



1992

Virginia Commonwealth University Undergraduate Bulletin

Virginia Commonwealth University

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C O M M O N W E A L T H
U N I V E R S I T Y

1992-1994 ▼ UNDERGRADUATE ▼ BULLETIN



**Virginia Commonwealth University
Richmond, Virginia**

Undergraduate Bulletin 1992-1994



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May 1992

Number 2

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For information on Virginia Commonwealth University: contact (804) 367-0100 or (804) 786-0438 or refer to Contact Information on page iii of this Bulletin.

The Board of Visitors, the administration, and the faculty of Virginia Commonwealth University are committed to a policy of equal opportunity in education and employment without regard to race, creed, sex, national origin, age, or handicap. This policy is monitored by the Office of Equal Employment Opportunity/Affirmative Action Services.

Contact Information

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School of Business, 1015 Floyd Avenue, Box 4000

School of Community and Public Affairs, 919 West Franklin Street, Box 2513

School of Dentistry, 520 North 12th Street, Box 566

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Equal Employment Opportunity/Affirmative Action Services, 901 West Franklin Street, Box 3022, (804) 367-1347

ACCREDITATION

Virginia Commonwealth University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools.

EFFECTIVE BULLETIN

The bulletin issued in the academic year a student enters or re-enters a degree program is the one containing the requirements that student must complete to earn his degree.

Students in continuous enrollment may fulfill the requirements of the bulletin issued the year they entered VCU, or switch to a later bulletin. In either case, students must fulfill the requirements listed in the bulletin they choose.

RIGHT RESERVED

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.

1992–93 University Calendar

August

Monday–Wednesday	24–26	MCV Campus Orientation and Registration
Monday–Friday	24–28	Orientation and advising for all Academic Campus students
Tuesday	25	Faculty Meeting, 8:30 am—Academic Campus; Faculty Meeting, 3:30 pm—MCV Campus
Thursday	27	Evening Studies Registration, Registration for New, Transfer, Readmit Day students—Academic Campus
Thursday	27	Classes begin at 8:00 am—MCV Campus
Friday	28	Registration, Continuing Day students—Academic Campus
Thursday–Thursday	27–Sept. 3	Add/Drop and Late Registration—MCV Campus
Saturday	29	Official date for certifying August diploma
Monday	31	Classes begin at 8:00 am—Academic Campus
Monday–Thursday	31–Sept. 3	Add/Drop and Late Registration—Academic Campus

September

Monday	7	Labor Day Holiday
Friday	25	Last day for Fall degree candidates to submit graduation applications to their advisors for December degrees
Tuesday	29	Last day for undergraduate students to submit work for removal of incompletes from Spring semester or Summer sessions—Academic Campus

October

Friday	23	Last day to drop a course with a mark of “W”—both campuses (except for courses not scheduled for the full semester)
Monday–Friday	26–Nov. 6	Advising for Spring semester students

November

Monday	9	Spring semester Advance Registration begins for all students (including Evening students)
Wednesday	25	Thanksgiving holiday begins at 5:00 pm—No evening classes will meet
Monday	30	Thanksgiving holiday ends at 8:00 am

December		
Friday	11	Last day of classes for Fall semester—both campuses, Evening studies
Monday–Friday	14–18	Saturday classes meet December 12 Final examinations for Fall semester—MCV Campus
Monday–Saturday	14–19	Final examinations for Fall semester—Evening Studies classes
Monday–Tuesday	14–22	Final examinations for Fall semester—Academic Campus Day classes
Tuesday	22	Holiday vacation begins at 5:00 pm
Saturday	26	Official date for certifying December diploma
Monday	28	Holiday Intersession classes begin
January		
Saturday	9	Holiday Intersession classes end
Tuesday–Friday	12–15	Orientation and advising for all Academic Campus students
Thursday	14	Registration for New, Transfer, Readmit Day students—both campuses Evening Studies Registration
Friday	15	Registration, Continuing Day students—Academic Campus
Monday	18	Martin Luther King Jr. Holiday
Tuesday	19	Classes begin at 8:00 am—both campuses
Tuesday–Thursday	19–21	Add/Drop and Late Registration for all students
Friday	29	Last day for spring degree candidates to submit graduation applications to their advisors for May degrees
February		
Tuesday	16	Last day for undergraduate students to submit work for removal of incompletes for Fall semester—Academic Campus
March		
Friday	12	Last day to drop a course with a mark of “W”—both campuses (except for courses not scheduled for the full semester)
Saturday	13	Spring vacation begins at noon—both campuses
Monday	22	Spring vacation ends at 8:00 am—both campuses Summer Registration begins—Academic Campus
Monday–Friday	22–Apr. 2	Advising for Fall semester students
April		
Monday	5	Fall semester Advance Registration begins for all students (including Evening students)
May		
Tuesday	4	Day classes end for Spring semester—Academic Campus—Evening classes continue through May 8
Wednesday	5	Study day—Academic Campus day classes
Thursday–Friday	6–14	Final examinations for Spring semester—Academic Campus day classes

May

Friday	7	Last day of classes for Spring semester—MCV Campus
Monday–Friday	10–14	Final examinations for Spring semester—MCV Campus
Monday–Saturday	10–15	Final examinations for Spring semester—Evening Studies classes
Saturday	22	Commencement (including August and December graduates)
Monday	24	Summer sessions begin

Summer Sessions 1993**May**

Monday–Friday	24–June 11	3-week summer pre-session
Monday–Thursday	24–June 24	5-week summer pre-session
Monday	31	Memorial Day holiday

June

Tuesday/Wednesday– Wednesday/Thursday	1/2–July 21/22	8-week evening summer session
Monday–Wednesday	21–July 21	4½-week summer session
Monday–Thursday	21–July 29	6-week summer session
Monday/Tuesday– Wednesday/Thursday	21/22–Aug 11/12	8-week evening summer session
Monday–Thursday	28–July 29	5-week summer session

July

Friday	2	Last day for summer degree candidates to submit graduation applications to their advisors for August degrees
Monday	5	Independence Day Holiday
Tuesday	6	Evening Studies Registration for Fall semester begins
Thursday–Friday	22–Aug 20	4½-week summer session

August

Monday–Friday	2–20	3-week post session
Friday	20	Summer sessions end

Tentative Fall 1993 Beginning Dates**August**

Thursday	26	Classes begin at 8:00 am—MCV Campus
Monday	30	Classes begin at 8:00 am—Academic Campus

The 1993-94 University Calendar will be printed in the 1993-94 VCU Resource Guide.



Dear Student:

It is my pleasure to welcome you to Virginia Commonwealth University.

As Virginia's largest public urban university, VCU is one of the most diverse institutions in the state. Diversity finds expression in the University's multicultural students and faculty, its multifaceted architecture, and its multidisciplinary course offerings. VCU's programs range from the arts to business, from the sciences and humanities to government and public affairs, from social work to education. You will find credit and noncredit offerings for full-time and part-time students as well as for practicing professionals. You will benefit from our extensive research and public service, athletic and cultural activities, libraries, and student centers. Our capable and committed faculty are ready to assist you, augmented by an array of support services designed to help you achieve your potential.

VCU is an extraordinary institution. We are proud to have you here as you pursue your education.

Sincerely,

A handwritten signature in black ink that reads "Eugene P. Trani". The signature is written in a cursive, flowing style.

Eugene P. Trani
President

PART I — Virginia Commonwealth University

THE UNIVERSITY COMMUNITY

Virginia Commonwealth University is a state-aided institution with an enrollment of 21,608 undergraduate, graduate, and health professions students studying on its two campuses in Richmond, Virginia. The Medical College of Virginia Campus is located near the financial, governmental, and shopping areas of downtown Richmond; the Academic Campus is two miles west in Richmond's historic Fan District, a residential area that dates from the nineteenth century.

The University takes its founding date of 1838 from the year in which the Medical College of Virginia was created as the medical department of Hampden-Sydney College. MCV became an independent institution in 1854 and state-affiliated in 1860.

VCU's Academic Campus began in 1917 as the Richmond School of Social Work and Public Health. In 1925 it became the Richmond Division of the College of William and Mary; and in 1939 its name was changed to Richmond Professional Institute of the College of William and Mary, from which it separated in 1962 to become an independent state institution.

In 1968 the two schools merged to form Virginia Commonwealth University: the undergraduate, graduate, and professional programs of Richmond Professional Institute joined with one of the largest and most comprehensive medical centers on the East Coast to create a major state university.

VCU boasts a diverse student body and one of the largest evening colleges in the United States.

The University ranks among the top 75 of the nation's colleges and universities in attracting federally funded research grants; and its faculty, representing the finest American and foreign graduate institutions, enhance VCU's position among the important institutions of higher learning in the United States via their work in the classroom, the laboratories, the hospital, and as published in scholarly journals. VCU maintains active communications with its growing cadre of alumni and enjoys a cooperative and stimulating relationship with the city of Richmond, which encompasses the arts, the business community, the architectural community, and local government. Today VCU operates a major teaching hospital and is composed of a college, 12 schools, and the School of Graduate Studies. These academic units offer one associate, 57 baccalaureate, 60 masters, 19 doctoral, two first-professional, and 13 post-baccalaureate certificate programs.

VCU's location in historic Richmond affords its students the benefit of living in one of the South's most cosmopolitan cities. Located in central Virginia, Richmond is a two-hour drive from the Atlantic seashore to the east, Appalachian mountain recreational sites to the west, and Washington, D.C., to the north. A wide range of cultural, educational, and recreational facilities and activities is available in the Richmond area, including a full performance schedule at VCU's own Performing Arts Center. VCU's proximity to downtown Richmond, which is Virginia's capital and a major East

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Coast financial and manufacturing center, provides students with opportunities for part-time employment and student housing in a variety of settings.

ACADEMIC COMPOSITION OF THE UNIVERSITY

VCU is composed of the following college and schools:

- College of Humanities and Sciences, including the School of Mass Communications
- School of Allied Health Professions
- School of the Arts
- School of Basic Health Sciences
- School of Business
- School of Community and Public Affairs
- School of Dentistry
- School of Education
- School of Graduate Studies
- School of Medicine
- School of Nursing
- School of Pharmacy
- School of Social Work

MISSION OF THE UNIVERSITY

Virginia Commonwealth University is a public, urban, research university, supported by the Commonwealth of Virginia to serve the people of the commonwealth and the nation. The university provides a fertile and stimulating environment for learning, teaching, research, creative expression, and public service. Essential to the life of the university is a faculty actively engaged in scholarship and creative exploration—activities that increase knowledge and understanding of the world, and inspire and enrich teaching.

The university is dedicated to educating full- and part-time students of all ages and diverse backgrounds in an atmosphere of free inquiry and scholarship, so they may realize their full potential as informed, productive citizens with a lifelong commitment to learning and service.

The university serves the local, state, national, and international communities through its scholarly activities, its diverse educational programs, and its public service activities. As an institution of higher learning in a metropolitan center that is also the capital of the commonwealth, the university enjoys unique resources that enrich its programs and offer special opportunities for contributing its intellectual and creative expertise in the development of innovative approaches to meet the changing needs of

our society.

The goals of Virginia Commonwealth University in carrying out its mission are to

Provide undergraduate education that includes a broad and rigorous foundation in the arts, sciences and humanities, and explores the ideas and values of humankind.

Offer nationally and internationally recognized professional and graduate programs leading to doctoral, master's, and other terminal and advanced degrees in the professions, the sciences, the humanities, and the arts.

Foster a scholarly climate that inspires creativity, a free and open exchange of ideas, critical thinking, intellectual curiosity, freedom of expression, and intellectual integrity.

Expand the boundaries of knowledge and understanding through research, scholarship, and creative expression in the sciences, arts, humanities, and the professional disciplines.

Value and promote racial and cultural diversity in its student body, faculty, administration, and staff to enhance and enrich the university.

Develop and sustain a faculty of the highest quality by providing an environment conducive to their achieving and maintaining national and international stature and by continuing to attract both recognized scholars and outstanding individuals with a high potential for scholarly achievement and excellence in teaching.

Provide an optimal environment for educating and training health care professionals, for conducting research to improve health care and delivery, and for meeting the needs of patients and the community in a comprehensive health care setting.

Use the urban environment as a laboratory for studying and developing new approaches to problems pertaining to the public and private sectors.

Support, through its commitment to public exhibitions, performances, and other cultural activities, the imaginative power of the liberal, visual, and performing arts to express the problems and aspirations of humanity *and to enrich* the lives of individuals.

Develop innovative programs for continuing education that establish permanent intellectual connections between the university and its constituents, enhance professional competence, and promote dialogue on public issues.

Offer diverse opportunities for individuals to benefit from higher education through a variety of avenues to include flexible scheduling for part-

time undergraduate and graduate students, open admission for nondegree seeking students with appropriate preparation, advanced degree programs for working professionals, selected programs in diverse locales, admission for graduates with appropriate associate degrees of arts or sciences, and support programs for specially admitted students.

Promote interdisciplinary studies within the university to bring new perspectives to bear on complex problems.

Mobilize its creative energies and its expertise to meet the needs of society and individuals in its unique role as Virginia's major urban university.

GENERAL EDUCATION AT VIRGINIA COMMONWEALTH UNIVERSITY

The faculty at Virginia Commonwealth University are committed to the mission of excellence and diversity in undergraduate education.

The College of Humanities and Sciences and the Schools of the Arts, Business, Community and Public Affairs, Education, and Social Work are each responsible for establishing particular course requirements for their students. Beginning in 1986, however, faculty from these schools and from the baccalaureate granting schools on the health sciences campus began to develop a set of common expectations for their students. These common expectations unite faculty in fields as diverse as psychology and art history, accounting and social work, urban studies & planning and health & physical education. It is VCU's goal to provide our students with an excellent general education experience as well as specialized training in a disciplinary or professional field. Eight areas for common general education were developed by faculty and were approved by the University Undergraduate Curriculum Committee in 1989.

Students should be able to **READ KNOWLEDGEABLY** and to **WRITE EFFECTIVELY**.

Students should **ACHIEVE COMPETENCY IN BASIC MATHEMATICS**. They should **ACHIEVE AN UNDERSTANDING OF BASIC CONCEPTS IN MATHEMATICS, STATISTICS, AND COMPUTING** which are required in understanding and solving modern technological problems.

Students should **ACHIEVE LITERACY IN SCIENCE** by studying the process, concepts, and significant details of modern experimental science. They should also **DEVELOP AN APPRECIATION OF THE ROLE OF SCIENCE**

in the development and functioning of the modern world.

Students should **ACQUIRE AN UNDERSTANDING OF THEIR SOCIAL ENVIRONMENT AND THE WAY IT CHANGES**. To this end they should **DEVELOP AN UNDERSTANDING OF THE THEORETICAL PERSPECTIVES, KEY CONCEPTS, AND METHODS OF ANALYSIS** of at least one social science.

Students should **DEVELOP A FULLER APPRECIATION OF THE HUMAN CONDITION AND ITS HISTORICAL DIMENSIONS** through the study of those disciplines traditionally associated with the humanities. Humanities courses should require **CRITICAL READING, THINKING, AND WRITING**.

Students should **DEVELOP AN UNDERSTANDING OF THE DIVERSITY OF AESTHETIC AND ETHICAL VALUES** in our world and the role they play in our public and private lives at both the professional and personal levels. Students should be able to **EXAMINE CRITICALLY SUCH SYSTEMS AND BELIEFS, TO FORM RATIONAL ARGUMENTS AND JUDGMENTS** relative to aesthetics and ethics.

Students should **DEVELOP AN UNDERSTANDING OF CULTURAL DIVERSITY AS SHAPED BY GENDER, ETHNICITY, LANGUAGE, HISTORY AND TRADITION**, through the acquisition of knowledge and skills which will enable the student to interact constructively with culturally diverse people.

Students should **DEVELOP THE HABIT OF SELF-EXPLORATION**, enabling them to become lifelong learners.

These goals will be achieved by an array of curricular and programmatic strategies. To guarantee the continued renewal of VCU general education, students' learning in these areas will be regularly assessed. Assessment results should be used to inform students of their progress in achieving the goals of general education, to enhance general education courses, and to inform the periodic reformulation of the goals and the strategies.

ACADEMIC RESOURCES

VCU 101 Introduction to the University. This course is designed to orient new students to the rich traditions and purposes of an education at Virginia Commonwealth University. It is designed to assist students in making the transition

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from a high school program, from a community college or other university program, or from the world of work to academic life at VCU. Through lectures, class discussion, on-campus projects, readings, and the opportunity to work with faculty in a small group setting, students can discover the resources and services of VCU, assess their academic strengths and limitations, consider academic and career goals, and clarify expectations about being a student at VCU. After this course, students will better understand their "fit" as a new member of the VCU community and the ways to achieve a personally rewarding and successful academic program.

University Library Services. University Library Services (ULS) administers the major research libraries on both campuses. Collections are housed in James Branch Cabell Library on the academic campus, Tompkins-McCaw Library on the MCV campus, and in three learning resource centers. In addition, ULS operates Media Production Services.

Both libraries provide an assortment of services, including reference assistance from professional librarians, library orientation tours and bibliographic instruction, computer-assisted literature searches, and self-service photocopiers.

The online catalog links the libraries on both campuses and enables patrons to determine the status of library materials. Through interlibrary loan, students may borrow books from public and academic libraries throughout the United States.

James Branch Cabell Library's growing collections support the programs of the academic campus and also contain a significant amount of health science materials. More than 670,000 volumes and over 5,700 journal titles are housed in the five-story building at the heart of the academic campus. ULS is designated as a partial depository for U.S. Government documents and as an official U.S. Patent Depository. ULS also offers services for persons with disabilities. Both libraries are wheelchair accessible.

The comprehensive collections of Tompkins-McCaw Library support the University's teaching and research needs in the health sciences and include more than 265,000 volumes and over 2,400 journals. Tompkins-McCaw Library is a designated resource library for the southeastern states in the Regional Medical Library System.

Media Production Services, located in Sanger Hall on the MCV campus, offers medical illustration, graphic art, computer slide imaging,

photography services and instructional design services.

The three learning resource centers contain nonprint materials, such as records, tapes, microscopes, posters, and filmstrips. The Cabell LRC houses materials helpful to students in the academic campus curriculum, while the two learning resource centers on the MCV campus are related to the health sciences curriculum.

ULS is a member of the Center for Research Libraries, the Richmond Area Library Cooperative, the Association of Southeastern Research Libraries, the Richmond Area Film Video Cooperative, and the Southeast Library Network.

Computing Services

Computing support is provided by three primary centers: Academic Campus Computing Services, Health Sciences Computing Services, and the University Computer Center. Basic services from these centers include consulting help in the use of all university computing resources, teaching short courses, advice on acquisition of computer systems, operation of local computer facilities and data networks, optical scanning for test grading, faculty evaluation and other surveys, and microcomputer software site licensing. A variety of other services are provided to support micro, mini and main-frame computing.

Academic Campus Computing Services. The Academic Campus Computing Services (ACCS) operates two DECsystem UNIX computer systems. A variety of software packages are available for use with the DECsystem computers. The programming languages available are BASIC, C, Pascal, FORTRAN 77, Lisp, GKS and Prolog. Application software includes wordprocessing (WordPerfect), editing (vi, jove), text processing (troff), text analysis (Writer's Workbench), microcomputer communications (Kermit), electronic mail (ELM, mail), networking (ftp, rlogin, telnet), statistics (SPSS, Splus), spreadsheet (20/20) and database (Unify). To gain access to the UNIX-based software as well as Macintosh and IBM PC/compatible software, ACCS maintains public-access terminal and microcomputer facilities that are strategically located around the campus: the Cabell Library, the School of Business Building, the Hibbs Building, and the General Purpose Academic Building. Also, dialup facilities are available to provide access from remote locations.

ACCS also operates and maintains the Academic Campus data network (ACnet), which is an Ethernet network that uses the TCP/IP communications protocol. The ACnet is in or near most of the buildings on the academic campus. This allows high speed data communications between the general purpose DECsystem computers, departmental computer systems and sub-networks, and terminal servers. The ACnet is part of VCUnet that links the Academic Campus, Health Sciences Campus, and the University Computer Center. In turn, VCUnet is connected to the Virginia Education and Research Network (VERnet), which is VCU's link to the Internet, and provides access to BITNET.

Application forms for access to the DECsystems as well as for accounts on the IBM mainframes (at the University Computer Center) and the VAX systems (at Health Sciences Computing Services) are available from the ACCS Customer Service Window, located in room B-9 of the Cabell Library.

Health Sciences Computing Services. Health Sciences Computing Services (HSCS) on the MCV campus manages a VAXcluster (VMS) consisting of multiple VAXes, which provide interactive computing to public and private terminals around the campus. The VAXes provide a rich variety of software packages for statistical analysis (SAS, SPSSX, GLIM), molecular modeling (CHEMX, FRODO, SYBYL), DNA sequence analysis (GCG), simulation (SPICE), numerical methods (IMSL, NAG, LINPACK), and graphics (SASGRAPH, GKS). Computer languages available include FORTRAN, SAS, Pascal, BASIC, C, and COBOL. Other areas include database (INGRES, Datatrieve, forms management (FMS), data entry (EasyEntry), word processing (WordPerfect), and text processing (TEX). In addition, the VAXes are used extensively for electronic mail (connected to BITNET and Internet) and information dissemination for the academic community.

A limited number of IBM-compatible and Apple Macintosh microcomputer systems are available. External devices such as optical scanners, slide-makers, plotters, and digitizers are connected to these microcomputers. SUN, IBM AIX, and VAXstation graphics workstations are also available. Many departments and schools maintain their own microcomputer labs.

Data switches provide access to central (VAX and IBM) and departmental computing re-

sources, from some 1,800 terminals and personal computers around the campus, and via dialup modems. HSCS manages multiple interconnected Ethernet networks on the MCV campus supporting Novell, TCP/IP and DECnet protocols.

Application forms for access to the VAX systems as well as for accounts on the IBM Mainframes (at the University Computer Center) and the DECsystems (at the Academic Campus Computing Services) are available from HSCS.

University Computer Center. The University Computer Center (UCC) has the responsibility to provide and support mainframe computing capability to the university administration, faculty, staff, and students. UCC operates two IBM mainframes: one using the VM operating system and the other using MVS/XA. The basic services include TSO, WYLBUR, and CICS on-line, systems and batch job processing. The programming languages available are FORTRAN, COBOL, SAS, C, Pascal, PL/I, Lisp, Algol and SNOBOL. Packages are available for statistical analysis (SAS, SPSS, BMDP, OSIRIS), numerical methods (IMSL, NAG, ACRITH), simulation (GPSS-V, Spice, Censpac), graphics (SAS-GRAPH), and text formatting (SCRIPT). Additional software is available as a result of IBM's Higher Education Software Consortium. Remote job entry (RJE) is provided to the IBM system from the DECsystems and VAX facilities.

UCC is also the location that provides computing equipment and staff operations that supports the Medical College of Virginia Hospital Information System which includes PABS (Patient Accounting Billing System) and MIS (Medical Information System).

The UCC facilities and staff offices are located halfway between the medical and academic campuses.

Communications. The Academic Campus Data Network (ACNet), the VAX's on the MCV campus, and the University Computer Center are linked together using the TCP/IP suite of protocols to form the VCUnet. VCUnet provides access to BITNET, VERnet (the Virginia Education and Research Network), and the Internet.

Center for Educational Development and Faculty Resources (CEDR). CEDR has as its mission the strengthening of University resources devoted to education. This mission is

pursued through work in the areas of instructional, faculty, and student development. In each area, extramural funding is sought to augment basic University capabilities.

Currently, examples in the area of instructional development include a project to strengthen cancer education in nursing, medicine, and dentistry (funded by the National Cancer Institute), and provision of staff support to assessment.

In the area of faculty development, operation of the Faculty Resource Office is the major activity. This office provides information to faculty on career development opportunities, on extramural funding sources for scholarly projects; and offers consultation on teaching issues. Faculty workshops are offered from time to time. CEDR also coordinates the Central Virginia Faculty Consortium.

Student development activities include the provision of academic skills development services on the MCV campus and the nurturing of minority students' (from both campuses) career interests in the health professions.

Most CEDR projects are carried out in collaboration with faculty from the several schools both informally and through formal appointment as CEDR Faculty Fellows (short term) or joint appointments. Close working relationships are maintained with Sponsored Programs Administration and the University Advancement program.

ACADEMIC SERVICES

VCU seeks to make its courses and programs available to all persons who qualify for college-level work and who wish to enroll. The University has developed programs to improve access to its academic offerings and to prepare special populations for successful college enrollment.

Academic Counseling Office. The Academic Counseling Office was established to assist student-athletes in their efforts toward educational attainment and graduation. The program seeks to help students maximize academic potential while they are members of intercollegiate athletic teams. Over 250 men and women participate in the University's 16 intercollegiate athletic programs. The program sponsors an Academic Enhancement Program which includes tutorial assistance, athletic study sessions, and workshops which are designed especially for student-athletes. The program also provides academic counseling and academic progress reviews for

student-athletes. The Academic Counseling Office works to support the academic progress of student-athletes toward graduation as well as eligibility for participation in intercollegiate athletics.

Division of Continuing Studies and Public Service. The division has major responsibility for the development, coordination, and conduct of the University's continuing and adult education activities, international programs, and public service activities. These programs include evening, summer, and off-campus study, noncredit public service classes, the Survey Research Laboratory, nontraditional study, special student advising, cooperative education, mediated instruction, and international programs. Thousands of central Virginia residents who cannot attend college full time or during the day take advantage of these programs. (Please see Part XIX of this *Bulletin*.)

Senior Citizen Higher Education Program. The act creating this program provides that any legal resident of the state (over the age of 60) who has been a Virginia resident for one year may enroll in courses at Virginia colleges and universities without paying tuition. (Please see Part II of this *Bulletin*.)

Advanced Scholars Program. Qualified high school seniors from area high schools may be permitted to carry college-level courses at the University concurrently while completing the high school diploma. Students are permitted to select those courses of interest and, upon successful completion, receive appropriate college credit. Students are charged tuition. (Please see Part II of this *Bulletin*.)

Early Admission Program. This program allows an exceptional student the opportunity to enroll at the University after the completion of the junior year of high school. (Please see Part II of this *Bulletin*.)

Early Decision Plan. Under this plan, highly qualified freshman applicants applying for the fall semester may be accepted on December 1. If accepted under this plan, the applicant must withdraw applications from all other schools and commit to VCU by January 1.

Advanced Placement. Qualified students who have taken college-level work in secondary schools may receive academic credit and/or advanced placement. (Please see Part II of this *Bulletin*.)

Guaranteed Admission to the Health Science Programs on the MCV Campus and Selected

Programs on the Academic Campus. Qualified freshmen may be admitted to the various health science programs on the MCV campus and selected programs on the academic campus. If accepted, these students will automatically move into the professional-level program or upper-division (graduate) program and will not be required to submit an application for admission to the professional-level program. (Refer to Part II of this *Bulletin*.)

Office of Academic Support. The Office of Academic Support offers a number of services and programs designed to enhance the educational development and success of undergraduate students. The office provides a variety of supportive programs and services which include innovative curricula, tutorial services, academic advising, personal counseling, and career planning in order to maximize student adjustment and academic achievement.

The Program of Services for Students With Disabilities is also a component of the Office of Academic Support. (See Part II of this *Bulletin*.)

BOOKSTORES

The Bookstores provide textbooks and other related materials required for University studies. The academic campus store maintains the largest stock of used books available to VCU students. The Bookstores also carry an extensive line of study aids, reference materials, general books and magazines. In addition, students will find a large assortment of licensed insignia items, including gifts, furniture and apparel. The stores offer a full line of art and office supplies, computer supplies, lab apparel, calculators, greeting cards, candies and snack items.

Payment: Both Bookstores accept cash, Visa, MasterCard and personal in-state checks. Out-of-state checks are accepted only during rush periods.

Refunds and exchanges: The customer must provide a valid cash register receipt. Textbooks may be returned only through the second week of regular classes and must be in absolutely new, unmarked condition.

Academic Campus

Hibbs Building, 900 Park Avenue, (804) 367-1678

Hours: Regular hours are Monday–Thursday 8:00 am–7:15 pm and Friday 8:00 am–4:30 pm. Extended rush hours during heavy use periods of each semester are Monday–Thursday 8:00 am–

9:00 pm; Friday 8:00 am–4:30 pm; and Saturday 10:00 am–3:00 pm. Wholesale book buy-back daily from 2:00 pm–4:00 pm.

MCV Campus

McGuire Hall Building, 12th and Clay Streets, (804) 786-0336

Hours: Monday–Friday 7:45 am–4:30 pm

UNIVERSITY MAIL SERVICES

The United States Postal Service (USPS) provides self service postal vending machines in the lobby of the Mail Services office at 1000 East Marshall Street on the MCV campus and in the University Student Commons on the academic campus. Students may mail packages through the USPS from the Student Commons Postal Center. A full service USPS station at 8th and Marshall Streets is available to support MCV campus students.

All students living in residential housing have dormitory mail boxes. Use of a nine digit zip code is important and should be included on all mail. Mail for dormitory residents should be addressed as follows.

Cabaniss Hall

Student's Name

Room No. _____ Cabaniss Hall

Richmond VA 23298-8000

Bear, McRae, Rudd or Warner Hall

Student's Name

Room No. _____ Hall

Richmond VA 23298-7000

Rhoads Hall

Student's Name

Room No. _____ Rhoads Hall

Richmond VA 23220-8575

Johnson Hall

Student's Name

Room No. _____ Johnson Hall

Richmond VA 23220-8461

Gladding Residence Center

Student's Name

Room No. _____ Gladding Res. Cnt.

Richmond VA 23220-8615

INTERCOLLEGIATE ATHLETICS

Dr. Richard Sander

Athletic Director

The intercollegiate athletic program at VCU continues to grow with the addition of new athletic facilities and upgraded programs. The

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renovated Franklin Street Gymnasium and the new Thalheimer Tennis Center, with an air-supported roof, are among the most modern athletic facilities in the state.

Over 250 student-athletes participate in the 16 athletic programs sponsored by the university. Athletic teams for men include: baseball, basketball, cross country, golf, soccer, tennis, and indoor and outdoor track & field. Women's teams include: basketball, cross country, field hockey, golf, tennis, volleyball, and indoor and outdoor track & field.

All full-time undergraduate students registered at VCU are eligible to compete subject to the rules and regulations governing intercollegiate competition. Students interested in a specific sport should contact the coach through the Department of Athletics, located in the Franklin Street Gymnasium, 819 West Franklin Street, Richmond, VA 23284-2003, (804) 367-1277.

ACADEMIC ORGANIZATION

Virginia Commonwealth University is organized into a college, schools, and departments offering undergraduate and graduate programs. The dean's office of each school provides the general coordination of the academic departments and programs within the school. Listed below are the schools with their departments and programs.

The College of Humanities and Sciences

School of Mass Communications
Advertising/Public Relations
Broadcasting
Editorial News
Public Relations
Program in Afro-American Studies
Interdisciplinary Degree Program in Science
Department of Biology
Department of Chemistry
Department of English
Department of Foreign Languages
French
German
Spanish
Comparative Literature
Department of History and Geography
Program in International Studies
Department of Mathematical Sciences
Division of Applied Mathematics and Mathematics
Division of Computer Science
Division of Operations Research and Statistics
Department of Military Science
Department of Philosophy and Religious Studies
Program in Judaic Studies
Department of Physics and Physical Science

Dual Physics/Engineering Program
Department of Political Science
Department of Psychology
Department of Sociology and Anthropology
Pre-professional Studies in Health Sciences
Dental Hygiene
Dentistry
Health Information Management
Medicine
Medical Technology
Nursing
Nuclear Medicine Technology
Occupational Therapy
Optometry
Pharmacy
Physical Therapy
Veterinary Medicine
Pre-professional Study for Engineering
Pre-professional Study for Law
Program in Women's Studies
Environmental Studies

School of Allied Health Professions

Department of Gerontology
Department of Health Administration
Department of Medical Technology
Department of Nurse Anesthesia
Department of Occupational Therapy
Program in Patient Counseling
Department of Physical Therapy
Department of Radiation Sciences

School of the Arts

Art Foundation Program
Department of Art Education
Department of Art History
Art Historical
Museum Studies
Art Historical/Studio
Department of Communication Arts and Design
Department of Crafts
Ceramics
Fiber/Fabric Design
Glassworking
Jewelry/Metalsmithing
Wood/Furniture Design
Department of Dance/Choreography
Department of Fashion
Fashion Design
Fashion Merchandising
Fashion Art and Advertising
Department of Interior Design
Department of Music
Performance
Composition
Music Education
Department of Painting and Printmaking
Painting
Printmaking
Department of Photography (No Undergraduate Degree)
Department of Sculpture
Department of Theatre
Performance
Design/Technical
Theatre Education

School of Basic Health Sciences

Department of Anatomy
 Department of Biochemistry and Molecular Biophysics
 Department of Biostatistics
 Program in Biomedical Engineering
 Department of Human Genetics
 Department of Microbiology & Immunology
 Department of Pharmacology & Toxicology
 Department of Physiology

School of Business

Advanced Program
 Business Administration Program
 Business Foundation Program
 Department of Accounting
 Department of Decision Sciences and Business Law
 Production/Operations Management
 Department of Economics
 Department of Finance and Marketing
 Finance
 Finance
 Insurance/Risk Management
 Marketing
 Real Estate and Urban Land Development
 Department of Information Systems
 Department of Management
 Human Resources Management/Industrial Relations
 Management
 Administrative Systems Management
 General Management
 Owner-Managed Business

School of Community and Public Affairs

Department of Justice and Risk Administration
 Administration of Justice
 Law Enforcement
 Juvenile Justice
 Corrections
 Legal Studies
 Safety and Risk Administration
 Department of Recreation, Parks, and Tourism
 Recreation and Park Management
 Therapeutic Recreation
 Travel and Tourism
 Department of Rehabilitation Counseling
 General Client Services Option
 Alcoholism and Drug Client Services Option
 Department of Urban Studies and Planning
 Environment
 Information Systems
 Planning
 Public Policy and Social Change
 Urban Management

School of Dentistry

Division of Dental Hygiene
 Department of Endodontics
 Department of Oral Pathology
 Department of Oral and Maxillofacial Surgery
 Department of Orthodontics
 Department of Pediatric Dentistry
 Department of Periodontics
 Department of Removable Prosthodontics
 Department of Restorative Dentistry

School of Education

Division of Educational Studies
 Educational Foundations
 Division of Health and Physical Education
 Physical Education
 Health Education
 Division of Teacher Education
 in cooperation with the College of Humanities and
 Sciences Extended Teacher Preparation Programs
 Early Education NK-4
 Middle Education 4-8
 Secondary Education 8-12
 Biology
 Chemistry
 English
 French
 General Science
 German
 History/Social Science
 Mathematics
 Physics
 Spanish
 Special Education K-12
 Emotional Disturbance
 Mental Retardation

School of Medicine

Department of Anesthesiology
 Department of Dermatology
 Department of Family Practice
 Department of Internal Medicine
 Department of Legal Medicine
 Department of Neurology
 Department of Obstetrics and Gynecology
 Department of Ophthalmology
 Department of Otolaryngology
 Department of Pathology
 Department of Pediatrics
 Department of Physical Medicine and Rehabilitation
 Department of Preventive Medicine
 Department of Psychiatry
 Department of Radiation Oncology
 Department of Radiology
 Department of Surgery

School of Nursing

Department of Community and Psychiatric Nursing
 Department of Maternal-Child Nursing
 Department of Medical-Surgical Nursing
 Department of Nursing Administration
 and Information Systems

School of Pharmacy

Department of Medicinal Chemistry
 Department of Pharmacy and Pharmaceutics

School of Social Work

Baccalaureate Social Work Program
 Master of Social Work Program
 Ph.D. Program in Social Policy and Social Work

For a complete list of Academic degree programs, please see Academic Programs in this *Bulletin*.



PART II — Undergraduate Admissions

GENERAL POLICY GOVERNING ADMISSIONS AND ENROLLMENT

As a comprehensive, metropolitan, public institution, Virginia Commonwealth University seeks to provide excellent higher education for those who will profit from an intellectually challenging experience. The University encourages applications from individuals who are sincere in their desire to study in an environment where excellence in teaching, research, scholarly activities, and community services are stressed. VCU also encourages applications from returning adult students whose education may have been interrupted.

Recognizing the value of a diverse student body, the University invites applications from all qualified persons without regard to age, race, sex, religion, disability, or national origin. Although the University has a primary responsibility to educate Virginia residents, the value and contribution of a diverse student body is recognized and the enrollment of students from other states and countries is encouraged. Entrance requirements are in full compliance with all applicable federal and state statutes, rules, and regulations.

All persons admitted and enrolled at the University are classified as either degree-seeking or special students (nondegree-seeking). Degree-seeking students are presumed to be working toward a degree in approved educational programs, while special students are permitted to enroll in classes on a semester/term basis. Recognizing a commitment to educate students

who desire to take courses primarily for self improvement or to continue life-long education, the University also encourages the enrollment of special (nondegree) students. The University will enroll as many qualified degree and nondegree students as resources permit. When resources are limited, spaces will go to those who present credentials showing the greatest potential for academic success in degree programs and for contributing to the University's diverse programs and mission.

The Board of Visitors establishes general admission policies on the recommendation of the university administration. Admissions criteria and policies are recommended by University Enrollment Services/Admissions as well as the deans of the schools and college of the University upon advice of their faculties. Entrance requirements for schools and the college within the University may differ. Unique requirements, such as examinations, auditions, portfolios, interviews, licensure, or language proficiency, may be required to demonstrate potential for success in selected programs and courses. The University will select applicants who present the strongest qualifications in scholastic achievement and potential, standardized examinations, and through review of other evidence of potential. Each applicant is reviewed on an individual basis.

CATEGORIES OF STUDENT ENROLLMENT

VCU provides a variety of ways in which a

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student may pursue a course of studies.

Degree-Seeking Student. This student has fulfilled the admission requirements of the University and a particular school and is enrolled in a bachelor's (four-year) degree program or a health sciences preparatory program. A degree-seeking student may engage in studies as either a full-time (12 credits or more per semester) or as a part-time student and may enroll for day and/or evening classes.

Furthermore, a degree-seeking student may pursue a program of studies in one of the following ways:

1. As a **declared departmental major** in a school or college. The student who declares a specific major upon entry to VCU will begin a course of studies leading to a degree in the declared major. (The student may change the major at a later date.)
2. As an **undecided student** within a specific school or college. Students who know the school or college they wish to enter, but not the specific department, may select the "undecided" category within that particular school or college. Students will be advised along general academic lines so they may enroll in courses which will assist them to more clearly define their academic objectives.

Recognizing that some undecided students seeking admission to VCU may not wish to choose a particular school in which to study by the time they apply or enroll, the University recommends that they select the undecided category in the College of Humanities and Sciences. The advising program is flexible enough to suit the interests of any student, yet it is basic to a number of fields of study. During the first year of study, students are encouraged to investigate various fields of study until they find a major that suits their interests and needs.

Students must define these goals and declare a major area of study no later than the semester in which they will complete their 62nd credit (two years of study).

Undergraduate Special Student. A student who meets the requirements for undergraduate eligibility may enroll for credit as a special student in day and/or evening classes at VCU without seeking admission to a degree program.

Undergraduate special students are advised

about course selections and aided in educational and vocational planning by the counselors in the Adult/Nontraditional Programs. Students are also encouraged to seek advising, depending on intended major, from the appropriate office listed below:

School of Business

Office of the Associate Dean for Undergraduate Studies
Business Building, 1015 Floyd Avenue, room 3119, (804) 367-1595

School of Community and Public Affairs

Office of the Assistant Dean
919 West Franklin Street, room 205,
(804) 367-1282

School of Education

Office of the Assistant Dean
Oliver Hall, 1015 West Main Street, room 2090, (804) 367-1309 or Humanities and Sciences (below)

College of Humanities and Sciences

(including humanities, sciences, social sciences, Mass Communications, Pre-Health Sciences, Undecided Majors)
Office of the Associate Dean
Hibbs Building, 900 Park Avenue, room 205,
(804) 367-1673

Health and Physical Education

Department of Health and P.E.
817 West Franklin Street, room 221,
(804) 367-1284

School of Social Work

Office of the Director for the BSW Program
1001 West Franklin Street, room 103,
(804) 367-8495

Permission to enroll as a special student does not assure later admission as a degree-seeking student. Continuance in this status is dependent on academic performance, and special students are subject to the continuation regulations stated in Part V of this *Bulletin*.

The undergraduate special student may pursue course work in one of the following categories:

1. As a **nondegree holder**. This student has not previously earned a baccalaureate degree. The student may take a maximum of 11 credits per semester (part-time).
2. As a **degree holder**. This student has previously earned a baccalaureate degree at VCU or another accredited institution and plans to pursue additional undergraduate course work. The student may take a

maximum of 19 credits per semester.

3. As a **transient student**. This student is presently seeking a baccalaureate degree at another institution of higher education, is in good standing at that institution, and plans to pursue a course of study at VCU for no more than two semesters with the intent of transferring the work back to the home institution to complete the degree. The student may take a maximum of 19 credits per semester and must present a letter from the home institution approving the student's status as a transient student at VCU. (Refer to the Special Student Guidelines in Part II of this *Bulletin*).

Credits earned as a special student will be recorded on the student's permanent academic record. There is no limit placed upon the number of credits that can be earned in this classification. Special students who wish eventually to earn a baccalaureate degree at VCU are encouraged to seek admission to a degree program before accumulating 22 semester credits.

Evening and Summer Studies

VCU day and evening programs are academically integrated, and credit earned in the evening program is identical to credit earned during the day. An evening program student is one who takes only evening program courses designated by the letter "E." (For classification purposes, any student who takes at least one course during the day is classified as a "day student.") A student may register for courses in the evening program as a degree-seeking or a special (nondegree-seeking) student.

Evening and summer program information may be requested by mail, telephone, or by stopping by Adult/Nontraditional Programs, Virginia Commonwealth University, 827 West Franklin Street, Richmond, VA 23284-2523, (804) 367-1400. Refer to Part XIX for additional evening and summer program information.

ADMISSION GUIDELINES

The credentials of undergraduate applicants for admission to degree status are reviewed on an individual basis. Because the number of applicants who meet the requirements for admission exceeds the number that can be admitted, the University selects those candidates who present the strongest qualifications in scholastic achievement and potential as reflected on transcripts

and test scores. Freshman applicants who are interested in the University's academic support program should read the section on Office of Academic Support in Part II of this *Bulletin*. Applicants interested in enrolling as special students should read the Special Student Guidelines that appear in this section.

Freshman Admission Guidelines

An applicant for degree status must be a graduate of an accredited secondary school (or its equivalent) or hold a GED certificate with adequate scores, defined as a composite score of at least 55 on the GED battery. A high school student should submit an application for admission after completion of the junior year, unless applying for the Early Admission or Advanced Scholar programs, in which case the application should be submitted after the sophomore year.

All freshman applicants under the age of 22 are required to submit scores from the Scholastic Aptitude Test (SAT) or American College Test (ACT).

For admission to the College of Humanities and Sciences (including the School of Mass Communications), School of Business, School of Community and Public Affairs, School of Education, or School of Social Work, at least 20 high school units, with the following minimum distribution of subjects, are required: four units in English; three units in mathematics, one of which must be algebra I and one of which must be geometry or algebra II; two units in science, one of which must be a laboratory science; and three units of history or social sciences or government. Students are encouraged to present at least two units in a modern or ancient language. Many programs at the University require at least one year of collegiate study in a modern or ancient language for graduation.

In addition, preference is given to candidates who submit the Advanced Studies Diploma or its equivalent. This diploma requires four units in English; three in social sciences, including world history, United States history, and United States government; three units in mathematics (algebra I, geometry, and algebra II); three units in science drawn from earth science, biology, chemistry, physics, or other advanced science courses; and either three years of one foreign language or two years of two foreign languages.

Applicants seeking admission to programs in the College of Humanities and Sciences (including the preprofessional health-related programs

or pre-engineering), the Schools of Business, Education (especially those interested in the five-year bachelor's/master's program), Community and Public Affairs, and Social Work are encouraged to take additional laboratory science courses in high school. In addition to the above basic requirements in mathematics, applicants to programs in science, computer science, and mathematics are encouraged to take additional trigonometry, advanced algebra, or higher mathematics courses.

Freshman applicants planning to pursue a major in the health sciences (clinical radiation sciences, dental hygiene, medical technology, nursing, occupational therapy, pharmacy, physical therapy) are advised to apply to the preprofessional programs of their choice in the College of Humanities and Sciences.

The University Honors Program offers qualified students interested in health science the opportunity for early acceptance into many of VCU's Medical College of Virginia campus programs.

Freshman applicants who are not admitted with degree status may be eligible to enroll at VCU as special students provided one year has elapsed since their high school graduation date.

Early Decision Plan Guidelines

Highly qualified freshman fall semester applicants who have selected VCU as their first choice and who meet the November 1 early decision application deadline may be admitted to VCU by December 1. Early decision applications are not processed for the spring semester.

School of the Arts Freshman Admission Guidelines

The School of the Arts does not have specific high school unit requirements but does require applicants to have graduated from high school or hold a GED. In place of the units, degree applicants must complete the School of the Arts Admissions Packet which is designed to measure the applicant's ability and aptitude for the arts. **The packet must be filed in addition to the university undergraduate application for admission** and forms an important part of the basis on which an admission evaluation will be judged. With the exception of fashion merchandising and some concentrations in art history, applicants to the visual arts (including technical/design theatre) are required to complete the

drawing and design exercises specified in the packet. Additional artwork should not be submitted unless requested. Applicants to the departments of Dance/Choreography, Music, or Theatre must complete the written information in the packet and are required to participate in an audition arranged by the appropriate department. Applicants to the Department of Music must also show evidence of having attained proficiency in one or more areas of music performance and must take the musicianship placement examination.

Transfer Admission Guidelines

Transfer applicants are considered for admission provided they present evidence of good standing at the last institution attended. Although a minimum cumulative grade-point average of 2.0 on a 4-point scale in all nonremedial credits attempted at all accredited colleges attended is required for admission, preference is given to transfer applicants presenting a GPA of at least 2.25. Transfer candidates who have earned fewer than 30 semester credits/45 quarter credits and who are under 22 years of age must submit the SAT or ACT results and must also meet specific guidelines listed in the Freshman Admission Guidelines section.

Some programs have additional requirements for admission as a transfer student. For example, transfer applicants to the Schools of the Arts, Business, and Mass Communications on the academic campus, and to the health science programs on the Medical College of Virginia campus should consult the appropriate section of this bulletin for admission requirements.

Transfer applicants who are not admitted with degree status may be eligible to enroll as special (nondegree-seeking) students as determined by University Enrollment Services/Admissions.

VCU encourages students enrolled in a Virginia community college to transfer to VCU. Each Virginia community college has been supplied with the *VCU Transfer Guide* that provides transfer information for specific schools, departments, and programs at VCU. Students planning to transfer should read this guide carefully and should also consult with their community college counselors regarding the specific information in the transfer guide. Applicants from Virginia Community Colleges should please note that their acceptance or denial, and, if enrolled, their subsequent progress and grades of their first year, will be reported back to the

community colleges from which they transferred. This will enable the community colleges to evaluate the effectiveness of their programs. The information will be protected as confidential, and used internally only for assessing and improving the community colleges' academic programs.

Transfer applicants who are ineligible to return to their former institutions due to academic suspension may not apply to VCU for a period of one year for the first suspension and five years for the second suspension.

Transfer applicants who have been suspended from another institution for nonacademic or disciplinary reasons will be referred to the Office of the Vice-Provost for Student Affairs for preadmission clearance.

Readmission Guidelines

Students who withdraw from all courses after the first week of the semester are considered to have been enrolled for that semester. Students who have not attended VCU for four or more successive semesters (including summer) must submit an application for readmission to University Enrollment Services/Admissions. **Students who have attended another institution or who have been suspended since their last enrollment at VCU also must apply for readmission.** This must be done prior to the application submission date for the semester in which the student plans to return.

Students who wish to return to VCU after enrolling at another institution will be considered as transfer applicants and will be reviewed for admission based on the transfer admission guidelines related to good standing and cumulative grade-point average. Students who attend another institution during periods of suspension from VCU will be considered as readmitted students for admission purposes and will assume their VCU grade-point average and academic status upon their return.

Readmission applicants who wish to change their major may be required to meet additional requirements for some programs. Applicants to the School of the Arts must submit the School of the Arts Admissions Packet.

Students may apply for readmission to VCU for the semester following completion of the first suspension period (two semesters, one of which may be summer). Under certain circumstances, students may be considered for readmission from the second and final suspension after a period of

five years. Students on second suspension who wish to return before the required completion of the five-year suspension period must appeal their readmission to the Academic Status Committee. Students should contact the dean's office of the school or college from which they were suspended to initiate this process. For more information on suspension policies, refer to Section V of this bulletin.

Applicants who have been suspended from the University for nonacademic or disciplinary reasons will be referred to the Office of the Vice-Provost for Student Affairs for preadmission clearance.

International Student Admission Guidelines

VCU encourages qualified international students, both immigrant and nonimmigrant, to seek admission to VCU. Complete information and application materials for international applicants may be obtained from UES/Admissions-International, Virginia Commonwealth University, Richmond, VA 23284-2526, USA.

English Language Proficiency Requirement. To ensure maximum benefit from academic study at VCU, all non-native English-speaking applicants, regardless of immigration status, must provide evidence of English language proficiency prior to admission and/or prior to enrollment in the University.

