                | 36  | 808 W. Franklin St.   | 121 | Planning & Finance Building,<br>327 W. Main St.   |
| 5  | President's House, 910 W. Franklin St.            | 38  | Meredith House, 1014 W. Franklin St.                              | 123 | Blanton House, 826-28 W. Franklin St.   |
| 7  | Ginter House, 901 W. Franklin St.                 | 41  | Johnson Hall, 801 W. Franklin St.                                 | 124 | 1022 Floyd Ave.   |
| 8  | Anderson House, 913 W. Franklin St.               | 44  | Millhiser House, 916 W. Franklin St.                              | 135 | Physical Plant Shops, 10 S. Linden St.  |
| 9  | Scherer Annex, 921 W. Franklin St.                | 45  | 916 W. Franklin St. (rear)  | 138 | James Branch Cabell Library,<br>901 Park Ave.   |
| 10 | Scherer Hall, 923 W. Franklin St.                 | 46  | Sitterding House, 901 Floyd Ave.                                  | 139 | Pollak Building, 325 N. Harrison St.  |
| 11 | 918 W. Grace Street                               | 52  | Center for Improving Teaching<br>Effectiveness, 310 N. Shafer St. | 149 | School of Business, 1015 Floyd Ave.—<br>Business School Auditorium,<br>14 N. Linden St. |
| 12 | Anderson Gallery, 907½ W. Franklin St.            | 55  | White House, 806 W. Franklin St.                                  | 150 | 10 N. Brunswick St.   |
| 13 | Life Sciences Building, 816 Park Ave.             | 58  | McAdams House, 918 W. Franklin St.                                | 160 | 909 W. Franklin St.   |
| 14 | Ritter-Hickok House, 821 W. Franklin St.          | 60  | Stagg House, 912 W. Franklin St.                                  | 163 | Oliver Hall - Physical Sciences Wing,<br>1001 W. Main St.                               |
| 17 | Brown House, 914 W. Franklin St.                  | 64  | 1128 Floyd Ave.   | 164 | Apartment Dormitory, 711 W. Main St.  |
| 18 | 1322-24 W. Main St.                               | 65  | 107 N. Morris St.   | 166 | Music and Theatre Building,<br>922 Park Ave.  |
| 20 | Adkins House, 824 Park Ave.                       | 66  | Holiday Inn, 301 W. Franklin St.                                  | 167 | Oliver Hall - Education Wing,<br>1015 W. Main St.                                       |
| 21 | Hibbs Building, 900 Park Ave.                     | 67  | Raleigh Building, 1001 W. Franklin St.                            | 169 | 1001 W. Broad St.   |
| 22 | Shafer Street Playhouse,<br>221 N. Shafer St.     | 68  | Cary Street Gym, 911 W. Cary St.                                  | 202 | Mosque  |
| 23 | Lafayette Hall, 312 N. Shafer St.                 | 81  | Buford House, 922 W. Franklin St.                                 | 203 | Ask-It, Shafer St.  |
| 24 | VCU Music Center, 1015 Grove Ave.                 | 96  | Franklin Terrace, 812-14 W. Franklin St.                          |     |   |
| 25 | Decatur-Axtell House,<br>915 W. Franklin St.      | 102 | Hunton House, 810 W. Franklin St.                                 |     |   |
| 26 | Education Annex, 109 N. Harrison St.              | 103 | Valentine House, 920 W. Franklin St.                              |     |   |
| 27 | Stark House, 919 W. Franklin St.                  | 111 | VCU Parking   |     |   |
| 28 | Student Commons, 907 Floyd Ave.                   | 112 | Rhoads Hall, 710 W. Franklin St.                                  |     |   |
| 30 | 620 N. Lombardy St.                               | 116 | Bird House, 820 W. Franklin St.                                   |     |   |
|    |   | 117 | Physical Plant Warehouse,<br>6 S. Linden St.                      |     |   |