Evidence of English language proficiency will be evaluated based on factors such as length of stay in the United States, amount and type of formal U.S. education, Test of English as a Foreign Language (TOEFL) scores, and Scholastic Aptitude Test (SAT) scores. In general, VCU requires a minimum score of 550 on the TOEFL for admission, but some programs may require a higher TOEFL score. The University reserves the right to require additional testing and remedial study in the VCU English Language Program prior to full-time enrollment in university courses. The University offers a full-time English as a Second Language non-credit program. For information on this program including fees, contact the Center for International Programs, Virginia Commonwealth University, Richmond, Virginia 23284-3043, USA (804) 367-2551.

Nonimmigrants (students with temporary U.S. visas). Due to the time constraints involved in processing international applications and ob-

taining visas, prospective international applicants should submit the application for admission at least 9 months before they plan to enroll. In order for immigration documents to be issued, all required admission credentials must be submitted no later than eight weeks prior to registration for classes. Applicants who are unable to meet the credentials deadline should plan to defer their intended term of entry.

As required by U.S. regulations and by VCU admission policies, nonimmigrant applicants must demonstrate

1. satisfactory academic achievement
2. adequate English language proficiency as described above
3. ability to finance all educational and living expenses

Applicants must submit academic records that demonstrate successful completion of secondary school education (usually 12 years of pre-university study) in their own country.

VCU is unable to provide financial support for undergraduate international students. Therefore, applicants who need a student (F-1) visa or a visiting scholar (J-1) visa also must present documented evidence of available financial support to cover annual living and educational expenses while studying at VCU.

U.S. Immigration and Naturalization Service regulations usually do not allow nonimmigrant students to study at VCU as special (nondegree-seeking) students. The University registers international students **only** if they present a current and valid visa that permits enrollment in a university. Proof of current visa type must be submitted to University Enrollment Services/Admissions prior to enrollment unless the applicant is requesting an F-1 or J-1 visa. F-1 students and J-1 visiting scholars admitted to VCU must submit copies of all immigration documents to the international student advisor prior to enrolling in classes.

Immigrants (permanent residents, resident aliens, and asylum applicants). Since immigrant applicants usually are in the U.S. at the time an application is submitted, these students are required to meet the same application deadlines as U.S. citizens.

Refer to the freshman admission guidelines, transfer admission guidelines, and admission procedures for specific program requirements.

If educated in the U.S., immigrant applicants will be considered for admission under the same

academic policies as those applicable to U.S. citizens. If educated outside the U.S., the same academic records are required as those for nonimmigrant students.

The University requires detailed information concerning U.S. immigration status. Proof of permanent residency must be submitted with the admission application.

Special Student Guidelines

The first time a student registers as a special student, he/she must meet the following conditions of eligibility as appropriate to his/her status:

1. Be a high school graduate or GED holder for one year prior to the intended term of entry; or
2. Be an applicant who meets established admission requirements; or
3. Be a transfer student who is eligible to return to the former institution or has been out of school for at least one year for a first suspension or five years for the second suspension incurred at any institution; or
4. Be a former VCU student who is eligible to return. If the student has been suspended from VCU for academic reasons, eligibility for future enrollment must be reestablished in accordance with procedures outlined in the preceding readmission guidelines section and the suspension policies outlined in Part V of this bulletin; or
5. Be a bachelor's degree holder taking undergraduate courses; or
6. Be an eligible transient student. A transient student must present, prior to or at the time of registration, a letter from the home institution which states that the student is in good standing, has permission to study at VCU for transfer back to the home institution, and which outlines the courses to be studied at VCU.
7. Be a non-U.S. citizen who has been cleared through UES/Admissions.

Students are responsible for knowing the terms of eligibility and for stating that they are eligible for special student status.

The first time a student registers as a special student, proof of eligibility will be required. Students may sign an eligibility card stating their eligibility, which will then be verified by University Enrollment Services/Records and Registra-

tion. A student may establish eligibility also by providing verification of high school graduation, GED certification, or verification that he/she is eligible to return to the previous institution of study.

If the student's eligibility cannot be verified or if the student is found to be ineligible, the grade on the course taken will be changed to NC (no credit), there will be no tuition refund, and an administrative hold will be placed on future registrations until eligibility is established.

Degree-holding special students enrolling in graduate courses should refer to the *VCU Graduate Bulletin*.

Special students who plan to earn a degree eventually must apply for degree admission and, depending on their credentials, may be required to complete 15 credits with an earned grade-point average of 2.0 which includes a minimum of two courses (totaling six credits) required by their degree curriculum.

Students studying on foreign student visas, because of U.S. immigration and naturalization regulations, are expected to enroll as full-time students and usually are not permitted to enroll as special students.

The University Enrollment Services/Admissions staff is available to answer general questions, to distribute publications and application forms, and to provide specific information pertaining to the admissions process.

Application forms and other admissions information may be obtained by writing or telephoning University Enrollment Services/Admissions, Box 2526, Virginia Commonwealth University, Richmond, VA 23284-2526, toll free—1-800-841-3638, (804) 367-1222, FAX (804) 367-1899, or by visiting the office at 821 West Franklin Street.

ADMISSION PROCEDURES

It is the responsibility of the applicant to ensure that all required admission documents are forwarded to University Enrollment Services/Admissions before the deadline. (Refer to the Undergraduate Application Deadlines section in Part II of this *Bulletin*). Applications and supporting credentials for programs offered on the academic campus must be submitted to University Enrollment Services/Admissions, Box 2526, Virginia Commonwealth University, Richmond, VA 23284-2526.

Applicants to the professional-level health science programs offered on the MCV campus

(except for the associate degree program in radiologic technology) must have completed a minimum of 60 semester hours of transferable credit from an accredited college or university and must satisfy the prerequisites of the program to which they are applying. Refer to the appropriate section of this bulletin or the *Medical College of Virginia Bulletin* for specific admission requirements. Applications and supporting credentials for the professional-level health science programs must be submitted to University Enrollment Services/MCV Campus Admissions, Virginia Commonwealth University, Richmond, VA 23298-0632.

All applications and supporting documents become the property of the University and are not returned to the applicant. After all required documents have been received, candidates will be notified of the decision by University Enrollment Services/Admissions.

The following must be submitted to University Enrollment Services/Admissions when applying for an undergraduate degree program:

1. **Official Application Form.** Candidates seeking admission or readmission to the University in an undergraduate degree program must file an official Application for Undergraduate Admission before the specified deadline. Students planning to complete a second baccalaureate degree also must submit this application. Care should be taken to read the admissions guidelines in this bulletin, to follow the directions accompanying the application, and to complete all information requested. Incomplete or incorrect applications will result in a processing delay.
2. **Application fee.** Application fees are nonrefundable and should be submitted by check or money order with the application for admission. Do not submit cash. The application fee is \$20. Currently enrolled VCU students applying to undergraduate MCV campus programs are not required to remit the application fee. Applications received without the application fee or an approved waiver request will be returned to the sender.
3. **Official transcript(s).** *Freshman applicants* are required to submit their official high school transcript(s) showing course work completed to date. The secondary

school record should contain courses and grades earned, rank in class, and overall grade-point average. A final transcript will also be required showing date of graduation, overall grade-point average, and rank in graduating class. **Freshman applicants still in high school are encouraged to have their guidance counselors submit the Application for Admission with their transcripts.** GED holders must submit their partial high school transcripts (if high school was attended).

Transfer candidates must request the registrar of each college attended to send an official transcript of their grades. Transfer candidates who have earned fewer than 30 semester credits/45 quarter credits must also submit their secondary school records.

Applicants to professional-level *health science programs* on the MCV campus must submit official high school transcripts and official transcripts from all colleges, universities, and hospital schools/programs attended.

University Enrollment Services/Admissions will obtain for *readmission candidates* the student's VCU transcript. Applicants who have attended other colleges since leaving VCU must request the registrar of each college to send official transcripts to UES/Admissions.

4. **Test Scores.** *Freshman applicants* (high school graduates and GED holders) under 22 years of age must submit Scholastic Aptitude Test (SAT) or American College Testing (ACT) scores.

GED holders must submit an official copy of their GED scores.

Transfer applicants under 22 years of age and with less than 30 semester/45 quarter credits of college work must submit SAT or ACT scores.

Applicants to the *Radiologic Technology Program* must submit SAT or ACT scores. Applicants to professional-level *health science programs* on the MCV campus must submit these scores if they have taken either of these tests. However, applicants are not required to take either test if they have not already done so. Applicants to the Pharmacy Program are

required to submit scores for the Pharmacy College Admission Test (PCAT). PCAT test booklets are supplied in the MCV Application Packet or may be obtained by writing to the testing agency.

Foreign applicants whose native language is other than English must submit scores for the Test of English as a Foreign Language (TOEFL) in addition to any other test scores required. In general, VCU requires a minimum score of 550 on the TOEFL, but some programs may require a higher TOEFL score.

5. **Supplemental Application Packets.** *Art applicants* must submit the School of the Arts Admissions Packet to the School of the Arts, Box 2519, Virginia Commonwealth University, Richmond, VA 23284-2519.

Applicants to professional-level *health science programs* on the MCV campus submit, in addition to the application for admission, the supplemental application materials for the program to which they are applying. All materials are provided in the MCV Application Packet for the program to which the applicant is applying. See the *Medical College of Virginia Bulletin*.

Foreign applicants submit the Financial Support Statement with the application for admission in addition to any other supplemental application packets which may be required.

6. **Interviews and Auditions.** Applicants to the following programs will be contacted by the program for an interview or audition: dance/choreography, dental hygiene, music, nontraditional studies, occupational therapy, radiation sciences, radiologic technology, and theatre. Applicants to health science programs not listed are strongly encouraged to contact UES/MCV Campus Admissions, (804) 786-0488, to arrange an interview. Although interviews are not required for other programs, applicants are welcome to meet with an admissions counselor to discuss their applications. In some cases, however, University Enrollment Services/Admissions may **require** an interview.

UNDERGRADUATE APPLICATION DEADLINES

Freshman Application Deadlines

All applicants to programs on the academic campus are required to submit their applications for the fall semester by February 1 and for the spring semester by December 1. Applicants to the radiologic technology program on the MCV campus are encouraged to apply by March 1. Applications received after these dates will be considered on a space-available basis.

Early Decision Plan

Secondary school students with outstanding records may want to consider VCU's Early Decision Plan. Under this single-choice, binding plan, applicants agree to attend the University if offered admission; and they must withdraw all applications from other institutions if accepted to VCU. The deadline for early decision application is November 1. Acceptances are mailed on December 1. If the University does not offer admission on December 1, the applicant will be reconsidered automatically under the regular admissions process.

Transfer Application Deadlines

While application deadlines for most programs are June 1 for the fall semester and December 1 for the spring semester, the following application deadlines are established for the programs indicated:

	Fall Semester	Spring Semester
dental hygiene	January 15	
health care management	July 31	December 30
health information management	July 31	
medical technology	March 1	
nursing	January 15	
occupational therapy	December 15	
pharmacy	February 1	
radiation sciences	April 1	

Applications for admission to the programs listed above (except for the programs in occupational therapy and physical therapy) received after these deadline dates will be considered on a space-available basis.

Financial Aid Application Deadlines

Financial aid applicants (both campuses) must submit the Financial Aid Form (FAF) to the College Scholarship Service before May 1. Applications for financial aid received after the deadline date will be considered if funds are available.

ADMISSION NOTIFICATION

Freshman applicants accepted to the University for the fall semester will be notified by letter of the conditions of their acceptance by April 1 if they meet the February 1 deadline. Freshman applicants who apply under the regular admission process may receive **early notification** of their acceptance if they present exceptional admission credentials. Transfer applicants for the fall semester to programs on the Academic Campus who apply before the June 1 deadline will be notified by July 1. **All applicants for the spring semester will be notified on a rolling basis.**

Information on advisement and registration procedures, the medical history form, and housing information will be included with the acceptance letter. Virginia requires that all full-time students enrolling for the first time in a Virginia public institution of higher education furnish a health history and immunization record from a qualified licensed physician. New students must submit their health history to the VCU University Student Health Services.

When an applicant is tentatively accepted to the University, a final transcript is required to complete the individual's admission file. If the official transcript has not been received by the end of the fourth week of classes of the semester for which the student was accepted, an administrative hold will be placed on future registrations until the credentials are received establishing the student's eligibility.

The University reserves the right to rescind offers of admission if the final documents indicate that the applicant no longer satisfies the entrance requirements.

Undergraduate applicants who are not admitted to degree status but are offered special status may request information or assistance in formulating alternative educational plans from the Adult/Nontraditional Programs, Virginia Commonwealth University, Richmond, VA 23284-2002, (804) 367-0200.

Students are also encouraged to seek advising, depending on intended major, from the appro-

appropriate office listed below:

School of Business

Office of the Associate Dean for
Undergraduate Studies
Business Building, 1015 Floyd Avenue, room
3119, (804) 367-1595

School of Community and Public Affairs

Office of the Assistant Dean
919 West Franklin Street, room 205,
(804) 367-1282

School of Education

Office of the Assistant Dean
Oliver Hall, 1015 West Main Street, room
2090, (804) 367-1309 or Humanities and
Sciences (below)

College of Humanities and Sciences

(including humanities, sciences, social sciences,
Mass Communications, Pre-Health
Sciences, Undecided Majors)
Office of the Associate Dean
Hibbs Building, 900 Park Avenue, room 205,
(804) 367-1673

Health and Physical Education

Department of Health and P.E.
817 West Franklin Street, room 221,
(804) 367-1284

School of Social Work

Office of the Director for the BSW Program
1001 West Franklin Street, room 103,
(804) 367-8495

**RESPONDING TO THE OFFER OF
ADMISSION**

Fall freshman applicants accepted under VCU's Early Decision Plan must accept the offer of admission by January 1. Fall freshman applicants accepted to the University by April 1, including those admitted under the Early Notification Plan, must notify University Enrollment Services/Admissions of their intent to enroll or not enroll by May 1. Fall freshman applicants, if accepted after April 1, must notify the University within four weeks.

Fall transfer applicants accepted to programs on the academic campus must notify University Enrollment Services/Admissions of their intent to enroll by July 1 or four weeks after receiving their letter of admission. **All students accepted for the spring semester must respond to the offer of admission by January 1.**

A \$100 non-refundable deposit is required of all applicants who accept VCU's offer of admission. *The \$100 deposit will be credited to the*

student's account with the University and is not deferrable to a future semester. Students experiencing economic hardships may request a waiver of the \$100 deposit through a letter from a school official (counselor, advisor, principal) submitted to University Enrollment Services/Admissions. The decision to grant a waiver will be based on information submitted to the University on the student's Financial Aid Form.

Students who defer their acceptance to a later semester will forfeit their initial tuition deposit and will be required to submit a second \$100 deposit for the semester in which they choose to enroll.

IMMUNIZATION REQUIREMENTS

Virginia Commonwealth University requires that all full-time students have a validated immunization record on file at University Student Health Services (USHS). This is a requirement which must be completed prior to matriculation.

The record must be completed fully and accurately, and also must be accompanied by documentation that the vaccines were given. This may be done in several ways: (1) The student's physician may transfer the information from his/her medical record and sign the form verifying its accuracy; or (2) the student may complete the form using information received from his/her local health department or from the armed services, but he/she then must attach a validated copy of supporting documentation. Many middle schools and high schools require validated immunization records from all students. If a student has recently graduated from high school, the immunization records may still be available. The student may request that the school provide a copy of his/her immunization records.

Please note that if documented evidence of full immunization according to VCU guidelines cannot be provided, then the student must see his/her family physician or health department and receive updated immunizations. Most city and county health departments offer free immunization clinics (e.g., Richmond City Health Department, 500 North Tenth Street).

Immunity to the following diseases must be documented as specified on the forms supplied by the School of Graduate Studies with the formal offer of admission.

Tetanus. Documentation of both 1 and 2 is necessary: (1) primary immunization series,

including month/day/year of each dose, and (2) **tetanus/diphtheria booster (Td) (month/day/year) within the past 10 years.**

Diphtheria. Documentation of both 1 and 2 is necessary: (1) primary immunization series, including month/day/year of each dose, and (2) **tetanus/diphtheria (Td) booster, including month/day/year, within the past 10 years.**

Polio. (1) primary immunization with a total of 3 doses of OPV (oral Sabin) or (2) primary immunization with a total of 4 doses of IPV (injected Salk). NOTE: Documentation of prior vaccination against polio, including month/day/year of each dose, is required. However, if not completed in the past, it is not recommended that the student complete the primary polio series unless he/she is less than 18 years old or is planning travel to an area endemic or epidemic for polio.

Rubeola (Measles). Please be aware that there has been a recent change in the recommendations for the measles vaccine. VCU, in keeping with the American College Health Association recommendations, will now require two (2) doses of the measles vaccine, both given after 12 months of age. Although the vast majority of you will have had one dose of the vaccine, only a few of you will have had a second dose. Documentation of one of the following is necessary: (1) born before 1957 and, therefore, considered immune, or (2) two doses of measles vaccine, both administered after 1967, after the age of one year, and administered at least one month apart (document month/date/year). This is a new requirement which began fall 1990, or (3) physician's certification of diagnosis of measles, including month and year of occurrence, or (4) documentation of immune titer proving immunity. NOTE: Measles vaccine given before 1968 is not acceptable.

Rubella (German Measles). Documentation of one of the following is necessary: (1) rubella vaccine given after one year of age (document month/day/year) or (2) report of immune titer proving immunity. NOTE: A history of disease is not acceptable. Rubella vaccine given before June 9, 1969, is not acceptable.

Mumps. Documentation of one of the following is necessary. (1) Mumps vaccine given after one year of age and after 1967 (document month/day/year). (2) Report of immune titer proving immunity. (3) Physician's certification of diagnosis of mumps including month and year of occurrence. (4) Born prior to 1957 and therefore

considered immune.

Students with questions should contact the staff of University Student Health Services, Academic Campus, Suite 159, Gladding Residence Center, 711 West Main Street, Richmond, VA 23284-2022, (804) 367-1212.

ORIENTATION

The University provides orientation during the summer, fall, and spring to all new undergraduate students. Orientation programs are designed to increase the students' awareness of the University's programs, services, and facilities and to provide opportunities for faculty advising and registration for their first semester of classes.

After acceptance to the University, students will be sent detailed information regarding the orientation program. Included in the orientation program is a program for the parents of freshman students that is especially helpful to their understanding of the University and its future relationship to their sons and daughters.

For additional information about orientation, contact the orientation coordinator at the Office of Student Activities, Virginia Commonwealth University, Richmond, VA 23284-2032, (804) 367-6500.

EVALUATION OF TRANSFER CREDIT

An evaluation of transferable credits for applicants to the academic campus programs is made by the appropriate school or department after the accepted applicant's final transcript has been received by University Enrollment Services/Admissions. Applicants to MCV campus programs will receive a copy of the transfer credit evaluation with the offer of admission.

Acceptable course credits from other institutions will be recorded on the student's permanent record at VCU, together with the grades earned, if the credits are applicable toward a degree program. Accepted transfer credits are applicable toward a degree program. Accepted transfer credits are counted as hours earned toward the degree but are not used in the computation of the student's VCU grade-point average. Grades for transfer credits are evaluated in the computation determining graduation honors. Credits earned at other institutions carrying a grade of "D" are not accepted for transfer. *In addition, transfer work from two-year institutions may not be applied to upper-division requirements at VCU.*

Students accepted from the Virginia Commu-

nity College System and other two-year institutions who have received the Associate in Arts or Associate in Science degrees in a university parallel college transfer curriculum generally will qualify for junior status. Exact designation of the student's status will be determined after an evaluation of acceptable credits is made by the school or college in which the student enrolls. Up to 50 percent of the total credits required for graduation from the program into which the student is transferring may be transferred from two-year institutions, including not more than 50 percent in the major field of study. However, the candidate should realize that more than two additional years may be necessary to complete the degree requirements in certain curricula.

Credits earned in community college occupational or technical programs will be judged on their own merits to determine their applicability toward VCU degree requirements. In addition, many accredited institutions offer correspondence courses which may be considered for transfer credit.

Courses taken on the "pass/fail" or "pass/no pass" systems or courses taken for grades of "satisfactory" or "unsatisfactory" that receive earned credits and a "satisfactory" grade (or comparable passing grade) from the transfer institution will receive equivalent semester credit. Transfer credits graded as "pass/fail" will not be included in the computation for determination of academic honors at VCU.

The final 30 credits required toward the degree must be completed in residence at Virginia Commonwealth University.

OFFICE OF ACADEMIC SUPPORT

The Office of Academic Support, a composite of several services, seeks to enhance the success and promote the retention of student participants. The Office focuses on VCU's non-traditional students (i.e. minority, low-income, and first-generation college students) who meet the criteria for participation. The Office provides counselor support, academic planning, tutorial assistance, career planning, and a variety of seminars and workshops designed to meet the needs of its population. The Program of Services for Students with Disabilities is also a component of the Office of Academic Support.

The Office of Academic Support also provides an alternate admission process for students who marginally meet or fall below the University's requirements for admission as full-time degree-

seeking students. Students who are accepted through the Office of Academic Support alternate admission have demonstrated potential for academic achievement that is not always indicated by their SAT scores. Students admitted may be required to attend a developmental program during the summer prior to their university enrollment. Students enroll in courses in mathematics, English, reading/study skills, and orientation to the University. This summer experience allows students to ease into the rigorous demands of university life by improving basic academic skills and personal confidence.

During the academic year, program participants maintain close contact with the program and counselors. Students are monitored by their counselors to ease their adjustment to the University.

The Office of Academic Support participants are selected from a variety of academic, economic, geographic, and cultural backgrounds. Early application to the University is encouraged, especially for students who also will need financial aid. Priority consideration for admission and also for financial aid will be given to students who apply before March 1.

Students who are interested in participating in the programs should write to the Office of Academic Support, Virginia Commonwealth University, Richmond, VA 23284-2500, (804) 367-1650.

SENIOR CITIZENS HIGHER EDUCATION PROGRAM

The Senior Citizens Higher Education Act of 1974 provides that any legal resident of the state who before the beginning of any term or semester . . . in which he or she claims benefits of the act, and who has had legal domicile in the state for one year may, without paying tuition, register for and enroll in courses under the conditions outlined in the act as amended in 1982 and 1986.

The tuition-free policy shall apply except that the senior citizen shall be subject to fees established for the purpose of paying for course materials, such as laboratory fees, individualized music instructions, etc.

Senior citizens who are not enrolled for academic credit may not register for more than three courses in any one term or semester but may register each semester. The Senior Citizens Act benefits shall be available to persons 60 years of age or older with the following legally mandated provisions:

1. The senior citizen shall be subject to admission requirements of the institution.
2. The institution shall determine whether or not it has the ability to offer the course or courses.
3. If the senior citizen has a federal taxable income of not more than \$10,000 during the preceding year, the individual may take a course for academic credit at no charge. If the person's taxable income exceeded \$10,000, the individual may only audit the course at no charge. A senior citizen, regardless of income level, may take a noncredit course at no charge.
4. The senior citizen shall be admitted to a course after all tuition-paying students have been accommodated. Senior citizens wishing to avail themselves of the opportunity to study at Virginia Commonwealth University should call

for day courses: University Enrollment Services/Admissions, (804) 367-1222.

for evening courses: Adult/Nontraditional Programs, (804) 367-1400.

for VCU Free University information call (804) 367-6021.

POLICY FOR PERSONS WITH DISABILITIES

Virginia Commonwealth University is committed to a policy of equal opportunity and affirmative action in education and employment and complies with the requirements of the Rehabilitation Act of 1973 and the American Disabilities Act of 1990.

The University does not discriminate against qualified disabled applicants for admission or program accessibility and seeks to provide reasonable accommodation.

The Office of EEO/AA Services has responsibility for coordinating services to the disabled. Contact Velma J. Williams, (804) 367-1347.

For tutorial/academic support services, contact Shyla M. Ipsen on the Academic Campus (804) 367-1139 or Donald G. Roebuck (804) 786-9782 on the MCV Campus.

ENRICHMENT AND ACCELERATION OPPORTUNITIES

Special honors programs and courses are offered at the University. Please refer to the

appropriate school sections of this *Bulletin* for further information. Interdisciplinary honors courses designed for superior freshmen in any program are also available.

Early Admission Program

The Early Admission Program permits exceptional students the opportunity to enroll at the University as freshmen after the completion of the junior year of high school. The program is available to students who demonstrate readiness for college by their high school record, SAT results, and in an interview with an admissions officer. Applicants for the Early Admission Program must present a minimum GPA of 3.2 and minimum combined SAT scores of 1100, or demonstrate exceptional talent in their intended area of study. Additionally, early admission applicants must be within two of the required units for graduation and have the written approval of the high school principal (or designee) to seek admission to college as full-time undergraduate students. Candidates interested in this program should write University Enrollment Services/Admissions for further information.

Advanced Scholars Program

Qualified high school students from Richmond and surrounding area high schools may be permitted to carry college-level courses at the University concurrently while completing the high school diploma. Students may select courses of interest and upon successful completion of the courses may receive college credit. However, courses selected should not be available in the high school curriculum.

Candidates must be nominated and approved by the secondary school principal. A maximum of 100 candidates will be accepted for each term, and candidates may enroll for no more than two courses per term.

As a guide to secondary schools, the following criteria for selection are considered:

1. Each candidate must be nominated and approved by the secondary school principal.
2. Each candidate must have achieved a total of 1,100 points on the College Entrance Examination Board SAT (110 PSAT) and must have maintained a "B" average.
3. Each candidate must be a high school junior or senior.
4. The desired courses to be studied must be

available and appropriate.

5. All parties should emphasize that tuition is charged for courses taken as an Advanced Scholar.

Notification forms and other information may be obtained from University Enrollment Services/ Admissions, Box 2526, Virginia Commonwealth University, Richmond, VA 23284-2526, (804) 367-1222.

THE UNIVERSITY HONORS PROGRAM

The Virginia Commonwealth University Honors Program was established to meet the needs of academically talented undergraduate students through a challenging and exciting program with high academic standards. The Honors Program offers students an opportunity to exchange ideas, ask questions, and explore values with bright fellow students and teachers who have been selected carefully for their scholarship and teaching excellence. The University Honors Program offers the opportunity for students to expand their creative and intellectual horizons and to benefit from small classes in which there is greater interaction between students and faculty and among students themselves.

Eligibility Requirements

The University Honors Program is open to qualified entering freshmen, continuing students who demonstrate excellence after enrolling at VCU, and transfer students who have shown similar ability at other institutions.

1. High school graduates with combined SAT scores of at least 1200 who rank in the upper 15% of their graduating class or who are the recipients of a VCU Presidential Scholarship are eligible for admission to the University Honors Program automatically upon application. Continuing VCU students or transfer students who have achieved a 3.50 cumulative GPA in 30 college semester hours of credit are also eligible for admission automatically upon application.
2. Good students who do not quite meet the criteria for automatic admission are encouraged to apply. Students are admitted to the University Honors Program on an individual basis by a subcommittee of the Honors Council. The primary condition for acceptance is evidence of sufficient personal commitment and academic abil-

ity to do Honors level work.

To continue in the University Honors Program, a student must maintain a cumulative GPA of 3.50 or higher. Should a student's cumulative GPA fall below 3.50, the student may be placed on Honors Probation for a semester. Withdrawal from the Honors Program is not noted on the student's permanent record.

Undergraduates from all schools and colleges on VCU's academic campus who meet the eligibility are invited to apply. For application materials write to the University Honors Program, 916 West Franklin Street, Box 3010, Virginia Commonwealth University, Richmond, VA 23284-3010, (804) 367-1803.

Graduation with University Honors

Academic advisors at VCU help Honors students select classes that fulfill the requirements for graduation and match students' interests. In addition, Honors students are eligible to take courses designated as "Honors." Some Honors courses are special sections of regular courses open to Honors students only, in which class size is limited to maximize opportunities for interaction directly with the instructor and fellow students. Other Honors courses are special courses for the Honors Program. Of particular interest among these are **modules**. These are single focus topics courses, which occupy only one-third of a semester. Modules are often interdisciplinary and strive to connect rather than isolate studies. Each module counts for 1.5 semester hours of credit.

To graduate with **University Honors**, students are required to take at least six modules. All Honors courses are noted on the student's official transcript. In addition to completing at least six module courses and maintaining a GPA of 3.50 or higher, the student must present a **dossier** documenting how the student has become a well-educated individual. The dossier is presented in the last semester of the student's academic work to the Director of the University Honors Program and the University Honors Council.

In the dossier students refer to the following guidelines explaining how they have been fulfilled or explaining why an alternative was more appropriate in the student's particular situation.

Guidelines and regulations

1. The Honors student must have at least a 3.50 cumulative GPA and a 3.20 cu-

- mulative GPA in Honors courses.
2. The Honors student should achieve a standard of excellence in the eight areas of general education delineated on page 3 of this Bulletin, as well as in the student's major field.
 3. Honors students should show well-roundedness by enrolling in at least two upper level courses outside their field of specialization.
 4. The Honors student should complete at least 18 semester hours of credit in courses designated as Honors courses. The Honors student must complete at least nine semester hours of credit in module courses.¹

It is important to note that the ideas expressed above are to be considered as guidelines to the development of a dossier. Only the GPA minimums and the six modules are required to graduate with University Honors. The central objective of the University Honors Program is that the student demonstrate good scholarship and sound learning in the best of the University's tradition.

Special opportunities

The University Honors Program sponsors a variety of intellectual, cultural and social activities as important supplements to classroom study. Among these are:

The Honors Idea Exchange—an approved student campus organization, composed of Honors students. The Idea Exchange decides each year on its projects and activities.

Weekly Brown Bag Lunches—informal discussions on topics pertinent to the wide-ranging interests of Honors students. Discussions are led by outstanding guest speakers from the University faculty and administration, and from many different *fields in the community*.

Honors Seminars—an arena where students can witness and participate in dialogue between faculty. With more structure than Brown Bag Lunches, the seminars afford the opportunity for presenting scholarly ideas for discussion and debate.

Outstanding Lecturer Series—World renowned scholars are brought to the VCU campus to lecture on topics of interest and concern to Honors students. Students have the opportunity to meet informally with the speakers.

The University Honors Program is committed to enriching the students' academic and personal endeavors. Since people in the University Honors Program are serious students, special privileges beyond the vast resources available to all VCU students are provided. Some of these privileges include:

- Registration priority
- Special library privileges
- Availability of special housing

The center of activities and community for the University Honors Program is **Millhiser House**, a Victorian brownstone house at 916 West Franklin Street. In the house students have meeting rooms, quiet study rooms, word processors, a copy machine, computers, and recreation areas. Millhiser House is open at night for study and during the day.

Guaranteed Admission Program

This series of programs guarantees Honors students admission to the professional-level health sciences program of their choice or to a graduate program in basic health sciences, business, education, or physics. Honors students who receive guaranteed admission may enter the program of their choice **without test scores required** (except for statistical purposes) or further application materials, provided they fulfill University Honors Program requirements and satisfy the curricular prerequisites of the program they plan to enter. To maintain guaranteed admission status, Honors students must maintain the 3.50 cumulative GPA and progress satisfactorily in Honors courses and special courses designated by the professional or graduate program they plan to enter.

Health Sciences Guaranteed Admission Programs

Entering Honors freshmen with combined SAT scores of at least 1200 may apply for guaranteed admission to the MCV campus professional programs in **medicine, dentistry, dental hygiene, medical technology, nursing, pharmacy, occupational therapy, or physical therapy**. Transfer students accepted into the University Honors Program who plan to enter

¹ Modules are short courses which carry 1.5 semester hours of credit each. The purpose of the module course is to offer the Honors student the opportunity to focus on special topics in a challenging academic format. The Honors student must complete at least six modules. The nine semester hours of credit thus earned may be counted as part of the 18 semester hours of credit in Honors courses.

programs in the School of Medicine or the School of Dentistry may also apply for guaranteed admission if they meet the 1200 SAT and the 3.50 GPA requirements.

Graduate Studies Guaranteed Admission Programs

Honors students interested in academic or research careers in **anatomy, biochemistry and molecular biophysics, biostatistics, human genetics, microbiology and immunology, pharmacology and toxicology, and physiology** are invited to apply for guaranteed admission to the **School of Basic Health Sciences** during their sophomore year of college. Programs in this school lead to Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees.

Honors students, if they meet the criteria established by the **School of Business**, may be guaranteed admission to programs for any of the master's degree programs offered by the School of Business. The master's degrees are valid terminal degrees for careers in management and administration or may be used to satisfy a substantial portion of the requirements for the doctoral program offered at VCU.

Students accepted to the University Honors Program who are planning careers as **elementary, secondary or special education teachers** may receive guaranteed admission to the graduate phase of the University's extended teacher preparation program. In this program, students earn a bachelor's degree in the College of Humanities and Sciences, a master's degree in the **School of Education**, and satisfy the certification requirements of Virginia and more than 30 other states. The Honors Program in Teacher Education strives to develop teachers with outstanding scholarship and sound professional competency.

Students accepted into the University Honors Program may apply for guaranteed admission to the Master of Science program in **physics** during their senior year in high school.

Application Procedures

To be accepted into a Guaranteed Admission Program, a student must be accepted by the University, by the University Honors Program, and by the Admissions Committee of the program the student wishes to enter. The Admissions Committee may require an interview. Although there is no application deadline for the

Guaranteed Admission Program, the earlier a student applies, the better. For the Health Sciences Guaranteed Admission Programs it is **strongly recommended** that students apply early in the fall semester of their senior year of high school.

For additional information about the Health Sciences Guaranteed Admission Programs of the VCU Honors Program, write or call the Coordinator, Pre-Health Sciences Advising, 900 Park Avenue, Box 2019, Virginia Commonwealth University, Richmond, VA 23284-2019, (804) 367-1673.

For additional information about any of the Graduate Studies Guaranteed Admission Program of the VCU Honors Program, write or call the Assistant Dean, School of Graduate Studies, Box 0568, Virginia Commonwealth University, Richmond, Virginia 23298-0568, (804) 786-0347.

Advanced Placement Tests/College Board

Qualified students who have taken college-level work in a secondary school may receive academic credit and/or advanced placement. Examinations which determine advanced placement are the Advanced Placement Tests of the College Board. AP grades of 3, 4, or 5 will be given from three to ten semester credits per AP test depending on the subject area and the quality of the free response section of the particular AP test. Final determination of credit will be made after test results and examination booklets have been received by the dean's office in the College of Humanities and Sciences and have been evaluated by the University. Accepted credits are counted as credits earned toward the degree but are not used in the computation of the student's VCU grade-point average.

The University accepts advanced placement in the following areas: American history, history of art, biology, chemistry, computer science, English language and composition, economics, European history, French language and literature, German language and literature, government and politics, Latin, mathematics calculus AB, mathematics calculus BC, music listening and literature, music theory, physics B, physics C, and Spanish language and literature.

College-Level Examination Program

The College-Level Examination Program (CLEP) is designed to allow individuals who

have gained knowledge outside the classroom to take an examination and receive college credit for what they have learned.

New students interested in taking the CLEP examination should direct their inquiries to the Adult/Nontraditional Programs, Virginia Commonwealth University, Richmond, VA 23284-2002, (804) 367-0200.

CLEP credit is awarded officially only to students who are accepted in a degree program. VCU will keep CLEP credit on file for non-degree seeking students for one year. The maximum credit that can be earned through CLEP is 54 semester hours. If a student has earned CLEP credit in a specific subject area or the mathematics general examination, that credit cannot duplicate accepted transfer credit or credit earned in courses taken at VCU. VCU does not award CLEP credit for the English general examination.

Official CLEP scores must be sent to University Enrollment Services/ Admissions for evaluation of credits from another institution.

Information for current students is found in Part V of this *Bulletin*.

International Baccalaureate Program

VCU considers higher level international baccalaureate courses to be comparable to the Advanced Placement Tests administered by the College Board. Each higher level subject passed with scores of 4–7 will be considered for advanced standing through the freshman sequence of that subject. All final transfer credits are determined by the academic department to which the student is admitted.

Undergraduate Credit by Examination

Refer to Part V of this *Bulletin*.

Placement Tests

The University provides placement testing to assist students in starting at the appropriate level in chemistry, mathematics, foreign languages, and reading. The Test of Standard Written English (TSWE) section of the Verbal Scholastic Aptitude Test (SAT) is used for placement in English. The orientation, advisement, and registration brochure sent to new students provides specific information about the curricula requiring these tests.

GRADUATE SCHOOL AND HEALTH SCIENCE PROFESSIONAL PROGRAM ADMISSIONS

The University Graduate Bulletin describing requirements and procedures for admission to graduate programs will be sent upon request. Address all inquiries to the School of Graduate Studies, Virginia Commonwealth University, Richmond, VA 23298-0568, (804) 786-0347.

Requirements and procedures for admission to first professional programs in dentistry and medicine are described in the *Virginia Commonwealth University Medical College of Virginia Bulletin*, available upon request from the School of Dentistry, Virginia Commonwealth University, Richmond, VA 23298-0566, (804) 786-9196, or the School of Medicine, Virginia Commonwealth University, Richmond, VA 23298-0565, (804) 786-9629.



PART III — Expenses and Financial Aid

FEES AND EXPENSES

It is expected that students shall pay all applicable fees described in this section when due. Students failing to pay their applicable fees when due will be subject to a late payment fee. Students are reminded that the University reserves the right to revise or alter all fees, regulations pertaining to student fees, and fee collection procedures whenever such revisions or alterations are deemed necessary.

It should be stressed that a student will incur not only those expenses for which he/she is billed by the school, but will, in addition, pay for clothing, books, supplies, travel, and many out-of-pocket expenses. Accordingly, each student should make allowances for such expenses in figuring the total cost of each year at the University.

Every student has the responsibility to keep a current mailing address on file with University Enrollment Services/Records and Registration.

FEE SCHEDULE

The amount of the fees categorized and described in this section appear in the *VCU Schedule of Tuition, Fees, and Other Expenses*. This publication is available each June, upon final determination of fee amounts by the Board of Visitors. *The Schedule of Tuition, Fees, and Other Expenses* may be obtained at the reception desk, University Enrollment Services, 821 West Franklin Street; at the Office of Student Accounting, 327 West Main Street; and by

writing or phoning University Enrollment Services and requesting current fee information.

TUITION DETERMINATION AND STUDENT CLASSIFICATION

Tuition is determined by both the student's domiciliary classification and the number of credit hours for which the student is registered.

Eligibility for in-state tuition benefits is determined by Section 23-7.4 of the Code of Virginia. (Refer to the section on Determination of Student Classification for In-State Tuition Purposes in this *Bulletin*.)

All non-Virginia resident applicants to the University (undergraduate, graduate, professional, special non-degree) who desire in-state tuition rates as Virginia residents must complete the Application for Virginia In-State Tuition Rates. The residency determination of the applicant will be conveyed at the time of admission.

New students who have initially been classified as non-Virginians for tuition purposes may request a review of the initial residency determination by contacting the UES/Residency office. This office may request that the applicant complete a Student Supplemental Application for Virginia In-State Tuition Rates and submit supporting documents for additional clarification. Continuing students desiring a change of their residency status must submit a completed Student Supplemental Application for Virginia In-State Tuition Rates with supporting documentation. Requests and applications for a second review must be submitted to the UES/Residency

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office by the **last** day of add/drop week for each semester. However, it is recommended strongly that applications be submitted by the appropriate deadline.

Spring Semester — December 1
Fall Semester — August 1
Summer Semester — May 1

Students approved for a change to in-state status for tuition purposes will be notified by mail with copies of their approval letters going to University Enrollment Services/Financial Aid and the Office of Student Accounting. Students denied in-state tuition benefits will also be notified by mail. The denial letter will inform the student of procedures for appeal of the decision.

TUITION AND FEE CHARGES

When a student receives his or his acceptance into an undergraduate degree program at the University and accepts the offer of admission, a \$100 nonrefundable tuition deposit is required. This deposit will be credited toward the tuition charge for the entering semester. If the student accepts the offer, pays the fee, but elects not to enroll for the semester he or she planned, the \$100 deposit is forfeited.

Students are classified as full-time or part-time based on the total number of credit hours for which they enroll each semester. Full-time undergraduate students are those students who are enrolled for 12 or more credits in a given semester. An academic year includes two semesters.

Full-time undergraduate students are charged a flat rate tuition fee per semester. Part-time undergraduate students, those enrolled for fewer than 12 credits, are charged tuition on a per-credit basis.

Students who have been classified as Virginia residents pay a lower flat-rate tuition fee as full-time students and a lower per-credit tuition fee as part-time students than out-of-state students. Evening undergraduate students pay the same per-credit tuition fees as their day student counterparts, and tuition assessment is based on their residency classification.

In addition to tuition, students are required to pay the following mandatory fees:

University Fee. The University Fee is used by the University to support student facilities, campus development, intercollegiate athletics, and other programs. These funds are allocated annually. Full-time students pay a flat-rate *University Fee* per semester. Part-time students

pay this fee on a per-credit basis. Part-time evening students are charged a lower University Fee than part-time day students.

Student Activity Fee. This fee is used to support social, cultural, and other activities for students on the academic campus, such as concerts, plays, student organizations, and publications. It is determined and assessed by the student governing body on the academic campus. Full-time academic campus students pay a flat-rate Student Activity Fee. Part-time day students on the academic campus pay this fee on a per-credit basis. Part-time evening students and students on the MCV campus are not charged this fee.

Student Government Association Fee. This fee is used to support social, cultural, and other activities for students on the MCV campus. It is determined and assessed by the Student Government Association on the MCV campus. Full-time MCV students pay a flat-rate fee. Part-time MCV campus students and all students on the academic campus are not charged this fee.

Student Health Fee. All full-time students are required to participate in the University Student Health Services and pay the Student Health Fee. Part-time students may participate on an elective basis but must pay the student health fee. Among services provided by the University Student Health Services are unlimited office visits for acute and chronic ailments, after-hours emergency room referrals, and laboratory tests.

The University Fee, the Student Activity Fee, the Student Government Association Fee, and the Student Health Fee are not charged for off-campus classes.

SPECIAL FEE CHARGES

Because of specialized programs, various schools and departments may charge each student additional fees to cover special materials, equipment breakage, and other costs. For specific information regarding special fees, students should refer to the *VCU Schedule of Tuition, Fees, and Other Expenses*, or to the specific school or department section within this *Bulletin*.

ROOM AND BOARD FEES

When a student receives his or her acceptance letter, a room reservation card will be enclosed. If residence hall space is required, the student fills out the card and returns it with a \$250 room

rental prepayment. The student will be notified of his or her contract for placement in a residence hall or of being placed on a waiting list for residence hall space.

The \$250 room rent prepayment will be credited toward the total amount due for room rent. New students who returned the signed contract for residence hall space will have until June 30 (for the Fall Semester) or December 15 (for students entering for the Spring Semester only) to cancel their contract in writing to the University Housing Office, 711 West Main Street, No. 103, Richmond, VA 23284-2517, and receive a refund of the \$250. When a student signs a housing contract after June 30 or December 15 and then cancels, the \$250 prepayment is forfeited.

Room Rent

Room rent is payable at the time tuition and other fees are due. Contracts for space in the residence halls are for the entire academic year of nine months, except in cases involving contracts initiated during the spring or summer terms or for students who will graduate at the end of the fall semester. Students will not be released from their contracts between semesters. Only one semester's room rent is due prior to each semester.

Students should refer to the *VCU Schedule of Tuition, Fees, and Other Expenses* for exact room and board charges. In addition, students are responsible for damages to student rooms, furnishings, and common living areas.

Board Plan

Undergraduate students living in University residence halls are required to participate in one of the board plans offered by the University unless they are living in self-sufficient apartment units with kitchens. Students residing off campus are encouraged to participate in a board plan and receive the same benefits as those students residing in University residence halls.

The University offers a number of different meal plans ranging from the traditional 20 meals per week plan to the more flexible 10 meals per week plan. Each plan can be customized with the purchase of **PLUS DOLLARS**. The following information should assist you in choosing the meal plan that fits your needs.

University Board Plans

20 Meal Plan. This plan provides three meals a day Monday through Saturday, plus brunch and dinner on Sunday.

15 Meal Plan. Provides any 15 of the 20 meals served in a seven day period.

10 Meal Plan. Students may choose any 10 of the 20 meals served each seven day period.

Students should refer to the *VCU Schedule of Tuition, Fees, and Other Expenses* for exact board plan charges.

PLUS DOLLARS

The PLUS DOLLARS program adds flexibility to meal plans. PLUS DOLLARS are purchased in conjunction with any Residence Hall Meal Plan and allows students to make purchases at other food service facilities on both campuses. PLUS DOLLARS are purchased at the beginning of the academic year in \$25.00 increments between \$100.00 and \$300.00. PLUS DOLLARS are billed with your Board charges.

Cash Equivalency

Students subscribing to a meal plan also have the option of using Cash Equivalency in place of a meal eaten in Hibbs or Larrick cafeterias allowing participants to take advantage of more food locations and services on campus. Cash Equivalency is not accepted at Taco Bell Express.

Other Food Service Facilities

Park Place: This operation, located in the Student Commons Building, features a wide array of fresh food selections, including the first Taco Bell Express operated in a Virginia College or University. Also offered are: a rotating selection of hot entrees and accompaniments, made to order deli sandwiches, fried chicken dinners and more.

Common Ground: Located on the bottom level of the Student Commons building, the Common Ground serves pizza, specialty sandwiches, salads, and beverages.

Gold Card

The Gold Card is a prepaid account that allows you to make purchases at any Food Services location without the worry of carrying cash. Gold Cards are not billed through the University, so students may make deposits as

frequently as necessary. A Gold Card does not meet the requirement of participating in a board plan for residence hall students.

The manager of University Food Services is the contact individual for all food service concerns. Additional information may be obtained by contacting the University Food Service Office, Hibbs Building, 900 Park Avenue, Room 207A, Richmond, VA 23284-0247. Food Services can be reached by calling (804) 367-8077.

STUDENT BILLING

The Office of Student Accounting issues bills to students showing charges for the following fees: tuition, Student Activities Fee, Student Government Association Fee, University Fee, private music lessons, School of the Arts major fee, nonart major course fees, School of the Arts materials fees, dental kits, room rent and board fees, and Student Health Fee.

Tuition and fees for preregistered students, along with charges for room and board where applicable, are due approximately one week before the start of the fall and spring semesters. All other students (not receiving financial aid) must pay at the time of registration.

REFUNDS

Students shall be entitled to refunds according to the policies outlined below. See also Financial Aid Refund policy under "Financial Aid."

Request for Refund. Requests for refunds must be made in writing to the Office of Student Accounting, 327 West Main Street, and will be considered on the basis of the policy statement governing the refund of tuition, room, and board:

1. Students dropping/withdrawing from courses through the first week of class will be entitled to a 100% refund of tuition and fees.
2. Students withdrawing from courses through the second week of class will be entitled to an 80% refund of tuition and the university fee.
3. Students withdrawing from courses through the third week of class will be entitled to a 60% refund of tuition and the university fee.
4. Students withdrawing from courses through the fourth week of class will be entitled to a 40% refund of tuition and the university fee. Students withdrawing from

courses after the fourth week of class are not entitled to receive a refund of tuition and fees.

5. A full refund of the board plan charges will be made if the withdrawal from the board plan is made prior to the first official board plan day of the year. However, students withdrawing from the University will be granted a refund based on a daily proration throughout the term.
6. Students will not be entitled to a refund of room fees if they are suspended from the residence halls for disciplinary reasons. 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 Assistant Vice Provost for Student Affairs (University Housing). Students will not be granted refunds unless they have completed the withdrawal procedures through the Housing Office.

The actual date of withdrawal will be certified by University Enrollment Services. Refunds, when appropriate, will be computed based on that certified date. **Refunds will not be made to students who do not attend classes and have not completed the required withdrawal procedure.** Refund processing can take from two to four 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 to the Refund Appeals Committee.

DEFENSE CRISIS TUITION RELIEF, REFUND, AND REINSTATEMENT GUIDELINES

These guidelines apply to any operation, including a defense crisis, in which the President of the United States declares a sudden mobilization that includes members of the Virginia National Guard or the active or reserve forces of the U.S. armed forces who are students enrolled at Virginia Commonwealth University.

Students are offered three tuition relief and refund options:

1. Drop all courses before the end of the Add/Drop period and receive a full refund—including all areas covered in number 3 below.
2. Receive a grade of *Incomplete* in all courses. Students residing in University

housing will be released from their housing and meal contracts and receive a full refund of these charges. The student will have twelve months after the beginning date of the next enrollment period following his/her completion of service required as a result of the national emergency to complete the course work.

If this re-enrollment option is chosen, "W's" will be placed on the file for the original semester and the student may be re-enrolled in the courses without further assessment of tuition or fees.

Should the student not complete the course work within the allotted option time, grade(s) of "W" will be assigned and a full refund of tuition and fees processed.

3. Accept administrative withdrawal from all courses as of the effective date of the orders to active duty. If this option is elected, a full refund of all tuition, fees, room and board charges will be made to the student. A full refund will be given for returned text books. When financial aid funds are involved, the amount recovered to the financial aid accounts will not exceed the financial portion of the direct University charges.

To initiate the process the student must provide the Director of UES/Records and Registration with a copy of his/her active duty orders and a statement electing Option 1, 2, or 3. The Director of UES/Records and Registration will post the appropriate grades and send a copy of the orders and the statement to the Director of UES/Financial Aid and Student Accounting.

Reinstatement

A student choosing option one (1), two (2), or three (3) above may re-enroll in the same program of studies without re-applying for admission if the student returns within one year of completing service required as a result of the national emergency. The student should begin his or her re-enrollment by advising the Director of Admissions in writing of intent to re-enroll.

STATEMENT OF STUDENT FINANCIAL RESPONSIBILITY

A student who fails to meet payments when due will be assessed a late payment fee, will be denied registration for future classes until he/she has paid all amounts owed to the University, and

may be withdrawn from the University. If withdrawn, the student may not attend classes until he/she has paid all accrued fees and has been officially reinstated. Withdrawals and reinstatements are the responsibility of University Enrollment Services/Records and Registration. Students withdrawn under this policy will not be relieved of their financial responsibility to the University.

Student accounts with balances owed the University will be referred to the Collection Unit. Pursuant to Sec. 2.1-732 et seq., of the *Code of Virginia*, and in accordance with rules and regulations promulgated by the State Comptroller and Attorney General of the Commonwealth of Virginia, Virginia Commonwealth University will charge interest, costs and fees on all accounts past due.

Students with balances owed the University will not be issued degrees, transcripts or grades, or grade reports until all charges are paid in full.

This policy is waived for accounts that reflect a balance supported by an awarded scholarship or approved loan on file in the Office of Student Accounting. Students are reminded, however, that they are ultimately responsible for any unpaid balance on their account as a result of the sponsor cancelling or reducing the award.

The University is participating in the Virginia Set-Off Debt Collection Act of 1981. Under the provisions of this act, a Virginia individual income tax refund will be subject to the University's claim for unpaid balances of tuition and fees.

Dishonored Checks

A charge of \$20 will be levied for all dishonored checks.

LOAN REPAYMENT

Prior to graduation or withdrawal from the University, students must undergo an exit interview. Students who have received the Stafford Student Loan (previously the Guaranteed Student Loan) or the Health Education Assistance Loan should contact University Enrollment Services/Financial Aid for information about the exit interview. Students who have received any other type of loan must contact the Office of Loan Management, 327 West Main Street, Richmond, Virginia 23284-3031.

ACCIDENT INSURANCE

The University is not responsible for accidents occurring to students in connection with class, laboratory, shop, fieldwork, athletics, student activities, travel, or other activities. However, the University offers to its students approved insurance providing substantial benefits at group rates. The insurance extends for a 12-month period beginning August 20, or from the beginning of the second semester to the next August 20, and includes coverage for accidents, hospital, medical, surgical, and other benefits for illnesses. Married students may wish to enroll their spouses and children. The University recommends, but does not require, that all students enroll in the approved student group insurance. For further information, contact University Student Health Services.

OFFICE OF STUDENT ACCOUNTING

The Office of Student Accounting, 327 West Main Street, Richmond, VA 23284-3036, (804) 786-2228, is responsible for billing those students who enroll in classes during advance registration for tuition, room, board (if applicable), and other fees. During regular registration, this office is responsible for assessment of charges to students. The office also bills third-party payers for VCU charges, and manages financial aid award disbursement. It makes fee refunds to eligible students based on policies stated in this section.

Residency determinations, upon which tuition rates are set, are made by **University Enrollment Services**.

Refund appeal determinations are made by the Refund Waiver Appeals Committee.

Financial aid applications and award determinations are managed by **University Enrollment Services/Financial Aid**.

FINANCIAL AID

Approximately 60 percent of the undergraduate students at VCU are receiving some form of financial assistance from state, federal, or university funds. The role of University Enrollment Services/Financial Aid is to assist students financially so that they can pursue their educational goals at VCU.

There are two financial aid offices serving the University. Students who have questions after reading this section of the bulletin should contact the appropriate office. Academic Campus students should contact University Enrollment

Services/Financial Aid, Virginia Commonwealth University, 901 West Franklin Street, Richmond, VA 23284-3026, (804) 367-0765. MCV campus students should contact University Enrollment Services/Financial Aid, Virginia Commonwealth University/Medical College of Virginia, 323 North Twelfth Street, Richmond, VA 23298-0244, (804) 786-0523. Students visiting the University may wish to make an appointment with one of the professional financial aid counselors.

University Enrollment Services/Financial Aid can assist students in obtaining three kinds of need-based assistance:

Grants. Grants are gift aid awarded to undergraduate students who show financial need. These awards do not require repayment. Students from low income families are the most eligible for grant programs. Generally, students receive grant funds in combination with loans or work-study.

Loans. Long-term educational loans are low interest borrowed funds that must be repaid when the student graduates, withdraws, or drops to less than half-time status.

Work-Study. Part-time employment, on- or off-campus, is available to students. Wages, hours and duties vary depending upon the employer and the work program.

Financial aid award packages are combinations of grants, loans, and work-study put together in an attempt to meet a student's financial need. Students and parents have the primary responsibility for paying the student's expenses. Financial aid packages will be offered to fill the gap that may exist between the cost of a student's education and money available from family, job income, savings and other resources.

GRANT PROGRAMS

The following grant programs are awarded on the basis of a student's demonstrated need; no repayment is required.

Pell Grant. This federal grant program is available to eligible undergraduate students. The grants may reach a maximum of \$2,400. The applicant must be enrolled for at least six credit hours of course work.

College Scholarship Assistance Program. A state and university program of grants to Virginia residents who are full-time, undergraduate students with financial need. The grants range from \$400 to \$2,000.

SEOG/Supplemental Educational Opportu-

nity Grant. This federal and university grant program is administered by VCU for undergraduate students with exceptional need who are Pell Grant eligible and who are enrolled full time. The grants range from \$200 to \$4,000 per year.

Virginia Undergraduate Grant. A University program of grant aid to full-time undergraduate students who are Virginia residents and who have high financial need. Awards may range from \$200 to an amount that does not exceed tuition and fees per year.

LOAN PROGRAMS

Loan funds may make it possible for students and/or their families to defer the cost of education by borrowing now and repaying after they leave VCU. Loan programs are available to most students. The rate of interest on the loan varies according to the kind of loan for which a student is eligible.

Perkins Loan. This joint federal and university program provides funds for eligible undergraduate students who are enrolled full time. If eligible, students are awarded a loan amount based on the computed financial need as calculated from the family financial information reported on the needs analysis application. Students cannot exceed \$4,500 of borrowing during their first two undergraduate years and \$9,000 of borrowing for all four undergraduate years.

If a student continues at least half-time enrollment (six credits each semester), no interest is charged nor is repayment required until the student leaves VCU. Interest of 5 percent a year begins six months after a student leaves school, and repayment must be completed within ten years.

Stafford Student Loans (formerly Guaranteed Student Loans). Undergraduate students at the freshman and sophomore levels with computed financial need may borrow up to \$2,625 per year. Juniors and seniors may borrow up to \$4,000 per year. The loan amount, however, cannot exceed the student's computed financial need.

The limit on borrowing is \$17,250 for all undergraduate study. No repayment of interest or principal is required as long as the student is enrolled at least half time (six or more credit hours each semester). Loan repayment begins six months after the student leaves school or enrolls in less than six credit hours.

Effective July 1, 1988, new borrowers with no

outstanding Stafford Loans will pay 8 percent interest during the first four years of repayment. In the fifth year of repayment, the interest rate will be 10 percent. Repayment must be completed within 10 years.

At the time the loan is approved for disbursement, an origination fee of five percent and a guarantee fee of up to three percent may be deducted.

To apply for a Stafford Loan, the student must file a needs analysis application. When the financial aid award package is offered, eligibility for the Stafford Loan is indicated. Detailed application procedures are outlined in the application reference materials, which accompany the award offer. The student must accept the award by signing and returning the award offer.

The Stafford Student Loan will be issued to VCU in multiple disbursements, one-half at the beginning of the period of enrollment (fall semester) and the remaining one-half at the midpoint of the period of enrollment (spring semester).

Nursing Loans. This joint federal and university program provides funds for full-time nursing students enrolled in a baccalaureate nursing degree program. The maximum award is \$4,000 per year to an aggregate maximum of \$13,000. The award amount is based on the student's financial need. The interest rate is 5 percent. Other repayment terms are similar to those for the Perkins Loan.

Supplemental Loan for Students. This is a non-need based loan program under which independent graduate, professional and independent undergraduate students may borrow up to \$4000 per year with a \$20,000 aggregate maximum. Although need is not an eligibility criterion, a need analysis application must be completed to determine eligibility for other need based assistance before a Supplemental Loan for Students may be processed. Interest rates are variable on an annual basis but will not exceed 12 percent. Interest charges are assessed from the time of disbursement. There are options which permit for the deferment of principal and interest during in-school years.

Parent Loan for Undergraduate Students. Similar to the Supplemental Loan for Students program, this non-need based program permits the parents of dependent students to borrow up to \$4000 per year with a \$20,000 aggregate maximum per dependent student. Interest rates are variable on an annual basis but will not

exceed 12 percent. Repayment of these loans begins within 60 days of disbursement.

WORK-STUDY EMPLOYMENT

Student Employment. All students are eligible to seek part-time employment opportunities with the University. There are three separate employment possibilities based upon a student's eligibility for financial assistance. To determine the type of student employment eligibility, the student must complete the financial aid need analysis application. The Office of Career Planning and Placement assists students in finding the available employment opportunities for which the student qualifies.

College Work-Study Program. This federal and university funded work program is available to students with computed financial need. The student has the opportunity to work in academic or service areas of the University on either the MCV or academic campus. The student will be offered this employment opportunity as a part of the financial aid offer.

Virginia Work-Study Program. This state and university funded work program is available to students with computed financial need. The student has the opportunity to work with community service employers in the Richmond area. The student has the option of selecting this employment opportunity if determined eligible for the College Work-Student Program.

University and Local Employment. If determined ineligible for the College Work-Study Program, the student may still seek regular campus employment that is funded entirely by university funds. The Office of Career Planning and Placement maintains listings of available university, community and local employment opportunities.

SHORT-TERM LOANS

The short-term loan program is used to assist enrolled students with immediate financial difficulties, generally of a personal and unavoidable nature. This loan is not made to students who are attempting to offset normal educational costs. Loans normally are limited to \$200, and repayment is due within 30 days. Information is available from University Enrollment Services/Financial Aid.

SUMMER AID

If funds are available, financial aid awards

may be made for the summer sessions. Awards are made on the basis of financial information filed for the academic year preceding the summer session. Applications and information on summer aid are available in April from University Enrollment Services/Financial Aid.

INTERNATIONAL STUDENTS

International students should inquire about services and assistance from the Office of the International Student Advisor.

SCHOLARSHIPS

The faculty, staff, and alumni of Virginia Commonwealth University are committed to maintaining high standards of academic excellence. Part of this commitment is carried out through the Virginia Commonwealth University Undergraduate Scholarship Program.

The Undergraduate Scholarship Program recognizes incoming, first-time freshmen and community college transfer students who have demonstrated superior personal and academic achievement. Financial need is not a criterion for most of the awards.

Scholarships are open to all students in all majors. Most scholarships are renewable for three additional consecutive years, provided the appropriate cumulative grade-point average is maintained.

Who Should Apply?

Incoming freshmen with SAT scores above 1050, GPA's above 3.0, who rank in the top 15th percentile of their high school class and who have outstanding records of community service, demonstrated leadership, or artistic talent are encouraged to apply. Community college transfer students must have completed at least 45 semester hours of course work with a cumulative GPA of 3.5. Students transferring to VCU from other four-year colleges, continuing VCU undergraduate, graduate students, and students working on a second undergraduate degree are not eligible for these scholarships. To receive awards from the University Scholarship Program, students must be full-time and enroll in a minimum of 28 semester hours during the academic year.

Students may apply for all VCU undergraduate scholarships by completing the University Undergraduate Scholarship application, available from University Enrollment Services/

Admissions, 821 West Franklin Street, Richmond, Virginia 23284, (804) 367-1222.

The Selection Process

Applications are reviewed by members of the Undergraduate Scholarship Committee. The committee's evaluation of the scholarship application is used in conjunction with the applicant's academic record to rank the applicant among all other scholarship applicants. Students will be notified of a scholarship award beginning on April 1 and continuing on a rolling basis.

Available Scholarships

The following descriptions provide a brief summary of the scholarships available through the University Undergraduate Scholarship Program:

The Presidential Scholarship. Each year the University awards Presidential Scholarships to 15 outstanding incoming students. The awards are equal in value to the cost of in-state tuition and mandatory fees plus the university charges for room and board. The scholarship is renewable for three additional years provided the appropriate grade-point average is maintained.

The Provost Scholarship. The University awards the Provost Scholarship to 50 incoming students each year. The value of this scholarship is equal to the in-state charges for tuition and mandatory fees. The scholarship is renewable for three consecutive years provided an appropriate grade-point average is maintained.

The Deans Scholarship. The University awards the Deans Scholarship to 100 incoming students each year. The value of this award is equal to one-half the charges for in-state tuition and mandatory fees. The award is renewable for three consecutive years provided an appropriate grade-point average is maintained.

The Black Scholars Award. The University confers the Black Scholars Award to 20 incoming freshmen who are black Virginians. The award equals in-state charges for tuition and mandatory fees. The award is renewable for three consecutive years provided an appropriate grade-point average is maintained.

Reynolds Metals Scholarship. Each year the University will award up to six scholarships to eligible dependents of Reynolds Metals employees in Virginia. The value of each scholarship is equal to in-state charges for tuition and mandatory fees. The scholarship is renewable for three

consecutive years provided the appropriate grade-point average is maintained.

The Coca-Cola Scholarship. The University awards two Coca-Cola Scholarships each year to incoming freshmen who are racial minorities, Virginia residents, and who are majoring in business. The awards are for \$1,000 and are renewable for three consecutive years provided an appropriate grade-point average is maintained.

The Brown Distributing Company Scholarship. Each year the University awards five \$1,000 scholarships to incoming freshmen from the Richmond area. These awards are not renewable.

The Aetna Life Scholarship. This scholarship, sponsored by the Aetna Life Insurance Foundation, is awarded by the University each year to the most highly qualified black freshman. The value of this award is \$5,000 and it is not renewable.

The Ukrops Scholarship. Sponsored by the Ukrops Corporation, this scholarship is awarded to an incoming black freshman from the City of Richmond. The value of the award is \$250 and it is not renewable.

The Dianne Nunnally and William V. Collins Scholarship. The University annually awards this scholarship, valued at \$750, to an incoming freshman. The scholarship is not renewable.

OTHER SCHOLARSHIPS

ROTC Scholarships. Army ROTC three- and two-year scholarships pay full tuition and fees plus an allowance for books. Additionally, Army ROTC scholarship recipients, as well as all advanced ROTC cadets, receive a stipend of \$100 per month during the academic year. ROTC scholarships are awarded to qualified students on a competitive basis. Scholarship applicants are evaluated on the basis of academic excellence, extracurricular activities, and leadership potential. For more information about the ROTC program and ROTC scholarships, contact the Department of Military Science in the College of Humanities and Sciences.

Part-Time Students

Two scholarships, the Julia Halley Latane Scholarship and the Rozanne Garrett Epps Scholarship, were created with the interest of helping working, part-time students complete their academic studies. The awards are for \$750 each academic year. Applications must be sub-

mitted or postmarked by June 1. Applications may be obtained from the Division of Continuing Studies and Public Service, 827 West Franklin Street, Richmond, VA 23284-2041, (804) 367-8421.

Study Abroad

The International Studies Abroad Award provides scholarships for VCU undergraduates who wish to study abroad. Applications must be submitted or postmarked by April 1. Applications may be obtained from the Center for International Programs, 916 West Franklin Street, Richmond, VA 23284-3043, (804) 367-8471.

DETERMINING A STUDENT'S FINANCIAL AID PACKAGE

Financial need is the difference between a student's total available resources and the total anticipated educational expenses for a given academic year. UES/Financial Aid must determine the student's financial need and eligibility for the available financial aid programs before a financial aid package may be offered.

First, an assessment of the total educational expenses is made reflecting such factors as the student's educational program, domicile status, housing plans, and credit hour enrollment. The allowable expenses include tuition and fees, books and supplies, housing and food, transportation, clothing, health, personal maintenance, and miscellaneous expenses.

Second, the approved federal Congressional Methodology is applied to the information provided on the need analysis application to calculate a family contribution for the educational expenses from the family's income and assets.

Third, financial need is the difference between the family contribution and the total educational expenses. This need amount is the maximum amount of financial assistance the student can receive from the need based programs. Students with or without financial need are eligible for the Parent Loan for Students or the Supplemental Loan for Students.

Student applications are ranked in order of greatest need and awards are made on the basis of the financial need. The student's application is considered initially for scholarship and grant eligibility, then loan or college work-study.

Additional student applications will be awarded assistance as the applications are completed.

FINANCIAL AID AND ACADEMIC REQUIREMENTS

A student's eligibility to receive funds from University, federal, and state programs depends on the number of credit hours for which the student initially registers and the number completed. Since most financial aid packages are awarded on the basis of full-time enrollment costs, the student should be aware that the awards will be reevaluated if full-time study is not established and maintained. For financial aid purposes, undergraduate, full-time enrollment status requires a minimum of 12 credit hours each semester.

Courses that a student audits do not count in the determination of enrollment status for financial aid purposes.

If a student is contemplating part-time study, it is advisable to see a financial aid counselor to discuss the consequences of such action.

REASONABLE ACADEMIC PROGRESS POLICY

In order to be eligible to receive financial aid from federal, state, or institutional programs at VCU, students must make reasonable academic progress in their certificate or degree program.

The criteria for reasonable academic progress are listed below:

1. Undergraduates who have attempted fewer than 30 hours must have earned at least 70 percent of the hours attempted at VCU.
2. Undergraduates who have attempted 30 or more hours at VCU must have earned at least 80 percent of the hours they have attempted.
3. Undergraduate students who have been enrolled for four or more enrollment periods (fall, spring, summer) must have earned a cumulative grade-point average (GPA) of 2.0 or above.
4. Graduate students must earn at least 80 percent of the 500-level or above course work that has been attempted.
5. Graduate students who have been enrolled in one or more graduate programs for four or more enrollment periods (fall, spring, summer) must have earned a cumulative 3.0 GPA or above in all 500-level and

higher courses.

6. Undergraduates may receive financial aid for a period not to exceed the equivalent of 12 semesters of full-time enrollment. Graduate students may receive financial aid for a period equivalent to six semesters of full-time enrollment for the master's degree and six semesters for the doctoral degree.
7. Students who receive aid and make no progress in two successive semesters shall not have made reasonable academic progress.

Students whose eligibility for financial aid has been suspended for lack of reasonable academic progress may appeal the action. The appeal will normally be granted if, in the judgement of the Financial Aid staff, the student can correct the deficiency within two academic terms. The appeal must be in writing and received by the financial aid director not later than 30 days after the date on the letter of notification. Students will be notified in writing of the results of the appeal.

At the end of each academic year, reasonable academic progress status will be determined by University Enrollment Services/Financial Aid. This determination will be made during June.

REFUND POLICY

If a student withdraws from VCU during the academic term, a portion of the financial aid already claimed may have to be repaid to the University. For information on refunds, refer to the "Expenses" part of this *Bulletin* section.

APPLYING FOR ASSISTANCE AT VCU

To apply for financial assistance, students should complete each of the steps outlined below.

1. **Meeting the financial aid deadline.** To receive maximum consideration for academic year or fall semester financial assistance, the required need analysis application must be completed and mailed to the appropriate processor by the established deadline. The application deadline for freshmen and all students enrolling on the MCV campus is March 15. The application deadline for academic campus students and transfers is April 15. The application deadline for all students for the spring semester and academic year is November 1. Applications mailed after November 1 will not be processed.
2. **Degree status requirements.** Admission to

the University is not necessary prior to applying for financial aid, however, no assistance will be offered until a student has been accepted for admission to a degree or certificate program. Applicants should not wait until they have been accepted for admission before filing the need analysis application.

3. **Complete the required need analysis application.** The preferred need analysis application for undergraduate, graduate and pharmacy students is the SINGLE-FILE form or the Financial Aid Form (FAF). Pharmacy students wishing to be considered for the most desirable types of aid must also provide parental information on the application. All financial information on the need analysis application should be provided from completed income tax returns for the tax periods requested. Do not send copies of tax returns unless requested to do so by UES/Financial Aid.
4. **Requesting Financial Aid Transcripts (FAT).** First time aid applicants must have a FAT completed by each postsecondary institution previously attended, even if no financial assistance was received. No financial assistance will be offered until all FATs have been received.
5. **Non-Virginia resident assistance.** Non-Virginia residents are encouraged to inquire about state grant funds from their state of residence. Funds may be available even though the student attends a university outside the student's state of residence.
6. **Submit Pell Grant Student Aid Report (SAR).** In response to the need analysis application, undergraduate students will receive a SAR from the application processor. After reviewing the SAR to ensure the accuracy of the information submitted, the SAR should be submitted to UES/Financial Aid if the student is identified as being Pell Grant eligible.
7. **Notification of awards.** Beginning in June students will receive a Financial Aid Notification (FAN) from UES/Financial Aid. Students will also be provided with detailed instructions for receiving the offered financial assistance.

Questions, as well as requests for applications, should be directed to the appropriate Financial Aid Office.

VETERAN AND RESERVIST EDUCATIONAL BENEFITS

For information on eligibility to receive Veteran and Reservist Educational Assistance, please contact the Office of Veteran Services, University Enrollment Services/Financial Aid, 901 West Franklin Street, Room 107, Richmond, VA 23284-3026, (804) 367-0977.

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.
2. Veteran students withdrawing from VCU or dropping a course must notify University 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 VA Regional Office.

VIRGINIA WAR ORPHANS EDUCATION PROGRAM

The Virginia War Orphans Education Program provides educational assistance for children, or surviving children, of certain veterans or service personnel. To be eligible for assistance under this program, an applicant must meet the following basic eligibility requirements:

1. The applicant must be no less than 16 years of age or no more than 25 years of age.

2. One of the applicant's parents must have served in the armed forces of the United States and must be permanently and totally disabled due to an injury or disease incurred in a time of war or other period of armed conflict; or
3. One of the applicant's parents must have died as a result of injury or disease incurred in a time of war or other period of armed conflict; or
4. One of the applicant's parents must be listed as a prisoner of war or missing in action.
5. The applicant's parent, on which eligibility is based, must have been a resident of Virginia at the time of entry into active military duty; or
6. The applicant's parent, on which eligibility is based, must have been a resident of Virginia for at least ten consecutive years immediately prior to the date of application.
7. The applicant must provide written verification attesting to their acceptance as a student in either a state-supported secondary or post-secondary educational institution.

Individuals eligible for the Virginia War Orphans Education Program are entitled to a tuition-free education at state-supported educational or training institutions on an annual basis. (Summer school also may be certified in the annual certification of students.) Individuals entitled to this benefit may utilize it to pursue any vocational, technical, undergraduate, or graduate program of instruction. Generally, programs listed in the academic catalogs of state-supported institutions are acceptable provided they have a clearly defined educational objective; i.e., certificate, diploma, or degree.

Requests for application should be sent to the Director, Division of War Veterans' Claims, Commonwealth of Virginia, 210 Franklin Road, S.W., Roanoke, VA 24011. If possible, applications should be submitted at least four months before the expected date of matriculation.



PART IV — Student Affairs

The University offers a wide variety of services to its students with responsibility for the majority of these services falling under the Division of Student Affairs. Students are encouraged to contact the vice-provost for student affairs if they are interested in services not listed below.

DIVISION OF STUDENT AFFAIRS

RICHARD I. WILSON

Vice-Provost for Student Affairs

CARMEN BELL

Administrative Assistant

The mission of the Division of Student Affairs is to help VCU students gain the most from their educational experiences, through direct services, attention to the campus environment, and effective communication and collaboration.

The Office of the Vice-Provost for Student Affairs is located in the Sitterding House, 901 Floyd Avenue, Richmond, VA 23284-3017, (804) 367-1244.

SERVICES FOR STUDENTS

Dean of Student Affairs

WILLIAM H. DUVAL

Associate Vice-Provost and Dean of Student Affairs

ELLEN D. PEARSON

Assistant Dean

NORMA A. PIERCE

Coordinator for Communications

The Office of the Dean of Student Affairs serves as a resource for students, parents, faculty

and staff who have problems or concerns with their interactions with each other and with the University. The dean's office will assist in resolving issues or will refer inquirers to the appropriate individual elsewhere in the institution.

The dean's office is also actively involved in understanding students and their needs, improving the quality of student life, and collecting and disseminating information about students. The dean sits on a variety of University committees, participates in orientation activities, and fulfills a number of additional administrative functions.

Students, parents, and staff members who have issues they wish to discuss or who are interested in various programs and opportunities are encouraged to visit the dean's office, which is located in the Sitterding House, 901 Floyd Avenue, Richmond, VA 23284-3017, (804) 367-8940.

University Student Health Services

BETTY ANNE JOHNSON, M.D., Ph.D.

Director

DAVID NELSON, M.D.

Assistant Medical Director

F. LYNNE CLEMO, M.D.

Assistant Medical Director

RALPH CLARK, M.D.

Assistant Medical Director

BETTY REPERT, PA-C

Assistant Director for Health Education

DORIS RICE

Assistant Director for Administration

The University Student Health Services (USHS) offer quality primary health care for the treatment of acute and chronic illness. In addition to diagnosis and treatment, the service emphasizes prevention of illness through screening, counseling, and health education. Full-time students are required to participate and pay the student health fee. Part-time students may elect to participate in the service but must pay the full student health fee.

The service is staffed by physicians, physician assistants, nurse practitioners, registered nurses, pharmacists, and health educators.

Services offered by the Student Health Services include general medical, allergy, and gynecology clinics; pharmacy and laboratory services; after-hours emergency care; and health education and public health programs.

All educational activities sponsored by USHS are available to students, including educational literature, video cassettes, weight reduction classes, and health-related programs on topics of interest to students.

Accidental injury and hospitalization are not covered by USHS, and students are urged to take advantage of the University-sponsored health plan. Information on this insurance program, which provides benefits to students at group rates, may be requested from USHS.

Virginia law requires that full-time students submit an immunization record prior to enrollment at VCU. The immunization record is included in the health history form mailed to students from University Enrollment Services and should be sent to the immunization coordinator on the academic campus.

The USHS office on the academic campus is located in Suite 159, Gladding Residence Center, 711 West Main Street. The USHS office on the MCV campus is located on the second floor of the A.D. Williams Clinic at 1201 East Marshall Street. For information, call (804) 367-1212 (academic campus), or (804) 786-9212 (MCV campus).

Immunization Requirements

Virginia Commonwealth University requires that all full-time students have a validated immunization record on file at the University Health Services. This is a requirement which must be completed prior to matriculation.

The record must be completed fully and accurately, and also must be accompanied by

documentation that the vaccines were given. This may be done in several ways: (1) The student's physician may transfer the information from his/her medical record and sign the form verifying its accuracy; or (2) the student may complete the form using information received from his/her local health department or from the armed services, but he/she then must attach a validated copy of supporting documentation. Many middle schools and high schools require validated immunization records from all students. If a student has recently graduated from high school, the immunization records may still be available. The student may request that the school provide a copy of his/her immunization records.

Please note that if documented evidence of full immunization according to VCU guidelines cannot be provided, then the student must see his/her family physician or health department and receive updated immunizations. Most city and county health departments offer free immunization clinics (e.g., Richmond City Health Department, 500 North Tenth Street).

Immunity to the following diseases must be documented as specified on the forms supplied by the School of Graduate Studies with the formal offer of admission.

Tetanus — Documentation of both 1 and 2 is necessary. (1) Primary immunization series, including month/day/year of each dose, and (2) **Tetanus/diphtheria booster (Td), month/day/year within the past ten years.**

Diphtheria — Documentation of both 1 and 2 is necessary. (1) Primary immunization series, including month/day/year of each dose, and (2) **Tetanus/diphtheria (Td) booster, including month/day/year within past ten years.**

Polio — (1) Primary immunization with a total of three doses of OPV (oral Sabin) or (2) primary immunization with a total of four doses of IPV (injected Salk).

NOTE: Documentation of prior vaccination against polio, including month/day/year of each dose, is required. However, if not completed in the past, it is not recommended that the student complete the primary polio series unless the student is less than 18 years old or is planning travel

to an area endemic or epidemic for polio.

Rubeola (Measles) — Please be aware that there has been a recent change in the recommendations for the measles vaccine. VCU, in keeping with the American College Health Association recommendations, will now require two (2) doses of the measles vaccine, both given after 12 months of age. Although the vast majority of you will have had one dose of the vaccine, only a few of you will have had a second dose. Documentation of one of the following is necessary. (1) Born before 1957 and, therefore, considered immune or (2) Two doses of measles vaccine, both administered after 1967, after the age of one year, and administered at least one month apart (document month/day/year). This is a new requirement beginning the fall of 1990. (3) Physician's certification of diagnosis of measles including month and year of occurrence. (4) Documentation of immune titer proving immunity.

NOTE: Measles vaccine given before 1968 is not acceptable.

Rubella (German Measles) — Documentation of one of the following is necessary. (1) Rubella vaccine given after one year of age, including month/day/year, or (2) report of immune titer proving immunity.

NOTE: A history of disease is not acceptable. Rubella vaccine given before June 9, 1969, is not acceptable.

Mumps — Documentation of one of the following is necessary. (1) Mumps vaccine given after one year of age and after 1967 (document month/day/year). (2) Report of immune titer proving immunity. (3) Physician's certification of diagnosis of mumps including month and year of occurrence. (4) Born prior to 1957 and therefore considered immune.

Students with questions should contact the staff of University Student Health Services, academic campus, Suite 159, Gladding Residence Center, 711 West Main Street, Richmond VA 23284-2022, (804) 367-1212.

University Counseling Services

JOHN G. CORAZZINI

Director

SANDY COLBS

Staff Psychologist

JENNINGS COX

Assistant Director

PAULINE MORONI

Staff Counselor and Assistant to the Director

ERIC ORITT

Staff Psychologist

NAPOLEON L. PEOPLES

Staff Counselor

KATHLEEN SCOTT

Staff Psychologist

University Counseling Services (UCS) provides a wide range of services designed to meet the personal, social, vocational, and educational needs of students.

Individual and group counseling enables individuals to learn the process of dealing more effectively with problems in living, coping with stress or depression, or increasing the general level of satisfaction with their lives. Together, students and their counselors identify primary areas of concern and set realistic goals for dealing with these issues. The counseling process often involves improving self-understanding, learning new behaviors, or eliminating self-defeating behaviors.

Career counseling and programming help students identify their interests, abilities, values, and needs. Through the use of self-exploration, homework exercises, and vocational testing, students are assisted in planning their academic and career goals.

Stress management programs enable students to cope more effectively with the many stresses in the university environment through the teaching and practice of physical, cognitive, and behavioral stress management techniques.

Consultation and outreach provides psychological services to individuals and organizations affiliated with the University in an effort to enhance their development. Goals are accomplished through activities including (1) liaisons with student and faculty groups, (2) programmatic interventions, (3) educational activities, and (4) environmental modifications. Included under programmatic intervention are the structured group program and the multicultural training program.

Initial interviews are offered by appointment. Students are eligible for 12 sessions per academic

year. Strictly confidential, UCS sessions are free except for selected tests.

Hours of operation

Academic	Monday–	
Campus	Thursday	8 am–6 pm
	Friday	8 am–4:30 pm
	Summer hours	
	Monday–Friday	8 am–4:30 pm

MCV

Campus	Monday–Friday	8 am–4:30 pm
	Summer hours	
	Monday–Friday	8 am–4:30 pm

University Counseling Services are available at 913 West Franklin Street, Richmond, VA 23284-2525, (804) 367-1647. On the MCV campus, the address and phone number are 302 North Twelfth Street, Richmond, VA, (804) 786-3964.

Office of Minority Student Affairs

L. VICTOR COLLINS

Director

The Office of Minority Student Affairs (OMSA) provides supportive services to ethnic, racial and cultural minority groups indigenous to this nation and who are substantially represented at the University. Virginia Commonwealth University is committed to a multi-cultural, diverse student body, and the Office of Minority Student Affairs offers a variety of assistance to students and faculty in support of this commitment.

This recently established office facilitates minority student involvement in the total campus experience from the Black Awakening Gospel Choir to the Student Government Association. The office also acts as an advocate for minority students' concerns and interests. Another service is the coordination of certain university-wide programs such as Black History Month. Certainly, OMSA is involved with counseling, both individual and group, and the provision of advice to groups such as the Black Student Alliance and the Black Caucus. However, OMSA also provides some services to groups and individuals seeking improved understanding regarding the races and cultures found at the University. In this way, the office seeks to supplement the opportunities for growth and development at the University.

Although a number of minority student organizations have historically flourished at the

University, an exciting new array of student organizations and programs have been initiated since OMSA was founded, including the Black Graduate Association, the African-American Scholars Program, and the Johari Players.

All students are urged to visit the Office of Minority Student Affairs located on the first floor of the Sitterding House, 901 Floyd Avenue, Richmond, VA 23284-3017, (804) 367-0558.

International Students and Visiting Scholars

BASSAM F. KHOURY

International Student Advisor

The University maintains an Office of International Student and Scholar Services to serve all international students and visiting scholars and to provide them with assistance and information.

The international student advisor is available on both the academic and medical campuses to assist with personal, financial, cultural, and social adjustment matters facing international students and help guide them within the University community so that they may pursue their academic goals successfully. The advisor will help international students maintain their non-immigrant student visa by issuing and processing the necessary immigration documents and by interpreting relevant immigration rules and regulations.

The International Student Union (ISU) is the official club of the international students attending the University. Membership to the club is open to all international students, American students, faculty, and staff who are interested in meeting and developing friendships with people of different cultural and national backgrounds. Also, the club concerns itself with promoting international understanding and awareness through its activities on and off campus. The University is supportive of the club and its educational, cultural, and social activities. International students are encouraged to join and actively participate in the various functions of the club. The experiences students will gain from their participation are a valuable part of the educational process.

Virginia Commonwealth University offers a variety of extra-curricula activities to all students to complement their formal education. These activities will provide opportunities for the exchange of ideas, personal development and growth, and leadership training, and they will aid international students in their adjustment to

U.S. campus life and provide the opportunity to practice spoken English through close contacts with American friends.

Students may contact the international student advisor located at the Center for International Programs, Millhiser House, 916 W. Franklin Street, Richmond, VA 23284-3043, (804) 367-0595. The medical campus office is located in Bear Hall, Room 112, (804) 225-4632. (Refer to Part XIX of this *Bulletin*.)

Career Planning & Placement

JEAN M. YERIAN
Director
SUSAN B. SPENCER
Associate Director
CAMILLA C. JONES
Assistant Director
MARY MILLER
Assistant Director
ROSALIND H. NEWTON
Assistant Director
LAURIE DEVER
Assistant Director
DON MARTIN
Career Counselor

Career Planning & Placement helps students discover more about themselves, explore career options, decide about directions, and develop sound strategies for reaching their career goals.

VCU offers many resources through the Career Planning & Placement Office. The Career Planning Resource Center provides

- computerized career searches
- an up-to-date microfiche occupational brief file
- a complete career information system (books, videos, cassettes)
- information on employers (annual reports, recruiting brochures, directories), academic campus majors, and on educational opportunities at the graduate level.

Students have the opportunity to participate in special career planning groups and to meet with a staff member for career counseling. Two popular topics for individual sessions are resume reviews and referrals to RamSCAN, the Student Career Advisory Network. RamSCAN allows students to talk with VCU alumni already active in their career fields.

Career Planning & Placement maintains a job bank of both part-time and full-time openings and has a special Community Service Student

Employment Program. The office publishes a newsletter called *Career Directions* which contains a wide variety of announcements on career topics.

Students may learn job search skills by participating in small-group workshops on such topics as interviewing techniques. The office also has an extensive video library on job search topics.

Seniors finishing within the academic year use the Career Planning & Placement office to interview with business, industry, government, and education representatives who visit the office seeking prospective graduates for anticipated openings in their organizations. To take advantage of this service, graduating students need to register early for the Campus Interview Program as the first visits are in October and some recruiters come to campus only once a year.

All students are urged to use the resources of Career Planning & Placement, located at The Ginter House, Second floor, 901 West Franklin Street, Richmond, VA 23284-2007, (804) 367-1645. The Career Planning Resource Center is open 8 am–7:30 pm on Monday, Wednesday, and Thursday, and 8 am–4:30 pm Tuesday and Friday.

Student Housing

HENRY G. RHONE
Assistant Vice-Provost for Student Affairs
BERNARD A. MANN
Director of Housing
NANCY E. ASAI
Director of Residence Education

Living accommodations on campus are provided for the convenient housing of students and to further the educational objectives of the University. Approximately 2,850 students live in University-oriented housing which varies in capacity and style, including high-rise residence halls, and suites and apartments on campus.

The University believes that residence hall living provides an opportunity for students to gain a variety of personal learning experiences that supplement and complement the formal learning gained in the classrooms and laboratories. The program seeks to make residence units a place where students can

- learn to meet and live successfully with other students
- assume major responsibility for their own lives and the atmosphere of their living environment

- participate in a variety of educational and social programs
- develop leadership skills through participation in residence governmental, social, and judicial organizations.

The residence education staff facilitates these objectives and always is available to assist students in the residence areas.

Although acceptance for admission to the University does not guarantee housing facilities to the new student, all students who desired space in University-operated housing have been accommodated in previous years. (See the Room and Board Fees section of Part III.)

Rooms in University-operated housing are rented for the entire academic year of nine months unless other arrangements are made. The student, parent, or guardian contracts to pay the rent for this period.

All rooms are furnished adequately, but some students may wish to add personal touches and conveniences of their own. As the buildings vary in age and occupancy, it is best to wait until arrival to decide on the extra furnishings. Students should provide their own pillows, bedspreads, linens, and blankets. Coin-operated washers and dryers are located in each building.

For further housing information, contact the Housing Office located in the Gladding Residence Center, 711 West Main Street, Richmond, VA 23284-2517, (804) 367-6495.

Off-Campus Housing

Although the University does not control or monitor privately-operated off-campus housing facilities, assistance in the location of non-University-controlled residences that rent to students on a nondiscriminatory basis is provided by the Off-Campus Housing Office. A computerized housing program in the Off-Campus Housing Office makes it easier for students to find appropriate housing. It is advisable for the student to inspect personally off-campus accommodations before contracting. Good quality apartments and rooms are limited, and interested students should make arrangements early.

For further off-campus housing information, contact the Off-Campus Housing Office located

in the University Student Commons, 907 Floyd Avenue, Richmond, VA 23284-2032. (804) 367-6509.

Food Service

Undergraduate students living in University residence halls are required to participate in one of the board plans offered by the University unless they are living in self-sufficient apartment units with kitchens. Students residing off campus are encouraged to participate in a board plan and receive the same benefits as those students residing in University residence halls.

The University offers a number of different meal plans ranging from the traditional 20 meals per week plan to the more flexible 10 meals per week plan. Each plan can be customized with the purchase of PLU\$ DOLLAR\$. (Refer to Part III of this *Bulletin*.)

Student Identification Cards

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

Rape Services Consultants

Rape Services Consultants are trained volunteer members of the VCU faculty and staff who are on call around the clock and are available to help rape survivors deal with the aftermath of attack. Services provided include helping the survivor identify needs, identifying campus and community resources, explaining options, and providing other assistance as requested. To contact a rape services consultant, call the University Counseling Services at 367-1647 from 8 am until 4:30 pm weekdays, and the VCU Police Dispatcher at 367-1196 evenings and weekends.

Drug and Alcohol Education

Various staff members in Student Affairs collaborate to conduct numerous educational activities for students related to abuse of drugs and alcohol. Students serve as peer educators, attend Octsoberfest activities, and receive training as servers and how to recognize problem drinkers. Staff members represent VCU in the Virginia Substance Abuse Consortium and are active in developing drug-free workplace policies and alcohol policies. For information regarding these programs, contact the Associate Dean of Student Affairs at 367-6500.

University Policies and Procedures

A number of policies and regulations at the University affect students. Many of these are printed in Parts II, III, and V of this *Bulletin*. Three policy documents are of particular interest to students. The *Virginia Commonwealth University Rules and Procedures* document outlines the rights, responsibilities, and privileges of each member of the university community and describes 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 demonstrating the prohibited conduct outlined in the document. The *VCU Honor System* defines academic dishonesty and provides a procedure for judging alleged violators of academic integrity. The *Grade Review Procedure* outlines a process whereby students may appeal grades that they feel have been assigned unfairly. Each student is responsible for being familiar with the provisions of all university policies and regulations. The policy documents described above are printed in full in the *VCU Resource Guide* which is distributed on campus each year and also is available at the Office of the Dean of Student Affairs located in the Sitterding House, 901 Floyd Avenue, Richmond, VA 23284-3017, (804) 367-8940.

Daytime Parking

Daytime parking is available to students at the parking deck located on Main Street, with entry from either Cherry or Laurel Street. Payment must be made upon exiting the deck. Students may purchase evening parking permits which are valid for most surface parking lots after 3:30

p.m., Monday through Friday, and all day on weekends. The parking office is located at Leigh House, 1000 East Clay Street, Richmond, VA 23298-0235, (804) 786-0501.

Due to the absence of reserved student parking on campus and limited off-campus parking, it is recommended that residence hall students not bring their automobiles to Richmond. Only authorized vehicles may be parked on campus.

ACTIVITIES FOR STUDENTS

Activities Information

Students may find out about campus activities through the following sources sponsored by Student Affairs:

SIT-TV — Stay-In-Touch Television — is a video information system displayed on TV monitors located throughout the University Student Commons. SIT-TV provides the most up-to-date information about campus events and services as well as national news, weather, and sports.

The University Student Commons Information Desk is staffed by students who can provide information regarding activities and events taking place daily on the campus. The student staff can answer questions, find information, give directions, and make referrals. The telephone number for the Information Desk is (804) 367-1981.

The Campus Source is a large calendar and electronic message board that lists campus activities. The Campus Source is available in the Cary Street Recreation Complex and the Hibbs Cafeteria.

SAM is a 24-hour telephone service that gives callers information about Student Activities and Meetings (SAM). The information is updated daily to provide the most accurate information available. To reach SAM, call (804) 367-6523.

Publications of the Division of Student Affairs also provide useful information to students. The *VCU Resource Guide*, a directory of student services, lists all services available at the University and contains the full text of several University policies that affect students. It also contains information on getting involved in

campus life, a list of registered clubs and organizations, information on special programs and events, and a directory of frequently called phone numbers. The *Student Organization Manual* lists information for all student groups. Copies of all of these publications are available at the Office of Student Activities/University Student Commons that is located in the Commons at 907 Floyd Avenue, Richmond, VA 23284-2032, (804) 367-6500.

Students and University Governance

The University Council, an advisory body to the University president, is the highest internal governance body of the University. The University Council has 27 faculty, ten students, ten administrators, and four subcommittees: the Executive Committee, the Committee on Student Affairs, the Committee on Academic Affairs, and the Committee on Faculty Affairs.

As a result of a referendum and elections held during the fall semester 1979, the Academic Campus Student Association was created and the newly-elected student senators formally began the new association in January 1980. Each of the six schools on the Academic Campus, as well as all students who have not matriculated into schools, are represented in the Student Senate. Elections for student senators are held each spring during the period of preregistration for fall classes. The senate is organized into committees, and all meetings of the senate are open to the public. The name of the senate was changed to the Virginia Commonwealth University Student Government, Academic Campus, in the fall semester, 1983. Additional information can be obtained from the Student Government office, located in the University Student Commons, 907 Floyd Avenue, Richmond, VA 23284-2032, (804) 367-6509.

Student Media

Commonwealth Times. Students write and edit the *Commonwealth Times*, a weekly campus newspaper containing news, features, editorials, and reviews of timely topics. The offices are located in room 1149 of the New Academic Building, 901 W. Main Street, Richmond, VA 23284-2010, (804) 367-1058.

Richmond Arts Magazine. The student-published literary and visual arts magazine is a two-dimensional showcase for the work of students,

faculty, and area artists. The magazine is distributed free on campus.

WVCW. The student-operated radio station uses a carrier current line to some residence halls and cafeterias. Programming includes music, information, news, public affairs, and public service announcements. Station facilities are located in the New Academic Building, 901 W. Main Street, Richmond, VA 23284-1961, (804) 367-1047.

Office of Student Activities/University Student Commons

KURT J. KEPPLER
Associate Dean of Student Affairs
BART A. HALL
Director of University Student Commons
KATHLEEN HALL
Director of Student Activities
SUSAN IVIE
Director of Recreational Sports
HENRIETTA BROWN
Manager of Student Organizational Accounts
VACANT
Coordinator of New Student Programs/Volunteer Services
CAROLYN FARLEY
Program Coordinator
JULIE AMBROSE
Assistant Director, University Student Commons
ANITA NAVARRO
Events Coordinator
GREGG ELLIOTT
Coordinator, Outdoor Adventure Program
RUSSELL VAN STRATT
Assistant Director of Recreational Sports
TODD B. McCOLLUM
Assistant Director of Recreational Sports
SHELLEY PIDGEON
Assistant Director of Recreational Sports

The Office of Student Activities/University Student Commons provides services to the VCU student community through program coordination, student group advisement, information dissemination, and facilities management of the University Student Commons and Cary Street Recreational Complex.

The University Student Commons is a focal point of student life on the campus and is a major facility for student meetings, organizational programs, and other leisure-time activities. The facility contains the Park Place cafeteria and the Common Ground, a deli/pub area. There are also lounge areas, meeting rooms, a theater, games room, student organization area, banking machines, sundry sales area, and an information desk. During the academic year, the Commons is

open Monday–Thursday from 7 am until 12 midnight, Fridays 7 am until 1 am, Saturdays 10 am until 1 am, and Sundays 12 noon until 11 pm. The Office of Student Activities/University Student Commons is located in the Commons, 907 Floyd Avenue, Richmond, VA 23284-2032, (804) 367-6500.

Student Programs and Involvement.

Numerous opportunities are available for students to participate and provide leadership in social, cultural, service, and recreational activities and organizations. Students determine their own level of involvement, bearing in mind the need for a balance between academic and extracurricular programs. Examples of various programs available include the Leadership Education Program for officers in student organizations; Black History Month and Kwanzaa; and the Lectures, Concerts, Films, Alternative Films, Public Relations, Common Ground, Fine Arts, and Special Events committees which are part of the Activities Programming Board.

Student Organizations. Approximately 150 student clubs/organizations exist at VCU and reflect the social, recreational, educational, political, or religious interests of the student body. Examples of organizations include fraternities and sororities, departmental and professional groups, interest groups such as the Black Student Alliance and Environmental Coalition, and service-oriented groups. The names of the current presidents of all currently registered organizations are available from the Office of Student Activities/University Student Commons.

Cary Street Recreation Complex. The complex includes a gymnasium which features basketball, volleyball, badminton, free weight and machine weights, racquetball courts, lighted artificial turf field, and jogging track. Numerous recreational activities are offered, including instructional classes in aerobics, racquetball, weight training, open recreation, and tournaments. New lighted tennis courts and outdoor basketball courts recently opened at the Cary Street site. Information on all recreational activities can be obtained at the Cary Street Recreation Complex, 911 West Cary Street, Richmond, VA 23284-2029, (804) 367-6219.

Intramural sports offer students the opportunity to participate in organized men's, women's,

and co-recreational leagues and tournaments. A diverse array of activities includes traditional team sports like flag football, basketball, and softball, as well as special activities such as super hoops, wallyball, badminton, and spike fest. Contact the Cary Street Recreation Complex, 911 West Cary Street, Richmond, VA 23284-2029, (804) 367-6219, for additional information.

Sports clubs are popular on campus and currently include men's rugby, fencing, women's soccer, judo, men's lacrosse, skateboarding, men's volleyball, and gymnastics. Contact the Cary Street Recreation Complex, 911 West Cary Street, Richmond, VA 23284-2029, (804) 367-6219 for additional information.

The **Outdoor Adventure Program and Outing Rental Center** provide a variety of outdoor recreational opportunities for students. Organized excursions with experienced trip leaders include camping, white water rafting, canoeing, caving, climbing, bicycling, backpacking, windsurfing, and cross-country skiing trips, many of which are designed for beginners. All necessary equipment is included in the trip fees. For students planning their own outdoor activities, equipment rental is available through the Outing Rental Center. For a nominal fee, canoes, backpacks, tents, and cross-country skis can be rented on a short-term basis. The Outdoor Adventure Leadership Program teaches interested student volunteers a variety of outdoor skills and prepares them to lead wilderness trips. Information on trips and equipment rentals can be obtained from the Outing Rental Center, currently located at the rear of the Millhiser House, 916½ West Franklin Street, Richmond, VA 23284-2032, (804) 367-6043.

New Student Programs/Volunteer Services. The Office of New Student Programs sponsors the STAR, and New Student Orientation Programs. Upperclass students are involved actively in all orientation programs. For more information, contact the office, located in the University Student Commons, (804) 367-6500.

The Office of Student Volunteer Services provides an active organized "link" between Virginia Commonwealth University and the Richmond metropolitan community, providing a vehicle the University community may use to volunteer in a productive and meaningful manner. Information about the diversity of service/learning programs in the area is available

in the office for review.

The coordinator of student volunteer services extrapolates society's expectations for volunteering and community service as components of career and job training to VCU students.

A wide range of volunteer opportunities is available, and every effort is made to link stu-

dents with agencies and/or organizations of their choice. Students may obtain a Student Volunteer Form by visiting the SVSO in the student organization area of the University Student Commons, 907 Floyd Avenue, Richmond, VA 23284-2032, (804) 367-6509.



PART V — Academic Regulations and General Degree Requirements

These academic regulations are established for students enrolled in programs in the College of Humanities and Sciences, School of the Arts, School of Business, School of Community and Public Affairs, School of Education, School of Social Work, Non-Traditional Studies, and for special (nondegree-seeking) students. Undergraduate students enrolled in programs other than those listed above should review the academic regulations described under the school/department section in this Bulletin and in the Medical College of Virginia Bulletin.