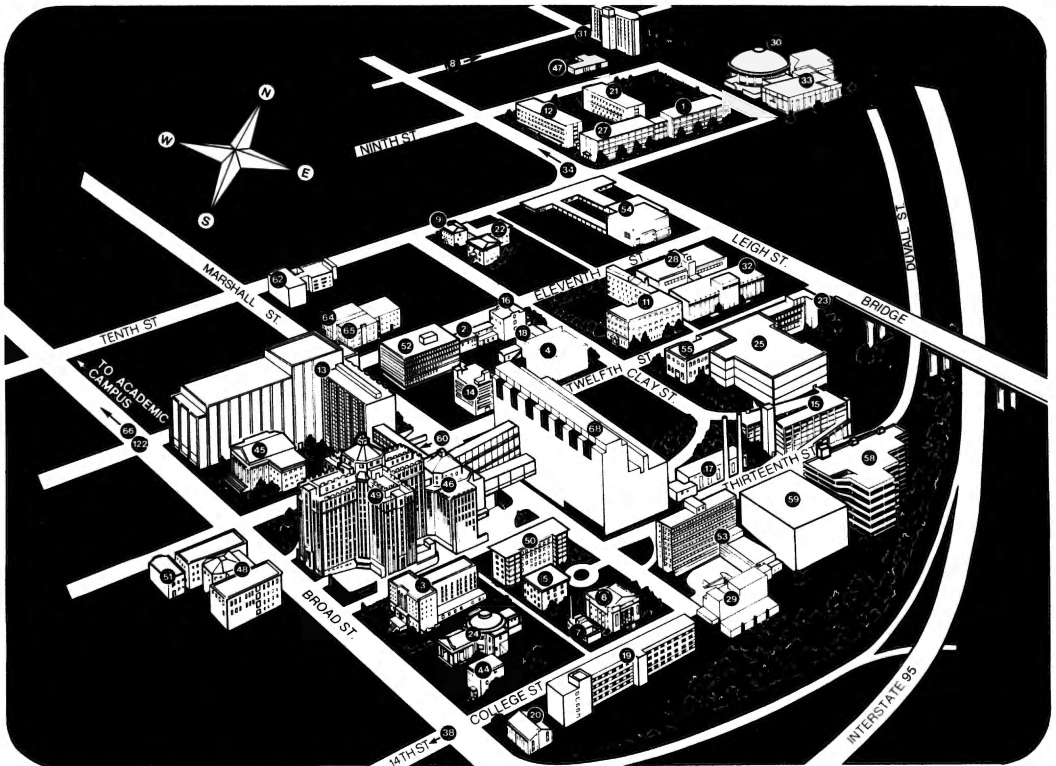


Academic  
Campus  
Locator



Code Building

- |   |  |   |
|---|--|---|
| 1 Bear Hall, 10th & Leigh St.                               | 20 Randolph Minor Annex, 301 College St.               | 47 VCU Day Nursery, 610 N. 9th St.                              |
| 2 Personnel Annex Building, 411 N. 11th St.                 | 21 Rudd Hall, 10th & Leigh St.                         | 48 South Hospital, 1201 E. Broad St.                            |
| 3 Nursing Education Building, 1220 E. Broad St.             | 22 Sheltering Arms, 1008 E. Clay St.                   | 49 West Hospital, 1200 E. Broad St.                             |
| 4 Pharmacy/Pharmacology Building, 410 N. 12th St.           | 23 Strauss Research Laboratory, 527 N. 12th St.        | 50 East Hospital, 1215 E. Marshall St.                          |
| 5 Dooley Building, 1225 E. Marshall St.                     | 24 Monumental Church, 1224 E. Broad St.                | 51 Lewis House, 223 Governor St.                                |
| 6 Egyptian Building, 1223 E. Marshall St.                   | 25 Tompkins-McCaw Library, 509 N. 12th St.             | 52 Nelson Clinic, 401-09 N. 11th St.                            |
| 7 Pathological Incinerator, 316 College St.                 | 26 Toxicology Laboratory & Rodent House, 9 N. 13th St. | 53 North Hospital, 1300 E. Marshall St.                         |
| 8 Physical Plant Shops Building, 659 N. 8th St.             | 27 Warner Hall, 10th & Leigh St.                       | 54 Virginia Treatment Center, 515 N. 10th St.                   |
| 9 Leigh House, 1000 E. Clay St.                             | 28 Wood Memorial Building, 521 N. 11th St.             | 55 Richmond Academy of Medicine, 1200 E. Clay St.               |
| 11 McGulre Hall, 1112 E. Clay St.                           | 29 Cancer Center, E. Marshall & College St.            | 56 Faculty - Staff Parking Deck (Lot D), 515 N. 13th St.        |
| 12 McRae Hall, 10th & Leigh St.                             | 30 Larrick Student Center, 641 N. 8th St.              | 57 MCV Hospital Supply & Distribution Building, 403 N. 13th St. |
| 13 Sanger Hall, 1101 E. Marshall St.                        | 31 Cabaniss Hall, 600 N. 8th St.                       | 58 George Ben Johnston Auditorium, 305 N. 12th St.              |
| 14 Ambulatory Care Center, 408 N. 12th St.                  | 32 Lyons Dental Building, 520 N. 12th St.              | 59 VMI Building, 1000 E. Marshall St.                           |
| 15 MCV/VCU Visitor Parking Deck, 1220 E. Clay St.           | 33 Gymnasium, 9th & Leigh St.                          | 60 Samuel Putney House, 1010 E. Marshall St.                    |
| 16 University Personnel Employment Office, 1101 E. Clay St. | 34 Animal Research Facility, Hanover County            | 61 Stephen Putney House, 1012 E. Marshall St.                   |
| 17 Central Heating & Power Plant, 400 N. 13th St.           | 35 Consolidated Lab Building, 9 N. 14th St.            | 62 Holiday Inn, 301 W. Franklin St.                             |
| 18 MCV Alumni Building, 1105 E. Clay St.                    | 44 Newton House, College & Broad St.                   | 63 New MCV Hospital, 1200 E. Marshall St.                       |
| 19 Randolph Minor Hall, 307-15 College St.                  | 45 Old Student Center, 323 Broad St.                   | 122 Richmond Plaza Building, 111 S. 7th St.                     |
|   | 46 A.D. Williams Memorial Clinic, 1201 E. Marshall St. |   |



Medical College  
of Virginia  
Campus Locator







Virginia Commonwealth University  
1012 East Marshall Street  
Richmond, VA 23298

Special Fourth Class Rate