ADDRESS

Every student has the responsibility to keep a current mailing address on file with University Enrollment Services/Records and Registration.

Mailings returned to University Enrollment Services/Records and Registration by the post office because of an incorrect address can cause a registration hold to be placed on a student's record until a correct address is provided.

ACADEMIC CREDIT

At Virginia Commonwealth University, credits toward a degree are awarded on the basis of students' demonstrated college-level learning. Students have a number of alternatives for accomplishing and demonstrating their learning (e.g., independent study, CLEP Examinations, Military Education, etc.); but the conventional

and most common method is through a combination of studio, laboratory, and/or classroom instruction **and** out-of-class activities such as reading, research, writing, and/or other assignments.

Typically, students should expect that out-of-class learning activities will require **AT LEAST** two hours for each hour of in-class instruction. Although proportions of time will vary, especially for studio and laboratory classes involving proportionately greater amounts of in-class time, the ratio of two hours preparation and study for each hour of lecture and discussion should be regarded as a normal minimum time investment.

ADVISING PROGRAM

Students are responsible for knowing and fulfilling all general and specific requirements relating to the completion of their degree program as described in this section.

An integral part of the student's academic program at VCU is individual student advising. A degree-seeking student is assigned a faculty advisor who is available for academic and career advising. Special (nondegree-seeking) students are encouraged to seek advice from the Adult/Nontraditional Programs, Room 101, 827 West Franklin Street. Students are also encouraged to seek advising, depending on intended major, from the appropriate office listed below:

School of Business

Office of the Associate Dean for
Undergraduate Studies
Business Building, 1015 Floyd Avenue, room
3119, (804) 367-1595

School of Community and Public Affairs

Office of the Assistant Dean
919 West Franklin Street, room 205,
(804) 367-1282

School of Education

Office of the Assistant Dean
Oliver Hall, 1015 West Main Street, room
2090, (804) 367-1309 or Humanities and
Sciences (below)

College of Humanities and Sciences

(including humanities, sciences, social sciences,
Mass Communications, Pre-Health
Sciences, Undecided Majors)
Office of the Associate Dean
Hibbs Building, 900 Park Avenue, room 205,
(804) 367-1673

Health and Physical Education

Department of Health and P.E.
817 West Franklin Street, room 221,
(804) 367-1284

School of Social Work

Office of the Director for the BSW Program
1001 West Franklin Street, room 103,
(804) 367-8495

Additional assistance for all students is available from the Counseling Center and the Office of Career Planning & Placement.

ATTENDANCE REGULATIONS

The establishment of attendance criteria is the responsibility of each school, and thus will vary from school to school and class to class. Instructors are responsible for clearly informing the student in writing of the attendance requirements for each course and the consequences of poor attendance. Students must abide by the requirements as announced in each separate class even though the requirements may vary widely among courses. Students may not enroll in two courses meeting at the same time without the written approval of the chairman of each involved department.

Any student in attendance difficulty should contact the instructor to explain the reasons for nonattendance and to discuss the feasibility of continuing in the course. If, in the opinion of either the student or the instructor, the student

has fallen so far behind that successful completion of the course is impossible, the student should withdraw from the course prior to the end of the first eight weeks of classes.

In the absence of an official withdrawal and continued non-attendance, the instructor may withdraw the student for non-attendance with a mark of "W" prior to the end of the withdrawal period or assign a final academic grade. **Withdrawals are not permitted after the end of the first eight weeks of classes.** For classes whose meeting dates do not conform to the semester calendar, the final withdrawal date is the day when one-half of the course has been completed. Withdrawal dates for each summer session are published in the summer studies catalog.

Religious Observances

The instructional program at VCU is based upon a series of class meetings involving lectures, discussions, special reading, and reporting assignments. Therefore, it is important for each student to be in attendance on a regular basis. A student who misses a class session is responsible for completing all material covered or assignments made during the absence. A student who wishes to observe a religious holiday of special importance that conflicts with class responsibilities must provide advance written notification to each instructor. Instructors will work with students to make alternative arrangements for missed examinations or other assignments, but are not specifically required to provide make-up tests or examinations. A student who believes that the alternative arrangement is not equitable may appeal in writing to the chairperson of the instructor's department.

**MIDSEMESTER STUDENT
EVALUATION OF ACADEMIC
PERFORMANCE**

University policy requires that faculty provide feedback to students regarding their academic performance prior to the semester withdrawal date. Although such feedback is not required to be in the form of a letter grade, grades do provide the clearest indicators of progress in class.

CHANGE OF MAJOR

If students wish to change their major area of concentration, they may initiate such changes under the following conditions:

1. Change of Major forms with instructions are available in University Enrollment Services/Records and Registration. The change will become official only after University Enrollment Services/Records and Registration has received the Change of Major/Minor form signed by the dean or chairperson of the appropriate school or department.
2. Students are advised to review the requirements and prerequisites of the program they wish to enter before initiating a change of major. Certain programs, including those in the Schools of the Arts, Business, Education, and Mass Communications, have additional requirements a student must fulfill before being accepted as a degree-seeking student. To assist students planning a change of major, audio tapes describing each major offered at VCU are available for review at the Cabell Library.
3. Students who are currently enrolled in a program on the MCV campus and who wish to change to a curriculum on the academic campus will do so through a change of major. Such students are subject to the continuance policy of the academic campus in making a change of major.
4. Students should be aware that credits previously earned at VCU or at another university may or may not be applicable to their new major.

CLASSIFICATION OF STUDENTS

Full- and part-time degree-seeking students (but not special nondegree-seeking students) are classified by credits earned as follows:

Freshmen.....	1 to 23 credits
Sophomores	24 to 53 credits
Juniors.....	54 to 84 credits
Seniors	85 credits and above

CONTINUOUS ENROLLMENT

A student who does not attend VCU for four or more successive semesters (including summer) must submit an application for readmission to University Enrollment Services/Admissions. This must be done prior to the suggested deadline date for submitting readmission applications for the semester in which the student wishes to return.

REGISTRATION POLICIES

Student Load

The semester credit is the quantitative unit by which courses are measured. A semester credit is defined as one hour per week of lecture-recitation or not less than two hours per week of laboratory work, field work, internship, or studio work throughout a semester. For purposes of computing student load, MAT 001 or ENG 001 or ENG 002 are equivalent to three semester hours but carry no academic credit.

Full- or Part-time Students

Student load is the total number of credits for which a student is enrolled in any semester. The student enrolled in 12 or more credits during any semester is classified as “full-time.” The student enrolled in 11 credits or less during any semester is classified as “part-time.”

The degree-seeking student may be either a “full-time” or “part-time” student. See Categories of Student Enrollment in Part II of this *Bulletin*.

Overload

The maximum number of credits for which a degree-seeking undergraduate student may enroll in any semester without special permission is 19, excluding holiday intersession courses. More than 19 credits is an overload. Permission to enroll in 20–21 credits may be granted upon the approval of the student’s advisor and the academic dean. An Overload Approval Form may be obtained from University Enrollment Services/Records and Registration. Undergraduate special students are limited to 11 semester hours. Overloads must be approved by the Academic Status Committee.

No student may attempt more than 21 credits in any one semester.

Regarding credits earned concurrently at another institution, refer to “Concurrent Registration,” Part V of this *Bulletin*.

Cancellation of Registration

A cancellation of registration must be made prior to the end of the “Add-Drop” period by notifying in writing University Enrollment Services/Records and Registration. Refunds will be issued in accordance with procedures set forth under Refunds in Part III, Expenses and Financial Aid, of this *Bulletin*.

See also Withdrawal From The University below. For readmission guidelines, see Part II of this *Bulletin*.

Withdrawal from the University

Students who withdraw from **ALL** classes during a semester must submit a completed Official Withdrawal Form to University Enrollment Services/Records and Registration before the end of the first eight weeks of classes. For classes whose meeting dates do not conform to the semester calendar, the final withdrawal date is the day when one-half of the course has been completed. This withdrawal form may be obtained from University Enrollment Services. 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 mark of "Withdrawn" (W) for all courses in which the student was enrolled. Refunds will be issued in accordance with procedures set forth under Refunds in Part III, Expenses and Financial Aid, of this *Bulletin*.

If, due to extraordinary circumstances, a student requests retroactive withdrawal after the final withdrawal date, the student must petition the Academic Status Committee for consideration of a waiver of this academic regulation. (See Waiver of Academic Regulations Academic Status Committee in Part V of this *Bulletin*.)

A student who withdraws from all courses during a semester may attend the following semester without submitting an application for readmission. A student who does not attend VCU for four or more successive semesters (including summer) must submit an application for readmission to University Enrollment Services/Admissions. This must be done prior to the suggested deadline date for submitting readmission applications for the semester in which the student wishes to return.

See also Cancellation of Registration above.

Audit Registration

Regarding registration for audit, refer to "Mark of Audit," in Part V of this *Bulletin*.

CHANGE IN REGISTRATION

Once a student has registered for classes, changes in registration may be made only according to the procedures listed below.

When a student makes any change in registra-

tion, the student should retain the copy of the new schedule issued as verification of the change.

During the Add/Drop Period

Dates of add/drop periods before and during the first week of classes are published in the schedule booklet each semester. Changes in registration (drops, adds, changes from credit to audit or audit to credit) during the add/drop periods may be made by completing a Course Request Form and submitting it to University Enrollment Services/Records and Registration. Courses dropped during add/drop periods do not become part of the student's permanent academic record.

After the Add/Drop Period

Students may not add courses after the add/drop period, except under unusual circumstances and with the permission of the dean of the school offering the course. (Refer to the calendar in the front of this *Bulletin* for the exact date.) Students may withdraw from classes only in accordance with the following procedures:

1. After the add/drop period, forms may be obtained in University Enrollment Services/Records and Registration and must be filed with that office before the student is officially withdrawn.
2. Withdrawals after the add/drop period and before the end of the eighth week of classes will become a part of the student's academic record with a mark of "W." For classes whose meeting dates do not conform to the semester calendar, the final withdrawal date is the day when one-half of the course has been completed.
3. Failure to complete the form when ceasing to attend a class will normally result in the assignment of a failing grade in the course.

See also Withdrawal From The University in Part V of this *Bulletin*.

Concurrent Registration

Students who are enrolled in degree programs need prior approval to take courses at other institutions to ensure that credits earned concurrently at another institution are eligible for transfer to VCU. Approval by the student's advisor, department chairman, and academic dean is required before registration at the other institution. A permit to take courses off campus can be obtained from University Enrollment

Services/Records and Registration or from the Office of the Dean.

GRADING AND MARKING SYSTEM

Grades and Grade Points

VCU course work is measured both in terms of quantity (semester hours of credit) and quality (grades). Grades are assigned according to a letter system with each letter being assigned a grade-point value. The letter grades and grade-point values are as follows:

GRADES Letters and Meaning	Grade-Point Value per Semester credit
A — Superior	4
B — Good	3
C — Average	2
D — Passing	1
F — Failing	0

The notation (#) when following a letter grade means that grade is not computed in the GPA.

The above scale is known as a four-point grading system since four is the highest grade point assigned. 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.

Grade-Point Average

The grade-point average (GPA) is computed by dividing the number of grade points earned at VCU by the number of credits attempted at VCU. The grades of accepted transfer courses are not included in the computation of the VCU grade-point average.

Repeated Courses

Courses attempted at VCU may be repeated. All credits attempted and grade points earned are included in the computation of the cumulative grade-point average with the following exception: (Note: This exception applies only to students enrolled in programs on the academic campus.) If a student repeats a course in which a “D” or “F” grade was received on the first attempt, the student may request at the time of registration that only the better grade be counted in computing the cumulative grade-point average. However, if more than one “D” or “F” grade is received in the same course, only one of these grades will be removed from the computation of

the cumulative grade-point average. A student may file the **Repeated Course Request form at any time during a semester prior to awarding of the undergraduate degree; however, the form must be filed before the last week of classes in any semester in order to have the cumulative grade point average adjusted at the end of that semester.**

The grades for all attempts will be recorded on the student’s permanent record. Students may not repeat courses for which they have previously received transfer credit without losing the transfer credit. A repeated course may be counted only once as credits earned for graduation. Before repeating a course, the student should consult with the advisor or department chairman.

Students who choose to exercise the repeat course option must do so *prior* to the awarding of their undergraduate degree from any school or college at VCU or any other university. The student’s grade point average at graduation will not be affected by repeating a course at any time after graduation.

Grade Exclusion Policy

This policy is applicable to a former student who was enrolled in a program offered on the academic campus and who meets all of the following criteria:

1. Has been separated completely from VCU for five or more years.
2. Is now entering an academic campus program, and
3. Earns at least a 2.0 GPA on the first 12 semester hours completed.

Under the grade exclusion policy, eligible students may request to have D and F grades previously earned at VCU excluded from their total credits earned and GPA computation for the purpose of meeting scholastic continuance and graduation requirements. All earned grades, including excluded D and F grades, however, will remain on the permanent transcripts. The courses for which exclusion is sought must be approved by the student’s major department chairman and by the dean of the school. The grade exclusion policy may be used only once during a student’s enrollment at VCU and cannot be revoked by the student after approval. Students who choose to exercise the grade exclusion policy must do so prior to the awarding of their undergraduate degree.

Change of Grade

A final grade may be corrected by the faculty member with proper submission of the Change of Grade Form to the chairman of the department in which the course was taught. The chairman will forward the form to the school's dean who will send it to University Enrollment Services/Records and Registration. For grades awarded for the fall semester, the change of grade must be submitted to the chairman of the department no later than 30 calendar days after the beginning of the following spring semester. For grades awarded for the spring semester or summer sessions, the change must be submitted no later than 30 calendar days after the beginning of the following fall semester.

A change of grade that will affect the student's academic eligibility to enroll must be made during the first week of classes of the semester or summer session in which the student wishes to continue attendance.

Grade Review Procedure

If a student feels that a grade is inaccurate, the student should discuss the grade 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 no agreement is reached and the student feels that the grade was unfairly assigned, the student may submit a written appeal to the chairman of the department in which the course was taught. For grades awarded for the fall semester, the change of grade appeal must be submitted to the department chairman no later than 30 calendar days after the beginning of the following spring semester; for grades awarded for the spring semester or summer sessions, the written appeal must be submitted no later than 30 calendar days after the beginning of the following fall semester.

The burden of proof is upon the student, and the written appeal should state and support with available evidence the reasons why the student believes the grade should be changed. The chairman of the department shall attempt to mediate an amicable solution within two weeks of receipt of the written appeal. If the complaint is not resolved, the chairman shall forward the student's appeal, together with the chairman's recommendation, to the dean of the school in which the course was taught.

The dean shall form a Grade Review Commit-

tee comprised of a nonvoting faculty chairman, two faculty members, and two students. The committee will review all written materials and records and will arrange for a hearing unless the appeal is judged to be patently without merit. At the hearing, the committee will hear evidence and testimony from all parties. The committee has the option of either raising the grade or leaving the grade unchanged.

A change of grade that will affect the student's academic eligibility to enroll must be made during the first week of classes of the semester or summer session in which the student wishes to continue attendance.

See also the Grade Review Procedure that is printed in full in the *VCU Resource Guide*.

Marks

The marks listed below, unlike grades, are not considered in the computation of hours attempted, hours earned, grade points earned, or grade-point average.

Letters and Meaning

- AU — Audit
- I — Incomplete
- PR — Progress
- CO — Continued
- W — Withdrawn
- P — Pass
- CR — Grade assigned for successful completion of credit by examination
- NG — Temporary administrative grade assigned when no grade is submitted by the instructor
- NC — Administrative grade, no credit
- RD — Repeated course; grade of "D" excluded from cumulative grade point average
- RF — Repeated course; grade of "F" excluded from cumulative grade point average

Mark of Audit (AU)

Class size permitting, a student may register for a course on an audit basis. A student may register for audit only during add/drop and late registration period as a new registration and not as a change from credit to audit. Auditing a course means that a student enrolls in a course but does not receive academic credit. A student who registers on an audit basis is subject to attendance regulations of that class and may be

administratively withdrawn by an instructor for a violation of the class requirements for auditors, before or after the normal eight week withdrawal deadline. A student who registers 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, and an audit course is counted as part of the student's semester load.

Mark of Incomplete (Temporary)

When circumstances beyond a student's control prevent the student from meeting requirements of a course by the end of a semester, the student may request the instructor to assign the mark of "Incomplete" for that semester. If in agreement, the faculty member fills out an "Incomplete Mark Assignment" form, bearing the student's signature. This form is submitted by the faculty member with the grade sheet for that course. A grade cannot be changed to "Incomplete" after the final day for submitting grades.

The time limit for submission of all course work necessary for removal of an "Incomplete" given during the fall semester is 30 calendar days after the beginning of the following spring semester; for "Incomplete" marks given during the spring semester or summer program, all course work must be submitted within 30 calendar days after the beginning of the following fall semester. The deadline for completion may be extended to the end of that semester upon the student's written request and with the approval of the faculty member and the dean of the school through which the course is offered. Extension beyond the end of the following semester is available only to students not enrolled during the semester in which the deadline falls and upon request submitted prior to the normal deadlines.

Upon expiration of the time limit, an unre-moved "Incomplete" is automatically changed to a failing grade.

Mark of Progress (PR)

The mark of "PR" may be assigned only in courses approved for such grading. Unlike the mark of "I," the mark of "PR" will not automatically be changed to a failing grade at the end of the succeeding semester.

Mark of Continued (CO)

The mark of "CO" may be assigned as an interim mark 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 the student must reregister for the course. Upon completion of the course a final grade will be assigned to the current semester and the previous "CO" mark(s) will remain. This mark may be assigned only in courses approved for such grading.

Mark of Withdrawn (W)

The mark of "W" indicates that the student has officially withdrawn from the course or has been withdrawn for nonattendance. The last day to withdraw for the fall and spring semesters is the end of the eighth week of classes. Summer students should check the *Summer Bulletin* for withdrawal dates.

See also *Withdrawal From The University* in Part V of this *Bulletin*.

Mark of Pass

The mark of "P" may be assigned only in courses approved for such grading. This grade denotes satisfactory completion of course requirements; if course requirements are not met satisfactorily, a grade of "F" will be assigned. Courses assigned the grade of "P" will not be computed in the grade-point average; courses assigned the grade of "F" will be computed in the grade-point average.

Evaluation and Final Grade Reports

Students are encouraged to discuss progress in courses with their instructors, especially prior to the withdrawal deadline. (Refer to Midsemester Student Evaluation of Academic Performance in Part V.)

Final grade reports are sent to students at the end of each semester. Grade reports are mailed to the official mailing address on file in University Enrollment Services/Records and Registration. Students must submit in writing any change of address to University Enrollment Services/Records and Registration, 827 West Franklin Street, Richmond, VA 23284-2520.

Transcripts

A transcript is a copy of the student's permanent academic record. An official transcript carries the University seal. Unofficial transcripts given directly to students contain the same

information as an official transcript but do not carry the University seal.

Transcripts of student academic records are issued by University Enrollment Services/Records and Registration only upon the written request of the student. The request should be made at least one week prior to the date needed.

A transcript will not be issued until the student has paid all University bills.

Transcript requests signed by the student may be submitted in person or by mail to University Enrollment Services/Records and Registration, 827 West Franklin Street, Richmond, VA 23284-2520.

CONTINUANCE IN ACADEMIC PROGRAMS

Definition of Good Standing

A student who has been admitted to VCU and is currently enrolled is in good standing until such time that he/she is placed on academic suspension.

Academic Warning

A student is placed on academic warning when his/her cumulative grade-point average falls below 2.0 (or "C") at the conclusion of any term of attendance (fall, spring, or summer). Notification of warning will appear on the student's grade report. A student remains on academic warning for one term (fall, spring, summer) of attendance at the end of which time the student must obtain a cumulative grade-point average of at least 2.0. Failure to do so results in academic probation.

Academic Probation

A student is placed on academic probation when his/her cumulative grade-point average is below 2.0 (or "C") for two successive terms of attendance. Notification of probation will appear on the student's grade report. A degree-seeking student on academic probation may not enroll for more than 12 credits per term of attendance. Students on academic probation are expected to improve their cumulative grade-point average by achieving a semester grade-point average of 2.0 or better during each term of attendance (fall, spring, and summer). Failure to do so results in academic suspension. A student *will be removed* from academic probation when

a cumulative grade-point average of at least 2.0 is obtained.

Academic Suspension

A student is placed on academic suspension when the cumulative grade-point average is below 2.0 for two successive semesters and the following semester grade-point average, including summer, is below a 2.0. Notification of suspension will appear on the student's grade report, and the student also will receive a letter from University Enrollment Services/Records and Registration stating the conditions of the suspension. A notation of the suspension is placed on the student's permanent record. Academic suspension indicates that the student has a record of continued unsatisfactory progress.

A student on academic suspension may not enroll at the University for two consecutive semesters, including summer (fall and spring, spring and summer, or summer and fall). Course work taken at another institution while the student is under academic suspension from VCU will be considered as part of the criteria for readmission, but the course work may not be used to increase the VCU grade-point average. If the student is readmitted, the course work will be evaluated according to regular procedures.

A student may apply for readmission to VCU for the semester following completion of the suspension period. A student readmitted after suspension enrolls under the status of academic probation and is subject to the provisions of that status. If a student readmitted after suspension fails to obtain a semester grade-point average of 2.0 in any term before achieving a cumulative grade-point average of at least 2.0, the student will receive a second, and final, suspension. The student may be considered for readmission after a period of separation of a minimum of five calendar years.

For readmission guidelines, see Part II of this *Bulletin*.

HONORS

Dean's List

The dean's list is a recognition of superior academic performance. A student is placed on the dean's list for each semester in which a semester grade-point average of 3.5 or higher is earned, based on a minimum of 15 credits earned. A notation is placed on the student's permanent academic record. Students with

marks of “Incomplete” or “Progress” are not eligible for the dean’s list.

Graduation Honors

Candidates for a baccalaureate degree who have completed a minimum of 60 credits at this institution may qualify for graduation honors. Awarding of honors is based on the student’s cumulative grade-point average at the time of graduation: Cum Laude is awarded for 3.3 to 3.59; Magna Cum Laude is awarded for 3.6 to 3.89; Summa Cum Laude is awarded for 3.9 and above.

Calculation of the grade-point average for honors determination will be based on grades received for all courses taken for credit at VCU, as well as for credits accepted for transfer to VCU; however, to qualify for graduation honors, a student’s grade-point average for courses taken for credit at VCU must be at least as high as the minimum required for the specific honor bestowed (i.e., Cum Laude 3.3 to 3.59; Magna Cum Laude 3.6 to 3.89; Summa Cum Laude 3.9 and above). Recognition of graduation honors will be made on the student’s diploma, permanent record, and in the commencement bulletin. This policy becomes effective May 1992.

DEGREE REQUIREMENTS FOR ALL ACADEMIC CAMPUS STUDENTS

Listed below are the degree requirements which must be fulfilled by all degree-seeking students on the academic campus. The student must consult the school and major departmental sections of this *Bulletin* for additional degree requirements.

Grade-Point Average

A cumulative grade-point average (GPA) of 2.0 (“C” average) or better is required in order to receive a baccalaureate degree. (Only credits taken at VCU are computed in the GPA.)

Some programs may require a higher cumulative GPA. Students should consult the section of this *Bulletin* that deals with their major for any grade-point average requirements above the University minimum of 2.0.

Total Credits

The total number of semester credits required for graduation depends upon the student’s major. Specific information may be found under

the degree program descriptions beginning with Part VI of this *Bulletin*.

Major Concentration

In order to receive the baccalaureate degree, a student must attain a 2.0 (“C” average) or better in all courses in the student’s major presented for graduation. (Only credits taken at VCU are computed in the GPA.) Students should consult the section of the *Bulletin* that deals with their major for any grade-point average requirements above the University minimum of 2.0.

Upper-Level Courses

A minimum of 45 credits is required in 300-400- and 500-level courses for a bachelor’s degree. Credits transferred from two-year institutions may not be used to fulfill this requirement.

Last 30 Credits

Degree candidates are required to complete the last 30 credits at this institution for either an associate or bachelor’s degree.

When students participate in VCU-sponsored programs abroad during their last 30 hours and earn course credit at a cooperating university, the credit is exempt from this requirement.

Graduation Application

The University confers degrees in May, August, and December; however, it holds an annual commencement exercise only in May. Each student who expects to complete the degree requirements by the end of a semester or summer session is required to file an application for the degree. Application forms may be obtained from University Enrollment Services/Records and Registration.

Degree applications must be submitted no later than the dates indicated in the calendars appearing in the front of this *Bulletin*. A student should schedule a conference with the advisor well ahead of the deadline and should note that the application requires, in addition, the approval of the department chairman and dean.

COMMENCEMENT PARTICIPATION POLICY

When a student has submitted a degree application for spring graduation but does not meet degree requirements, and there are extenuating circumstances, the student’s dean may permit the

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student to participate in commencement ceremonies. Permission may be given only when six or fewer credit hours are required and the student demonstrates the intent to complete the credit hours by the end of the summer session.

When such an exemption is made, the dean is to confirm the following conditions to the student in writing:

1. Participation in the commencement ceremony does not mean that the student has been awarded a degree.
2. The degree will not be awarded until all degree requirements have been met and the student has satisfied all financial obligations to the University.
3. The exemption is made only to accommodate the student's request and does not obligate the University to ultimately grant a degree unless all requirements and conditions have been met.

(This policy became effective fall 1989.)

DEGREE OPTIONS

Second Baccalaureate Degree

A student who has already earned a baccalaureate degree and wishes to earn a second baccalaureate degree at VCU should complete an application for undergraduate admission. This form may be obtained from University Enrollment Services/Admissions and should be submitted to that office. If the student is accepted, he/she will be referred to the dean's office of the school offering his/her intended major. The dean's office will evaluate the student's academic record and will prepare a statement of advanced standing that lists transferable credit to the second degree program.

A student seeking a second undergraduate degree must earn a minimum of 30 additional semester credits at VCU and also must satisfy any supplementary requirements of the department or school granting the degree.

Double Major

A double major is the fulfillment of the requirements in two majors concurrently. To earn a degree in double majors, the student must fulfill all of the requirements of the degree program(s) of which the majors are a part. Only one diploma will be awarded, but a notation recognizing the completion of the second major will be posted on the student's permanent academic record. To initiate a double major, a student should obtain

the form and instructions from University Enrollment Services/Records and Registration.

Minor Areas of Concentration

Although a minor is not required for completion of a degree, a student may elect any approved minor area of concentration. A minor is the completion within an area of specialization of a group of courses which is usually less than that required for a major. The minor may be used to fulfill career needs or to facilitate in-depth investigation in a discipline of secondary interest.

A student who wishes to pursue a minor should complete a Change of Major/Minor form. The courses for the minor shall be chosen from those courses approved for the minor. The grade-point average for the minor must be at least a 2.0 in the area of study in which the minor is sought. The minor will become official only after University Enrollment Services/Records and Registration has received the Change of Major/Minor form signed by the dean or chairperson of the appropriate school. However, a notation recognizing the fulfillment of the requirements for a minor will not be posted on the student's permanent academic record until the time of graduation. The student must submit a Minor Application form when he/she submits an application for graduation. Minor Application forms may be obtained from University Enrollment Services/Records and Registration.

OTHER SOURCES OF ACADEMIC CREDIT

College Level Examination Program (CLEP)

The College-Level Examination Program (CLEP) is designed to allow individuals who have gained knowledge outside the classroom to take examinations and receive college credit for what they have learned.

Procedures for VCU Students

1. Obtain the CLEP Approval Forms, information about the CLEP general and/or subject examinations, VCU course equivalency information, optional essay requirements, and the CLEP examination application from the Adult/Nontraditional Programs, Virginia Commonwealth University, 827 West Franklin Street, Room 101, Richmond, VA 23284-2002, (804) 367-0200.

2. CLEP Approval Forms must be completed for general examinations and for each subject examination taken.
3. Discuss the examination(s) to be taken with an advisor. Obtain permission signatures of the advisor and dean of the school in which the student is a major on each of the three approval forms. If the optional essay is required for a subject examination, it should be indicated on the CLEP Approval Forms and on the CLEP application.
4. Return the completed CLEP Approval Forms, the completed CLEP application, and the proper fee to the Adult/Nontraditional Programs. Upon receipt of these materials and fees, the examination time will be scheduled.
5. When the examination score is received and the optional essay is corrected, if required (a minimum of four weeks should be allowed), it will be forwarded to the dean's office in which the student is a major for final action. The dean will send formal notification of the award of credit to the student, University Enrollment Services, and the student's advisor.
5. The CLEP general examination in English composition is not acceptable for VCU credit. Students may take the CLEP freshman English subject examination for credit equivalent to English 101-102. For a student to receive credit for the CLEP general examination in mathematics, the student must take the Mathematics Placement Test and obtain the following result for credit to be awarded: the student must test at the MAT 102, 112, 200, or STA 213 level. Contact the Department of Mathematical Sciences (804) 367-1320 to make arrangements to take the test. The results should be reported to the dean of the school in which the student is a major.
6. The maximum number of semester credits that may be earned through CLEP Examinations is 54.

Undergraduate Credit by Examination

Recognizing that Virginia Commonwealth University enrolls students of varying backgrounds and experiences, the University provides its students the opportunity to accelerate their education through "credit-by-examination." The conditions under which credit-by-examination may be given and the procedure for doing so are outlined below.

Regulations for VCU Students

1. CLEP credit is awarded officially only to students who are fully accepted into a VCU degree program.
2. Students may not take a subject or general examination in the semester in which they plan to graduate.
3. A student may not attempt a subject or general examination if it duplicates in part, or all, any VCU course or combination of courses which the student has already completed or enrolled in for credit. (For example, a student who has completed courses in United States and European history, sociology, anthropology, and psychology, or similar courses, would not be eligible to take the social sciences and history general examination. The dean's office of the school in which the student is a major will make the decision about the appropriateness of taking a particular general examination.)
4. If a student has earned CLEP subject examination credit, the student may not take a VCU course for credit which would duplicate the already earned CLEP credit.
1. Each department or program, with the approval of the dean, shall
 - A. determine which, if any, courses shall be available for credit-by-examination. The student should check with the department offering course work in the area in which he or she wishes to take credit-by-examination for a list of the courses so designated.
 - B. determine the types of examinations, standards of evaluation, and evaluators for the courses so designated; and
 - C. determine the qualifications for students to be eligible to take the examinations.
2. The examinations, if available, may be taken during the fall and spring semesters and during the summer program by any enrolled student.
3. The student wishing to take credit-by-examination must
 - A. not have received a grade listed in the bulletin including "AU" or "W" for the

course for which credit-by-examination is being sought. Nor should the student have been granted transfer credit for a similar course taken elsewhere.

- B. be a currently enrolled student as certified by the examining department.
 - C. meet departmental and school eligibility requirements as evidenced by the written approval of the chairman of the examining department.
4. After consultation with his/her major advisor and within the first four weeks of a semester (or first week of a summer program), the student must complete the credit-by-examination approval form (obtained in the department) with the department chairman, leaving the completed form with the department chairman.
 5. Within two weeks, the student will be notified by the dean's office of the department handling the examination of the place and time of the examination.
 6. After notification by the dean's office and before taking the examination, the student shall pay the University cashier the fee established by the University for each credit being sought. The student shall present the receipt for payment to the department chairman prior to the time designated for taking the examination to verify payment.
 7. After the examination has been taken, the results and the examination will be forwarded to the dean's office, which will notify the student of the results. If the examination is passed, the course title, credits earned, and the grade of "CR" shall be recorded on the student's permanent record. The credits so earned will be applied toward the graduation requirement for total credits, but will not be included in the calculation of the student's grade-point average.

Military Service and ROTC Courses

The University may grant credit for formal military service school courses offered by the various branches of the United States Armed Services. The guidelines for granting credit for such courses include

1. the positive recommendation of the Commission on Accreditation of Service Experiences of the American Council on Education as stated in the most recent edition

of "A Guide to the Evaluation of Educational Experiences in the Armed Services" and

2. the applicability of such credit to the student's degree program as interpreted by the department or the school in which the student seeks a degree. Accepted credits are counted as credits earned toward the degree, but not used in the computation of the student's VCU grade-point average. The student should consult with the dean of the school or college for further details about the procedures for awarding credit for military service school courses.

Army ROTC is offered to all students at VCU. Advanced standing may be granted to veterans, junior ROTC graduates, or members of the Reserves/National Guard after review of academic records and verification of ROTC academic alignment by the department chairman. The number of credits accepted towards graduation requirements is determined by each school.

Transfer Credit

Refer to Evaluation of Transfer Credit in Part II of this *Bulletin*.

Credits Earned Through The International Student Exchange Program

Credits earned by a University student through the International Student Exchange Program (ISEP) will appear on the transcript but will not be included in the calculation of the student's cumulative grade-point average (GPA). (Refer to Center for International Programs in Part XIX of this *Bulletin*.) The new policy became effective July 1, 1990.

WAIVER OF ACADEMIC REGULATIONS ACADEMIC STATUS COMMITTEE

The Academic Status Committee considers petitions for waiver of the *academic regulations* presented in this section for undergraduate programs. The Committee, composed of faculty and administrative representatives from each school and college, from Student Affairs, and from University Enrollment Services/Records, is a standing committee of the Office of Academic Affairs, appointed by the provost and academic vice-president.

Students can appeal academic regulations when documented justification based on exten-

uating circumstances is available. Outlined below are the procedures to be followed for presenting such an appeal.

1. The academic advisor, department chairman, academic dean, or the Adult/Nontraditional Programs can provide an Academic Status Committee Petition form and assistance in organizing the petition.
2. A letter should be written to accompany the petition specifying the reasons for the request.
3. Appropriate written documentation should be provided to support the petition.
4. The petition and accompanying documents should be sent to the advisor, department chairman, or academic dean for a review and recommendation.
5. The Adult/Nontraditional Programs reviews and recommends for special non-degree seeking students.

The completed petition is then presented to the Academic Status Committee by the school or college representative. Students are notified in writing of the decision of the Academic Status Committee. All procedures of the Academic Status Committee are confidential and ensure the right of privacy of individual students.

VCU HONOR SYSTEM

Virginia Commonwealth University recognizes that honesty, truth, and integrity are values central to its mission as an institution of higher education.

Therefore, it must act to maintain these values, even to the point of separating from the University those who violate them. The VCU Honor System describes the responsibilities of students, faculty, and administration in upholding academic integrity, while at the same time respecting the rights of individuals to the due process offered by administrative hearings and appeals. All persons enrolled in any course or program offered by VCU, and all persons supervising the learning of any student are responsible for acting in accordance with the provisions of the VCU Honor System.

The VCU Honor System gives definitions and illustrative examples of six acts which are violations of the policy: Cheating, Plagiarism, Facilitating Academic Dishonesty, Abuse of Academic Materials, Stealing, and Lying. There are also six penalties which may be imposed upon students who are found guilty of violations: Honor Probation, Assignment of Grades, Suspension, Expulsion, Revocation, and Other Relevant Sanctions.

See also the VCU Honor System which is printed in full in the *VCU Resource Guide*.

Academic Programs

INTRODUCTION

The following seven sections describe in detail the undergraduate degree programs offered by VCU. The information which is included in this introduction will help the reader use program and course information found in the following seven sections.

UNDERGRADUATE DEGREE PROGRAMS AND POST-BACCALAUREATE CERTIFICATES

Associate in Science Degree

Radiological Technology

Bachelor of Arts Degrees

Art History

Chemistry

English

Foreign Languages/French

Foreign Languages/German

Foreign Languages/Spanish

Foreign Languages/Comparative Literature

History

Philosophy

Political Science

Psychology

Religious Studies

Sociology and Anthropology

Bachelor of Fine Arts Degrees

Art Education

Art History

Communication Arts and Design

Crafts

* Dance/Choreography

Fashion

Interior Design

Painting and Printmaking

Sculpture

Theatre

Theatre Education

Bachelor of General Studies

Bachelor of Music Degrees

Applied Music

Composition and Theory

Bachelor of Music Education Degree

Bachelor of Science Degrees

Accounting

Administration of Justice

Biology

Business Administration

Chemistry

Clinical Radiation Sciences

Computer Science

Dental Hygiene

Economics

Finance

Finance

Insurance/Risk Management

Health Education

Health Information Management

Human Resources Management/Industrial Relations

Interdisciplinary Degree Program in Science

Information Systems

Management

Administrative Systems Management

General Management

Owner-Managed Business

Marketing

Mass Communications

Mathematical Sciences/Applied Mathematics

Mathematical Sciences/Computer Science

Mathematical Sciences/Mathematics

Mathematical Sciences/Operations Research

Mathematical Sciences/Statistics

Medical Technology

Nursing

Occupational Therapy

Pharmacy
 Physical Therapy
 Physics
 Physics/Engineering (dual degree)
 Physical Education
 Production/Operations Management
 Psychology
 Real Estate and Urban Land Development
 Recreation, Parks, and Tourism
 Rehabilitation Services
 Safety and Risk Administration
 Sociology and Anthropology
 Urban Studies and Planning

Bachelor of Social Work Degree

Post-Baccalaureate Certificates

Accounting
 Aging Studies
 Applied Social Research
 Computer Science
 Criminal Justice Administration
 Environmental Studies
 Information Systems
 Patient Counseling
 Planning Information Systems
 Professional Counseling
 Public Management
 Real Estate and Urban Land Development
 Statistics
 Teaching
 Early Education NK-4
 Middle Education 4-8
 Secondary Education 8-12
 Special Education K-12
 Therapeutic Recreation (2nd Undergraduate degree, 30 hours)
 Urban Revitalization

GENERAL COURSE INFORMATION

Course Numbering System

1. All course numbers will consist of three digits (XXX).
2. The first digit relates to the course level as follows:
 - a. 0XX Noncredit Courses
 - b. 1XX Undergraduate, Lower Level
2XX
 - c. 3XX Undergraduate, Upper Level
4XX
 - d. 5XX Introductory Graduate Courses,
First Year, First Professional
(Medicine and Dentistry)
Fifth Year, Professional
Baccalaureate (Pharmacy)
 - e. 6XX Graduate Courses
7XX
6XX Second Year, First Professional
(Medicine, Dentistry, Pharmacy)
7XX Third and Fourth Year, First
Professional (Medicine and
Dentistry)

Course Interpretation

A single number listing for a course, such as Business 121, indicates that it is a one-semester course or is given only one semester each year.

Courses listed with a double number, such as History 201, 202 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 English 101–102 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.

Humanities Courses

To fulfill electives in the humanities, students generally may choose courses from among the following:

- Art History—all courses except those primarily concerned with technique, style, or skill (e.g., ARH 260, 261 History of Painting Technology; ARH 360 Introduction to Conservation);
- English—excluding courses in writing;
- Foreign Languages—courses at intermediate (201) level and above, except when such courses are used to fulfill the general education requirement in foreign languages;
- History—only HIS 305, 307, 308, 309, 336, 337, 338, 365, 366, and 485;
- Music—only MHT 243, 244, 421–422, and 441;
- Philosophy—all except PHI 221, 222;
- Political Science—only POS 341 and 342;
- Religious Studies—all courses;
- Any of the courses in European Cultures (EUC), and Foreign Literature in Translation (FLT).

Course Abbreviations Used in This Bulletin

Abbrev.	Description
AAS	Afro-American Studies
AEN	Art Education
AFO	Art Foundation
AHP	Allied Health Professions
AJP	Administration of Justice
AMS	American Studies
ANA	Anatomy
ANT	Anthropology
APM	Applied Music
ARA	Arabic

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ARH	Art History
ART	Art
BIC	Biochemistry and Molecular Biophysics
BIO	Biology
BME	Biomedical Engineering
BUS	Business
CDE	Communication Arts and Design
CHE	Chemistry
CHI	Chinese
CHM	Church Music
CHS	College of Humanities and Sciences
CML	Comparative Literature
COP	Cooperative Education
CRA	Crafts
CRS	Clinical Radiation Sciences
CSC	Computer Science
CSE	Community and Public Affairs
DAN	Dance
DEH	Dental Hygiene
EAS	Earth Science
ECO	Economics
EDU	Education
ENG	English
ENS	Environmental Studies
EUC	European Cultures
FDE	Fashion
FLT	Foreign Literature in English Translation
FRE	French
GEO	Geography
GER	German
GRE	Greek
GTU	Gerontology
HEB	Hebrew
HED	Health Education
HIM	Health Information Management
HIS	History
HON	Honors
HUS	Humanities and Sciences
IDE	Interior Design
INT	International Studies
ITA	Italian
LAT	Latin
LIN	Linguistics
LRS	Library Research Skills
LSK	Language Skills
MAC	Mass Communications
MAT	Mathematics
MET	Medical Technology
MHT	Music History, Literature, and Theory
MIC	Microbiology and Immunology
MIS	Military Science
MUC	Music Composition
MUE	Music Education
NUR	Nursing
OCT	Occupational Therapy
PAC	Patient Counseling
PAP	Painting and Printmaking
PAT	Pathology
PBS	Public Safety
PHA	Pharmacy
PHC	Medicinal Chemistry
PHE	Physical Education
PHI	Philosophy
PHT	Physical Therapy
PHY	Physics
PIO	Physiology

PMC	Pharmacology and Toxicology
POS	Political Science
PSY	Psychology
PTY	Photography
REC	Recreation, Parks, and Tourism
RED	Restorative Dentistry
REH	Rehabilitation Counseling
RST	Religious Studies
RTE	Radiologic Technology
RUS	Russian
SCU	Sculpture
SLW	Social Work
SOC	Sociology
SPA	Spanish
SPE	Speech
SRA	Safety and Risk Administration
SSC	Social Science
STA	Statistics
THE	Theatre
USP	Urban Studies and Planning
WST	Women's Studies

SCHOOL AND PROGRAM ACCREDITATIONS

School of the Arts: National Association of Schools of Art and Design

School of Business: American Assembly of Collegiate Schools of Business (Undergraduate and Masters); Accounting: Undergraduate and Masters)

School of Education: Virginia State Department of Education; National Council of Accreditation for Teacher Education (NCATE)

School of Mass Communications: American Council on Education for Journalism accreditation for the news-editorial and broadcast-news sequences

School of Nursing: National League for Nursing

School of Pharmacy: American Council on Pharmaceutical Education

School of Social Work: Commission on Accreditation of the Council on Social Work Education (B.S.W. and M.S.W.)

Department of Administration of Justice and Public Safety: Criminal Justice Accreditation Council

Department of Chemistry: The American Chemical Society

Department of Interior Design: Foundation for Interior Design Education Research

Department of Music: National Association of Schools of Music

Department of Psychology: American Psychological Association accreditation of the Clinical and Counseling Psychology Ph.D. programs

Department of Recreation, Parks, and Tourism: National Council on Accreditation of the

National Recreation and Parks Association
Division of Computer Sciences, Department of
Mathematical Sciences: Computer Science
Accreditation Commission of the Computing
Sciences Accreditation Board (B.S. in Com-
puter Science)

Program in Dental Hygiene: Commission on
Accreditation of the American Dental Associ-
ation

Program in Health Information Management:
Committee on Allied Health Education and
Accreditation, American Medical Associa-
tion, in collaboration with the American
Medical Record Association

Program in Medical Technology: Committee on
Allied Health Education and Accreditation,
American Medical Association, in collabora-
tion with the National Accreditation Agency
for Clinical Laboratory Services

Program in Occupational Therapy: Committee
on Allied Health Education and Accredita-
tion, American Medical Association, in col-
laboration with the American Occupational
Therapy Association

Program in Physical Therapy: Commission on
Accrediting in Education of the American
Physical Therapy Association

Program in Radiologic Technology: Committee
on Allied Health Education and Accredita-
tion, American Medical Association, in col-
laboration with the Joint Review Committee
on Education in Radiologic Technology

HONOR SOCIETIES

Chapters of the following national honor
societies are located at VCU and annually
recognize students and faculty for their service
and scholarship:

General Societies

Omicron Delta Kappa—*leadership and
Scholarship*

Phi Eta Sigma—*freshman scholarship*

Phi Kappa Phi—*scholarship*

Discipline Societies

Alpha Kappa Delta—*sociology*

Alpha Mu Alpha—*marketing*

Alpha Phi Sigma—*criminal justice*

Alpha Omega Alpha—*medicine*

Alpha Sigma Chi—*medical technology*

Beta Alpha Psi—*accounting*

Beta Gamma Sigma—*business*

Delta Pi Epsilon—*business education*

Financial Management Association National

Honor Society—*finance*

Kappa Tau Alpha—*mass communication*

Omicron Delta Epsilon—*economics*

Omicron Kappa Upsilon—*dentistry*

Pi Kappa Lambda—*music*

Pi Sigma Alpha—*political science*

Rho Epsilon—*real estate*

Rho Chi—*pharmacy*

Phi Delta Kappa—*education*

Phi Theta Epsilon—*occupational therapy*

Phi Sigma—*biological sciences*

Sigma Delta Pi—*Spanish*

Sigma Zeta—*medicine, dentistry, pharmacy,
and nursing*

Sigma Theta Tau—*nursing*

Sigma XI—*scientific research*

Sigma Pi Sigma—*physics*

Sigma Phi Alpha—*dental hygiene*

Sigma Phi Omega—*gerontology*

Psi Chi—*psychology*

COURSES IN HONORS (HON)

198 Freshman Honors. Semester course; 3 lecture hours. 3 credits; maximum total 6 credits. Prerequisite: permission of honors director. Course may be repeated once under different topic. An interdisciplinary course which will provide an intensive study of selected topics.

298 Sophomore Honors. Semester course; 3 lecture hours. 3 credits; maximum total 6 credits. Prerequisite: permission of honors director. Course may be repeated once under different topic. An interdisciplinary course which will provide an intensive study of selected topics. Appropriate prerequisites or corequisites may be demanded.

398 Honors Topics. Semester course; 3 lecture hours. 3 credits; may be repeated with different topics. Prerequisite: permission of honors director. An in-depth study of selected topics. May be cross-listed with departmental courses. See *Schedule of Classes* for specific topics to be offered each semester. Appropriate prerequisite or corequisites may be demanded.

399 Honors Module. One-third semester course; 3 lecture hours. 1.5 semester hours of credit per module. Prerequisite: permission of the honors director or the chairman of the offering department. Intensive studies of topics from a wide spectrum of disciplines are undertaken. Each module is a self-contained unit. Nine semester hours of credit must be taken in Honors modules to complete the Honors Core. See *Schedule of Classes* for topics.

492 Honors Independent Study. Semester course; variable credit, maximum of 4 semester hours of credit per semester, maximum total over all semesters of 9 semester hours of credit. Prerequisites: junior or senior standing, approval of honors director and instructor/tutor. Intensive study under supervision of a faculty member in an area not covered in depth or contained in the regular curriculum.

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VCU 101 COURSE

VCU 101 Introduction to the University. 1 lecture hour. 1 credit. A course to orient new students to the rich tradition and purposes of a university education. Students will assess

their expectations and evaluate their academic strengths and career goals. Through lectures, guest speakers, and individual projects, students will discover the VCU resources and services designed to help them solve problems and to achieve a personally rewarding successful academic program.



PART VI — College of Humanities and Sciences

ELSKE v.P. SMITH
Dean

TERRY L. OGGEL
Associate Dean

JOHN H. BORGARD
Associate Dean

JACKIE C. ELSTON
Assistant to the Dean

ARTHUR J. SEIDENBERG
Coordinator of Pre-Health Sciences
Advising

School of Mass Communications

THOMAS R. DONOHUE
Director

Cooperative Graduate Engineering Program

THOMAS W. HAAS
Director, and Director of Continuing
Education for the College

MISSION OF THE COLLEGE

The College of Humanities and Sciences is dedicated to the achievement of excellence through its teaching, research, and public service programs. Distinction achieved by these academic activities will stem from the subject matter of the humanities, letters, and sciences as well as from the creative interaction of faculty with students, with each other, and with the community. To take full advantage of its location and to meet VCU's established and ongoing urban commitment, the College of Humanities and Sciences recognizes and strives to meet the challenges posed by

- A. The diversity of the student body
- B. The diversity of the community

1. As a focus for research
 2. For training and education opportunities
 3. For service
- C. The diversity of VCU's schools and faculties.

The College of Humanities and Sciences carries the central responsibility for instruction and research in the basic components of all education: the humanities, sciences, and social sciences. In addition, the school offers the preparatory programs for entry into medical, dental, veterinary, law, optometry, pharmacy, nursing schools, and allied health profession programs.

All curricula within the College of Humanities and Sciences are calculated not only to build competence in a specific major area, but also to expose the student to a breadth of interest areas. In addition, the student has the opportunity to learn a variety of other competencies such as research techniques, report writing, observation methods, and interpersonal skills that will apply to a wide range of employment or advanced educational possibilities upon graduation. Students are encouraged to select minors or other groupings of courses in the College of Humanities and Sciences or other schools on the Academic Campus that will add to the student's general knowledge and marketable skills. Finally, the total humanities and sciences program provides a foundation of understanding, knowledge, and skills on which to build for careers, for continued learning in the future, and for the

student's involvement as an active citizen in whatever community he or she chooses to reside.

CURRICULA

Undergraduate Degree Programs

The College of Humanities and Sciences offers baccalaureate degrees in 16 areas:

biology — B.S.
 chemistry — B.S., B.A.
 computer science — B.S.
 economics — B.S.
 English — B.A.
 foreign languages — B.A.
 comparative literature
 French
 German
 Spanish
 history — B.A.
 mathematical sciences — B.S.
 applied mathematics
 computer science
 mathematics
 operations research
 statistics
 philosophy — B.A.
 political science — B.A.
 physics — B.S.
 physics/engineering (dual degree program) — B.S.
 psychology — B.S., B.A.
 religious studies — B.A.
 science — B.S.
 sociology and anthropology — B.S., B.A.

The School of Mass Communications offers the Bachelor of Science degree.

Information concerning curricula is given in the respective departmental and school sections.

Minor Areas of Concentration

In addition to the major, a student may elect a minor area of concentration in any department or program offering a minor program. The minor may be used to fulfill career needs or to investigate in depth a discipline of secondary interest.

The student should discuss his intention to pursue a minor with his advisor or the chairman of the major department. The student formally declares a minor by completing the Minor Application obtained along with the Graduation Application when the student files for graduation. The courses for the minor should be chosen from those courses approved by departments offering minors in their areas. Under ordinary circumstances students may not minor in the same area as their major.

A minimum of 18 credit hours is required for designation on the transcript as a minor, and a

minimum grade-point average of 2.0 must be achieved in the minor. Prerequisites for courses remain in effect as stated in the *Bulletin*.

Minors are offered in the following areas; consult the departmental section of this part of the *Bulletin* for a description of each minor.

Afro-American studies
 American studies
 anthropology
 biology
 chemistry
 computer science
 economics
 electronic instrumentation
 English
 environmental studies
 French
 geography
 German
 history
 international affairs
 international studies
 Judaic studies
 mathematics
 philosophy
 philosophy of law
 physics
 political science
 psychology
 public management
 religious studies
 sociology
 Spanish
 statistics
 women's studies
 writing (see English)

Preparation for Professional Studies

In addition to its mission of providing studies in liberal arts at the undergraduate and graduate levels, the College of Humanities and Sciences offers undergraduate preparatory programs and advising for the following areas:

pre-dental hygiene
 pre-dentistry
 pre-engineering
 pre-law
 pre-medical technology
 pre-medicine
 pre-nuclear medicine technology
 pre-nursing
 pre-occupational therapy
 pre-optometry
 pre-pharmacy
 pre-physical therapy
 pre-veterinary medicine

Specific curricular descriptions are listed elsewhere in this section.

Teacher Preparation

Students in the College of Humanities and Sciences may apply to the five-year Teacher Preparation Program sponsored jointly with the School of Education, which leads to the receipt of both a bachelor's degree from the College of Humanities and Sciences and a master's degree from the School of Education. Students in this program will be certified to teach in one of the following areas: early childhood, middle, secondary, or special education.

Students desiring additional information should contact the Office of Academic Services, School of Education, 2087 Oliver Hall (367-1296). Additional information is also listed in this *Bulletin* under the School of Education.

Graduate Studies

Master's degree programs are offered in biology, chemistry, computer science, creative writing, English, mass communications, mathematical sciences, physics/applied physics, psychology, and sociology. Doctoral programs are available in chemistry and psychology. Students may also find the doctoral programs in social policy and social work (School of Social Work) and urban services (School of Education) of interest. For details about these graduate programs see the *VCU Graduate Bulletin*.

STUDENT ADVISING

An integral part of the program in the College of Humanities and Sciences is individual student advising. The faculty advisor is an important personal link in the University organization. The advisor helps the student establish a relationship between the student's special needs and the University services, assists the student in career selection, and helps the student to understand University procedures.

Each freshman, transfer student, and readmitted student is assigned a faculty advisor by the department in which the student intends to major. Students admitted in the "undecided" category will be assigned advisors by the assistant dean.

Through consultation with the advisor and/or the dean, and frequent references to this *Bulletin*, the student has the responsibility to make certain that the course selections satisfy graduation requirements set forth in the departmental major program, in the general requirements of the College of Humanities and Sciences, and in the

general degree requirements of the Academic Campus.

The student has the responsibility to be familiar with the academic regulations of the Academic Campus concerning change of major, continuance, etc., as expressed in Part V of this *Bulletin*.

Career Advising

As a part of the advising process, faculty members provide information about careers and graduate study in their disciplines. In addition, a faculty member in each department has been designated as departmental career advisor and is equipped to assist a student in particular aspects of career development.

EDUCATIONAL GOALS

The ultimate goal of a liberal education is to help students develop the abilities to think and to continue learning — qualities that will support them in a world dominated by change and in their future endeavors as they become engaged with unsolved problems, whether in their personal lives, on the job, or in the larger community. Students who graduate from the College of Humanities and Sciences should be broadly educated, not simply trained. Thus, they may expect to function as understanding participants in events rather than as spectators or perhaps victims of those events.

To achieve these ends, the faculty of the College of Humanities and Sciences specify the following goals:

Students should write well enough to organize their ideas, support them, and communicate them effectively throughout their careers.

They should be able to reason logically and to quantify experience.

They should have some knowledge of the fundamental ideas and methods of the natural sciences.

Students should be able to *analyze ethical conflicts*, wherever these occur.

They should have an understanding of literature and of artistic experience.

Students should have a knowledge of our heritage as well as other cultures, including an introduction to a foreign language.

They should have some knowledge of human behavior and social, political, and cultural institutions.

GRADUATION REQUIREMENTS

For students majoring in a four-year B.A. or B.S. degree program (including students in the pre-dental, pre-medical, and pre-veterinary classifications), there are three areas of requirements that the student must complete for graduation:

1. Academic Campus requirements (See Part V of this *Bulletin*.)
2. General education requirements of the College of Humanities and Sciences
 - A. Bachelor of Arts degree or
 - B. Bachelor of Science degree
3. Departmental major requirements

General Education Requirements of the College of Humanities and Sciences

In the following paragraphs, specific courses that fulfill the general education requirements will be indicated. In other cases, reference will be made to approved lists from which students must choose courses to complete particular requirements. Specific courses recommended by a department to fulfill one or more of the College of Humanities and Sciences general education requirements are listed under Degree Requirements in the departmental section. Students should check these listings.

Major or minor courses may fulfill general education requirements if those courses appear among the following general education requirements or on the Approved Lists. However, no one course can be used to fulfill two general education requirements, with the exception of courses used to meet the writing-intensive requirements.

All Bachelor of Arts and Bachelor of Science degree programs require students to complete a minimum of 124 credits, no more than four of which may be physical education/activity courses.

Continuing students who entered the College of Humanities and Sciences prior to fall 1982 have the option of satisfying the new requirements listed below OR those in effect prior to fall 1982, when they entered or reentered the University.

Bachelor of Arts

The general education requirements listed below apply to the B.A. degree program in these areas: **chemistry, comparative literature, English, French, German, history, philosophy,**

political science, psychology, religious studies, sociology and anthropology, and Spanish.

Minimum Competencies

Credits

1. A. ENG 101–102 Composition and Rhetoric (by placement or course with a minimum grade of "C" in each course) 6-9¹

All students who have not received credit for first semester freshman composition and rhetoric must take the English Placement Test. On the basis of the scores, students will be placed in the appropriate level of English or exempted and given credit for the course.

- B. Upper-level writing requirement: One upper-level, three-credit expository writing course (See Approved List A.)

OR

Two writing intensive courses, three credits each, other than those on Approved List A (See *Schedule of Classes* book each semester for a listing of these courses.)

The process of writing takes place in all disciplines. Specific sections of courses will be designated in a variety of departments that will provide students with opportunities for substantial writing while at the same time completing a major course or elective.

2. A. PHI 221 Critical Thinking 6-9

AND

either MAT 101 College Algebra or MAT 111 Basic Mathematics of the Behavioral, Social, and Management Sciences.

- B. Three additional credits from CSC 150 BASIC Computer Concepts, CSC 201 Introduction to Computing Using FORTRAN, CSC 255 Structured Programming, MAT 102 Trigonometry, MAT 112 Elements of Calculus for Behavioral, Social, and Management Sciences, MAT 200 Calculus with Analytic Geometry, MAT 211 Mathematical Structures, PHI 222 Introduction to Symbolic Logic, STA 213 Introduction to Statistics.

If the student places beyond the 101 (111) level on the Mathematics Placement Test, the student may complete the mathematics part of Section A and the Section B requirement by completing any course in B EXCEPT CSC 150 and PHI 222. If the student places into and completes MAT 101 or 111, ANY course in B may be taken to fulfill the section B requirement.

All students who have not started or completed the mathematics sequence indicated in their curriculum must take the Mathematics Placement Tests.

¹This figure assumes that the requirement is met through an upper-level (300-400) expository writing course. (See Approved List A.) If it is met through writing-intensive courses, presumably they will be used to meet other general education requirements or part of the major.

Natural Sciences

Two-semester sequence of an introductory laboratory science (by course or placement) to be chosen from BIO 109–110, L109–110 General Biology and Laboratory; BIO 151–152, L151–L152 Introduction to Biological Science (generally for biology and selected pre-health majors); CHE 101–102, L101–102 General Chemistry and Laboratory; CHE 103–104, L103–104 Introduction to Modern Chemistry and Laboratory; PHY 101–102, L101–102 Foundations and Frontiers of Physics and Laboratory; PHY 201–202 General Physics and Laboratory; PHY 207–208 University Physics and Laboratory.

Check the *VCU Undergraduate Bulletin* for prerequisites for science courses.

Human Nature, Culture, and Institutions

1. Three credits in non-participatory courses in the history of an art, art criticism, aesthetics, or music appreciation (See Approved List G.) 2-3

OR

Two or more credits in participatory arts course (See Approved List G.)

2. Three credits from courses that apply ethical theories to fundamental moral problems (See Approved List H.) 3

3. Two courses in literature in English or foreign literature in English translation or upper-level (300-400) foreign literature in the original language. **One of the two courses must be in literature prior to 1900.** (See Approved List B.) 6

4. Two of the following three options: 12

A. A two-semester 100- or 300-level European history sequence (See Approved List C.)

OR

Six credits in European culture and heritage courses (See Approved List E.)

B. A two-semester 100–300-level American history sequence (See Approved List D.)

C. Six credits in non-western culture and heritage courses (See Approved List F.)

5. A foreign language through the intermediate 0-14

202, 205, or equivalent level (by course or placement).

A. Freshmen who wish to continue in their high school language will be given a placement test to determine the level at which they will begin language study for credit. Students desiring to begin study of a different language need not take the placement test and may begin with the elementary course in that language for credit.

B. Students transferring from other colleges and universities with advanced placement or advanced standing in foreign language will receive credits as granted by the institution from which they are transferring and should register for the next course in the sequence. Transfer students who have not begun language study at the collegiate level and who wish to continue study of their high school language are subject to the provisions of the previous paragraph.

C. New freshmen and transfer students who

qualify through the intermediate level (course 202 or equivalent) of a foreign language on the placement test receive no semester credit for such placement but have satisfied the language requirement.

6. Two courses that focus on human behavior and institutions (See Approved List J.) 6

Major

See major department degree requirements for exact number of credits (30 credit minimum).

Approved Electives

Approved elective courses to bring credit total to a minimum of 124 credits. Students should consult with their advisors about choice of minor program courses and/or electives appropriate to their departmental programs and personal interests.

Bachelor of Science

The general education requirements listed below apply to the B.S. degree programs in these areas: **biology, chemistry, computer science, economics, mass communications, mathematical sciences, physics, physics/engineering, psychology, and sociology and anthropology.**

Minimum Competencies

Credits

1. A. ENG 101–102 Composition and Rhetoric (by placement or course with a minimum grade of “C” in each course.) 6-9¹

All students who have not received credit for first semester freshman composition and rhetoric must take the English Placement Test. On the basis of the scores, students will be placed in the appropriate level of English or exempted and given credit for the course.

B. Upper-level writing requirement: One upper-level, three-credit expository writing course (See Approved List A.)

OR

Two writing intensive courses, three credits each, other than those on Approved List A (See *Schedule of Classes* book each semester for a listing of these courses.)

The process of writing takes place in all disciplines. Specific sections of courses will be designated in a variety of departments that will provide students with opportunities for substantial writing while at the same time completing a major course or elective.

2. MAT 101 College Algebra or MAT 111 Basic Mathematics for the Behavioral, Social, and Management Sciences (by course or placement.) 6-9

AND

Six additional credits from the mathematical sciences — computer science, mathematics, or statistics — as stipulated by the major departments.

¹This figure assumes that the requirement is met through an upper-level (300-400) expository writing course (See Approved List A.) If it is met through writing-intensive courses, presumably they will be used to meet other general education requirements or will be part of the major.

Natural Sciences

Two-semester sequence of an introductory laboratory science as stipulated by the major department (by course or placement) to be chosen from BIO 109–110, L109–110 General Biology and Laboratory; BIO 151–152, L151–L152 Introduction to Biological Science (generally for biology and selected pre-health sciences majors); CHE 101–102, L101–102 General Chemistry and Laboratory; CHE 103–104, L103–104 Introduction to Modern Chemistry and Laboratory; PHY 101–102, L101–102 Foundations and Frontiers of Physics and Laboratory; PHY 201–202 General Physics and Laboratory; PHY 207–208 University Physics and Laboratory.

Check the *VCU Undergraduate Bulletin* for prerequisites for science courses.

Human Nature, Culture, and Institutions

1. Civilization and Culture. Minimum of 14 credits from categories A, B, C, **OR** D below to be taken as follows: no more than six credits in each category may be used toward the required 14, and, of these, six credits must be taken from category A **OR** six must be taken from category B. (Courses can still be taken in both categories.) If the six credits are taken from category A and not from B, three credits must be in literature prior to 1900.

A. Literature — courses in literature in English or foreign literature in English translation or upper-level (300–400) foreign literature in the original language. **One of the two courses must be in a literature prior to 1900.** (See Approved List B.)

B. History or Culture and Heritage
European history courses (See Approved List C.)

OR

American history courses (See Approved List D.)

OR

European Culture and Heritage courses (See Approved List E.)

OR

Non-Western Culture and Heritage courses (See Approved List F.)

C. Three credits in nonparticipatory courses in the history of an art, art criticism, aesthetics, or music appreciation; (See Approved List G.)

OR

Two or more credits in participatory arts courses (See Approved List G.)

D. Ethics — courses that apply ethical theories to fundamental moral problems (See Approved List H.)

2. A foreign language through the elementary 102 or equivalent level (by course or placement).

A. Freshmen who wish to continue in their high school language will be given a placement test to determine the level at which they will begin language study for credit. Students desiring to begin study of a different language need not take the placement test and

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may begin with the elementary course in that language for credit.

B. Students transferring from other colleges and universities with advanced placement or advanced standing in foreign language will receive credits as granted by the institution from which they are transferring and should register for the next course in the sequence. Transfer students who have not begun language study at the collegiate level and who wish to continue study of their high school language are subject to the provisions of the previous paragraph.

C. New freshmen and transfer students who qualify through the elementary level (course 102) of a foreign language on the placement test receive no semester credit but have satisfied the language requirement.

3. Two courses that focus on human behavior and institutions (See Approved List J.)

6

Major

See major department degree requirement for exact number of credits (30 credit minimum).

Approved Electives

Approved elective courses to bring credit total to a minimum of 124 credits. Students should consult with their advisors about choice of minor program course and/or electives appropriate to their departmental programs and personal interests.

GENERAL EDUCATION REQUIREMENTS APPROVED LISTS

APPROVED LIST A — EXPOSITORY WRITING COURSES

See *Bulletin* for any prerequisites.

English (ENG)

302 Legal Writing

304 Advanced Composition

327/BUS 327 Business and Technical Writing

French (FRE)

303, 304 Advanced Grammar and Writing

German (GER)

303, 304 Advanced Grammar and Writing

Mass Communications (MAC)

303 General Assignment Reporting

363 Broadcast Newswriting and Reporting

392 Advertising Copywriting

Spanish (SPA)

303, 304 Advanced Grammar and Writing

APPROVED LIST B — LITERATURE IN ENGLISH OR FOREIGN LITERATURE IN ENGLISH TRANSLATION OR UPPER-LEVEL (300–400) FOREIGN LITERATURE IN THE ORIGINAL LANGUAGE

See *Bulletin* for any prerequisites.

Please note that this requirement calls for one of the two courses chosen to be in a literature prior to 1900. Such courses will be shown with an asterisk.*

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Students who have not previously taken a high school or college-level literature survey course may wish to fulfill this requirement with a sophomore-level survey course such as ENG 201 through 206. These courses will give students an extended survey of a number of works written over a relatively long period of time.

Students who have already taken survey courses may wish to fulfill this requirement with an upper-level course in English or foreign literature in English translation (FLT) or the original language. These courses will give students a more intensive experience with the literature of a particular age, genre, or writer.

Literature In English (ENG)

English courses at the 200 level are recommended. However, any upper-level (300-400) literature courses offered by or cross-listed with the English Department (excluding writing and linguistics courses) may be used to fulfill the requirement.

ENG courses covering literature prior to 1900 are ENG 201*, 203*, 205*, 241*, 319*, 320*, 321*, 322*, 335*, 361/RST 361*, 371*, 372*, 400*, 401*, 402*, 403*, 407*, 409*, 410*, 415*, 416*, 423*, 424*.

Foreign Literature in English Translation (FLT)

Any foreign Literature in English translation course may be used to fulfill this requirement.

FLT courses covering literature prior to 1900 are FLT 311*, 321*.

Foreign Literature in the Original Language

French (FRE)

- 301*, 302 Survey of Literature
- 411* The Middle Ages
- 412* The Sixteenth Century
- 413* The Seventeenth Century
- 416* The Eighteenth Century
- 417* The Nineteenth Century
- 420 The Twentieth Century

German (GER)

- 301*, 302 Survey of Literature
- 416* Age of Goethe
- 417* Literature of the Nineteenth Century
- 420 Literature of the Early Twentieth Century
- 421 Modern Literature

Spanish (SPA)

- 301*, 302 Survey of Literature
- 321, 322 Survey of the Literature of Spanish America
- 412* The Golden Age: Renaissance
- 413* The Golden Age: Baroque
- 417* Nineteenth Century Literature
- 420 The Twentieth Century
- 425 Spanish American Literature: Prose Fiction
- 426 Spanish American Literature: Poetry Drama
Essay

APPROVED LIST C — EUROPEAN HISTORY COURSES (HIS)

Bachelor of Science students may choose **any** of the courses shown on Lists 1 and 2 below. Also, in the sequences shown below, the first course is not a prerequisite for the second course. For example, a student may take HIS 316 prior to HIS 315.

Bachelor of Arts students must choose a **sequence** of courses from List 1. Bachelor of Arts students may not use *courses from List 2*. Any two consecutively numbered

courses from List 1 constitute a sequence. The two courses may be taken in any order.

History (HIS)

List 1

- 101, 102 Introduction to European History
- 303 Greek Civilization
- 304 Roman Civilization
- 306 The Early Middle Ages
- 307 The High Middle Ages
- 308 Europe in Renaissance
- 309 The Reformation
- 310 Europe in Absolutism and Enlightenment 1648-1815
- 311 The Zenith of European Power, 1815-1914
- 312 The Age of Total War: Europe, 1914-1945
- 313 Post-War Europe, 1945 to Present

List 2

- 315, 316 History of France
- 317, 318 History of Germany
- 319, 320 History of England
- 321, 322 History of Russia
- 323 History of Spain and Portugal
- 325, 326/RST 318, 319 History of the Jewish people
- 327/RST 327 History of Christianity
- 329, 330 European Social History
- 331 Nazi Germany
- 336 Modern European Intellectual History
- 337/ARH 432 The Origins of Modernism, 1880-1930
- 338 History of Socialism

APPROVED LIST D — AMERICAN HISTORY

Bachelor of Science students may choose **any** of the courses shown on Lists 1 and 2 below. Also, in the sequences shown below, the first course is not a prerequisite for the second course. For example, a student may take HIS 352 prior to HIS 351.

Bachelor of Arts students must choose a **sequence** of courses from List 1. Bachelor of Arts students may not use courses from List 2. Any two consecutively numbered courses from List 1 constitute a sequence. The two courses may be taken in any order.

History (HIS)

List 1

- 103, 104 Introduction to American History
- 342 Colonial America, 1585-1763
- 343 Two American Revolutions, 1763-1800
- 344 Age of Jefferson and Jackson, 1800-1850
- 345 Civil War and Reconstruction
- 346 The Emergence of Modern America, 1877-1914
- 347, 348 Twentieth Century U.S. History

List 2

- 335 The American Jewish Experience
- 349, 350 American Military History
- 351, 352 History of the South
- 353, 354 Virginia History
- 355 Virginia and the Civil War
- 356 Virginia Indians and their Neighbors
- 357, 358 American Social History
- 360 American Ethnic History
- 361, 362/AAS 361, 362 Americans from Africa
- 363, 364 History of the American Urban Experience
- 365, 366 American Intellectual History
- 369, 370 American Constitutional and Legal
Development
- 374 History of the American Frontier
- 375, 376 American Diplomatic History

APPROVED LIST E — EUROPEAN CULTURE AND HERITAGE COURSES

See *Bulletin* for any prerequisites.

Art History (ARH)

103, 104 Survey of Western Art

European Culture/Humanities (EUC/HUM)

311 Classical Mythology

340/USP 350 Culture and Urbanism in Great

European Cities

French (FRE)

306, 307 French Civilization I, II

Geography (GEO)

207 World Regional Geography

334 Regional Geography of Europe

German (GER)

306, 307 German Civilization I, II

History (HIS)

315, 316 History of France

317, 318 History of Germany

319, 320 History of England

321, 322 History of Russia

323 History of Spain and Portugal

Italian (ITA)

305 Italian Conversation and Civilization

Philosophy (PHI)

103, 104 Introduction to the History of Western
Philosophy

Religious Studies (RST)

304 Introduction to Judaism

331 Christianity and Culture

407 Modern Jewish Thought

Spanish (SPA)

306 The Civilization of Spain

APPROVED LIST F — NON-WESTERN CULTURE AND HERITAGE COURSES

See *Bulletin* for any prerequisites.

Afro-American Studies (AAS)

107, 108/HIS 105, 106 Introduction to

African History

200/ANT 200/USP 200 African Culture

204 Africa in Transition

333/GEO 333 Geography of Africa

356/POS 356 African Governments and Politics

357/POS 357 Politics of Southern Africa

387/HIS 387 History of West Africa

389/HIS 389 History of Southern Africa

American Studies (AMS)

301 Introduction to Native American Studies

Anthropology (ANT)

103 Cultural Anthropology

200/AAS 200/USP 200 African Culture

201 The Evolution of Man and Culture

304/SOC 304/WST 304 The Family

305 Comparative Society

350/INT 350 Peoples and Cultures of the World

425 Religion, Magic, and Witchcraft

Geography (GEO)

208 World Regions

333/AAS 333 Geography of Africa

History (HIS)

105, 106/AAS 107, 108 Introduction to
African History

109, 110 Introduction to Latin American History

301, 302/RST 315, 316 The Ancient Near East

328 Modern Middle East

378 History of Central America

383 Ancient Egypt

384 Latin America and World Affairs

385 History of Mexico

386 History of Brazil

387/AAS 387 History of West Africa

389/AAS 389 History of Southern Africa

Philosophy (PHI)

408/RST 408 The Indian Tradition

410/RST 410 The Chinese Tradition in Philosophy

412/RST 412 Zen Buddhism

Political Science (POS)

351 Governments and Politics of the Middle East

355 Asian Governments and Politics

356/AAS 356 African Government and Politics

357/AAS 357 Politics of Southern Africa

452 Seminar in the Politics of Developing Areas

Religious Studies (RST)

311 World Religions

315, 316/HIS 301, 302 The Ancient Near East

317 The Formative Period of Islam

320 Taoism

408/PHI 408 The Indian Tradition

410/PHI 410 The Chinese Tradition in Philosophy

412/PHI 412 Zen Buddhism

Sociology (SOC)

304/ANT 304/WST 304 The Family

Spanish (SPA)

307 Latin American Civilization

Women's Studies (WST)

304/ANT 304/SOC 304 The Family

APPROVED LIST G — PARTICIPATORY AND NONPARTICIPATORY ARTS COURSES

Courses fulfilling this requirement are divided into participatory and nonparticipatory courses. Participatory courses are those primarily devoted to perfection of an artistic skill through studio work. Nonparticipatory courses are those primarily lecture- and content-oriented, with little or no studio work required, such as history of an art, art criticism, aesthetics, music appreciation.

PARTICIPATORY COURSES

Art Foundation (AFO)

121-122 Introduction to Drawing

Art Education (AEN)

340 Exploring the Visual Arts

408 Two-Dimensional Arts Experiences

409 Three-Dimensional Art Experiences

Crafts (CRA)

See *Bulletin* for CRA courses which are available.

Dance (DAN)

All courses excluding DAN 109-110, 209-210, 309-310,
and 409-410.

English (ENG)

305 Creative Writing: Genres

426/THE 426 Playwriting

435, 436 Creative Writing: Poetry

437, 438 Creative Writing: Fiction

Fashion (FDE)

All studio courses: Prerequisites must be satisfied.

Interior Design (IDE)

103 Introductory Studio course

Music (Applied Music—APM)

Applied music courses numbered in the 190's are class
lessons in piano, voice, guitar, and organ. Contact

Department of Music for more specific information.

Private lessons (APM 300-level private instruction) are available on beginning and advanced levels. Contact Department of Music for more information.

Applied music courses numbered 370 and 390 are large and small ensembles and chamber groups. In most cases, auditions are required. Contact Department of Music for more details.

Printing & Printmaking (PAP)

- 155 Drawing and Painting: Basic
- 209 Materials of Painting
- 255 Drawing and Painting: Basic

Sculpture (SCU)

- 211, 212 Basic Sculpture

Speech (SPE)

- 401 Oral Interpretation of Literature

Theatre (THE)

- 107, 108 Introduction to Stage Performance
- 103 Stagecraft
- 104 Costume Construction
- 221 Basic Scenic Design
- 225 Basic Stage Electronics — Lighting
- 326 Basic Stage Electronics — Sound

NONPARTICIPATORY COURSES

Art Education (AEN)

- 340 Exploring the Visual Arts
- 353 Art and Perceptual Communications

Art History (ARH)

- 103, 104 Survey of Western Art
- All other ARH courses may be used but check *Bulletin* for level and prerequisites.

Communication Arts & Design (CDE)

- 252 Twentieth Century Visual Communications
- 253 Theory and Philosophical Aspects of Visual Communications

Dance (DAN)

- 307-308 Dance History

Fashion (FDE)

All lecture courses: Prerequisites must be satisfied.

Music (Music, History, Literature, and Theory)

- MHT 105-106 Fundamentals of Music Theory
- MHT 110 Elements of Music
- MHT 117 Computers in Music
- MHT 243 Appreciation of Music
- MHT 245, 246/AAS 245, 246 Introduction to Afro-American Music
- MHT 280 Survey of Twentieth Century American Popular Music
- MHT 303-304 Piano Literature
- MHT 333 Organ Design
- MHT 334 Organ Literature
- MHT 421-422 Survey of Music History
- MHT/RST 431 Hymnology
- MHT/RST 435 Liturgics
- MHT 434 Choral Literature
- MHT 471 Jazz History and Literature
- MUE 281 Basic Music Skills
- MUE 331 Multiple Choir Programs

Philosophy (PHI)

- 421, 422 Aesthetics

Theatre (THE)

- 300 The Enjoyment of Theater
- 303 Black Theatre
- 307-308 History of Theatre
- 211-212 Introduction to Drama

403-404 History of Dramatic Literature

423-424 Modern Drama

APPROVED LIST H — ETHICS COURSES

See *Bulletin* for any prerequisites.

Philosophy (PHI)

- 211 History of Ethics
- 212 Ethics and Applications
- 213 Ethics and Health Care
- 214 Ethics and Business
- 327 Ethical Theory

Political Science (POS)

- 341 History of Political Thought I

APPROVED LIST J — HUMAN BEHAVIOR AND INSTITUTIONS

See *Bulletin* for any prerequisites.

Afro-American Studies (AAS)

- 103 Introduction to Afro-American Studies
- 105/SOC 105 Sociology of Racism
- 305/SOC 305/WST 305 Sociology of the Black Family
- 307/RST 307 Black Religion
- 310/ECO 310 Economics and Poverty
- 311/USP 337 Urbanization and Blacks
- 321/USP 321 Urban Economics
- 322/PSY 322 Personality and Behavior of the Afro-American
- 343/POS 343 Black Political Thought

Anthropology (ANT)

ANT 103 Cultural Anthropology is a prerequisite for many ANT courses and is recommended as the basic course. With completion of any prerequisites, the following are recommended:

- 201 The Evolution of Man and Culture
- 311/GEO 311 History of Human Settlement
- 350/INT Peoples and Cultures of the World

Economics (ECO)

- 203 Introduction to Economics
 - 210-211 Principles of Economics
- With completion of prerequisites, the following are recommended.

- 306 Public Finance — Federal
- 301/AAS 310 Economics and Poverty
- 321/USP 321 Urban Economics
- 421 Government and Business
- 431 Labor Economics

Education (EDU)

- 300 Foundations of Education
- 301 Human Development and Learning

Geography (GEO)

- 102 Introduction to Cultural Geography
- 311/ANT 311, 312 History of Human Settlement
- 322 World Political Geography

Political Science (POS)

POS 101,102 American Government; 201 Introduction to Political Science; and 202 Introduction to Comparative Government are recommended as basic courses. However, all POS courses may be used to fulfill this requirement **excluding** the following: POS 214, 320, 331, 334, 432, 448, 492, 494, 498, and 499.

Psychology (PSY)

PSY 101 General Psychology is a prerequisite for all upper-level PSY courses and is recommended as the basic course. With the completion of this prerequisite, all PSY 300 and 400 level courses may be used to fulfill this requirement **excluding** the following courses: PSY 317,

318, 415, 492, 493, and 498-499.

Religious Studies (RST)

- 101 Introduction to Religious Studies
- 301 Introduction to the Old Testament
- 302 Introduction to the New Testament
- 307/AAS 307 Black Religion
- 311, 312 Religions of the World
- 334 Religions in Contemporary America

Sociology (SOC)

SOC 101 General Sociology is a prerequisite for many SOC courses and is recommended as the basic course.

With the completion of any prerequisites, all SOC courses may be used to fulfill this requirement **excluding** the following courses: SOC 214, 319, 320, 421, 492, and 493.

Social Science (SSC)

- 303 Marriage and Family Relations
- 330 The Psychology and Sociology of Death
- 340 Human Sexuality

Women's Studies (WST)

- 201 Introduction to Women's Studies
- 304/ANT 304/SOC 304 The Family
- 305/AAS 305/SOC 305 Sociology of the Black Family
- 318/POS 318 Politics of Race, Class and Gender
- 333/SOC 333 Sociology of Sex and Gender
- 334/SOC 334 Sociology of Women
- 335/PSY 335 Psychology of Women

HUMANITIES AND SCIENCES UNDECIDED PROGRAM

Exploratory Program for Students Undecided About a Major

JOHN H. BORGARD
Associate Dean

Recognizing that some students seeking admission to VCU may not wish to choose a particular school on the Academic Campus in which to study by the time they apply or enroll, the University recommends that the students enroll in the College of Humanities and Sciences. The advising program is flexible enough to suit the interests of any undecided students, yet the courses recommended are basic to a variety of majors.

The undecided student will be assigned a faculty advisor with whom the student must meet at least once a semester prior to advanced registration. The advisor and the student will assess the general academic direction of the student's interests and plan a program of studies to assist the student to define his or her academic objectives more clearly.

Students admitted into the "humanities and sciences undecided" category are encouraged to select a major by the end of two years of study. Students must declare a major within one of the University's schools no later than the semester in which they will complete 60 credits.

Listed below are freshman and sophomore

level courses from which "undecided" students should choose courses to explore in various fields.

As undecided students begin to make decisions about a major, they should consult that major's specific requirements listed in the *Bulletin* for courses that should be taken in the freshman and sophomore years.

Suggested Courses for Humanities and Sciences Undecided Students Among Various Schools

A. Most Transferable Courses

- ENG 101-102 Composition and Rhetoric (placement test required)
- HIS 101-102 Introduction to European History
- HIS 103-104 Introduction to American History
- PSY 101 General Psychology
- SOC 101 General Sociology
- SPE 121 Effective Speech
- BIO 109-110 General Biology, CHE 101-102 General Chemistry, PHY 207-208 University Physics I, II, with laboratories
- ECO 210-211 Principles of Economics
- MAT 100 or 111 (placement test required)
- Physical Education

B. Second Level of Most Transferable Courses

- POS 101 American Government
- ARH 103 Art History, General
- AAS 103-104 Introduction to Afro-American Studies
- PHI 103-104 Introduction to History of Western Philosophy
- PHI 221 Critical Thinking and PHI 222 Introduction to Symbolic Logic

If School is Probably Arts

- AFO 121-122 Introduction to Drawing
- ARH 103-104 Art History, General
- CRA 201-202 Metalsmithing, CRA 211-212 Jewelry, CRA 241-242 Beginning Ceramics, CRA 261-262 Beginning Textiles
- FDE 200 Introduction to Fashion Design, FDE 211-212 Garment Construction, FDE 240-241 Introduction to Fashion Merchandising
- IDE 103-104 Introductory Studio Course, IDE 217-218 Great Houses and Monuments: Europe and America
- PAP 155E-156E Drawing and Painting, Basic; PAP 255-256 Drawing and Painting, Basic; PAP 355-356 Drawing and Painting, Intermediate
- THE 307-308 History of the Theatre
- Private Music Lessons
- APM 100 Aural Skills
- APM 191-192 Class Lessons in Piano
- APM 193-194 Class Lessons in Voice
- APM 195-196 Class Lessons in Guitar
- APM 197-198 Class Lessons in Organ
- APM 370 Large Ensembles
- APM 390 Chamber Ensembles
- MHT 105-106 Fundamentals of Music Theory
- MHT 117 Computers in Music
- MHT 201 Acoustics

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If School is Probably Humanities and Sciences

ANT 103 Cultural Anthropology
ENG 101-102 Composition and Rhetoric (placement test required)
Foreign Language (placement test required if continuing in high school language)
HIS 101-102 Introduction to European History
HIS 103-104 Introduction to American History
HIS 105-106 Introduction to African History
HIS 109-110 Introduction to Latin American History
Laboratory Science—two-course sequence with laboratories—BIO 109-110 General Biology, CHE 103-104 Introduction to Modern Chemistry, PHY 101-102 Foundations and Frontiers of Physics
MAT 100 Unitized Mathematics, or MAT 111 Basic Mathematics for Behavioral, Social, and Management Sciences (placement test required)
PHI 103, 104 Introduction to the Problems of Philosophy
POS 101 U.S. Government and POS 201 Introduction to Political Science
PSY 101 Introduction to Psychology
RST 101 Introduction to Religious Studies
SOC 101 General Sociology

If School is Probably Business

ENG 101-102 Composition and Rhetoric (placement test required)
BUS 111-112 Basic Mathematics and Elements of Calculus for Behavioral, Social, and Management Sciences
BUS 121 The Business Environment
BUS 203-204 Introduction to Accounting
ECO 210-211 Principles of Economics
SPE 121 Effective Speech
Elective in history or political science
A natural science elective
Elective in sociology, psychology, or anthropology

If School is Probably Community and Public Affairs

Life or Physical Science, 3 hours (no laboratory necessary)
AJP 181 Survey of the Administration of Justice, REC 195 Recreational Leadership, REC 261 Recreation in Modern society, REH 201 Introduction to Rehabilitation
CSE 315 Evolution of the American City
CSE 316 Urban Life in Modern America
ENG 101-102 Composition and Rhetoric
Humanities electives, 6 hours
Social sciences, 9 hours
MAT 111/BUS 111 Basic Mathematics for Behavioral, Social, and Management Sciences (placement test required)
PSY 101 Introduction to Psychology
SOC 101 General Sociology

If School is Probably Education (See Part XIII for additional information.)

CSC 150 Basic Computer Concepts
ENG 101-102 Composition and Rhetoric (placement test required)
ENG 200 Level Literature
MAT 101 and 102 College Algebra and Trigonometry or MAT 111-112 Basic Mathematics and Elements for Behavioral, Social, and Management Sciences
HED 300 Introduction to Health Education
HIS 103 Introduction to American History
ECO 203 Introduction to Economics
PHE 102 Fitness and Weight Control
PSY 101 Introduction to Psychology

SOC 101 General Sociology
BIO 109-110 General Biology
BIO L109-L110 Biology Laboratory
SPE 121 Effective Speech
Physical Education Activity Courses

If School is Probably Social Work

ANT 103 Cultural Anthropology
ENG 101-102 Composition and Rhetoric (placement test required)
BIO 109-110 General Biology
MAT 101 College Algebra or MAT 111/BUS 111 Basic Math for Behavioral, Social, and Management Sciences (placement test required)
PSY 101 Introduction to Psychology
SOC 101 General Sociology
Social/behavioral science electives, 6 hours (political science, economics, history)
Electives, 6 hours

UNDERGRADUATE CREDIT BY EXAMINATION

Recognizing that Virginia Commonwealth University enrolls students of varying backgrounds and experiences, the College of Humanities and Sciences provides its students the opportunity to accelerate their education through "credit-by-examination." A full description of this program can be found in Part V of this *Bulletin*.

UNIVERSITY HONORS PROGRAM

The Virginia Commonwealth University Honors Program was established to meet the needs of academically talented undergraduate students through a challenging and exciting program with high academic standards. The University Honors Program offers the opportunity for students to expand their creative and intellectual horizons, and to benefit from small classes in which there is greater interaction between students and faculty and among students themselves.

Undergraduates from the College of Humanities and Sciences, as well as all other schools on VCU's academic campus, who meet the eligibility requirements, are invited to apply. For a detailed description of qualifications and requirements, refer to Part II of this *Bulletin*.

DEGREE PROGRAMS AND MINORS SCHOOL OF MASS COMMUNICATIONS

THOMAS R. DONOHUE
Director

Robert Bohle
George Crutchfield
Jack Haberstroh

Diane Cook-Tench
Joyce Dodd
Robert Hughes

David Kenamer
June Nicholson
Ted Smith
Wilma Wirt

James Looney
Cynthia De Riemer
Clarence Thomas

The objectives of the School of Mass Communications are to prepare students for careers in the mass media and related fields and to encourage high standards of ethical and journalistic performance. The prescribed courses in the School of Mass Communications provide a broad educational base and instruct students in the techniques of mass communications.

The School of Mass Communications offers a Bachelor of Science degree in mass communications with specialization in the following sequences:

1. **News-Editorial Sequence.** This concentration is intended primarily for those who wish to prepare for newspaper writing or editing positions.
2. **Advertising Sequence.** This concentration is designed to prepare students for careers in advertising departments of manufacturers and retailers, advertising agencies, advertising media, and advertising service organizations.
3. **Public Relations Sequence.** This concentration is designed to prepare students for employment in industry, government, nonprofit associations or agency public relations work.
4. **Broadcasting Sequence.** This concentration is designed for students who wish to prepare for careers in broadcast journalism or production.

Master of Science in Mass Communications.

For information about graduate work in mass communications, see the *VCU Graduate Bulletin*.

DEGREE REQUIREMENTS

Bachelor of Science in Mass Communications. The Bachelor of Science curriculum in mass communications requires a minimum of 124 credits, including at least 31 but not more than 34 credits in mass communications courses. The school is divided into a lower division (freshman, sophomore) and an upper division junior, senior).

Only two courses in the major, MAC 101 Mass Communications and MAC 203 News-writing, may be taken in the lower division. Students must successfully complete a language skills test and have a minimum typing speed of 35 wpm to enroll in MAC 203 News-writing. Proof of typing skills must be established via examination or completion of a college-level typing course with a grade of "C" or better.

To be admitted to the upper level, students

must meet the following requirements: a grade-point average of 2.25 in all courses, completion of MAC 101 Mass Communications and MAC 203 News-writing (with a "C" grade or better), and completion of the following courses: ENG 101–102; HIS 103, 104; ECO 210–211; MAT 101–STA 213; POS 102; laboratory science (8 credit hours), and a foreign language (6–8 credit hours).

A formal petition for admission to upper-division status must certify completion of these requirements and selection of an area of mass communications specialization.

To enroll in a Mass Communications (MAC) course, mass communications majors must have earned a C grade or better in all courses prerequisite for that course.

Mass Communications majors must attain a 2.25 GPA overall at VCU and a 2.25 in the major to graduate.

Students who transfer to VCU with junior standing and meet other qualifications for admission to the upper division will be placed on one semester's probation to establish the grade point average requirement.

The student admitted to the upper level will choose one of the following concentrations:

Advertising

300 Media Graphics
380 Introduction to Advertising
392 Advertising Copywriting
393 Television and Radio Advertising
394 Advertising Layout and Production
408 Communications Law
480 Media Strategy
481 Advertising Campaigns I
482 Advertising Campaigns II
MAC electives (0–3 credits)

Public Relations

300 Media Graphics
320 Multi-Media Public Relations Production
323 Public Relations
333 Public Relations Writing
380 Introduction to Advertising
408 Communications Law
423 Public Relations Campaigns
425 Public Opinion
MAC electives (2–5 credits)

News-Editorial

300 Media Graphics
303 General Assignment Reporting
305 Copy Editing
375 Legislative Reporting
403 Advanced Reporting
404 Specialized/Project Reporting
405 Advanced Editing
408 Communications Law
MAC electives (3–6 credits)

Broadcasting

- 361 Principles of Broadcasting
- 363-364 Broadcast Newswriting & Reporting
- 365 Introduction to Broadcast Production
- 408 Communications Law
- 461 The Documentary
- 493 Field Work/Internship (3 hrs. required)

AND choose 4-7 hours from the following:

- 362 Newscasting
- 364 TV/Radio Advertising
- 463 Advanced Radio Production
- 464 Advanced Television Production
- 492 Independent Study

Collateral requirements for the tracks include Advertising—BUS 308, Public Relations—BUS 308, Broadcasting—SPE 262.

In addition to the MAC and collateral courses listed previously, students also must take any two additional history courses; two literature courses taught by the English Department, one of which must be in literature prior to 1900; POS 322 State and Local Government; SPE 321 Speech for Business and the Professions (except broadcast news majors); PTY 301 Photo-Journalism; one course from the following: CSC 201 Introduction to Computing Using FORTRAN, CSC 255 Structured Programming, STA 214 Applications of Statistics, CSC 150 BASIC Computer Concepts.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in mass communications. A full description of the program appears in Part XIX of the *Bulletin*.

MINOR IN AFRO-AMERICAN STUDIES

W. AVON DRAKE
Director

Ann Creighton-Zollar ²	Daryl C. Dance
Norrece T. Jones, Jr. ²	Regenia A. Perry
Richard K. Priebe	

The minor in Afro-American Studies shall consist of 18 credits. Students are required to complete AAS 103 Introduction to Afro-American Studies and at least one course in each of the following areas: (1) Africa, (2) African-Americans, and (3) Africa and African-American Arts. Courses in Afro-American Studies are designed to help students gain knowledge and appreciation of the history and culture of Africans and Afro-Americans and their contributions to world civilizations.

MINOR IN AMERICAN STUDIES

RICHARD A. FINE
Coordinator

The minor in American studies, offered jointly by the Departments of English and History, shall consist of at least 18 upper-level credits to be distributed as follows: (1) AMS 394 Perspectives in American Studies and AMS 391 Topics in American Studies (6 credits); (2) humanities electives (3–6 credits); (3) social science electives (3–6 credits); and (4) approved electives or independent study (0–3 credits). All courses selected to fulfill distribution areas should deal with American materials and topics. A list of recommended courses and electives is maintained by the coordinator.

ANTHROPOLOGY

See Sociology and Anthropology.

APPLIED MATHEMATICS

The B.S. in applied mathematics/mathematical sciences is offered by the Department of Mathematical Sciences. See Mathematical Sciences.

BIOLOGY

LEONARD A. SMOCK
Chairman of the Department
JAMES E. GATES
Associate Chairman
GERALD A. PETERS
Director of Graduate Studies

Charles R. Blem	Leann B. Blem
Bonnie L. Brown	Russell V. Brown
Karlynn Bucher	Joseph P. Chinnici
Carolyn M. Conway	Michael L. Fine
Robert W. Fisher	Gregory C. Garman
Miles F. Johnson	David N. Karowe
T. Daniel Kimbrough, Jr.	Sara M. McCowen
Richard R. Mills	John F. Pagels
J. Lewis Payne	Gerald A. Peters
Arthur J. Seidenberg	Jennifer K. Stewart
Gail C. Turner	Stanley R. Webb
Fang-Sheng Wu	Donald R. Young

The curriculum in biology prepares students for graduate study in biology; for admission to schools of medicine, dentistry, and veterinary medicine; for admission to allied health programs; for employment in laboratory or field programs in private industry or governmental agencies; and for teaching in secondary schools.

The Department of Biology offers the Bachelor of Science in biology.

²Joint appointment

Biology majors interested in teaching careers in elementary, secondary, or special education participate in an extended program that results in the awarding of two degrees: a Bachelor of Science in biology and a master's degree in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

Preprofessional Study for the Health Sciences. The Bachelor of Science in biology program provides a four-year course of study in preparation for medical, dental, or veterinary school. The department also offers a variety of two-year preprofessional programs in the allied health professions.

Master of Science in Biology. For information about the graduate program in biology, see the *VCU Graduate Bulletin*.

Nonmajor Electives. The department offers a variety of courses that do not fulfill the major or minor requirements and are not specific requirements for prehealth science students. These courses are offered to develop the general science literacy of the nonbiology major.

Degree Requirements

Bachelor of Science in Biology. The Bachelor of Science curriculum in biology requires a minimum of 124 credits, including 40 credits in biology. Only 3–4 credits of biochemistry may be applied toward the major. In addition to the BIO courses required for the Bachelor of Science degree in biology, the following courses are required and the indicated sequence is recommended. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

Majors must take any two of the following three mathematical sciences options:

1. CSC 201 Introduction to Computing Using FORTRAN or CSC 255 Structured Programming
2. MAT 200 Calculus with Analytic Geometry
3. STA 213 Introduction to Statistics

In preparation for any of these mathematical sciences options, all students must take the Mathematics Placement Test. Depending on the

results, the students may be placed in MAT 101 College Algebra prior to enrolling in one of the above mentioned courses.

Freshman Year. BIO 151–152, L151–L152 Introduction to Biological Science and Laboratory I and II, CHE 101–102, General Chemistry and CHE L101–102 General Chemistry Laboratory I and II, and mathematical sciences courses selected from the options described above.

Sophomore Year. BIO 218 Cell Biology, BIO 317 Ecology, BIOCORE 4 credits, CHE 301–302 Organic Chemistry and CHE L301–302 Organic Chemistry Laboratory I and II, and mathematical sciences courses if not already completed.

Junior Year. BIOCORE 8 credits, PHY 207–208 University Physics, or PHY 201–202 General Physics and BIOAREAS 3 credits.

Senior Year. BIOAREAS 12 credits.

BIOCORE. The following courses must be taken by majors:

BIO 151–152, L151–L152 Introduction to Biological Science and Laboratory I and II
 218 Cell Biology
 310 and L310 Genetics and Genetics Laboratory
 317 Ecology
 Organismal Biology. One course from each of the following groups:

Animal Group

301 Comparative Vertebrate Anatomy
 302 Animal Embryology
 312 Invertebrate Zoology
 313 Vertebrate Natural History

Plant Group

320 Biology of the Seed Plant
 321 Plant Development
 410 Taxonomy of Flowering Plants

At least eight laboratory courses must be taken from BIOCORE and BIOAREAS courses.

BIOAREAS. The remaining courses in biology must be chosen from one or more of the following areas. Courses at the 500 level listed in this *Bulletin* are open to qualified seniors and graduate students only.

1. Cellular/Molecular

303 Bacteriology
 311 Animal Physiology
 420 Plant Physiology
 455 Immunology and Serology
 502 Microbial Biotechnology
 504 Comparative Animal Physiology
 524 Endocrinology
 585 Virology

2. Organismal

301 Comparative Vertebrate Anatomy

302 Animal Embryology³
 309 Entomology
 312 Invertebrate Zoology³
 313 Vertebrate Natural History³
 320 Biology of the Seed Plant³
 321 Plant Development³
 410 Taxonomy of Flowering Plants
 411 Summer Flora
 415 Aquatic Macrophytes
 416 Ornithology
 417 Mammalogy
 429 Neuroanatomy
 435 Herpetology
 L436 Laboratory in Herpetology
 503 Fish Biology

3. Environmental

307 Aquatic Ecology
 L317 Ecology Laboratory
 401 Applied and Environmental Microbiology
 431 Introduction to Marine Biology
 432 Biology of Polluted Waters
 501 Advanced Ecology
 507 Aquatic Microbiology
 514 Stream Ecology
 518 Plant Ecology

4. General

200 Biological Terminology
 291 Topics in Biology
 292 Independent Study
 308 Vertebrate Histology
 391 Topics in Biology
 392 Introduction to Research
 430 Human Genetics
 445 Neurology and Behavior
 490 Research Seminar
 491 Topics in Biology
 492 Independent Study
 498 Honors Research and Thesis
 522 Evolution and Speciation

TRANSFER STUDENTS OR CHANGE OF MAJOR

Students who change their major to biology after having completed BIO 109, L109, 110, L110 or transfer to VCU with a general biology course equivalent to BIO 109, L109, 110, L110 (rather than with a course in botany and a course in zoology) will be allowed to count these courses toward the biology major in lieu of BIO 151, L151, 152, and L152. However, after satisfying the Organismal Biology requirement in the BIOCORE (above), such students will be required to take (as part of the required 40 credits) one additional upper-level course in the plant sciences and one in the animal sciences which must be chosen from the following:

Animal Science Courses

301 Comparative Vertebrate Anatomy
 302 Animal Embryology

309 Entomology
 311 Animal Physiology
 312 Invertebrate Zoology
 313 Vertebrate Natural History
 416 Ornithology
 417 Mammalogy
 435 Herpetology
 445 Neurobiology & Behavior
 503 Fish Biology

Plant Science Courses

320 Biology of the Seed Plant
 321 Plant Development
 410 Taxonomy of Flowering Plants
 420 Plant Physiology
 518 Plant Ecology

No more than 8 credits of the 100 level (or introductory level) courses can be applied to the major.

Minor in Biology

The minor in biology shall consist of 23 credits, including the following: BIO 151–152, L151–L152 Introduction to Biological Science and Laboratory I and II; BIO 218 Cell Biology, BIO 310 Genetics; BIO 317 Ecology and one of the following courses: BIO 301 Comparative Vertebrate Anatomy; BIO 302 Animal Embryology; BIO 312 Invertebrate Zoology; BIO 313 Vertebrate Natural History; BIO 320 Biology of the Seed Plant; BIO 321 Plant Development; or BIO 410 Taxonomy of Flowering Plants.

In completing the minor in biology, the student is also required to complete CHE 101–102, L101, L102 General Chemistry and General Chemistry Laboratory I and II, and CHE 301–302, L301, L302 Organic Chemistry, and Organic Chemistry Laboratory I and II.

Honors in Biology (Research Scholar in Biology Program)

Biology majors in the B.S. program may earn Honors in biology. To enter this program, they must have at least 20 credits in biology and a 3.5 grade-point average overall and in the biology courses. Students who successfully complete this program will graduate with “Research Scholar in Biology” status, and the notation will be placed on the transcript.

Students will complete successfully the Research Scholar in Biology program when they (1) complete the following courses with a grade of A or B in each: BIO 392 Introduction to Research,

³These courses may be used to fulfill the BIOAREA requirement if not previously used to fulfill the BIOCORE requirement.

4 to 6 credits of BIO 498 Honors Research and Thesis, and BIO 490 Research Seminar and (2) present a 3.5 grade-point average overall and in their biology courses. The Research Scholar in Biology student must meet all of the Department of Biology requirements for graduation. Students should consult with their academic advisors and the Biology Honors/Research Committee to create a program suitable to their particular needs and interest.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in biology. A full description of the program appears in Part XIX of the *Bulletin*.

CHEMISTRY

LAWRENCE J. WINTERS

Chairman of the Department

ALBERT T. SNEDEN

Associate Chairman

Milton J. Allen

M. Samy El-Shall

Raphael M. Ottenbrite

Sarah C. Rutan

Stuart J. Silvers

James Terner

Lidia M. Vallarino

Robert G. Bass

Fred M. Hawkrige

Suzanne M. Ruder

Donald D. Shillady

Billy L. Stump

Joseph Topich

Vicki H. Wysocki

The purpose of the curriculum in chemistry is to prepare students for graduate study in chemistry; for teaching in secondary schools; for employment in chemical and industrial laboratories and in related fields of business and industry; and for admission to schools of medicine, dentistry, and veterinary medicine.

The Department of Chemistry offers two undergraduate degree programs:

1. Bachelor of Science in chemistry. Two options are available: the chemical science program and the professional chemist program. The chemical science program is suitable for pre-professional study for the health sciences and other interdisciplinary areas where an emphasis in chemistry is desirable. The professional chemist program requires a greater concentration in chemistry. It is approved by the American Chemical Society Committee on Professional Training. Upon satisfactory completion of the degree requirements the student is certified by the American Chemical Society.
2. Bachelor of Arts in chemistry. The program allows the student to follow a curriculum in chemistry, but it provides more opportunity for electives in other liberal arts areas.

Chemistry majors interested in teaching careers in elementary, secondary, or special educa-

tion participate in an extended program that results in the awarding of two degrees: a Bachelor of Science in chemistry and a master's degree in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

In addition, the department offers required and elective courses in chemistry for students in other programs of study.

Preprofessional Study for the Health Sciences. The Bachelor of Science and Bachelor of Arts in chemistry programs, with the proper selection of electives, satisfy admission requirements to most schools of medicine or dentistry.

Master of Science and Doctoral Program in Chemistry. For information about these programs in chemistry, see the *VCU Graduate Bulletin*.

Degree Requirements

Bachelor of Science in Chemistry. The Bachelor of Science in chemistry curriculum for **Professional Chemists** requires a minimum of 124 credits, including a minimum of 44 credits in chemistry. In addition to the CHE courses required for the Bachelor of Science degree in chemistry, the following courses are required and the indicated sequence is recommended. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

German is recommended for the foreign language general education requirement.

Freshman Year. CHE 101–102 General Chemistry and CHE L101–102 General Chemistry Laboratory I, II; MAT 102, 200 Trigonometry and Calculus with Analytic Geometry. (In preparation for MAT 102, all students must take the Mathematics Placement Test. Depending on the results, the student may be placed in MAT 101 College Algebra prior to enrolling in MAT 102.)

Sophomore Year. CHE 309 Quantitative Analysis; CHE 301–302 Organic Chemistry and CHE L301–302 Organic Chemistry Laboratory I, II; MAT 201 Calculus with Analytic Geometry; MAT 307 Multivariate Calculus; PHY 207–208 University Physics I, II, or with permission in special cases, PHY 201–202

College Physics.

Junior Year. CHE 303–304 Physical Chemistry, CHE L304 Physical Chemistry Laboratory, MAT 301 Differential Equations.

Senior Year. CHE 406 Inorganic Chemistry, CHE 409 Instrumental Analysis, CHE 510 Atomic and Molecular Structure. CHE 401 Qualitative Organic Chemistry or CHE L406 Inorganic Chemistry Laboratory or a minimum of two credits of CHE 492 Independent Study or CHE 493 Chemistry Internship must be selected as an approved elective in the junior or senior year.

The Chemical Science Option for the Bachelor of Science in chemistry allows the student to select more courses from other disciplines. This program has less stringent requirements in mathematics, physics, and chemistry, and is particularly suitable for students intending to study medicine or dentistry.

It requires a minimum of 124 credits, including a minimum of 35 credits in chemistry. In addition to the CHE courses required for the Bachelor of Science degree in chemistry, the following courses are required and the indicated sequence is recommended. These courses may be used in fulfillment of appropriate College of Humanities and Sciences General Education Requirements and Academic Campus requirements.

German is recommended for the foreign language general education requirement.

Freshman Year. CHE 101–102 General Chemistry and CHE L101–L102 General Chemistry Laboratory I, II; MAT 102, 200 Trigonometry and Calculus with Analytical Geometry. (In preparation for MAT 102, all students must take the Mathematics Placement Test. Depending on the results, the student may be placed in MAT 101 College Algebra prior to enrolling in MAT 102.)

Sophomore Year. CHE 309 Quantitative Analysis; CHE 301–302 Organic Chemistry and CHE L301–L302 Organic Chemistry Laboratory I, II; MAT 201 Calculus with Analytic Geometry; PHY 207, 208 University Physics I, II; or PHY 201–202 College Physics.

Junior Year. CHE 303 Physical Chemistry or with permission, CHE 305 Introduction to Physical Chemistry; CHE 304 Physical Chemistry; CHE L304 Physical Chemistry Laboratory.

Senior Year. Approved chemistry electives three credits minimum — may include CHE/BIC 403 Biochemistry.

Bachelor of Arts in Chemistry. The Bachelor of Arts curriculum in chemistry requires a minimum of 124 credits, including 35 credits in chemistry. In addition to the CHE courses required for the Bachelor of Arts degree in chemistry the courses required and their recommended sequence are the same as given above for the chemical science B.S. degree program. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

German is recommended for the foreign language general education requirement.

Minor in Chemistry

The minor in chemistry shall consist of at least 18 credits, distributed as follows: ten credits in CHE 101–102, L101, L102 General Chemistry and Laboratory I and II; and a minimum of eight credits selected from: CHE 309 Quantitative Analysis or CHE 301, L301 Organic Chemistry and Laboratory I or either CHE 303 Physical Chemistry or CHE 305 Introduction to Physical Chemistry. If CHE 101–102, L101, L102 General Chemistry and Laboratory I and II are used for the humanities and sciences laboratory science general requirement, ten or more additional credits of upper-level (300–400) chemistry must be completed in lieu of CHE 101–102, L101, L102. Prerequisites in mathematics and physics should be noted.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in chemistry. A full description of the program appears in Part XIX of the *Bulletin*.

COMPUTER SCIENCE

The B.S. in computer science and the B.S. in computer science/mathematical sciences are offered by the Department of Mathematical Sciences. A minor in computer science are also offered. See Mathematical Sciences.

ECONOMICS

MICHAEL D. PRATT

Chairman of the Department

See School of Business section of this *Bulletin* for listing of Department of Economics faculty.

Economics is the science of making choices. It is the study of how the goods and services we want get produced and how they are distributed among us.

The Department of Economics offers two degree programs:

1. Bachelor of Science in economics, conferred by the College of Humanities and Sciences with a required core of liberal arts courses. (This degree program is described below.)
2. Bachelor of Science in economics, conferred by the School of Business with a required core of business courses. (For further information on this program, see School of Business section in this *Bulletin*.)

The degree in economics conferred through the College of Humanities and Sciences is designed for the following purposes:

1. To prepare students for careers as economists, and such other areas as public administration, social service, the financial sector, and business.
2. To prepare students for graduate work in economics.
3. To prepare students for graduate work in professional schools, such as law, public administration, and medicine.

In addition, the department offers required and elective courses for students in other programs of study throughout the University.

Degree Requirements

Bachelor of Science in Economics. The Bachelor of Science curriculum in economics requires a minimum of 124 credits, including 36 credits in the major (33 credits in economics plus STA 213 Introduction to Statistics).

The student majoring in economics must complete the following courses: ECO 210–211 Principles of Economics, ECO 301 Microeconomic Theory, ECO 302 Macroeconomic Theory, ECO 307 Money and Banking, ECO 489 Senior Economics Seminar, STA 213 Introduction to Statistics, an additional 15 credits of electives in upper-level (300–400) economics courses.

In addition to the ECO and STA courses required for the Bachelor of Science degree in economics, the student must choose two courses in mathematics from the following options, and one course in computer science (CSC), preferably CSC 201 Introduction to Computing Using FORTRAN. Selection of the courses will depend on the student's objectives and score on the

Mathematics Placement Test. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

- (1) MAT 111–112 Basic Mathematics and Elements of Calculus for the Behavioral, Social, and Management Sciences; (2) MAT 101–200 College Algebra and Calculus with Analytic Geometry; or (3) MAT 102–200 Trigonometry and Calculus with Analytic Geometry; or (4) MAT 200–201 Calculus with Analytic Geometry.

In selecting approved electives to meet the general requirements of the College of Humanities and Sciences, it is recommended that students select courses related to a major in economics — specifically, courses in accounting, history, mathematics and statistics, philosophy, political science, sociology-anthropology, and finance, preferably with several courses in one or two of these subjects.

Eligibility for enrollment in most upper-level economics and business courses (BUS or ECO 300–400 levels) is restricted to junior, senior, and graduate students who have completed baccalaureate degrees.

Minor in Economics

The minor in economics offered through the College of Humanities and Sciences shall consist of at least 18 credits including the following: (1) ECO 210–211 Principles of Economics; (2) one or more courses chosen from ECO 301 Microeconomic Theory, ECO 302 Macroeconomic Theory, or ECO 303 Managerial Economics; and (3) the remaining courses chosen from upper-level (300–400) economics courses.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in economics. A full description of the program appears in Part XIX of the *Bulletin*.

ENGINEERING

A dual physics/engineering degree program is offered in cooperation with Auburn University, Old Dominion University, and George Washington University. For further details, see the Department of Physics section of this *Bulletin*.

ENGLISH

- JAMES J. KINNEY
Chairman of the Department
RICHARD A. FINE
Associate Chairman
ELIZABETH J. COOPER
Director of Composition and Rhetoric
DAVID E. LATANÉ
Director of M.A. Program
ANN M. WOODLIEF
Director of Undergraduate Studies
GREGORY E. DONOVAN
Director of Creative Writing

- | | |
|--------------------|---------------------|
| Robert A. Armour | Jill Baughan |
| Boyd M. Berry | Walter R. Coppedge |
| Marcel Cornis-Pope | Tom De Haven |
| Elizabeth F. Duke | Maurice Duke |
| C. W. Griffin | Marguerite Harkness |
| Elizabeth Hodges | Michael Keller |
| Elisabeth Kuhn | Lawrence F. Laban |
| David E. Latané | George C. Longest |
| A. Bryant Mangum | Robert C. Markham |
| Paule Marshall | Charlotte C. Morse |
| L. Terry Oggel | Richard K. Priebe |
| Gary Sange | Nicholas A. Sharp |
| Leslie Shiel | |

The purpose of the English department is to teach students to see their worlds with clarity and respond to them with sensitivity, through reading and writing well. Students are asked to read and explore a diversity of texts created in different times and in a variety of voices; to respond to these texts variously and critically, including situating them within their contexts and discerning their important aesthetic features, rhetorical elements, and social functions; and to express themselves in expository or imaginative works that engage thought and feeling, evince purpose clearly, marshal appropriate evidence, and observe principles of rhetorical decorum. The degree provides an excellent liberal arts base for advanced study and for careers in academic and professional areas.

The Department of English offers the Bachelor of Arts in English.

English majors interested in careers in elementary, secondary, or special education participate in an extended program that results in the awarding of two degrees: a Bachelor of Arts in English and a master's degree in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

In addition, the department offers required and elective courses in English composition,

language, and literature for students in other programs of study as well as for those majoring in English.

Master of Arts in English and Master of Fine Arts In Creative Writing

For information about the graduate program in English, see the *VCU Graduate Bulletin*.

Degree Requirements

Bachelor of Arts in English. The Bachelor of Arts curriculum in English requires a minimum of 124 credits, including 36 credits in the major, 6 of which also fulfill the general education literature requirement. A minimum of 30 credits must be taken in upper-level (300-400-500) English courses, except that 6 credits may be taken in upper-level foreign literature, including foreign literature in translation. ENG 101-102 may not be counted toward the major.

Courses offered for the English major should be distributed as follows: 12 credits in British literature (at least six at the upper-level; majors normally take ENG 203-204 for the other six); 6 credits in upper-level American literature; 6 credits in upper-level comparative literature; 3 credits in upper-level linguistics and criticism; 3 credits in upper-level writing; and 6 credits of departmental electives. At least six credits in upper-level courses must be taken in literature written prior to 1800.

British Literature

- 319 Age of Dryden and Pope
- 320 Age of Johnson
- 321 Romantic Literature
- 322 Victorian Poetry
- 323 Twentieth Century British Literature
- 335 Glories of the English Renaissance
- 400 Shakespeare: The Early Works
- 401 Shakespeare: The Later Works
- 402 Chaucer
- 403 Milton
- 409 Medieval Studies: _____
- 410 Renaissance Studies: _____
- 415 English Novel, Eighteenth Century
- 416 English Novel, Nineteenth Century
- 423 English Drama, 900-1642
- 424 Restoration and Eighteenth Century Drama

American Literature

- 313 Southern Literature
- 314/AAS 314 Black American Writers
- 371 American Literature: Colonial and Federal
- 372 American Literature: American Romanticism
- 373 American Literature: Realism and Naturalism
- 374 American Literature: Early Twentieth Century
- 375 American Literature: Contemporary

414 American Novels and Narratives
AMS 394 Perspectives in American Studies

Comparative Literature⁴

315 The Modern Novel
316 Modern Poetry
317 Modern Drama
318 Contemporary Poetry
361/RST 361 Bible as Literature
363/AAS 363 African Literature
365/AAS 365 Caribbean Literature
367 Eastern Thought in Western Literature
381 Fiction into Film
384/WST 384 Women Writers
386 Introduction to Folklore
390 Studies in Satire
407 Medieval Epic and Romance
421/CML 421 Comparative Literature I
422/CML 422 Comparative Literature II
351/EDU 351 Children's Literature⁵
433/EDU 433 Adolescent Literature⁵
FLT 301 Early Chinese Literature
FLT 302 Revolution and Erotic Life in Chinese Literature
FLT 311 The Humanist Quest in French Literature
FLT 312 Revolt and Renewal in Modern French Literature
FLT 321 Early German Literature
FLT 322 Modern German Literature

Linguistics and Criticism

350 Approaches to Literature
429 Form and Theory of Poetry
430 Form and Theory of Fiction
449 Introduction to Linguistics
450 Modern Grammar
451 History of the English Language
453/LIN 453 Introduction to Modern Rhetoric
552 Teaching English as a Second Language

Advanced Writing

302 Legal Writing
304 Advanced Composition
305 Creative Writing: Genres
307/EDU 307 Teaching Writing Skills
327/BUS 327 Business and Technical Report Writing
426, 427/THE 426, 427 Playwriting
435, 426 Creative Writing: Poetry
437, 438 Creative Writing: Fiction

Minor Requirements — General

A student majoring in English may pursue a minor in writing, but not an English minor.

Minor in English. The minor in English shall consist of 18 credits in upper-level (300–400) English courses, including at least three credits from each of the following areas: (1) British literature; (2) American literature; (3) linguistics, criticism, and advanced writing; and (4) comparative literature. Three credits may be taken in foreign literature in English translation (FLT) and three in independent study; ENG 300 Practical Writing Workshop will not count towards

the minor.

Minor in Writing. The minor in writing shall consist of 18 credits in the writing courses listed here. ENG 304 Advanced Composition is required and should be taken as early in the minor as possible. The other 15 credits are chosen from the following areas: (1) creative writing (ENG 305, 426, 427, 435, 436, 437, and 438) and (2) professional writing and rhetoric (ENG 302, BUS/ENG 327, ENG 453, ENG 493, MAC 203, MAC 300, MAC 305, MAC 341).

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in English. A full description of the program appears in Part XIX of the *Bulletin*.

MINOR AND CERTIFICATE IN ENVIRONMENTAL STUDIES (ENS)

ELSKE v.P. SMITH
Coordinator

Faculty affiliated with the Environmental Studies Program are

Margot W. Garcia (Urban Studies & Planning)	Leonard Smock (Biology)
David Hartman (Sociology and Anthropology)	Greg Garman (Biology)
Brad Hooker (Philosophy and Religious Studies)	Marijean Hawthorne (History & Geography)
Peter Schulz (Urban Studies & Planning)	Husain Mustafa (Political Science)
	Jan Thomas (Justice & Risk Administration)

Environmental crises and discussion of environmental issues are central features of modern industrial societies. Continuing technological development and economic growth demand increased public understanding of environmental constraints and the effects of human activity on the environment. When environmental questions are explored in depth, scientific knowledge, policy considerations, and ethical issues are necessarily joined. The curriculum in environmental studies is structured to provide a multidisciplinary introduction to biophysical and social factors which affect the quality of life on earth.

⁴No more than six credits in upper-level literature courses taught by the Department of Foreign Languages may be applied toward the English major.

⁵English majors may count either ENG 351 or ENG 433 but not both toward their major.

The minor and the certificate programs seek to furnish both broad and specific educational benefits. The minor in environmental studies provides an overview of the field which offers an intrinsically interesting way for many students to organize elective course work while gaining knowledge important to life in the contemporary world. When combined with an appropriate major, an environmental studies minor can be useful to students planning careers in any area concerned with environmental processes and problems. The environmental studies certificate can help prepare students for work in such fields as industrial pollution control, municipal water treatment, environmental planning and analysis, biological monitoring, and science writing and reporting. The minor and the certificate programs should also be valuable to those who expect to study at the graduate level in such concentrations as ecology and environmental systems.

The minor in environmental studies shall consist of 21 credits, 18 of which must be outside the student's major department. A minimum of 12 credits must be taken at the upper level (300-400). Students minoring in environmental studies must also complete STA 213 Introduction to Statistics or CSE 242 Methods of Community Analysis. Required and approved courses for the minor are as follows:

Required Courses

- BIO 315 Man and the Environment, **OR**
- USP 331 Environmental Systems
- POS 311 Politics of the Environment, **OR**
- SRA 300 Regulatory Aspects of Safety, Security and Health
- STA 213 Introduction to Statistics, **OR**
- CSE 242 Methods of Community Analysis, **OR**
- BUS 301 Business Statistics
- ENS 490 Seminar in Environmental Studies

All biology courses except BIO 315 and 332 have BIO 151-152, L151-L152 as prerequisites. Students are advised to take these two introductory courses rather than BIO 109-110, L109-L110.

Additional Approved Courses

At least one natural science course and at least one social science course must be taken from the following list:

- BIO 307 Aquatic Ecology
- BIO 315 Man and the Environment
- BIO 317 Ecology
- BIO L317 Ecology Lab
- BIO 332 Environmental Pollution
- BIO 431 Introduction to Marine Biology

- BIO 432 Biology of Polluted Waters
- BIO 501 Advanced Ecology
- BIO 503 Fish Biology
- BIO 514 Stream Ecology
- BIO 518 Plant Ecology
- EAS 401 Meteorology
- EAS 411 Oceanography
- GEO 102 Introduction to Cultural Geography
- GEO 203/204 Physical Geography
- GEO L203/L204 Physical Geography Lab
- GEO 311/312/ANT 311/312 History of Human Settlement
- PHY 105 Physical Geology
- PHY 315 Energy and the Environment
- POS 311 Politics of the Environment
- USP 302 Land Use Capability
- USP 331 Environmental Systems
- USP 332 Environmental Management
- USP 333 Energy and Conservation Planning
- ECO 308 Economic Geography
- SOC 355 Natural Resources and Society
- SOC 426 Population Dynamics
- SRA 300 Regulatory Aspects of Safety, Security, and Health
- SRA 420 Hazardous Materials Management
- SRA 430 Systems Safety
- SRA 440 Incident Investigation and Analysis
- ENS 490 Research Seminar in Environmental Studies
- ENS 491 Topics in Environmental Studies
- ENS 492 Independent Study
- ENS 493 Environmental Studies Internship

Certificate in Environmental Studies

A certificate in environmental studies will be awarded to students who complete the requirements for a minor in environmental studies, an additional nine credits of approved upper-level environmental studies course work, and one of the following four courses in applications of statistics: PSY 214, SOC 214, STA 214, or STA 543. Courses may be counted toward both a student's major and the environmental studies certificate. A 2.0 GPA must be earned in the certificate courses.

FOREIGN LANGUAGES

ROBERT GODWIN-JONES

Chairman of the Department

- | | |
|-----------------------|---------------------|
| Manual Béjar | Paul F. Dvorak |
| Steven Guemann | Chantel Maréchal |
| Antonio Masullo | Eugenia Muñoz |
| Cécile E. Noble | Margaret T. Peischl |
| Beatriz Rosado | Robert L. Sims |
| Kenneth A. Stackhouse | |

Besides offering a liberal education in the humanities, the Bachelor of Arts degree program in foreign languages, prepares students for

careers in which knowledge of a foreign language, literature, and culture is essential for graduate study in foreign languages and for teaching French, German, or Spanish.

All VCU students who wish to continue their high school language must take the foreign language placement test. While credit is not granted by the placement test, it may fulfill certain graduation requirements. Transfer students will receive the credits granted by the institution from which they are transferring. Consult the specific language requirement for the Bachelor of Arts or Bachelor of Science degree.

The Department of Foreign Languages also offers courses in foreign literature in English translation (FLT), comparative literature (CML), and European culture (EUC). These courses do not satisfy the language requirements or electives.

The Department of Foreign Languages offers the Bachelor of Arts in foreign languages, with tracks in French, German, Spanish, or comparative literature.

Foreign language majors interested in careers in elementary, secondary, or special education participate in an extended program that results in the awarding of two degrees: a Bachelor of Arts in foreign languages with a track in French, German, or Spanish, and a master's in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

Language majors are strongly urged to take two more years of a second foreign language. The Department of Foreign Languages offers minors in French, German, Spanish, and a track in comparative literature, as well as courses in Chinese, Italian, Latin, and Russian.

Study Abroad Opportunities

Students majoring or minoring in foreign languages are encouraged to participate in a study abroad program. VCU has active programs for students interested in living and studying abroad during the summer. These programs offer students opportunities for short-term immersion in the language, culture, and civilization of the countries they visit. The Department of Foreign Languages currently offers summer study abroad programs in France, Austria, Spain, and Italy. VCU is a

member of ISEP, the International Student Exchange Program, which offers a junior year abroad at one of 40 universities worldwide.

Minimum Major/Minor Requirements in Transfer Students

Transfer students intending to major in a foreign language must take a minimum of two 400-level courses within the department. Both the credit and the distribution requirements for the major must be satisfied. For the minor, VCU coursework must include at least two courses at the 300 level or above in the chosen language area.

Minor in French, German, or Spanish

A minor in French, German, or Spanish shall consist of at least 18 credits in the specific language as follows: 201, 202, or 205, plus at least 12 credits at the 300/400 level. Students placing above the 200 level shall take an additional six credits in either 300 or 400 level courses.

Degree Requirements

Bachelor of Arts in Foreign Languages with a Track in French, German, or Spanish. The degree program requires a minimum of 124 credits, including 30 credits in upper-level courses in either French, German, or Spanish. Along with the general requirements of the College of Humanities and Sciences for the B.A. degree, students in the French, German, or Spanish tracks are required to take the following courses:

- 301 and 302 Survey of Literature
- 303 and 304 Advanced Grammar and Writing
- 306 and 307 Civilization
- 305 Conversation or 311 Language through the Media

To complete the major, students will select nine hours of course work at the 300 or 400 level, at least six hours of which shall be at the 400 level.

Transfer students intending to major in a foreign language must take a minimum of two 400-level courses in the chosen language area at VCU. Both the credit and distribution requirements for the major must be satisfied. For a minor, VCU course work must include at least two courses at the 300 level or above in the chosen language area.

Bachelor of Arts in Foreign Languages with a Track in Comparative Literature. The foreign languages degree program with a track in comparative literature requires a minimum of 124 credits, including 30 credits towards the major in upper-level (300–400) courses.

Along with the general education requirements of the College of Humanities and Sciences for the B.A. degree and the Academic Campus requirements, students in the comparative literature track are required to take the following core courses (six credits): CML 301 Introduction to Comparative Literature and CML 485 Seminar in Comparative Literature. (With permission of the comparative literature advisor, ENG 350 Approaches to Literature may be substituted for CML 301.)

In addition to the above core courses, students will complete the major by taking

A. 12 upper-level credits in one of the following national literatures: French, German, Spanish/Latin American. These must include the appropriate 301–302 Survey of Literature, or 321–322 Survey of the Literature of Spanish America sequence and two other literature courses in the original language.

B. Six upper-level credits in a second national literature, chosen from the following: American, Chinese, English, French, German, Greek, or Spanish. Courses may be either in the original language or in English translation (FLT).

C. Six upper-level credits in comparative literature courses which include more than one national literature. The following courses may be used to fulfill this requirement:

Comparative Literature: 391 Topics in Comparative Literature/FLT 391 Topics in Foreign Literature in English Translation

English: 315 The Modern Novel, 363 African Literature, 365 Caribbean Literature, 367 Eastern Thought in Western Literature, 386 Introduction to Folklore, 407 Medieval Epic and Romance, 421, 422, CML 421, 422, Comparative Literature, Theatre: 403, 404 History of Dramatic Literature; 423, 424 Modern Drama

The following courses may be used to fulfill the requirements only with the permission of the comparative literature advisor:

English: 316 Modern Poetry, 317 Modern Drama, 318 Contemporary Poetry, 361 The Bible as Literature, 381 Fiction into Film, 390 Studies in Satire, 395 Topics in Literature, 407 Medieval Studies, 491 Topics in Literature, 492 Independent Study

Foreign Literature in English Translation: 311 The Humanist Quest in French Literature, 312 Revolt and Renewal in Modern French Literature, 391 Topics in Foreign Literature in English Translation, 492 Independent Study

HISTORY AND GEOGRAPHY

GEORGE E. MUNRO

Chairman of the Department

Joseph W. Bendersky

Robert D. Cromeey

Harold E. Greer, Jr.

Norrece T. Jones, Jr.

Michael W. Messmer

Philip J. Schwarz

Eugene P. Trani

Melvin I. Urofsky

Alan V. Briceland

Arthur J. Engel

Marijean E. Hawthorne

Susan E. Kennedy

James T. Moore

Robert M. Talbert

Ted Tunnell

The purpose of the history curriculum is to expose the student to a multidimensional analysis of the human past. Knowledge gained through such analysis not only has the intrinsic appeal of any disciplined intellectual inquiry but also constitutes an indispensable basis for active citizenship and for critical thinking about the society in which one lives. Historical training at the undergraduate level provides access to personal and social awareness within the rich tradition of the liberal arts; it is also an ideal means of preparing the student for a wide range of careers or further professional study.

The Department of History and Geography offers the Bachelor of Arts in history.

History majors interested in teaching careers in elementary, secondary, or special education participate in an extended program that results in the awarding of two degrees: a Bachelor of Arts in history and a master's degree in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

Other students may avail themselves of a wide range of courses with thematic, topical, national, or chronological emphases to fulfill requirements or electives in their own educational programs.

Degree Requirements

Bachelor of Arts in History. The Bachelor of Arts curriculum in history requires a minimum of 124 credits, including 30 credits in history, of which a minimum of 24 credits must be at the upper (300 and 400) level. At least six credits must be taken from the following courses: HIS 461–462, 483, 485, 486, 490, 493, or 498. All students in the Bachelor of Arts program must choose at least six credits in each of three geographical areas; Europe, the United States, and the Third World. With approval of the departmental curriculum committee, students may take

up to six credits toward the history major from courses in other departments.

Along with completion of the general education requirements of the College of Humanities and Sciences for the B.A. degree and Academic Campus requirements, approved electives may be chosen from any courses offered in the College of Humanities and Sciences and in the Schools of the Arts, Business, Community and Public Affairs, and Education.

Students should consult their advisors to create a program adapted to their particular needs and interests.

Honors in History

History majors in the B.A. program may earn a degree with honors in history. To enter this program they must have a 3.0 overall average in their work or a 3.0 average for their junior year, with at least a 3.2 average in history. Application to enter the Honors in History program must be made in the junior year. Students who complete this program successfully will graduate in the Honors in History program, and the notation will be placed on their transcripts.

Minor in History

The minor in history shall consist of a minimum of 18 credits of which at least 12 must be at the 300 or 400 level. Of the upper-level (300–400) credits, at least 3 credits must be taken from the following courses: HIS 461, 462, 483, 485, 486, 490, 493, 498.

Minor in Geography

The geography minor shall consist of 18 credits including GEO 203, 204 Physical Geography; GEO L203, L204 Physical Geography Laboratory; GEO 207 or 208 World Regions; and GEO 311 or 312 History of Human Settlement. Six credits must be upper-level (300–400) courses. USP 513 Planning Graphics, and USP 521 Cartography and Air Photo Interpretation may apply to the minor and are strongly recommended to students wishing to concentrate in physical geography.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in history. A full description of the program appears in Part XIX of the *Bulletin*.

MINOR IN INTERNATIONAL STUDIES

HERBERT HIRSCH

Coordinator

The minor in international studies is designed to increase students' awareness of and sensitivity to the values, traditions, and aspirations of people in other parts of the world and to provide comprehensive knowledge of a specific geographical location. This program, coordinated within the College of Humanities and Sciences, enables students to earn a minor in international studies while completing departmental, school, and University requirements for a B.A. or B.S. degree. The insights offered by the wide variety of disciplines that focus on an international perspective are intended to enhance the minor.

A secondary field of concentration beyond the major may be developed by combining general courses in international studies with a focus on either a geographical area or global issues. At present, students may specialize in one of five world regions: Africa, Latin America, the Middle East, Russia and Eastern Europe, and Western Europe.

Two core courses provide the framework for the international studies minor. INT/POS 203 Issues in World Politics examines history and politics of significant issues in world politics. Issues treated include: the nation state, war and peace, inequality, justice, terrorists, genocide and human rights as well as selected others. The course will also examine attempts to ameliorate problems and to resolve conflicts.

INT 490 Seminar in International Issues is a senior seminar which will be taught by faculty whose expertise is in the different focus areas. The student will select one issue or area and will bring to bear the methodology and subject matter of their major through individual research. All other requirements and electives in the International Studies program are drawn from existing courses in several departments.

Requirements

The minor in international studies consists of 21 credit hours. Students frequently will be able to count at least one course from general education requirements toward the minor. Courses taken for the minor are distributed as follows:

1. Core Courses (6 credits)
 - INT/POS 203 Issues in World Politics
 - INT 490 Seminar in International Issues
2. Focus area (15 credits):

A. Geographic Area Track (15 credits)

Students will be expected to focus on one of the geographic area specialties.

- Africa
- Latin America
- Middle East
- Russia and Eastern Europe
- Western Europe

An approved list of courses is available from the Director of the International Studies Program.

In addition, student should fulfill their language requirement with a language appropriate to their area of focus when possible.

B. Global Issues Track (15 credits)

Students will focus on a significant issue in international studies. Coursework may involve independent study and directed reading.

An approved list of courses is available from the Director of the International Studies Program.

The coordinator of the minor in international studies serves as the student advisor, working closely with other faculty in appropriate departments, and provides the approval necessary to show that the minor has been completed. Students should work with the international studies advisor in setting up their program of study.

MINOR IN JUDAIC STUDIES

See Philosophy and Religious Studies.

MASS COMMUNICATIONS

See School of Mass Communications at beginning of degree programs.

MATHEMATICAL SCIENCES

REUBEN W. FARLEY

Chairman of the Department

DAVID F. BAUER

Assistant Chairman

LORRAINE M. PARKER

Assistant Chairman

JAMES A. WOOD

Director of Graduate Affairs

Division of Applied Mathematics and Mathematics

Ghidewon A. Asmeron

James K. Deveney

David Finston

William Haver

C. Michael Lohr

Pratip N. Raychowdhury

Hassan Sedaghat

Gary Thompson

John F. Berglund

Reuben Farley

William A. Glynn

Robert H. Johnston

J. Richard Morris

John F. Schmeelk

William W. Terrell

James Wood

Division of Computer Science

Richard E. Allan

Susan Brilliant

James Ames IV

Chao-Kun Cheng

William B. Evans

Lorraine Parker

Lawrence West

Branson Murrill

David A. Schedler

Division of Operations Research and Statistics

John Barnes

Robert Boudreau

Neil W. Henry

Ronnie Lamb

Sharon Navard

David F. Bauer

James Davenport

Robert E. Johnson

Joanna Leleno

Patricia Pepple

The purpose of the curriculum in mathematical sciences is to promote understanding of the mathematical sciences and their structures, uses, and relationships to other disciplines. To this end, the scholarly growth of the faculty and students in the mathematical sciences is nurtured through study, research, and a high standard of excellence in teaching. The curriculum provides a sound foundation for the student seeking to enter a vocation with a technological orientation and for the student who wishes to pursue graduate study in applied mathematics, computer science, mathematics, operations research, statistics, or related disciplines.

The Department of Mathematical Sciences offers a Bachelor of Science degree in mathematical sciences and a Bachelor of Science in computer science. Both degrees contain a required core of courses that provide a foundation for more specialized work, while furnishing an introduction to a variety of areas in the mathematical sciences.

Within the **B.S. in Mathematical Sciences**, students may choose one of the following concentrations:

1. **Applied Mathematics/Mathematical Sciences** in which those analytical and computational techniques are studied that are needed to solve many of today's problems. These methods have been applied classically in such areas as chemistry and physics, but now they also find use in many other areas.
2. **Computer Science/Mathematical Sciences** in which the mathematical foundations and the practical applications of computers are studied to provide the student with the expertise to *function effectively* in this rapidly expanding discipline. This concentration provides a solid education in computer science while allowing the flexibility to pursue other areas of study.
3. **Mathematics/Mathematical Sciences** in which an understanding of the power and beauty of pure mathematics and its applications to various branches of knowledge is fostered.
4. **Operations Research/Mathematical Sciences** in which the student studies modern mathematical techniques for solving problems arising from other fields, such as engineering, business, or economics.

5. **Statistics/Mathematical Sciences** in which mathematical models used in the investigation of uncertain phenomena are developed and applied to experimental and nonexperimental data.

As an alternative to the above concentrations, students, in consultation with their advisors, may design an individual plan of study.

Mathematical sciences majors interested in teaching careers in elementary, secondary, or special education participate in an extended program that results in the awarding of two degrees: a Bachelor of Science in mathematics and a masters degree in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

The **B.S. in Computer Science** is a rigorous, highly concentrated curriculum of computer science courses, which is accredited by the Computer Science Accreditation Commission of the Computing Sciences Accreditation Board. It includes advanced study in several important areas of computer science and provides a strong foundation in this discipline.

The Department of Mathematical Sciences also offers a Mathematical Sciences Certificate in computer science or in statistics. In addition, for students in other programs, the department offers minors in computer science, mathematical sciences, and statistics. Also offered are required and elective courses for students in other programs of study as well as for students majoring in mathematical sciences.

Degree Requirements

Bachelor of Science in Mathematical Sciences. The Bachelor of Science curriculum in mathematical sciences requires a minimum of 124 credits, including 41 credits in courses labeled CSC, MAT, or STA. Along with the general education requirements of the College of Humanities and Sciences and the Academic Campus requirements, students are required to take core courses and fulfill specific requirements for the degree.

On the basis of results of the Mathematics Placement Test, students may be required to take MAT 101 College Algebra or MAT 102 Trigonometry. No more than three credits in 100-level mathematical sciences courses will be applicable to the general requirements for the B.S. degree. Credit for 100-level mathematical sciences

courses may not be applied toward the mathematical sciences credits required for the major.

Mathematical sciences majors are required to select one of the following options:

- A. Complete two of the following sequences:
1. BIO 109-110, L109, L110 General Biology and Laboratory I, II
 2. CHE 101-102, L101, L102 General Chemistry and Laboratory I, II
 3. PHY 207-208 University Physics or PHY 201-202 General Physics
- OR
- B. Complete one of the above science sequences, and complete a minor or second major offered outside the Department of Mathematical Sciences.

The student may use courses from the chosen option to fulfill appropriate College of Humanities and Sciences general education requirements.

Core. All students are required to take

CSC 225 Structured Programming
 MAT 200-201 Calculus with Analytic Geometry
 MAT 211 Mathematical Structures
 STA 212 Concepts of Statistics

Concentrations. By completing the listed requirements, students may obtain a designation on their transcript indicating that their study has emphasized one of the following concentrations. Students may choose to meet the requirements of more than one concentration.

1. **B.S. in Applied Mathematics/Mathematical Sciences.**
 MAT 301 Differential Equations, MAT 307 Multivariate Calculus, MAT 310 Linear Algebra, MAT 512 Complex Analysis for Applications, MAT 517-518 Methods of Applied Mathematics, and six additional upper-level credits in mathematical sciences. (MAT 302 Numerical Calculus, MAT 437 Applied Partial Differential Equations, and MAT 511 Applied Linear Algebra are recommended.) Students in this concentration should elect at least one upper-level course in chemistry or physics. (CHE 510 Atomic and Molecular Structure is recommended.)
2. **B.S. in Computer Science/Mathematical Sciences.**
 CSC 256 Data Structures and Advanced Programming, CSC 301 Introduction to Discrete Structures, CSC 311 Assembler Language, CSC 312 Introduction to Operating Systems, CSC 401 Algorithm Analysis with Advanced Data Structures, CSC 403 Programming Languages, one 500-level computer science course, and six additional upper-level credits in mathematical sciences.
3. **B.S. in Mathematics/Mathematical Sciences.**
 MAT 307 Multivariate Calculus, MAT 310 Linear Algebra, MAT 501 Algebraic Structures, MAT 507-508 Analysis I and II, MAT 509 General Topology I, and six additional upper-level credits in mathematical sciences.

4. **B.S. in Operations Research/Mathematical Sciences.**
MAT 307 Multivariate Calculus; MAT 309 Introduction to Probability Theory; MAT 310 Linear Algebra; MAT 327 Mathematical Modeling or STA 503 Introduction to Stochastic Processes; MAT 527-528 Mathematical Foundations of Operations Research; and six additional upper-level credits in mathematical sciences.
5. **B.S. in Statistics/Mathematical Sciences.**
MAT 307 Multivariate Calculus; MAT 309 Introduction to Probability Theory; MAT 310 Linear Algebra; STA 404 Introduction to Statistical Inference; STA 541 Applied Statistics for Engineers & Scientists; STA 544 Statistical Methods II; three additional upper-level credits in statistics; and three additional upper-level credits in mathematical sciences.

A student who meets the requirements for two of the concentrations within the mathematical sciences degree may receive a double major. In addition, a student who meets the requirements for one of the concentrations and those for the computer science degree may receive a double major unless the concentration is also computer science. To initiate a double major, the student must obtain the appropriate form from University Enrollment Services/Records and Registration.

With the approval of the departmental Undergraduate Credentials Committee and their academic advisor, students may design their own plan of study. This curriculum must contain at least 24 credits in upper-level (300-500 level) mathematical sciences courses. Such students would receive a B.S. in mathematical sciences.

Bachelor of Science in Computer Science. The Bachelor of Science curriculum in computer science requires a minimum of 124 credits, including 57 credits in courses labeled CSC, MAT, or STA. Along with the general education requirements of the College of Humanities and Sciences and the Academic Campus requirements, students must take required courses and fulfill specific requirements for the degree.

On the basis of results of the Mathematics Placement Test, students may be required to take MAT 101 College Algebra or MAT 102 Trigonometry. No more than three credits in 100-level mathematical sciences courses will be applicable to the general requirements for the B. S. degree. Credit for 100-level mathematical sciences courses may not be applied toward the mathematical sciences credits required of the computer science major.

Computer science majors are required to select one of the following options:

- A. Complete two of the following sequences:
- BIO 109-110, L109-L110 General Biology and Laboratory I, II
 - CHE 101-102, L101-L102 General Chemistry and Laboratory I, II
 - PHY 207-208 University Physics
- OR
- B. Complete all of the following:
- One of the above science sequences.
 - Six additional credits in biology, chemistry, or physics (excluding PHY 101, PHY 102, PHY 201, and PHY 202).
 - A minor or second major offered outside the Department of Mathematical Sciences.

The student may use courses from the chosen option to fulfill appropriate College of Humanities and Sciences general education requirements.

Required Mathematics and Statistics Courses

MAT 200-201 Calculus with Analytic Geometry
MAT 211 Mathematical Structures
STA 212 Concepts of Statistics
One of MAT 301 Differential Equations, MAT 302 Numerical Calculus, MAT 310 Linear Algebra, or MAT 351 Applied Abstract Algebra.

Required Computer Science Courses

CSC 255 Structured Programming
CSC 256 Data Structures and Advanced Programming
CSC 301 Introduction to Discrete Structures
CSC 311 Assembler Language
CSC 312 Introduction to Operating Systems
CSC 401 Algorithm Analysis with Advanced Data Structures
CSC 403 Programming Languages
CSC 505 Computer Architecture
CSC 508 Data Base Theory
Twelve additional credits chosen from upper-level computer science classes. STA 321 Statistical Computing may be used to satisfy three of these credits.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in mathematical sciences. For a full description of this program, see Cooperative Education in Part XIX of this *Bulletin*.

Minor Requirements—General

A minimum grade-point average of 2.0 must be achieved in the minor. Credit for 100-level mathematical sciences courses may not be applied toward a minor. Mathematical sciences majors and computer science majors may not

minor in a program of the Department of Mathematical Sciences.

Minor in Mathematical Sciences. A minor in mathematical sciences shall consist of at least 18 credits offered by the Department of Mathematical Sciences, including a minimum of one semester of calculus and nine upper-level credits. Neither STA 213 Introduction to Statistics nor any 100-level courses will be credited toward the required 18 credits. The calculus requirement may be fulfilled by MAT 200 Calculus with Analytic Geometry or MAT 112 Elements of Calculus for Behavioral, Social, and Management Sciences although MAT 112 may not be counted toward the required 18 credits.

Minor in Computer Science. A minor in computer science shall consist of at least 18 credits offered by the Department of Mathematical Sciences including CSC 255, CSC 256, MAT 211, and nine upper-level credits in computer science.

Minor in Statistics. The requirements for a minor in statistics are the same as those for the minor in mathematical sciences with the restriction that the nine credits of required upper-level course work be earned in statistics courses. It is strongly recommended, but not required, that students seeking a minor in statistics take MAT 211 Mathematical Structures and STA 212 Concepts of Statistics.

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

Master of Science in Mathematical Sciences. For information about the graduate program in mathematical sciences, see the *VCU Graduate Bulletin*.

Master of Science in Computer Science. For information about the graduate program in computer science, see the *VCU Graduate Bulletin*.

Master of Education in Mathematics Education. For information about the graduate program in mathematics education, see the *VCU Graduate Bulletin*.

For students who hold bachelor's degrees and wish to gain undergraduate preparation in an area of mathematical sciences, the following

opportunities are offered:

Second Baccalaureate Degree. For information on the second baccalaureate degree see the information in Part V 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. Students who gain certification through the program are well suited for many professional opportunities available in the scientific community and with government agencies. In addition, the certification process is designed to allow interested students to prepare for graduate study in computer science.

To gain certification through this program, the student is required to earn a minimum of 33 credits from courses at the 200-level or higher in the mathematical sciences. Credits toward certification can be transferred from course work completed before or after receiving the bachelor's degree. Included among the 33 credits must be the following:

- A. At least 18 credits from courses in mathematical sciences at the 300 level or higher earned at VCU after the candidate has received a bachelor's degree.
- B. Of the 18 credits listed in part A, at least 15 credits must be in computer science with at least six of these credits at the 400 level or higher; CSC 311 Assembler Language, and CSC 401 Algorithm Analysis with Advanced Data Structures are required courses for certificate students.
- C. At least nine credits in approved electives in mathematical sciences other than computer science. A calculus course must be included among these credits.

Upon successfully completing all courses in the program within a five-year period with a grade of "C" or better and having maintained a grade-point average of 2.5 or better in the program, the student will be awarded the Mathematical Sciences Certificate in computer science. Successful completion of a certificate program does not guarantee admission to the master's degree program in mathematical sciences.

Students seeking to enter the certificate program should contact the Department of Mathematical Sciences for information on admission procedures.

Mathematical Sciences Certificate in Statistics. The Department of Mathematical Sciences

offers a certificate program in statistics for students who have received bachelor's degrees in other areas. The primary goal of the program is to allow students with undergraduate majors in science, engineering, and the social sciences an opportunity to acquire the formal training in statistics that is currently in demand in industry and government. Some students may also find this program a useful way to prepare for graduate study in statistics.

The certificate program in statistics requires completion of 18 post-baccalaureate approved credits in statistics and probability at VCU. The 18 approved credits must be at the 300-level or above, and the student must achieve a grade point average of 2.5 or better with no grade below C. Up to six credits taken at VCU before admission to the program can be applied toward the certificate, but courses credited toward the student's undergraduate degree cannot be counted toward the 18 credit requirement. All requirements for the certificate must be completed within 5 years of admission to the program.

To be admitted to the program, a student must have completed a year of calculus (MAT 200-201 or the equivalent) and a semester of computer science (CSC 201 or 255 or the equivalent) in addition to introductory statistics.

The following courses are required if they have not already been taken as part of an undergraduate program:

- MAT 309 Introduction to Probability Theory
- STA 404 Introduction to Statistical Inference
- STA 541 Applied Statistics for Engineers & Scientists
- STA 544 Statistical Methods II

Students will work closely with the program coordinator in selecting appropriate elective courses. While some students may have the background necessary for a 600-level graduate course, it is expected that most elective courses will be drawn from 300-500 level STA offerings of the department. Statistics courses taught in other units of the University may be credited toward the certificate, however, by permission of the program coordinator.

Students seeking to enter the certificate program in statistics should contact the Department of Mathematical Sciences for information on admissions procedures.

OPERATIONS RESEARCH

The B. S. in operations research/mathematical sciences is offered by the Department of Mathematical Sciences. See Mathematical Sciences.

MILITARY SCIENCE

MAJOR JAMES D. MORLEY

Chairman of the Department

Capt. Wendell R. Croucher SSG Clarence Davis

The purpose of the military science curriculum is to teach the principles of management and leadership which provide a foundation for civilian or military careers. Graduates are eligible for appointment as commissioned officers in the United States Army or reserve components of the United States Army (Army Reserve, Army National Guard). Qualified seniors may apply for commissions in the Regular Army.

Scholarships. Any student may compete for Army ROTC scholarships.

Courses. In the general military science curriculum, the first two years constitute the basic course and the last two years the advanced course. All courses, except the advanced summer camp, carry academic credit. There is no army service commitment for basic course students, nor is there any obligation to enroll for successive offerings. Basic military science courses are restricted to freshmen and sophomores. Advanced standing may be granted to veterans, junior ROTC graduates, or members of the Reserves/National Guard after review of academic records and verification of ROTC/academic alignment by the department chairman. Compression of courses in certain cases may be approved by the chairman of the department. Students who enroll in the ROTC program must be approved by the department chairman. Advanced course students must meet certain academic and physical criteria. Advanced course students receive a monthly subsistence of \$100.

Uniforms and Equipment. All uniforms and equipment are furnished by the U.S. government without cost to the individual.

Upper-Level Credit Limitation for College of Humanities and Sciences Students. For students in the College of Humanities and Sciences, only three of the eight required 300-level military science credits may be applied toward the University 45 upper-level credit requirement.

PHILOSOPHY AND RELIGIOUS STUDIES

PETER VALLENTYNE

Chairman of the Department

Earle J. Coleman	Clifford W. Edwards
Anthony Ellis	Thomas O. Hall, Jr.
Bradford Hooker	James E. Lindsey, Jr.
Eugene Mills	Robert B. Redmon, Jr.
Jack D. Spiro	Robert M. Talbert

The Department of Philosophy and Religious Studies offers two distinct undergraduate degree programs:

1. Bachelor of Arts in philosophy;
2. Bachelor of Arts in religious studies.

The department offers, as well, elective courses for other programs of study.

Philosophy aims at a deeper understanding of matters that most concern us. Philosophical questions crop up in science, religion, art, morality, politics, medicine, and in everyday life. Students enrolled in philosophy courses are encouraged to think seriously about fundamental issues in all these domains and to formulate coherent and well-grounded points of view. Because of its extensive use of critical, analytical reasoning, philosophy equips those who study it for work in law, business, medicine, and other fields that require careful thought and the clear expression of ideas.

Courses in religious studies enable one to study religion as a major aspect of human culture, along with other disciplines, such as the liberal and fine arts and the sciences. The student planning a church-related vocation is provided the opportunity to begin academic preparation with an objective and descriptive study of religion.

In addition, the department offers elective courses for other programs of study as well as courses for the student majoring in philosophy, or religious studies.

Degree Requirements

Bachelor of Arts in Philosophy. The Bachelor of Arts curriculum in philosophy requires a minimum of 124 credits, including 36 credits in philosophy courses; 21 of these must be in upper level philosophy courses. Majors in philosophy are required to take the following courses: PHI 103, 104 Introduction to the History of Philosophy; PHI 222 Formal Logic; three courses from PHI 327 Ethical Theory or PHI 335 Social and

Political Philosophy or PHI 301 Mind and Reality or PHI 302 Reason and Knowledge; and at least one semester of PHI 490 Seminar in Philosophy.

Students must also fulfill the general education requirements of the College of Humanities and Sciences for the B.A. degree and Academic Campus requirements.

Bachelor of Arts in Religious Studies. The Bachelor of Arts curriculum in religious studies requires a minimum of 124 credits, including 30 credits in religious studies courses or in courses listed below as acceptable for religious studies credit.

The student majoring in religious studies is required to take the following courses: RST 101 Introduction to Religion; 6 credits from among the following: RST 301 Old Testament, RST 302 New Testament, RST 311, 312 World Religions, RST 317 The Formative Period of Islam, HIS/RST 318, 319 History of the Jewish People; 3 credits from among the following: RST 320 Taoism, RST/PHI 408 Indian Traditions, RST/PHI 410 Chinese Traditions, RST 412 Zen Buddhism; RST/PHI 430 Philosophy of Religion; and RST 490 Seminar in Religious Studies. Courses acceptable for religious studies credits within the required 30 credits include all courses designated as religious studies (RST) and the following: ANT 425 Religion, Magic, and Witchcraft and PSY 405 Humanistic Psychology. Up to six credits in Hebrew, Greek, Arabic, or Chinese language courses may be accepted within the required 30 credits of the program if approved by the department as integral to an individual's major program.

Students must fulfill the general education requirements of the College of Humanities and Sciences for the B. A. degree and Academic Campus requirements.

Minor Requirements — General

Minor in Philosophy. The philosophy minor shall consist of 18 credits, including at least nine credits in upper-level (300–400) courses, and including either PHI 103 or 104.

Minor in Philosophy of Law. The minor in philosophy of law shall consist of 18 credits, one course from PHI 211 History of Ethics/PHI 212 Ethics and Applications/PHI 213 Ethics and Health Care/PHI 214 Ethics and Business; PHI

327 Ethical Theory; PHI 335 Social and Political Philosophy; PHI 320 Philosophy of Law and two courses from the following: POS 341, 342 History of Political Thought, POS 314 American Constitutional Law, and HIS 369, 370 American Constitutional and Legal Development.

Minor in Religious Studies. The minor in religious studies shall consist of 18 credits in RST courses, including at least nine credits in upper level (300–400) courses.

Minor in Judaic Studies

Jack D. Spiro, Director

The minor in Judaic studies shall consist of 18 credits chosen from among the following: RST 301 Introduction to the Old Testament; RST 304 Introduction to Judaism; RST 305 Hebrew Prophets; RST 335 The American Jewish Experience; RST 407 Modern Jewish Thought; HIS 324 The Holocaust; HIS 325, 326/RST 318, 319 History of the Jewish People; and other courses, approved by the director of Judaic studies, which may be developed.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in philosophy. A full description of the program appears in Part XIX of the *Bulletin*.

PHYSICS

ROBERT H. GOWDY

Chairman of the Department

Horst Armbruster	Marilyn F. Bishop
Steven L. Herr	Purusottam Jena
Shiv N. Khanna	V. Adam Niculescu
Bijan K. Rao	Elske v. P. Smith

The curriculum in physics can be used to meet a number of career objectives. One can prepare for

1. a technical career in physics or allied area.
2. graduate study in physics or a related area.
3. graduate studies or a profession in areas such as business, medical science, environmental science, law, or science writing.
4. the teaching of physics in secondary schools.
5. a career in engineering through either the dual-degree or the pre-engineering program.

The Department of Physics offers three undergraduate degree programs:

1. the Bachelor of Science in physics.
2. the dual physics/engineering program.

3. the accelerated BS/MS physics program.

Physics majors interested in teaching careers in elementary, secondary, or special education participate in an extended program that results in the awarding of two degrees: a Bachelor of Science in physics and a master's degree in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

The dual physics-engineering degree program is conducted in conjunction with Auburn University, Auburn, Alabama; George Washington University, Washington, DC; and Old Dominion University, Norfolk, Virginia. In this program, the student who satisfactorily completes a specified three-year course sequence at VCU would normally be accepted into one of several selected engineering programs at any one of the above three universities. Upon completion of the requirements for a Bachelor of Science in engineering at the cooperating university, the student also receives a Bachelor of Science in physics from VCU.

The person interested in preparing for studies in engineering but not desiring to enter the dual-degree program should see the pre-engineering program.

In addition, the department offers required and elective courses for students in other programs of study as well as for students majoring in physics.

Master of Science in Physics/Applied Physics. For information about the graduate program in physics/applied physics, see the *VCU Graduate Bulletin*.

Degree Requirements

Bachelor of Science in Physics. The Bachelor of Science curriculum in physics requires a minimum of 124 credits, including 36 credits in physics, with a minimum of 26 credits in upper-level courses, at least six of which must be at the 400 or 500 level. In addition to the PHY courses required for the Bachelor of Science degree in physics, the following courses are required and the indicated sequence is recommended. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

Freshman Year. MAT 200–201 Calculus with Analytic Geometry I, II; PHY 207–208 University Physics I, II; CHE 101–102, L101–102 General Chemistry and Laboratory, or BIO 109–110, L109–L110 General Biology or BIO 151–152, L151–L152 Introduction to Biological Science. (MAT 101–102 College Algebra and Trigonometry may be required prior to MAT 200 depending upon the results of the Mathematics Placement Test. In this case, PHY 207 will be postponed one or two semesters.)

Sophomore Year. MAT 307 Multivariate Calculus; MAT 301 Differential Equations; PHY 301, 302 Classical Mechanics I and II; PHY 320 Introduction to Modern Physics; and PHY L320 Modern Physics Laboratory I.

Junior Year. PHY 350 Advanced Laboratory; PHY 380 Modern Physics; PHY 376 Electromagnetism; and physics electives.

Senior Year. Physics electives.

Those students intending to pursue graduate studies in physics would normally be expected to take PHY 322, 340, 571, 576, and 580 as electives. Those interested in experimental physics would also normally take one or more credits in PHY 397, 492, or 550. Those students who plan to pursue technical careers in applied or engineering physics would normally be expected to take PHY 322, 331, 340, 432, 440, and one or more credits in PHY 397 or 492 as electives.

Bachelor of Science in Physics/Bachelor of Science in Engineering Dual Degree Program. The dual-degree program in physics and engineering requires a minimum of 93 credits from VCU, including 35 credits in physics, with a minimum of 20 credits in upper-level courses. In meeting the general requirements of the College of Humanities and Sciences, CHE 101–102, L101 and L102 General Chemistry and Laboratory must be used to meet laboratory science requirements.

General Education Requirements for Physics/Engineering Dual Degree Majors. Due to the accelerated nature of the Physics/Engineering Dual Degree Program, students need complete only 20 credits or less in Part III Human Nature, Culture, and Institutions of the general education requirements. However, in fulfilling Part III, students may present no more than 14 credits in Category I Civilization and Culture and no more than eight credits in Category 2 Foreign Language (by course or placement). At least three and no more than six credits must be

presented in Category 3 Human Behavior and Institutions. All other general education requirements must be completed in full. The following courses are required and the indicated sequence is recommended.

Freshman Year. MAT 200–201 Calculus with Analytic Geometry I, II; PHY 207–208 University Physics I, II; CHE 101–102 General Chemistry, and CHE L101–L102 General Chemistry Laboratory I, II.

Sophomore Year. MAT 307 Multivariate Calculus; MAT 301 Differential Equations; PHY 320 Introduction to Modern Physics and PHY L320 Modern Physics Laboratory; PHY 301, 302 Classical Mechanics I, II.

Junior Year. PHY 350 Advanced Laboratory; PHY 380 Modern Physics; PHY 376 Electromagnetism; eight credits of physics electives.

Students not prepared to begin the PHY 207, 208 and MAT 200–201 sequences in their freshman year may not be able to complete the VCU degree program within a three-year period. Additional requirements placed by the cooperating engineering schools should be obtained from the dual-degree program advisor.

Minor in Physics. A minor in physics shall consist of 20 credits made up of PHY 207, 208, PHY 320, PHY L320, and six credits of physics electives which are applicable to the physics major.

Accelerated B.S./M.S. Physics Program. Students enrolled in the physics B.S. program may elect to take graduate courses which will count toward the M.S. degree. Up to six hours of graduate credit may be earned without any special provisions; however, to offer more than six credits of pre-admission graduate credits toward the M.S. degree, the student must apply for admission to the accelerated B.S./M.S. program through the Physics Department Graduate Admission Committee in the junior year indicating (1) a curriculum plan for completing the physics B.S. degree within two years or its part-time equivalency and (2) which graduate courses the student intends to offer toward the physics M.S. degree. Those applying for this accelerated program should have a B average or better. Admission to the accelerated program does not imply admission to the graduate program. Application for graduate admission must be made when the B.S. degree is applied for.

Minor in Electronic Instrumentation. A minor in electronic instrumentation shall consist

of a minimum of 19 credits made up of PHY 207, 208, 330, 331, 432, and three credits selected from PHY 335, 532, 535, CSC 255, 256. PHY 201–202, with MAT 200–201, will be accepted in lieu of PHY 207–208. Physics majors who desire this minor must replace any credits offered toward their major from the list PHY 335, 532, 535, CSC 255, 256.

POLITICAL SCIENCE

ROBERT HOLSWORTH

Chairman of the Department

M. Elliott Banks	Frank Belloni
W. Avon Drake	Suzanne Fiederlein
Herbert Hirsch	Melanie N. Jackson
C. Scott Keeter	Husain Mustafa
Nelson Wikstrom	

The political science curriculum has two central objectives. First, it offers the student a broad liberal arts education and a comprehensive understanding of the nature and functioning of the political process. Second, it provides a sound foundation for graduate study in political science or careers which require a knowledge of governance and the political process.

The Department of Political Science offers a Bachelor of Arts degree in political science.

In addition, the department offers elective courses in political science for students in other programs of study as well as for those majoring in political science.

Degree Requirements

Bachelor of Arts in Political Science. The Bachelor of Arts curriculum in political science requires a minimum of 124 credits, including 33 credits in political science.

Along with completion of the general education requirements of the College of Humanities and Sciences for the B.A. degrees and Academic Campus requirements, the student majoring in political science must complete the following courses: POS 101, 102 American Government and POS 201 Introduction to Political Science.

Political Science majors are also required to take one course in *three* of the following areas of study: Comparative Politics (POS 351, 352, 353, 354, 355, 356, 357, 468); International Politics (POS 361, 362, 363, 364, 452); Political Theory and Methodology (POS 341, 342, 343, 344, 320, 448); and U.S. Politics (301, 303, 306, 308, 310, 311, 314, 315, 318, 321, 322, 323, 329, 331, 409, 420, 432). Topics courses cannot be used to satisfy the distribution requirements. In addition, political science majors are *strongly ad-*

vised to take POS 320 (Quantitative Methods in Political Science). With the prior *approval* the departmental curriculum committee, a student may take three credits toward the political science major from courses in other departments.

Honors in Political Science

Political science majors may earn honors in political science. To enter this program, students must have a 3.0 overall grade-point average and at least a 3.3 average in political science. In addition, students must have completed 18 hours in political science before the senior year. Twelve of these hours must be completed at VCU. Application to enter the Honors in Political Science Program must be made in the second semester of the junior year.

Students will successfully complete the honors in political science when they (1) complete POS 498 Political Science Honors, with a grade of B or higher, (2) complete POS 499 Political Science Honors Project, with a grade of B or higher, and (3) graduate with a 3.0 overall and a 3.3 political science grade-point average.

Minor Requirements — General

Students majoring in political science may not minor in political science or international affairs.

Minor in Political Science. The minor in political science shall consist of 18 credits, including POS 101, 102 American Government, POS 201 Introduction to Political Science, and at least nine credits in upper-level (300–400) courses selected in consultation with a political science advisor, excluding POS 492 Independent Study and POS 493 and 494 Internships.

Minor in International Affairs. The minor in international affairs shall consist of 18 credits including POS 202 Introduction to Comparative Government, POS 361 International Relations, and at least one additional political science course chosen in consultation with the political science department from a department-approved list. The remaining nine credits will be chosen from recommended courses in political science, history and geography, economics, business, sociology, anthropology, foreign language, and philosophy and religious studies.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an under-

graduate degree in political science. A full description of the program appears in Part XIX of the *Bulletin*.

Concentration in Public Management

Political science majors should take POS 331 Public Administration and POS 432 Public Bureaucracy as part of the 33 credits required for the political science major. To complete the concentration, students should take USP 413 Policy Implementation and USP 322 Urban Finance, beyond the credits required for the political science major.

Minor in Public Management Requirements

The public management minor consists of 18 upper-level credits. All students must take the following courses: POS 331 Public Administration, POS 432 Public Bureaucracy, USP 413 Policy Implementation, and USP 322 Urban Finance.

In addition, two of the following electives are required: POS 329 Intergovernmental Relations, POS 334 Public Personnel Administration, USP 541 Urban Public Policy (to be taken by POS majors), or POS 321 Municipal Government and Administration (to be taken by USP majors).

PSYCHOLOGY

STEVEN J. DANISH

Chairman

ARNOLD L. STOLBERG

Director of Undergraduate Studies

Stephen M. Auerbach

Joseph P. Bush

Judy M. Chartrand

John G. Corazzini

Marilyn T. Erickson

Sandra E. Gramling

John J. Hartnett

Thomas H. Leahey

James P. McCullough, Jr.

Iris A. Parham

Finetta L. Reese

Mark F. Stasson

Everett L. Worthington

Kent G. Bailey

Catherine Radecki-Bush

Maxine L. Clark

Timothy R. Elliott

Albert D. Farrell

Robert J. Hamm

Donald J. Kiesler

John M. Mahoney

Barbara J. Myers

Joseph H. Porter

Stephen B. Robbins

Stanley R. Strong

The curriculum in psychology reflects the discipline's three major orientations: that of a science teaching and incorporating empirical methods; that of a healing profession; and that of a philosophy, raising basic questions about the assumptions, values, and ideals of human beings and their societies.

Both the Bachelor of Science and the Bachelor of Arts degree programs in psychology incorpo-

rate these three orientations, but with different emphases and different requirements.

The Bachelor of Science curriculum gives students a comprehensive appreciation of psychology as a science. Through a highly structured set of requirements (core, content areas, and science courses in other disciplines), the student systematically develops understanding and skill in scientific methods of inquiry, particularly about human behavior. Students with a Bachelor of Science degree have the necessary preparation for postgraduation employment or the pursuit of graduate study.

The Bachelor of Arts curriculum offers students greater flexibility in their programs of study, with a concentrated background in psychology. Students may elect to gain a breadth of psychological knowledge with a diversity of courses or to gain depth in one or two areas by more thematic selections. This opportunity for breadth or depth should be considered in light of the student's present goals for employment and possible graduate or professional training.

Psychology majors interested in teaching careers in elementary, secondary, or special education participate in an extended program that results in the awarding of two degrees: a Bachelor of Science in psychology and a master's degree in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

Master of Science and Doctor of Philosophy Programs in Psychology. For information about graduate work in psychology, see the *VCU Graduate Bulletin*.

Degree Requirements

Students should carefully review the humanities and sciences requirements for a B.A. or B.S. degree. The curricula of the B.A. and B.S. in psychology were developed in the context of these general education requirements. It is the student's responsibility to know the specific requirements of both the college and the Department of Psychology, to plan a meaningful program of study, and consult regularly with a faculty advisor.

Bachelor of Science in Psychology. The Bachelor of Science curriculum in psychology requires a minimum of 124 credits, including a

minimum of 30 credits in psychology. A maximum of 36 credits in psychology (this limit does not apply to courses numbered 490 and above) can be presented for graduation for the Bachelor of Science degree. At least 15 of the 30 minimum required credit hours must be completed at Virginia Commonwealth University. In addition, students must earn a "C" grade or better in each of the following courses when presented for graduation: PSY 101, STA 213, PSY 214 and PSY 317.

The student who majors in psychology is required to take five core courses in the discipline and to choose four additional courses from a selection of offerings in four content areas. To complete the minimum requirement of 30 credits in psychology, one free elective is selected from all of the department's courses (excluding PSY 201, which may, however, be counted beyond the 30 required credits).

The following five courses constitute the required core in the B.S. curriculum:

- PSY 101 Introduction to Psychology
- PSY 214 Applications of Statistics
- PSY 317 Experimental Methods
- PSY 318 Principles of Psychological Tests and Measurement
- PSY 451 History & Systems of Psychology

The student must choose ONE course from each of the following FOUR content areas:

Developmental

- PSY 301 Child Psychology OR 304 Development Psychology (both cannot be taken for credit toward a degree), 302 Psychology of Adolescence, 306 Psychology of Adult Development.

Social/Personality

- PSY 309 Personality, 321 Social Psychology, 323 Interpersonal Relations, 335/WST 335 Psychology of Women, 341 Group Dynamics, 405 Humanistic Psychology.

Physiological/Learning

- PSY 401 Physiological Psychology, 403 Introduction to Psycholinguistics, 406 Perception, 410 Principles of Learning and Cognition.

Self-Development/Applied Psychology

- PSY 303 Effective Behavior and Contemporary Psychology, 308 Stress and its Management, 310 Industrial Psychology, 340 Introduction to the Helping Relationship, 407 Psychology of the Abnormal, 426 Child Psychopathology.

In addition to the PSY courses required for the Bachelor of Science in psychology, the student must take the following courses:

- STA 213 Introduction to Statistics (Required prior to PSY 214, Applications of Statistics)
- One additional course in computer science, mathematics, or statistics taught by the mathematical sciences

department. If the student places high enough on the Mathematics Placement Test, MAT 101 is not required.

- BIO 109-110 General Biology and
- BIO L109-L110 General Biology Laboratory

or

- BIO 109-L109 General Biology and Laboratory and biology elective and laboratory
- SOC 101 General Sociology
- ANT 103 Cultural Anthropology
- One elective in Anthropology, Economics, Gerontology, Political Science, or Sociology.
- One elective in Biology, Chemistry, or Physics.

Bachelor of Arts in Psychology. The Bachelor of Arts curriculum in psychology requires a minimum of 124 credits, including a minimum of 30 credits in psychology. (These credits can be selected from any of the departmental offerings and should be chosen in close consultation with a faculty advisor.) A maximum of 36 credits in psychology (this limit does not apply to courses numbered 490 and above) can be presented for graduation for the Bachelor of Arts degree. At least 15 of the 30 minimum required credit hours must be completed at Virginia Commonwealth University. In addition, students must earn a "C" grade or better in each of the following courses if these courses are to be presented for graduation: PSY 101, STA 213, PSY 214 and/or PSY 317.

Students who take the B.A. curriculum in psychology must fulfill the general education requirements of the college for the Bachelor of Arts degree.

Careers in Psychology

Students choose to major in psychology for many reasons, most often some combination of wanting to help other people and to learn the scientific principles of behavior. A major expectation for students is to receive career assistance about postgraduation alternatives for employment or graduate/professional school training. The Department of Psychology has developed specific methods to assist students with their career and educational planning.

PSY 201 Career Development in Psychology provides an orientation to the specialty areas within our discipline and to the vocational opportunities available with a bachelor's degree and further professional training. A Careers and Advising Center has also been established to develop special workshops and to provide individual/group counseling services for the career concerns of our undergraduate majors. Specific information is available in this office on how to choose elective courses for bachelor's-level

employment in mental health services, personnel, management, corrections, rehabilitation, health services, education, and laboratory research. PSY 493 Field Work: Human Services and PSY 494 Research Internship in Psychology are two, upper-level, elective courses, specifically designed to enhance the psychology major's career pursuits for either employment or graduate-level training. Both of these courses provide opportunities for direct, practical experience with close supervision.

Graduate School in Psychology. The Careers and Advising Center maintains up-to-date information from the American Psychological Association and other resources on admission requirements and program offerings for a variety of graduate schools. Those students who are considering graduate school should consult their faculty advisor or the Psychology Advising Center early in their study at VCU. Specific courses in psychology are strongly recommended for many graduate programs and careful, early planning is important. Referrals to other campus services are also made in order to help the student with other professional school options and their entrance requirements, for example, prelaw, premed, Master of Social Work, Master of Business Administration, etc.

Honors in Psychology

Psychology majors in the B.S. program may earn honors in psychology. Students who are interested in this program are encouraged to enroll in Honors 198/PSY 101 if they qualify. Any student, however, can join the program provided he or she has: (a) declared a major in psychology; (b) taken a minimum of 20 credits and a maximum of 60 credits at VCU; and (c) earned an overall VCU grade point average of 3.0. Once admitted, the honors student must fulfill three basic program requirements. First, students take a minimum of 12 credits in Psychology courses designated as honors sections (Honors 198/PSY 101 can be included). Second, honors students enroll in PSY 494 (Research Internship in Psychology) for a minimum of 3 semester credits by no later than the spring semester of their junior year. Last, all students complete PSY 498/499 (Honors in Psychology) in their senior year. A student will graduate with Honors in Psychology if he or she has (a) completed all course requirements specified above with a grade of B or better; (b) maintained a

GPA of at least 3.3 both overall and in psychology; and (c) completed all other requirements for the B.S. Degree.

Minor in Psychology

The minor in psychology shall consist of 18 credits, in psychology courses, including PSY 101 Introduction to Psychology, one course from each of the four basic areas (Developmental, Social/Personality, Physiological/Learning, and Self-Development/Applied Psychology) and one additional course. PSY 201 Career Development in Psychology cannot be used to meet this requirement. Nine of the 18 credits must be taken at Virginia Commonwealth University.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in psychology. A full description of the program appears in Part XIX of the *Bulletin*.

RELIGIOUS STUDIES

See Philosophy and Religious Studies.

INTERDISCIPLINARY DEGREE PROGRAM IN SCIENCE

STEVEN L. HERR
Coordinator

Academic advising for the Interdisciplinary Degree Program in Science is done by selected faculty members in the biology, chemistry, mathematical sciences, and physics departments.

The purpose of the interdisciplinary program in science curriculum is to provide the students with a broad and interdisciplinary, but fundamental, grounding in the sciences. In addition to the broad spectrum of required science courses, students will select a concentration from biology, chemistry, mathematical sciences, physics, or environmental sciences. The program is also designed particularly for students interested in careers in early or middle school science education.

Students completing the curriculum prescribed below will earn the degree of Bachelor of Science in Science.

Bachelor of Science in Science majors interested in teaching careers in early, middle, secondary, or special education participate in an ex-

tended program that results in the awarding of two degrees: a Bachelor of Science in science and a master's degree in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

Degree Requirements

Bachelor of Science in Science. The Bachelor of Science curriculum in science requires a minimum of 124 credits. Along with the general requirements of the Academic Campus and the College of Humanities and Sciences for the B.S. degree listed on pages 55 and 68, the curriculum requires 51–56 credits in CORE science and mathematics courses, and 14–15 credits in one of the following tracks: biology, chemistry, mathematical sciences, physics, or environmental science.

In preparation for the required mathematical sciences courses, all students must take the Mathematics Placement Test. Depending on the results, students may be placed in MAT 101 College Algebra prior to enrolling in the required mathematical sciences courses.

Freshman Year. BIO 151–152 and L151–L152 Introduction to Biological Science and Laboratory I and II; CHE 101–102 and L101–L102 General Chemistry and Laboratory; and mathematical sciences courses selected from the options listed below.

Sophomore Year. PHY 201–202 General Physics OR PHY 207–208 University Physics; additional mathematical sciences courses; other lower level CORE courses.

Junior and Senior Years. Other CORE courses and courses from the concentration.

Core Course Requirements:		<i>Credits</i>
BIO 151–152	Introduction to Biological Science	6
L151–L152	Laboratory	2
BIO 317	Ecology	3
CHE 101–102	General Chemistry	8
L101–L102	Laboratory	2
PHY 201–202	General Physics	8–10
OR		
PHY 207–208	University Physics	
PHY 105, L105	Physical Geology & Laboratory	4
PHY 391	Geologic Fieldwork	1
PHY 103, L103	Elementary Astronomy	4
EAS 401	Meteorology and Climatology	
OR		
EAS 411	Oceanography	3

GEO 203 and L203	Physical Geography & Laboratory	
OR		
GEO 204 and L204	Physical Geography	4
BIO 392*	Introduction to Research	1
Two of the following:		
1. MAT 200**	Calculus with Analytic Geometry	
2. MAT 201**	Calculus with Analytic Geometry	
3. STA 212	Concepts of Statistics	
OR 213***	Introduction to Statistics	
4. CSC 201	Introduction to Computing	
OR 255	Structured Programming	
		6–8
		Sub-total 51–56

*Student may substitute Independent Study 492 for two credits from CHE, MAT or PHY for this course.
 **Required in mathematics, physics and chemistry tracks.
 ***STA 213 is a prerequisite for STA 214 required in the Environmental Studies track.

AND

One Of The Following Six Tracks:

Tracks		<i>Credits</i>
<i>Biology</i>		
BIO 218	Cell Biology	3
BIO 310	Genetics	3
BIO L310	Laboratory in Genetics	1

and two of the following:
 one upper level animal and one upper level plant course

8	
Sub-total	15

<i>Chemistry</i>		
CHE 301–302	Organic Chemistry	6
CHE L301–L302	Organic Chemistry Laboratory I & II	4
CHE 309	Quantitative Analysis	
		4
		Sub-total 14

<i>Environmental Studies*</i>		
ENS 490	Seminar in Environmental Studies	3
STA 214	Applications of Statistics	3

One of the following:		
ECO 308	Economic Geography	
USP 331	Environmental Systems	3

One of the following:		
BIO 332	Environmental Pollution	
BIO 432	Biology of Polluted Waters	3

One of the following:		
ENS 491	Topics in Environmental Studies	
ENS 493	Environmental Studies Internship	
GEO 311/ANT 311	History of Human Settlement	3
		Sub-total 15

*With additional credits, students may earn a certificate in Environmental Studies.

<i>Mathematical Sciences</i>		
STA 212	Concepts of Statistics	3
CSC 255	Structured Programming	3
MAT 211	Mathematical Structures	3
Two of the following three:		6
STA 321	Introduction to Statistical Computing	
MAT 310	Linear Algebra	
CSC 554	Applications of Computers in Teaching Mathematics	
Sub-total		15
<i>Physics**</i>		
PHY 320	Introduction to Modern Physics	3
PHY L320	Modern Physics Laboratory	1
PHY 322	Optics	3
PHY 330	Electrical Circuits	2
MAT 301	Differential Equations	3
PHY 301	Classical Mechanics I	3
Sub-total		15

**PHY 207–208 sequence required as prerequisite

SOCIAL SCIENCES

J. JOHN PALEN
Coordinator

Courses in social sciences are offered by a variety of academic departments. However, they have been grouped together as “Courses in Social Sciences” under Course Descriptions.

SOCIOLOGY AND ANTHROPOLOGY

JOSEPH MAROLLA
Chairman of the Department
J. SHERWOOD WILLIAMS
Associate Chairman

David G. Bromley	Ann Creighton-Zollar ⁶
David D. Franks	David Hartman ⁶
Neil Henry ⁶	Julie Honnold
Edward E. Knipe	Takami Kuwayama
Stephen Lyng	John Mahoney
John H. McGrath	Lynn D. Nelson
J. John Palen	Michael Sanow
Diana Scully	

The curriculum in sociology and anthropology seeks to ensure that each student develops a sound foundation in the basic principles, theories, and techniques of analysis in sociology and/or anthropology. Since students vary in their interests and professional aspirations, the curriculum provides them with opportunities for intellectual growth as well as career development. Finally, the curriculum seeks to allow students maximum participation in developing the course of study they will pursue.

To attain these goals, the Department of Sociology and Anthropology provides diverse

course offerings, including independent study and research for advanced involvement in faculty research.

The Department of Sociology and Anthropology offers both the Bachelor of Science and the Bachelor of Arts degrees. The Bachelor of Science curriculum emphasizes the scientific methods and the development of skills important in research-oriented careers. The Bachelor of Arts curriculum offers students the opportunity to pursue a liberal education consistent with their intellectual interests and career goals. Both the Bachelor of Arts and Bachelor of Science curricula will prepare students for graduate studies in sociology and anthropology.

Sociology and anthropology majors interested in teaching careers in elementary, secondary, or special education participate in an extended program that results in the awarding of two degrees: a Bachelor of Science in sociology and anthropology and a master’s degree in teaching. The extended program is administered jointly by the College of Humanities and Sciences and the School of Education. For more information, contact the Office of Academic Services, School of Education.

Master of Science in Sociology and Doctor of Philosophy Program in Social Policy and Social Work. For information about graduate work in sociology see the *VCU Graduate Bulletin*.

Degree Requirements

Students majoring in sociology and anthropology must meet the B.A. or B.S. general education requirements of the College of Humanities and Sciences.

Bachelor of Science in Sociology and Anthropology. The Bachelor of Science curriculum in sociology and anthropology requires a minimum of 124 credits including 30 credits in sociology and anthropology, 21 of which must be in upper-level (300–400) courses.

In fulfilling the general education requirements of the College of Humanities and Sciences, students seeking a Bachelor of Science in sociology or anthropology must choose one of the following three options: (1) MAT 101 College Algebra, STA 213 Introduction to Statistics, and any one of the following three courses: MAT 112 Elements of Calculus; CSC 150 Basic Computer Concepts; or CSC 201 Introduction to Computing; (2) MAT 111 Basic Mathematics for Behav-

⁶Joint appointments

ioral, Social and Management Sciences, STA 213, and any one of the following three courses: MAT 112 Elements of Calculus; CSC 150 Basic Computer Concepts; or CSC 201 Introduction to Computing; (3) if a student scores high enough on the Mathematics Placement Test, the requirement may be satisfied with STA 213 and any one of the following courses: MAT 112; CSC 150 Basic Computer Concepts; or CSC 201 Introduction to Computing. Each of these options fulfills both the general education requirements as well as the departmental requirements.

In addition, majors are required to take PSY 101 General Psychology and strongly urged, but not specifically required, to take at least 15 credits in related fields such as mathematics, philosophy, political science, or economics as approved electives.

The laboratory science requirement may be fulfilled by taking a two-semester sequence of an introductory laboratory science (by placement or course) to be chosen from BIO 109–110, L109–L110 General Biology and Laboratory; CHE 101–102, L101–L102 General Chemistry and Laboratory; CHE 103–104, L103–L104 Introduction to Modern Chemistry and Laboratory; PHY 101–102, L101–L102 Foundations and Frontiers of Physics and Laboratory; PHY 201–202 General Physics; PHY 207–208 University Physics.

The student majoring in sociology and anthropology has a choice of fulfilling either a sociology or an anthropology concentration to complete the department's requirements for a major.

Sociology Concentration. A minimum of 30 credits in sociology or anthropology courses including SOC 101 General Sociology, SOC 214 Applications of Statistics, SOC 320 Research Methods in the Social Sciences, SOC 402 Sociological Theory, ANT 103 Cultural Anthropology. At least 18 credits in this concentration must be in sociology courses.

Anthropology Concentration. A minimum of 30 credits in sociology or anthropology courses including ANT 103 Cultural Anthropology, SOC 101 General Sociology, ANT 201 The Evolution of Man and Culture. At least 18 credits in this concentration must be in anthropology courses.

The anthropology concentration beyond the required courses is primarily in the area of cultural/social anthropology and sociology.

Students interested in biocultural anthropology, linguistics, or archaeology will be encouraged and guided to take courses in other departments which relate to these fields of anthropology. See advisor or department chairman for suggested courses.

Bachelor of Arts in Sociology and Anthropology. The Bachelor of Arts curriculum in sociology and anthropology requires a minimum of 124 credits, including 30 credits in sociology and anthropology, 21 of which must be in upper-level (300–400) courses. The student seeking a Bachelor of Arts degree may also choose either the concentration in sociology or anthropology as described above. Students who concentrate in sociology must take STA 213 in fulfilling their general education requirements as it is a prerequisite for SOC 320, but are not required to take SOC 214 as part of the Bachelor of Arts curriculum.

Minor Requirements — General

Students majoring in sociology and anthropology may not minor in sociology or anthropology.

Minor in Anthropology. The anthropology minor shall consist of 18 credits, including ANT 103 Cultural Anthropology. Of the 15 remaining credits, 12 must be taken from either upper-level (300–400) anthropology courses, or nine credits upper-level anthropology courses and three upper-credits from any history course on List F. The remaining three credits may be any Sociology or Anthropology course.

Minor in Sociology. The sociology minor shall consist of 18 credits including SOC 101 General Sociology and at least one of the following: SOC 318 Social Thought, SOC 340 Social Psychology, or SOC 402 Sociological Theory. A minimum of 12 credits must be taken at the upper-level (300–400). One upper-level course in anthropology may be used to fulfill the 18 credit requirement.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in sociology. A full description of the program appears in Part XIX of the *Bulletin*.

Master of Science in Sociology. For information about graduate work in sociology see the *VCU Graduate Bulletin*.

Graduate Work

Other graduate programs of interest to sociology and anthropology students are the Master of Science in sociology and the doctoral programs in social policy and social work (School of Social Work) and in urban services (School of Education). See the *VCU Graduate Bulletin*.

Undergraduate Topics Courses. Topics courses in both sociology and anthropology (SOC 391 and ANT 391) are an integral part of the program and provide an unusual opportunity for the advanced student. Generally these courses are restricted to a small number of students who share specialized interests in a topic which is either too advanced or too limited in its general appeal to warrant its inclusion as a regular offering. At least one such seminar is offered each semester and the topics course may be repeated to a maximum of 18 credits so long as there is no duplication of the topics.

Independent Study. These courses (SOC 492 and ANT 492) are designed for juniors and seniors capable of doing independent work on selected topics under the direction of specific faculty members. For example, if a course is not being regularly offered in some area of interest to a particular student, and if there are not enough students interested in the area to warrant the offering of a topics course, the student may, with the permission of the instructor, enroll in independent study.

Students may earn a maximum of 24 credits in departmental independent study courses, but they may not enroll for more than six credits per semester. Only majors in sociology and anthropology or related fields may enroll in these courses. All students must have completed a minimum of 12 credits in sociology or anthropology with an overall sociology-anthropology grade-point average of at least 2.7.

STATISTICS

The B. S. in statistics/mathematical sciences is offered by the Department of Mathematical Sciences. A minor in statistics and a certificate in statistics are offered. See Mathematical Sciences.

MINOR IN WOMEN'S STUDIES

DIANA SCULLY
Coordinator

The minor in women's studies shall consist of 18 credits. Students are required to take the following: (1) WST 201, Introduction to Women's Studies; (2) a minimum of one course from offerings in the social sciences selected from WST 333/SOC 333, WST 334/SOC 334, WST 335/PSY 335; and (3) a minimum of one course from offerings in the humanities selected from WST 236/ENG 236, WST 339/HIS 339, WST 384/ENG 384. The remainder of courses are electives. Women's studies is the cross-disciplinary, cross-cultural examination of women's perspectives and experiences.

COURSES IN WOMEN'S STUDIES (WST)

201 Introduction to Women's Studies
236/English 236 Women in Literature
304/Sociology/Anthropology 304 The Family
305/Sociology/Anthropology/Afro-American Studies
305 The Black Family
318/POS 318 Politics of Race, Class and Gender
333/Sociology 333 Sociology of Sex and Gender
334/Sociology 334 Sociology of Women
335/Psychology 335 Psychology of Women
339/History 339 History of Women
384/English 384 Women Writers
391 Topics in Women's Studies
457/Art History 457 Women, Art, and Society
492 Independent Study

PREPARATION FOR PROFESSIONAL STUDIES IN THE HEALTH SCIENCES

ARTHUR J. SEIDENBERG
Coordinator of Pre-Health Sciences Advising

The College of Humanities and Sciences provides preparatory programs for the following health science programs offered on the Medical College of Virginia Campus: medicine, dentistry, dental hygiene, medical technology, nuclear medicine technology, nursing, occupational therapy, pharmacy, and physical therapy. Pre-veterinary medicine advising is available through the biology department. Pre-optometry advising is available through the College of Humanities and Sciences dean's office.

An early acceptance program has been established between the College of Humanities and Sciences and the Medical College of Virginia Campus of VCU to provide guaranteed admission to professional programs mentioned above for academically superior students. This program is only open to entering freshmen whose

SAT scores are at least 1200. Details are provided in the section entitled Honors Program in Part II of this *Bulletin*.

Most of the students enrolled in a pre-health science program in the College of Humanities and Sciences will make application to one of the MCV Campus professional programs listed above. Unless informed otherwise by the student, College of Humanities and Sciences advisors help the student to prepare an academic program which will meet the requirements of the MCV Campus professional programs. However, since more qualified students apply to the MCV Campus programs than can be accommodated, students are encouraged to apply to other professional schools and to use their elective courses to meet requirements of those institutions.

In addition, students are advised to plan alternative career choices in the event that they are not accepted into a professional program. This is particularly true for students enrolled in a two-year pre-health science program. Early preparation toward meeting the requirements of the alternate choice major through judicious use of elective courses will enable the student to make a smooth transition from a pre-health science program to a baccalaureate program.

Virginia residency may be a factor in admission to the MCV Campus health science programs. Students desiring more information about residency should consult the appropriate admissions officer on the MCV Campus.

Preparation for the Study of Medicine and Dentistry (PMD — Pre-Medicine and PDT — Pre-Dentistry)

Pre-Medical Advisory Committee: Robert G. Bass, Charles R. Blem, Carolyn M. Conway, Sandra E. Gramling, Jackson E. Jeffrey, Stephen G. Lyng, Suzanne M. Ruder, Arthur J. Seidenberg, Nicholas A. Sharp, Donald D. Shillady

Pre-Dental Advisors: faculty in the biology and chemistry departments

In preparation for entering these professions, leaders in medical and dental education encourage prospective students to obtain a broad background in liberal arts education including not only sciences but also humanities and social sciences. **A prospective student should check with the intended school of medicine or dentistry for its specific requirements.**

Many schools of medicine, including the School of Medicine on the MCV Campus, require a minimum of three years (90 semester

hours or the equivalent) in an accredited college or university, but preference is given to candidates who will earn a baccalaureate degree prior to the beginning of medical school. The following are the courses generally required for admission to most medical schools including the School of Medicine at VCU: biological science, general chemistry, organic chemistry, English, mathematics, and physics. Other courses, such as general physiology, genetics, calculus, and behavioral sciences, though not required, are strongly recommended for the pre-medical student.

Many schools of dentistry, including the School of Dentistry on the MCV Campus, require a minimum of at least three years of liberal arts education taken in an accredited college or university. The following courses are generally required for admission to most dental schools, including the School of Dentistry at VCU: biology, general chemistry, organic chemistry, mathematics, physics, and English. Other courses, such as those in the behavioral sciences and courses involving psychomotor skills are strongly recommended.

Programs of Study. Admission to and completion of a pre-medical or pre-dental program of studies offered by the College of Humanities and Sciences does not constitute admission to the School of Medicine or School of Dentistry of Virginia Commonwealth University; the student must make separate application to the medical or dental school of his choice at the appropriate time.

Students entering the College of Humanities and Sciences with an interest in preparing for medical or dental school will apply as a “pre-medical” or “pre-dental” student and also declare an academic major. This classification as pre-medical or pre-dental exists to identify the student’s future career interests; the student does not earn a “pre-medical” or “pre-dental” degree. As the student begins to clarify his academic interests through regular conversations with his assigned pre-medical or pre-dental advisor, the student will major in one of the regular four-year degree programs offered in the College of Humanities and Sciences, while, at the same time, completing the necessary prerequisites for application for admission to the medical or dental school of his choice.

The pre-medical and pre-dental students are encouraged to major in the fields of their greatest interest. Students need not major in a science

area; in fact, many non-science majors have very high acceptance rates into medical or dental schools.

Certain curricula in the College of Humanities and Sciences allow a student to plan a program for entry into medical or dental schools which accept students upon completion of three years of successful undergraduate work. The university will award a Bachelor of Science degree to a student who has successfully completed the first year of an accredited medical or dental school provided he has completed all the general requirements for the College of Humanities and Sciences and the requirements in his major. Successful completion of the first year of medical or dental school will be accepted as 30 credits of electives towards the student's total hours.

Preparation for the Study of Veterinary Medicine (PVT)

RUSSELL V. BROWN
Coordinator

The Bachelor of Science in chemistry and the Bachelor of Science in biology programs offered at the Academic Campus provide excellent opportunities to complete the necessary prerequisites for application to a veterinary school.

Preparation for the Study of Optometry (POP)

ARTHUR J. SEIDENBERG
Coordinator

The Bachelor of Science and Bachelor of Arts program offered at the Academic Campus provide excellent opportunities to complete the necessary prerequisites for application to optometry school.

Prospective students are encouraged to obtain a broad background in liberal arts education including not only sciences but also humanities and social sciences. **A prospective student should check with the intended school of optometry for its specific requirements.**

Many schools of optometry require a minimum of three years (90 semester hours or the equivalent) in an accredited college or university, but preference is given to candidates who will earn a baccalaureate degree prior to the beginning of optometry school. The following are the courses generally required for admission to most optometry schools: biological science, general chemistry, organic chemistry, physics, mathematics, English, and general psychology.

Preparation for the Study of Dental Hygiene (PDH)

JAMES E. GATES
Coordinator

Advisors: Robert C. Markham, Arthur J. Seidenberg

The curriculum in pre-dental hygiene offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in dental hygiene offered through the School of Dentistry on the MCV Campus. Students intending to apply to the junior and senior year professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the departmental admissions committee.

	<i>Credits</i>
ENG 101-102 Composition and Rhetoric	6
MAT 101 College Algebra	3
STA 213 Introduction to Statistics	3
CHE 101 General Chemistry	4
CHE L101, Laboratory I, II	1
or	
CHE 103 Introduction to Modern Chemistry	3
CHE L103 Laboratory I, II	1
BIO 109, L109 General Biology, Laboratory I	4
BIO 205 Basic Human Anatomy	4
BIO 206 Human Physiology	4
BIO 209 Medical Microbiology	4
PSY 101 General Psychology	3
SOC 101 General Sociology	3
SPE 121 Effective Speech	3
Approved Electives	14
	(minimum) 60

If a student does not qualify to take CHE 101 and CHE L101 in the first semester due to a low score on the Mathematics Placement test or due to placement in CHE 100 Introduction to Chemistry, needed for additional chemistry preparation, the student should add a 3-credit elective in

the fall semester and plan to take CHE 102 and L102 in the summer.

Preparation for the Study of Medical Technology (PMT)

Advisors: Robert G. Bass, Frederick M. Hawkridge, Donald D. Shillady, Billy L. Stump

The curriculum in pre-medical technology offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program majoring in medical technology offered through the School of Allied Health Professions on the MCV Campus. Students intending to apply to a professional program at another institution should consult that bulletin for the exact prerequisite courses. Any student who wishes to transfer to a school other than MCV must transfer to a school that will confer a degree at the completion of the fourth year.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the departmental admissions committee.

	<i>Credits</i>	
	<i>1st Sem.</i>	<i>2nd Sem.</i>
<i>First Year</i>		
CHE 101-102 General Chemistry	4	4
CHE L101-L102 General Chemistry Laboratory I, II	1	1
ENG 101-102 Composition and Rhetoric ...	3	3
MET 201 Introduction to Medical Technology	1	—
MAT 101 College Algebra or MAT 102 Trigonometry	3	—
Humanities or Social Science Electives	3	3
BIO 109 General Biology	—	3
BIO L109 General Biology Laboratory I	—	1
	15	15
<i>Second Year</i>		
CHE 309 Quantitative Analysis	—	4
BIO 205 Basic Human Anatomy	4	—

BIO 206 Human Physiology	—	4
Humanities or Social Science Electives	12	6
	16	14

If a student does not qualify to take CHE 101 and CHE L101 in the first semester due to a low score on the Mathematics Placement Test or due to placement in CHE 100 Introduction to Chemistry needed for additional chemistry preparation, the student should add BIO 109, L109, General Biology and Laboratory in the fall semester and should plan to take CHE 102 and L102 in the summer.

Preparation for the Study of Nuclear Medicine Technology (PNM)

Advisor: Arthur J. Seidenberg

The curriculum in pre-nuclear medicine technology meets the minimum academic requirements for the Bachelor of Science degree program majoring in clinical radiation sciences with a nuclear medicine concentration offered through the School of Allied Health Professions on the MCV Campus. Students intending to apply to a professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632, in the fall of the year preceding the year of desired admission. Admission to the program on the MCV Campus will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the departmental admissions committee.

	<i>Credits</i>
ENG 101-102 Composition and Rhetoric	6
MAT 101 College Algebra	3
CHE 101-102 General Chemistry	8
CHE L101, L102 Laboratory I, II	2
BIO 109, L109 General Biology, Laboratory I	4
BIO 205 Basic Human Anatomy	4
BIO 206 Human Physiology	4
PSY 101 General Psychology	3
PHY 201-202 General Physics	8
Approved Electives	(minimum) 18
	(minimum) 60

If a student does not qualify to take CHE 101 and CHE L101 in the first semester due to a low score on the Mathematics Placement Test or due to placement in CHE 100 Introduction to Chemistry, needed for additional chemistry preparation, the student should add a three-credit elective in the fall semester and plan to take CHE 102 and L102 in the summer.

Preparation for the Study of Nursing (PNR)

GAIL TURNER

Coordinator

Advisors: Leann Blem, J. Lewis Payne, Arthur J. Seidenberg

The curriculum in pre-nursing offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in nursing offered through the School of Nursing on the MCV Campus. Students intending to apply to the professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following preparatory programs offered by the College of Humanities and Sciences does not constitute admission to the professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude, and interest.

Because of recent changes in the program at the School of Nursing on the MCV Campus, there are two pre-nursing tracts available:

(1) *Students who start pre-nursing at VCU as freshmen apply in September of their first year for entrance into the School of Nursing. Students will receive a decision during the following spring semester. If accepted, students begin study in the School of Nursing in the fall semester of their sophomore year. The length of the nursing program in this tract is three years. Students in this tract complete approximately 30 of the 60 credits listed below during their freshman year. The remaining arts and sciences credits are completed while the student is enrolled in the School of Nursing, normally during the sophomore year.*

The curriculum listed below outlines the 60 credits needed, approximately 30 of which are taken during the freshman year.

(2) *Students who transfer to VCU to complete the pre-nursing requirements apply in September of the year prior to desired matriculation. Students will receive a decision during the following spring semester. If accepted, students begin study in the School of Nursing in the summer. The length of the nursing program in this tract is two years and one summer. Students in this tract complete all of the credits listed below prior to matriculation in the School of Nursing.*

	<i>Credits</i>
ENG 101–102 Composition and Rhetoric	6
*Humanities Electives	12
PSY 101 General Psychology	3
SOC 101 General Sociology	3
**Social Science Elective	3
***NUR 200 Concepts of Health	3
MAT 101 College Algebra or MAT 111 Basic Mathematics for Behavioral, Social, and Management Sciences or STA 213 Introduction to Statistics (STA 213 preferred)	3
****Science Elective	4
BIO 101, L109 General Biology and Laboratory	4
BIO 205 Basic Human Anatomy	4
BIO 206 Human Physiology	4
BIO 209 Medical Microbiology	4
BIO 217 Nutrition	3
Elective	4
	60

*one course in philosophy is required

**ANT, PSY, SOC, or SSC courses only (do not take PSY 304)

****taken after being admitted to the School of Nursing

*****If high school chemistry (with laboratory) with a grade of "C" or better has not been completed (within 10 years of matriculation in nursing school), one semester of chemistry with laboratory must be taken. If high school chemistry with a grade of "C" or better has been completed, choose from: BIO 110 and L110, CHE 103 and L103, PHY 101 and L101, or PHY 201 and L210.

Preparation for the Study of Occupational Therapy (POC)

ARTHUR J. SEIDENBERG

Coordinator

Advisors: Alan V. Briceland, Robert L. Sims

The curriculum in pre-occupational therapy offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program majoring in occupational therapy offered through the School of Allied Health Professions on the MCV Campus. This program is accredited by the American Occupational

Therapy Association, Inc. Students intending to apply to the junior and senior year professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632, in the fall preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude, and interest. A personal interview is required as a part of the admission procedure.

	<i>Credits</i>	
	<i>1st Sem.</i>	<i>2nd Sem.</i>
<i>First Year</i>		
ENG 101-102 Composition and Rhetoric...	3	3
PSY 101 General Psychology	3	—
SOC 101 General Sociology.....	3	—
BIO 109 General Biology	3	—
BIO L109 General Biology Laboratory	1	—
BIO 205 Basic Human Anatomy or BIO 206 Human Physiology	—	4
MAT 101, STA 213 College Algebra and Introduction to Statistics or STA 213 Introduction to Statistics	3	3
Electives		6
	16	16
<i>Second Year</i>		
PSY 304 Developmental Psychology.....	3	—
PSY 407 Abnormal Psychology	3	—
Psychology Elective	—	3
BIO 205 Basic Human Anatomy or BIO 206 Human Physiology	4	—
Sociology elective	3	—
Electives	2-3	12
	15-16	15

These are considered minimum requirements. Students are encouraged to pursue additional study in biology, psychology, and sociology. Students are also encouraged to take mathematics and statistics courses to increase their curricular options at the end of this preparatory program.

Preparation for the Study of Pharmacy (PPH)

Advisors: M. Samy El-Shall, Gordon A. Melson, Raphael M. Ottenbrite, Suzanne M. Ruder, Sarah C. Rutan, Stuart J. Silvers, Albert T. Sneden, James Turner, Joseph Topich, Lidia M. Vallarino, Lawrence J. Winters, Vicki H. Wysocki

The curriculum in pre-pharmacy offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in pharmacy offered through the School of Pharmacy on the MCV Campus. Students intending to apply to the professional program at another institution should consult the bulletin for the exact prerequisite courses.

Credits earned by examination (AP, CLEP, etc.) will not count toward the 69 credits required for entry to the MCV/VCU School of Pharmacy. However, the content area covered by the examination does not need to be repeated. Electives may be substituted for the needed credits.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the final three years of the professional program on the MCV Campus. The student must make separate application to that professional program through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the school admissions committee.

	<i>Credits</i>
BIO 109-110 General Biology	6
BIO L109-L110 General Biology Laboratory I, II ...	2
ENG 101-102 Composition and Rhetoric	6
MAT 101 College Algebra or MAT 102 Trigonometry or STA 213 Introduction to Statistics	3
MAT 200 Calculus with Analytic Geometry	4
CHE 101-102 General Chemistry	8
CHE L101-L102 General Chemistry Laboratory I, II	2
ECO 210 Principles of Economics.....	3
PHY 201-202 General Physics.....	8
CHE 301-302 Organic Chemistry.....	6
CHE L301-L302 Organic Chemistry Laboratory I, II	4
Approved Humanities and Social Sciences Electives ...	18
	69

If a student does not qualify to take CHE 101 and CHE L101 in the first semester due to a low score on the Mathematics Placement Test or due to placement in CHE 100 Introduction to Chemistry needed for additional chemistry preparation, the student should add a three-credit elective in the fall semester and should plan to take CHE 102 and L102 in the summer or following fall semester.

Also, since this program requires that the student take 17–18 credits each semester in order to finish in four semesters, the student should give strong consideration to planning some courses for the summer between freshman and sophomore years.

Physical education credits are not acceptable in meeting the above prerequisites.

PREPARATION FOR THE STUDY OF PHYSICAL THERAPY (PPT)

JACKSON E. JEFFREY

Coordinator

Advisors: Karlynn W. Bucher, Joseph P. Chinnici, Arthur J. Seidenberg, Jennifer K. Stewart

The curriculum in pre-physical therapy offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the program in physical therapy offered through the School of Allied Health Professions on the MCV Campus. Students intending to apply to the professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following three-year (90 semester credits) preparatory program offered by the College of Humanities and Sciences does not constitute admission to the professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the School of Graduate Studies, Virginia Commonwealth University, Richmond, VA 23298-0568, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be determined by the departmental admissions committee. Factors that will be considered by the committee are the student’s scholastic record and professional suitability. In addition, the student is expected to have acquired knowledge concerning the practice and goals of the profession of physical therapy.

	<i>Credits</i>
*English 101–102 Composition and Rhetoric ..	6
**BIO 109–110 General Biology	8
**BIO L109–L110 General Biology Laboratory I, II	2
***CHE 101–102 General Chemistry	8
***CHE L101–L102 General Chemistry Laboratory I, II	2
Physiology	4
***PHY 201–202 General Physics	8
***MAT 101 College Algebra or MAT 102 Trigonometry or MAT 200 Calculus with	

Analytic Geometry	3–4
STA 213 Statistics	3
***PSY 101 General Psychology	3
Psychology Elective	3
***Social Science Electives	6
Humanities Elective	3
Approved Electives	(minimum) 25–28
	(minimum) 90

*AP credits may be substituted for up to three credits.

**Students should take BIO 151, L151, 152, and L152 if they plan to major in biology. AP credits may not be used to fulfill the biology requirement.

***AP credits may be used to satisfy requirement.

In order to complete the social science, psychology, and humanities requirements, students are encouraged to choose courses from the following categories: child, adolescent, or abnormal psychology, personality, development, psychology of adjustment, sociology, anthropology, economics, history, philosophy or logic, counseling, and human relations.

In order to complete the total requirements, students are encouraged to elect courses from the following categories: computer science, embryology, histology, comparative anatomy, vertebrate or human anatomy, kinesiology, physiology, foreign languages, and courses in physical education dealing with an analytical approach to human movement or motor learning.

At least 8 hours of electives must be upper-level courses. A “D” grade in any of the required courses shown above will not be acceptable toward admission.

PREPARATION FOR PROFESSIONAL STUDIES IN LAW

Advisors: Husain Mustafa, Department of Political Science; Carol D. Rasic, Department of Decision Sciences and Business Law; James L. Hague, Department of Safety and Risk Administration

Few law schools list specific undergraduate courses as prerequisites for admission. Thus, the student who is considering law school may major in virtually any department in the College of Humanities and Sciences, the School of Business, or the School of Community and Public Affairs. Students, however, are encouraged to obtain a broad liberal arts background with emphasis on the social sciences and English. Students may find the philosophy of law minor listed under the Department of Philosophy and Religious Studies interesting.

The pre-law advisors maintain continual

contact with law school admissions offices and will assist any interested student with questions concerning curriculum, financial assistance, application procedure, or the law school admission test.

PREPARATION FOR THE STUDY OF ENGINEERING

ROBERT H. GOWDY
Coordinator

Students wishing to pursue a career in any of the fields of engineering should enroll in the Department of Physics. The department offers two programs: (1) pre-engineering and (2) dual physics/engineering degree program.

The **pre-engineering program** at VCU affords the student a broad background in science and mathematics, as well as exposure to the humanities and social sciences, before specializing in a particular area of engineering. The department will assist qualified students in transferring to accredited engineering schools upon the completion of the program.

A typical two-year program for students ready to enter directly into calculus would be as follows:

Freshman Year. CHE 101–102 General Chemistry; CHE L101 –L102 General Chemistry Laboratory I, II; ENG 101–102 Composition and Rhetoric; MAT 200–201 Calculus with Analytic Geometry; PHY 207–208 University Physics I and III.

Sophomore Year. MAT 307 Multivariate Calculus; MAT 301 Differential Equations; PHY 320 Introduction to Modern Physics; CSC 201 Introduction to Computing; Humanities or Social Science Electives; Science Electives (from PHY 330 Electrical Circuits; PHY 331 Introductory Electronics; PHY 301–302 Classical Mechanics I and II; PHY 340 Introduction to Statistical Physics and Thermodynamics; PHY 376 Electromagnetism; or CSC 202 Introduction to Computing.)

Students who are interested in the chemical or biological aspects of engineering may wish to substitute courses in these areas in lieu of some physics courses in the second year. Those interested in engineering but whose background preparation does not warrant entrance into the two-year sequence above may spread their work over three years. Students should see the pre-engineering advisor for details of their individual programs.

Dual physics/engineering degree programs are offered in cooperation with Auburn University, Old Dominion University, and George Washington University. For further details, see Department of Physics section of this *Bulletin*.

COURSE DESCRIPTIONS

Course Numbering. 100 and 200 courses are undergraduate lower-level courses offered primarily for undergraduate students. 300 and 400 courses are undergraduate upper-level courses offered for advanced undergraduates.

A course designated with an asterisk indicates that the course is applicable to certain graduate degrees for selected graduate students. Such students must have their department and dean's approval to register for a limited number of these courses.

Courses at the 500 level are open to advanced undergraduate students with the consent of the offering department. Credit is applicable to only one degree.

COURSES IN AFRO-AMERICAN STUDIES (AAS)

103 Introduction to Afro-American Studies. Semester course; 3 lecture hours. 3 credits. Using an interdisciplinary approach, this course will familiarize students with important events, developments, personalities, and other phenomena that help facilitate the study and understanding of Afro-Americans from their African past to their present existence.

105/Sociology 105 Sociology of Racism. Semester course; 3 lecture hours. 3 credits. The course will explore the direct and indirect ways in which racial attitudes are acquired, their effect on individuals and society, and the institutional and ideological manifestations of racism as a "faith system," as exploitation, and as a form of human conflict. The central focus of interest will be on black-white relationships.

107, 108/History 105, Introduction to African History. Semester courses; 3 lecture hours. 3–3 credits. An overview of African civilization from prehistory to the present, with emphasis on cultural developments as well as selected in-depth analyses of specific issues in African history. First semester: to 1800. Second semester: since 1800.

200/Anthropology 200 Urban Studies 200 African Culture. Semester course; 3 lecture hours. 3 credits. An exploration of the unique and diverse cultural heritage shared by Africans. Particular attention will be given to life styles and work styles as these relate to knowledge, behavior, ideas, and objects.

204 Africa in Transition. Semester course; 3 lecture hours. 3 credits. Prerequisite: AAS 200 or permission of instructor. The impact of modern social change upon the traditional aspects of African life. Various aspects of social change as it applies to Africa today will be explored.

245, 246/Music History 245, 246, Introduction to Afro-American Music. Semester courses; 3 lecture hours. 3–3

credits. An introductory survey of black involvement with the development of music in America from 1607 to the present. Afro-American musical styles will be studied from many aspects including their African roots and contemporary popular expression.

303/Theatre 303 Black Theatre. Semester course; 3 lecture hours. 3 credits. A study of the major developments in the evolution of black theatre through readings and studio performances in black-related and black theatre dramaturgy.

305/Sociology 305/Women's Studies 305 Sociology of the Black Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. A socio-history of the development of the dynamics of the black family.

307/Religious Studies 307 Black Religion. Semester course; 3 lecture hours. 3 credits. An analysis of the role of religion in the lives of blacks with an emphasis on African religions and philosophies, the black church in America, and the roles of the various faiths, sects, and cults.

310/Economics 310 Economics and Poverty. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 210–211 or 203. An analysis of the causes of income inequality, the incidence and characteristics of poverty, and the economics of public policies designed to counteract poverty.

311/Urban Studies 337 Urbanization and Blacks: A Cross-Cultural Comparison. Semester course; 3 lecture hours. 3 credits. Comparisons and evaluation of past and contemporary urbanization patterns of black people primarily in Africa and America, their current social, economic, and political problems, and the range of solutions being proposed for dealing with them.

314/English 314 Black American Writers. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 101–102. An examination of the contributions of black writers in America from colonial times to the present.

315/Economics 315 Economic Development. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 210–211. An introduction to the process of economic development including a survey of development theory and a study of the experience of both underdeveloped and developed countries. Economic policies and tools of economic planning for stimulating development will be presented.

322/Psychology 322 Personality and Behavior of the Afro-American. Semester course; 3 lecture hours. 3 credits. Prerequisite: PSY 101. A study of personality factors, such as motivation, ego functioning, and the socialization processes with special emphasis on living conditions of Afro-Americans.

333/Geography 333 Geography of Africa. Semester course; 3 lecture hours. 3 credits. A study of land forms, climate, peoples, boundaries, trade, and cultural groupings of the African continent.

342/Art History 342 Afro-American Art. Semester course; 3 lecture hours. 3 credits. Prerequisite: advanced standing. A study of the art forms produced by Americans of African origin from the seventeenth century to the present with an emphasis on contemporary trends in black art.

343/Political Science 343 Black Political Thought. Semester course; 3 lecture hours. 3 credits. An historical and

sociological perspective on the political and social ideas of black thinkers from David Walker to the present.

356/Political Science 356 African Government and Politics. Semester course; 3 lecture hours. 3 credits. This course will introduce the student to the basic outlines of government and politics in Africa. The course will consider such topics as colonialism, elites and nationalism, and modernization strategies. Using the comparative approach, the course will primarily focus on West, East, and Central Africa.

357/Political Science Politics of Southern Africa. Semester course; 3 lecture hours. 3 credits. An examination of racial and political developments in the southern tip of Africa. While South Africa will be the primary focus of analysis, other countries in the region, such as Zimbabwe, Angola, and Mozambique, will be studied.

361, 362/History 361, 362 Americans from Africa. Semester courses; 3 lecture hours. 3, 3 credits. A study of the history and culture of blacks in the United States, designed to analyze some of the most important aspects of black life and the attitudes of the dominant society within which blacks lived. The second semester emphasizes the changing status, expectations, and ideologies of black Americans in the twentieth century. First semester: to 1877. Second semester: since 1877.

363/English 363 African Literature. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 101–102. The study of African oral performances and written literatures in English with emphasis on West and South Africa.

365/English 365 Caribbean Literature. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 101–102. A survey of West Indian writings. Attention will be given to African, European, and AmerIndian influences, as well as to the emergence of a West Indian literary tradition.

387/History 387 History of West Africa. Semester course; 3 lecture hours. 3 credits. A study of the transformation of West African societies from the iron age to modern, independent nation-states, with stress on the roles of reforming Islam, European economic and cultural influences, and European colonialism.

389/History 389 History of Southern Africa. Semester course; 3 lecture hours. 3 credits. A study of the history and culture of the peoples of southern Africa. Deals with the areas which presently are the Republic of South Africa, Lesotho, Swaziland, Botswana, Namibia, and Zimbabwe. Emphasizes the interaction among the various communities and ethnolinguistic groups in southern Africa.

413/Art History 350 African and Oceanic Art. Semester course; 3 lecture hours. 3 credits. A study of the architecture, painting, sculpture, and civilizations of the major art-producing tribes of West Africa and Oceania from the thirteenth century to the present.

491 Topics in Afro-American Studies. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum of nine credits; three credits may be applied to the Afro-American Studies minor. An in-depth study of specialized areas of Afro-American Studies.

492 Independent Study. Semester course; variable credit. Maximum four credits per semester. Maximum total in all independent study courses four credits. Open generally only to students of junior and senior standing who have acquired

at least 12 credits in Afro-American Studies courses. Determination of the amount of credit and permission of the instructor and coordinator must be procured prior to registration for the course.

COURSES IN AMERICAN STUDIES (AMS)

195 Richmond. 15 contact hours. 1 credit. A series of mini-courses dealing with aspects of Richmond's literary and historical importance from the city's beginning to the present.

301 Introduction to Native American Studies. Semester course; 3 lecture hours. 3 credits. An overview of the historical, social, and cultural aspects of life of the peoples native to the North American continent.

323 Social Attitudes in the Humanities. Semester course; 3 lecture hours. 3 credits. An examination of artistic and literary expressions of social attitudes and their influence on the development of the social reform movement. Focus will be on the western world, with special attention to the United States.

391 Topics in American Studies. Semester course; 3 lecture hours. 3 credits. Selected issues or problems in American civilization with materials drawn from such areas as history, the social sciences, philosophy, literature, the arts and mass communications. May be repeated once for credit.

394 Perspectives in American Studies. Semester course; 3 lecture hours. 3 credits. Prerequisite: six credits in American-related courses. An introduction to the methods, significant works, and major trends in American studies. May be taken for American literature credit by English majors. May not be used to satisfy the College of Humanities and Sciences requirements in literature.

COURSES IN ANTHROPOLOGY (ANT)

103 Cultural Anthropology. Semester course; 3 lecture hours. 3 credits. A general survey of anthropology with emphasis on learning about and from non-Western cultures.

105 Introductory Archaeology. Semester course; 3 lecture hours. 3 credits. The history, development, and current trends in archaeological method and theory are illustrated with case studies from around the world.

200/Afro-American Studies 200 Urban Studies 200 African Culture. Semester course; 3 lecture hours. 3 credits. An exploration of the unique and diverse cultural heritage shared by Africans. Particular attention will be given to life styles and work styles as these relate to knowledge, behavior, ideas, and objects.

201 The Evolution of Man and Culture. Semester course; 3 lecture hours. 3 credits. The application of evolutionary theory to the physical and cultural development of Homo sapiens.

252 The Archaeology of Richmond. Semester course; 3 lecture hours. 3 credits. The application of archaeological methods to Richmond's prehistoric, historic, and modern material culture. The city and surrounding counties are treated as an archaeological site and region. The artifacts left by past and present inhabitants provide a foundation for analyzing ways of life in the area.

304/Sociology 304/Women's Studies 304 The Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or ANT 103. The family in its social and cultural context. Analysis of child rearing, marriage, kinship, family crises, and family change in various societies around the world.

305 Comparative Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: a previous or concurrent course in social science. An introduction to social anthropology. The study of how social institutions such as marriage, family, law, economics, and government are organized and operate in different kinds of societies.

311/History 311 History of Human Settlement. Semester course; 3 lecture hours. 3-3 credits. A cultural geography of man's diffusion over the earth, agricultural and urban systems, exploration, migration, and colonization, and changing attitudes toward the environment. First semester: before 1750. Second semester: during and since the Industrial Revolution.

350/International Studies 350 Peoples and Cultures of the World. Semester course; 3 lecture hours. 3 credits. Prerequisite: ANT 103. May be taken for a maximum of six credits in two different world areas. A survey of the culture and traditions within a specific geographic area such as Latin America, Oceania, or Southeast Asia. See *Schedule of Classes* for areas being offered in a particular semester.

375 Field Archaeology. Semester course; 3 lecture, 8 field and laboratory hours. 6 credits. Introduction to archaeological field and basic laboratory techniques. Archaeological data collection (excavation or survey) forms the core of the course.

380/Sociology 380 Drugs, Society, and Culture. Semester courses; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or ANT 103. An examination of the anthropological and sociological significance of drugs and drug use from pre-historic cultures through modern societies.

386/English 386 Introduction to Folklore. Semester course; 3 lecture hours. 3 credits. A survey of the basic forms of folklore including proverbs, riddles, ballads, folktales, legends, myths, and games. The survey will also include approaches to collecting material and examining its literary, social, and historical significance.

391 Topics in Anthropology. Semester course; 3 lecture hours. 3 credits, maximum 6 credits per semester; maximum total of 18 credits in departmental topics courses which may be applied to the major. Prerequisite: permission of instructor. Seminar on current specialized areas of anthropological interest. See *Schedule of Classes* for specific topic to be offered each semester.

413 Psychological Anthropology. Semester course; 3 lecture hours. 3 credits. Prerequisite: ANT 103 or permission of instructor. An examination of individual psychological functioning in the cultural context. Analysis of the role of culture in personality development, cognitive development and mental health.

425 Religion, Magic, and Witchcraft. Semester course; 3 lecture hours. 3 credits. A survey of the nature and variety of beliefs outside of the major streams of religious thought. Among topics considered are myth, totemism, taboo, and sorcery. Emphasis on understanding supernatural beliefs and practices in relation to culture and society.

492 Independent Study. Semester course; variable credit, maximum six credits per semester; maximum total for all independent study courses 12 credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of the instructor and department chairman must be procured prior to registration for the course. Cannot be used in place of existing courses.

COURSES IN BIOLOGY (BIO)

NOTE: The following courses do not apply toward the major in biology: BIO 205, 206, 209, 211, 217, 315, 332, 465.

109–110 General Biology I–II. Continuous course; 3 lecture hours. 3–3 credits. First semester: fundamental properties of living systems. Second semester: organismal biology and ecology. (Not intended for the biology major.)

L109 General Biology Laboratory I. Semester course; 2 hours. 1 credit. Laboratory exercises correlated with BIO 109. Can be taken only concurrently with or subsequent to BIO 109. (Not intended for the biology major.)

L110 General Biology Laboratory II. Semester course; 2 hours. 1 credit. Laboratory exercises correlated with BIO 110. Can be taken only concurrently with or subsequent to BIO 110. (Not intended for the biology major.)

L111 Honors General Biology Laboratory. Semester course; 3 laboratory hours. 1.5 credits. Pre- or corequisite — BIO 109. An in-depth, participatory laboratory correlating with BIO 109. Credit will not be given for both BIO L109 and BIO L111.

L112 Honors General Biology Laboratory. Semester course; 3 laboratory hours. 1.5 credits. Pre- or corequisite — BIO 110. An in-depth, participatory laboratory correlating with BIO 110. Credit will not be given for both BIO L110 and L112.

151, 152 Introduction to Biological Science. Semester course; 3 lecture hours. 3, 3 credits. Designed for biology majors. First semester: survey of monerans, fungi, algae, plants. Second semester: survey of animals.

L151 Introduction to Biological Science Laboratory I. Semester course; 3 laboratory hours. 1 credit. Pre- or corequisite: BIO 151. Participatory work correlated with BIO 151.

L152 Introduction to Biological Science Laboratory II. Semester course; 3 laboratory hours. 1 credit. Pre- or corequisite: BIO 152. Participatory work correlated with BIO 152.

200 Biological Terminology. Semester course; 1 lecture hour. 1 credit. Prerequisite: a course in biology. The study of Greek and Latin word roots in the vocabulary of biology and medicine.

205 Basic Human Anatomy. Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisite: 4 credits in biology. Human body structure with emphasis on the skeletal-muscular aspects, utilizing the cat for dissection and human specimens and models as demonstrations. (Not applicable to the biology major.)

206 Human Physiology. Semester course; 3 lecture and 2 laboratory hours. 4 credits. Prerequisite: 4 credits in biology.

Functioning of the human body with emphasis on experimental procedures. (Not applicable to the biology major.)

209 Medical Microbiology. Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisite: 4 credits in biology. General principles and techniques of microbiology and the relations of microorganisms to disease. (Not applicable to the biology major.)

217 Principles of Nutrition. Semester course; 3 lecture hours. 3 credits. Prerequisite: 4 credits in biology. An introduction to basic principles of nutrition and their application in promoting growth and maintaining health throughout the life cycle. (Not applicable to the biology major.)

218 Cell Biology. Semester course; 3 lecture hours. 3 credits. Prerequisites: eight credits of general biology and eight credits in chemistry. An introductory examination of fundamental cellular process including structure-function relationships, enzymology, metabolism, genetic function, and cellular reproduction.

291 Topics in Biology. Semester course; variable credit, maximum 4 credits per semester; maximum total credit for all topics courses 6 credits (BIO 291, 391, and/or 491). A study of a selected topic in biology. See the *Schedule of Classes* for specific topic(s) and prerequisites.

292 Independent Study. Semester course; variable credit, maximum 2 credits per semester; maximum total credit for all independent study courses (BIO 292 and/or 492) six credits. Prerequisites: eight credits in biology and an overall GPA of 3.0. Determination of the amount of credit and permission of the instructor and department chairman must be obtained prior to registration for the course. Designed to allow students to accomplish independent readings of biological literature under the supervision of a staff member.

301 Comparative Vertebrate Anatomy. Semester course; 3 lecture and 6 laboratory hours. 5 credits. Prerequisites: BIO 151–L151, 152–L152. The evolution of vertebrate forms as demonstrated by anatomical studies of selected vertebrate types.

302 Animal Embryology. Semester course; 3 lecture and 4 laboratory hours. 5 credits. Prerequisite: BIO 218. Basic reproductive and developmental processes during animal embryonic development. Includes programming/packaging in the egg, cell-cell interactions, basic organogenesis. Cellular mechanisms and the role of differential gene activity in developmental processes will be emphasized. Laboratory includes observation of developmental processes and experimental work using living invertebrate and vertebrate embryos.

303 Bacteriology. Semester course; 3 lecture and 4 laboratory hours. 5 credits. Prerequisites: BIO 218 and eight credits in chemistry. The morphology and physiology of bacteria as applied to their cultivation, identification, and significance to other organisms.

307 Aquatic Ecology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 317, CHE 102 and L102. The physical, chemical, and especially the biological aspects of freshwater ecosystems.

308 Vertebrate Histology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 218. Microanatomy of vertebrate cells, tissues, and organs and the

relationship of structure to function. Laboratory work involves an in-depth study of vertebrate microanatomy at the light microscope level as well as an introduction to techniques used for the preparation of materials for histological study.

309 Entomology. Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisites: BIO 151–L151, 152–L152. Field and laboratory work emphasized to illustrate insect diversification, diagnostic features, habitats, and development patterns. A project is required and some independent work will be necessary.

310 Genetics. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 218. The basic principles of molecular and applied genetics of plants, animals, and microorganisms.

L310 Laboratory in Genetics. Semester course; 3 laboratory hours. 1 credit. Prerequisite or co-requisite: BIO 310. Exercises and experiments designed to demonstrate the laws of heredity using a variety of eukaryotic organisms such as corn, onions, fruit flies, mice, and humans.

311 Animal Physiology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 218. Physiological principles of animal cells, tissues, and organs from the viewpoint of chemical and physical phenomena.

312 Invertebrate Zoology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 151–L151, 152–L152. A survey of the invertebrate animals with emphasis on environmental interactions. A weekend trip to a marine environment is required.

313 Vertebrate Natural History. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 151–L151, 152–L152. The natural history of vertebrates with emphasis on the species native to Virginia.

315 Man and Environment. 3 lecture hours. 3 credits. A comparative study of the ecology and natural history of human populations, including the environments as determining factors in the evolution of human institutions and technology, resources management, and population crises; cultural traditions as mechanisms of population control; basic theory of population biology. (Not applicable to the biology major.)

317 Ecology. Semester course; 3 lecture hours. 3 credits. Prerequisites: BIO 151–L151, 152–L152. An introduction to the basic principles of ecology, including interactions among organisms and influences of the physical environment.

L317 Ecology Laboratory. Semester course; 4 laboratory hours. 2 credits. Prerequisite: BIO 317 or concurrent registration in BIO 317. A field-oriented course that provides experience in ecological research, including experimental design, instrumentation, data collection, and data analysis.

320 Biology of the Seed Plant. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 151–L151, 152–L152. The physiology, structure, and adaptation of seed plants.

321 Plant Development. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 218. A survey of the developmental changes that take place during the life cycle of lower and higher plants. Emphasis is placed on the control factors which are involved in regulating the ordered changes which take place during development.

332 Environmental Pollution. Semester course; 3 lecture hours. 3 credits. Prerequisite: eight credits in biology. The pollution in the environment with emphasis on the procedures for detection and abatement. (Not applicable to the biology major.)

391 Topics in Biology. Semester course; variable credit, maximum 4 credits per semester; maximum total credit for all topics courses six credits (BIO 291, 391, and/or 491). A study of a selected topic in biology. See the *Schedule of Classes* for specific topic(s) and prerequisites.

392 Introduction to Research. Semester course; 2 lecture and demonstration hours. 1 credit. Prerequisites: 15 credits in biology and an overall GPA of 3.0 or by permission of the instructor. An introduction to the scientific process. The course will cover the mechanics of problem definition, information gathering, and experimental design. Experimentation will be discussed in context with methods of data collection and analysis. Basic research techniques will be demonstrated by the faculty. The major objective is to prepare the student for future research experiences. The formulation of a research proposal will be the capstone of the course.

401 Applied and Environmental Microbiology. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 303 or equivalent. The biology and chemical activities of microorganisms (bacteria, algae, virus, and fungi) of industrial, pharmaceutical, and agricultural importance.

410 Taxonomy of Flowering Plants. 1 lecture and 5 laboratory hours. 3 credits. Prerequisites: BIO 151–L151, 152–L152 or permission of instructor. Systematic survey of the flowering plant families with emphasis on relationships. Some field trips for observing local flora.

411 Summer Flora. Semester course; 1 lecture and 5 laboratory hours. 3 credits. Prerequisites: BIO 151–L151, 152–L152 or permission of instructor. Field course in taxonomy of local summer flora.

415 Aquatic Macrophytes. Semester course; 1 lecture and 5 laboratory hours. 3 credits. Prerequisite: BIO 410 or 411. Field and laboratory study of vascular plants or aquatic habitats; including collection and identification, and consideration of the ecology, morphology, and economic value of aquatic macrophytes.

416 Ornithology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: eight credits of biology or permission of instructor. Basic biology of birds, with emphasis on their role in the environment.

417 Mammalogy. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: 12 credits of biology and permission of instructor. Study of the characteristics, adaptive radiation, and distribution of *mammals*, with emphasis on North American forms.

420 Plant Physiology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 218 and either BIO 320 or 321. Topics: photosynthesis, mineral nutrition, transport, phytohormones, development, tissue culture, and environmental stress. The laboratory will stress student-oriented research projects.

429 Neuroanatomy. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: BIO 465 or permission of instructor. A study of the morphology and

functional aspects of the central and peripheral nervous system of the human body.

430 Human Genetics. Semester course; 3 lecture hours. 3 credits. Prerequisites: BIO 310 and CHE 301, L301, 302, and L302. A broad approach, at an advanced level, to human genetics. Topics include cytogenetics, pedigree analysis, genetic mapping, aneuploid syndromes, immunogenetics, inborn errors of metabolism, cancer, genetic engineering, behavior and intelligence, amniocentesis, and genetic counseling.

431 Introduction to Marine Biology. Semester course; 3 lecture hours. 3 credits. Prerequisites: BIO 317 and CHE 102, L102. An introduction to physical, chemical, and geological oceanography and a more detailed treatment of the organisms and ecological processes involved in the pelagic and benthic environments of the world's oceans and estuaries.

432 Biology of Polluted Waters. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 317 and CHE 102, L102. Survey of the effects of water quality on the biota of freshwater and marine ecosystems with industrial and domestic water usage considerations.

435 Herpetology. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 317 or equivalent. The evolution, ecology, structure, taxonomy, and behavior of reptiles and amphibians.

L436 Laboratory in Herpetology. Semester course; 2 laboratory hours. 1 credit. Prerequisite or co-requisite: BIO 435. Identification, behavior, structure, and ecology of amphibians and reptiles. Two Saturday field trips are required.

445 Neurobiology and Behavior. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 317 or equivalent. The study of animal behavior stressing ecological, evolutionary, and neurobiological approaches.

445 Immunology and Serology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: 16 credits in biology including BIO 218 and eight credits in chemistry. Basic aspects of the immune response in higher animals. Study of the serological techniques used in biological research.

465 Functional Human Anatomy. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 205 or equivalent and permission of instructor. A study of the anatomy and kinesiology of the human body using prosected specimens and the dissected cadaver. Particular emphasis is placed upon the study of the extremities. Not applicable to the major in biology—intended primarily for students in the Department of Occupational Therapy.

490 Research Seminar. Semester course. 1 credit. Prerequisite/co-requisite: BIO 492 or 498 and senior status. Seminar will provide an opportunity for students participating in the biology department's undergraduate research program to develop skills necessary for effective oral presentation of their research work. Each student will participate in a variety of seminar discussions/activities and make several oral presentations related to his/her BIO 492 or 498 project. Guest speakers will give presentations on such topics as preparation of visual materials and statistical analysis of data.

491 Topics in Biology. Semester course; variable credit, maximum 4 credits per semester; maximum total credit for all topics courses six credits (BIO 291, 391, and/or 491). A study of a selected topic in biology. See *Schedule of Classes* for specific topic(s) and prerequisites.

492 Independent Study. Semester course; variable credit, maximum 4 credits per semester; maximum total credit for all independent study courses (BIO 292 and/or 492) six credits. Open to juniors and seniors who have completed BIO 392 Introduction to Research and have an overall GPA of 3.0 or better. A research proposal, including amount of credit sought and permission of the supervising faculty member, must be submitted to the Honors/Research Committee for approval prior to registration. Activities include field or laboratory research under the direct supervision of a faculty member. A minimum of three hours of supervised activity per week per credit hour is required. A final report in scientific paper format will be required at the completion of the research.

498 Honors Research and Thesis. Semester course; variable credit, maximum 4 credits per semester; maximum total credit for all undergraduate research in biology (BIO 498) 6 credits. Open only to juniors and seniors accepted into the Research Scholar Program who have completed BIO 392 Introduction to Research with a grade of B or better and have an overall GPA of 3.5 or better. A research proposal, including amount of credit sought and permission of the supervising faculty member, must be submitted to the Honors/Research Committee for approval prior to registration. Activities include field or laboratory research under the direct supervision of a faculty member. A minimum of three hours of supervised activity per week per credit hour is required. A quality thesis and thesis defense will be required at the completion of the research.

Courses at the 500 level listed in this Bulletin are open to qualified seniors and graduate students only.

501 Advanced Ecology. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 317 or equivalent. Advanced studies of population ecology, including competition, predation, reproductive and disease, and in-depth analyses of community and ecosystem structure.

502/Microbiology 502 Microbial Biotechnology. Semester course; 3 lecture hours. 3 credits. Prerequisites: MIC 504 or equivalent, BIC 503–504 or equivalent. Discussion of the application of basic principles to the solution of commercial problems. The course will cover the historical principles in biotransformations as related to primary and secondary metabolism, as well as, recombinant DNA technology and monoclonal antibody production. The products to be considered include antibiotics, steroids, vitamins, organic acids and solvents in addition to monoclonal antibodies and products resulting from the application of recombinant DNA technology.

503 Fish Biology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 317 or equivalent. Classification, behavior, physiology, and ecology of fishes. Laboratories will emphasize field collection of fish and identification of specimens.

504 Comparative Animal Physiology. Semester course; 3 lecture and 4 laboratory hours. 4 credits. Prerequisites: BIO 218 and CHE 301, L301, 302, and L302. Comparative physiology of animals with an emphasis at the molecular level.

507 Aquatic Microbiology. Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisite: BIO 303 and 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 Stream Ecology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 317. A study of the ecology of streams and rivers. Laboratory emphasis is on the structure and functioning of aquatic communities in mountain to coastal streams.

518 Plant Ecology. Semester course; 3 lecture and 2 laboratory hours. One three-day field trip is required. 4 credits. Prerequisite: BIO 317 or permission of instructor. A lecture, field, and laboratory course concerned with the development, succession, and dynamics of plant communities and their interrelations with climate, soil, biotic, and historic factors.

522 Evolution and Speciation. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 310 or equivalent. Study of evolutionary principles, with emphasis on genetic and environmental factors leading to changes in large and small populations of plants and animals, and the mechanisms responsible for speciation.

524 Endocrinology. Semester course; 3 lecture hours. 3 credits. Prerequisites: BIO 218 and CHE 301, L301, 302, and L302 or equivalent. Study of hormonal control system at the organ, tissue, and cellular level; although the major emphasis will be on vertebrate endocrine systems, some discussion of invertebrate and plant control systems will be covered.

585 Virology. Semester course; 3 lecture hours. 3 credits. Prerequisites: 16 credits in biology including BIO 218 or equivalent, and eight credits in chemistry. A comprehensive introduction to virology encompassing viruses of vertebrates, invertebrates, plants, and bacteria. Topics include physical and chemical characterization, classification, detection, replication, genetics, diseases, immunology, epidemiology, and interactions of viruses.

COURSES IN CHEMISTRY (CHE)

NOTE: In chemistry laboratories each student is charged for breakage incurred. Regular safety glasses are required. Failure to check out of laboratory, upon withdrawal or for other reasons, will incur a charge of \$10, billed from the Office of Student Accounting.

100 Introductory Chemistry. Semester course; 2 lecture and 2 problem session hours. 3 credits. (These credits may not be used to satisfy any chemistry course requirements in the College of Humanities and Sciences.) A course in the elementary principles of chemistry; required of all students without a high school chemistry background but who need to take CHE 101–102. (This course is also recommended for students who have a poor high school background in the sciences but who need to take CHE 101–102.)

101–102 General Chemistry. Continuous course; 3 lecture and 1 recitation hour. 4–4 credits. Prerequisite: CHE 100 or a satisfactory score on the Chemistry Placement Test. Pre- or corequisite: MAT 101. Fundamental principles and theories of chemistry, including qualitative analysis.

L101 General Chemistry Laboratory I. Continuous course; 3 laboratory hours. 1 credit. Pre- or corequisite: CHE 101. Experimental work correlated with CHE 101.

L102 General Chemistry Laboratory II. Continuous course; 3 laboratory hours. 1 credit. Pre- or corequisite: CHE 102. Prerequisite: CHE L101. Experimental work includes qualitative analysis.

103–104 Introduction to Modern Chemistry. Continuous course; 3 lecture hours. 3–3 credits. Introduces fundamental principles of modern inorganic, organic, and biochemistry and relates these to the chemistry encountered in everyday life, medicine, and the environment. (For non-chemistry majors; may not be used as a prerequisite for advanced chemistry courses.)

L103 Introduction to Modern Chemistry Laboratory I. Continuous course; 3 laboratory hours. 1 credit. Pre- or corequisite: CHE 103. Experimental work correlated with CHE 103.

L104 Introduction to Modern Chemistry Laboratory II. Continuous course; 3 laboratory hours. 1 credit. Pre- or corequisite: CHE 104. Prerequisite: CHE L103. Experimental work correlated with CHE 104.

NOTE: CHE 101, 102, L101, and L102 are prerequisites to all of the following chemistry courses.

301–302 Organic Chemistry. Continuous course; 3 lecture hours. 3–3 credits. A comprehensive survey of aliphatic and aromatic compounds with emphasis on their structure, properties, reactions, reaction mechanisms, and stereochemistry.

L301 Organic Chemistry Laboratory I. Continuous course; 4 laboratory hours. 2 credits. Pre- or corequisite: CHE 301. Experimental work correlated with CHE 301.

L302 Organic Chemistry Laboratory II. Continuous course; 4 laboratory hours. 2 credits. Prerequisite: CHE L301. Prequisite or corequisite: CHE 302. Experimental work correlated with CHE 302.

303 Physical Chemistry. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 201–202 or 207, 208, and MAT 200–201. Ideal and non-ideal gases, thermodynamics, free energy, and chemical equilibrium.

304 Physical Chemistry. Semester course; 3 lecture hours. 3 credits. Prerequisites: CHE 303 or 305 and permission of instructor. Kinetics, solution thermodynamics, heterogeneous equilibria, electrochemistry, and introductory biophysical chemistry.

L304 Physical Chemistry Laboratory. Semester course; 6 laboratory hours. 2 credits. Prerequisites: CHE 305 or 309. Corequisite: CHE 304.

305 Introduction to Physical Chemistry. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: MAT 200. Corequisite: PHY 201 or 207. Concepts and principles of physical chemistry as related to the fields of biology, medicine, and veterinary science. (Not for chemistry majors.)

309 Quantitative Analysis. Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisite: MAT 101 or equivalent. Theory and practice of gravimetric, volumetric, and instrumental analysis techniques, treatment of multiple equilibria in aqueous solutions.

401 Qualitative Organic Chemistry. Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisites: CHE 301–302 and L301–302. Theory, problems, and laboratory practice of systematic qualitative analysis for organic compounds with emphasis on modern spectrometric and chromatographic methods.

403/BIC 403 Biochemistry. Semester course; 3 lecture hours. 3 credits. Prerequisites: CHE 301-203 or equivalents with permission of instructor. A presentation of structural biochemistry, enzymology, biophysical techniques, biogenetics, and an introduction to intermediary metabolism.

404/BIC 404 Biochemistry. Semester course; 3 lecture hours. 3 credits. Prerequisites: CHE 301-302 or equivalents with permission of instructor. A presentation of intermediary metabolism, regulation, molecular genetics, biochemistry of nutrition, and selected topics of physiological/medical significance.

406 Inorganic Chemistry. Semester course; 3 lecture hours. 3 credits. Prerequisites: CHE 303 and 304. Advanced treatment of atomic structure, chemical bonding, properties of the elements, metal complexes, acid-base theory, and related subjects.

L406 Inorganic Chemistry Laboratory. Semester course; 1 lecture and 3 laboratory hours. 2 credits. Pre- or corequisite: CHE 406. Examination of inorganic non-metal, transition metal, and organometallic compounds using modern inorganic methods of synthesis and characterization.

409 Instrumental Analysis. Semester course; 3 lecture and 4 laboratory hours. 4 credits. Prerequisites: CHE 301, 302, 303, 304, and 309. Theory and practice of modern spectrophotometric, electroanalytical, and chromatographic techniques. Atomic absorption, selective ion electrodes, and uses of operational amplifiers.

492 Independent Study. Semester course; variable credit, maximum of 4 credits per semester; maximum total for all independent study courses 8 credits. Open generally to students of junior or senior standing who have completed CHE 302, CHE L302, and CHE 309 and have a minimum GPA of 2.5 in chemistry courses. A determination of the amount of credit and the written permission of both the instructor and the department chairman must be procured prior to registration for the course. Investigation of chemical problems through literature search and laboratory experimentation.

493 Chemistry Internship. Semester course; variable credit, maximum of 3 credits. One credit will be given for each 150 hours (approximately one month) of part-time or full-time chemical work experience. Prerequisite: open to students who have completed 24 credits in chemistry. Permission of advisor and department chairman must be obtained prior to registration for the course. Acquisition of chemistry laboratory experience through involvement in a professional chemistry setting.

510 Atomic and Molecular Structure. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 301 and PHY 208. Survey of the pertinent aspects of quantum mechanics. Line spectra, atomic structure and molecular bonding.

COURSES IN CHINESE (CHI)

101–102 Elementary Chinese. Continuous course; 5 lecture/recitation hours. 4–4 credits. Elementary grammar, reading,

and oral drill.

201–202 Intermediate Chinese. Continuous course; 3 lecture hours. 3–3 credits. Rapid review of the essentials of grammar, conversation, and readings from Chinese literature.

COURSES IN THE COLLEGE OF HUMANITIES AND SCIENCES (CHS)

CHS 190 College Seminar. 1 lecture hour. 1 credit. A seminar designed for first-year programs coordinated through the Office of the Dean of the College of Humanities and Sciences. Designed to help students integrate general education courses. Open only to students who participate in these programs. May be repeated once for credit.

CHS 491 College Topics. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for maximum of six credits. A discussion of complex issues that are of enduring value or of critical interest to society. The goals of the course are to (1) bring general principles from disciplinary or a variety of disciplinary contexts to bear on specific problems; (2) exercise critical thinking; (3) understand and integrate diverse perspectives; and (4) explore models of decision-making, underlying assumptions, and implications. Open primarily to seniors; others with permission of instructor. See *Schedule of Classes* for specific issues to be offered each semester.

COURSES IN COMPARATIVE LITERATURE (CML)

301 Introduction to Comparative Literature. Semester course; 3 lecture hours. 3 credits. Prerequisite: one course in foreign or English literature. An introduction to the history, theory, and practice of comparative literature, with emphasis on practical exercises in the application of comparative methods.

391/Foreign Literature in English Translation 391 Topics in Comparative Literature. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum of 6 credits in all topics courses at the upper-division level. An in-depth study of selected topics in comparative literature. See *Schedule of Classes* for specific topics to be offered each semester.

421, 422/English 421, 422 Comparative Literature. Semester courses; 3 lecture hours. 3, 3 credits. A comparative study of the forms and contents of the literature of Western civilization in translation with some attention to the dominant influence on and inter-relationships between English and continental literatures. First semester: ancient, medieval, and renaissance. Second semester: neo-classical, romantic, and modern.

485 Seminar In Comparative Literature. Semester course; 3 lecture hours. 3 credits. Prerequisites: ENG 201–202 or equivalent, ENG 350, and 12 additional upper-division credits in English, foreign literature ARH, CML, FLT, or THE courses. Students will prepare individual papers or projects in comparative literature. The course will begin with some attention to comparative methods and procedures of independent work. Designed for comparative literature majors.

492 Independent Study. Semester course; variable credit, maximum 3 credits per semester; maximum total for all independent study courses in CML is 6 credits. Open generally only to students of junior or senior standing who have completed 12 upper-division credits in English, foreign literature, ARH, CML, FLT, or THE courses. Determination of course content and permission of the instructor must be obtained prior to registration for the course. The course is designed to give students an opportunity to become involved in independent study in a specific area of comparative literature in which they have an interest.

COURSES IN COMPUTER SCIENCE

(CSC) Computer science is one of the mathematical sciences. See Mathematical Sciences for course descriptions.

COURSES IN EARTH SCIENCE (EAS)

401 Meteorology and Climatology. Semester course; 3 lecture hours. 3 credits. Prerequisite: GEO 203 or a physical science sequence or permission of instructor. A basic, semi-quantitative course in the elements of weather and climate, their driving forces, and their spatial and temporal distribution and variability. Atmospheric motions and circulation, weather forecasting, human impact on weather, and climate.

L401 Meteorology and Climatology Laboratory. Semester course; 3 laboratory hours. 1 credit. Pre- or corequisite: EAS 401. A series of laboratory and field experiments designed to quantify the elements of weather and climate and to interpret their local temporal and spatial variations.

411 Oceanography. Semester course; 3 lecture hours. 3 credits. Prerequisite: GEO 203 or 204 or PHY 101 or a natural science sequence or permission of instructor. A basic course in the physical, chemical, and geological properties of oceans and ocean basins. Origin and character of ocean basins, properties of oceanic waters, oceanic circulation, land-sea interactions, marine environments, and ecology. Designed for earth science teachers.

COURSES IN ECONOMICS (ECO)

See the School of Business section in this *Bulletin* for course descriptions.

COURSES IN ENGLISH (ENG)

001 Fundamentals of English Composition. Semester course; 3 lecture hours. 0 credits. A course designed to prepare students for ENG 101 Composition and Rhetoric by teaching them to write clear sentences and well-developed, well-organized paragraphs. (This course is recommended for students who have not previously studied grammar and composition extensively and will be required for those students whose English placement scores indicate inadequate preparation in grammar and composition.

002 English as a Second Language. Semester course; 2 laboratory and 2 lecture hours. 0 credits. Instruction in English pronunciation, grammar, vocabulary, and writing for students whose native language is not English. Primarily

for students whose English as a second language skills are at the intermediate level.

101–102 Composition and Rhetoric. Continuous course; 3 lecture hours. 3–3 credits. First semester: fundamentals of effective writing and critical analysis. Second semester: more complex writing and analysis—principles of critical thinking, the uses of research, and responsible use of evidence. Students may be exempted from 101 by achieving an appropriate score on the Test of Standard Written English (TSWE), which is used as the VCU English Placement Test. Students exempted through TSWE will not receive credit for 101. Credit for 101 and/or 102 may, however, be earned through appropriate scores on the Advanced Placement or CLEP examinations.

114 English Grammar and Usage. Semester course; 3 lecture hours. 2 credits. Prerequisite: ENG 101 or permission of the director of composition and rhetoric. An intensive study of the fundamentals of English grammar, usage, punctuation, mechanics, and spelling through drills and written exercises. This course is not equivalent to English 101 or 102, and these credits may not be used to satisfy the College of Humanities and Sciences degree requirement in composition and rhetoric.

NOTE: ENG 101–102 is prerequisite to all the following English courses.

201, 202 Western World Literature. Semester courses; 3 lecture hours. 3, 3 credits. A general study of Western world literature, including English and American literature. First semester: Homer to Shakespear. Second semester: Milton to Faulkner.

203, 204 British Literature. Semester courses; 3 lecture hours. 3, 3 credits. A survey of the literature of Britain with collateral readings, discussions, and reports. First semester: *Beowulf* to Johnson. Second semester: Wordsworth to Auden.

205, 206 American Literature. Semester courses; 3 lecture hours. 3, 3 credits. A survey of the literature of the United States. First semester: before 1865. Second semester: since 1865.

209, 210/Art History 209, 210 American Art and Literature. Semester courses; 3 lecture hours. 3, 3 credits. A general survey of the form and content of American art and literature with special emphasis on the relationships between visual and literary works. First semester: before 1865. Second semester: since 1865.

211, 212/Art History 211, 212 Western World Art and Literature. Semester courses; 3 lecture hours. 3, 3 credits. A general survey of the form and content of Western world art and literature with special emphasis on the relationships between visual and literary works. First semester: ancient Greece through the sixteenth century. Second semester: seventeenth century to present.

215 Introduction to Literary Genres. Semester course; 3 lecture hours. 3 credits. A study of the major literary genres (e.g., poetry, fiction, drama), designed to develop an understanding and appreciation of literature.

216 Stories. Semester course; 3 lecture hours. 3 credits. A study of what makes good or satisfying storytelling through discussion of such narrative forms as jokes, folktales, radio scripts, children's tales, short stories, and novels.

236/Women's Studies 236 Women in Literature. Semester course; 3 lecture hours. 3 credits. A study of literature by and about women with the intent of exploring images of women as reflected in fiction, poetry, and drama.

241 Introduction to Shakespeare. Semester course; 3 lecture hours. 3 credits. A close reading of a limited number of plays with careful attention to Shakespeare's art and dramatic conventions.

291 Topics in Language or Literature. Semester course; 3 lecture hours. 3 credits; maximum 6 credits in all topics courses at the 200 level. An in-depth study of a selected topic or genre in language or literature. See *Schedule of Classes* for specific topic to be offered each semester.

300 Practical Writing Workshop. Semester course; 3 workshop hours. 1–3 credits; 5, 10, or 15 weeks. Prerequisite: ENG 101–102. Practical Writing Workshop is a variable credit course covering organization, writing, and revision skills useful in upper-level university classes and on-the-job situations. Classes will be conducted as workshops, discussions, and lectures. Assignments may consist of paragraphs, revision exercises, research reports, summaries, critical reviews, letters, and resumes. Does not satisfy the Humanities and Sciences minimum competency writing requirements or count toward requirements for the English major or minor.

302 Legal Writing. Semester course; 3 lecture hours. 3 credits. Intensive practice in writing on subjects related to law or legal problems. Emphasis on organization, development, logical flow, and clarity of style. May not be used to satisfy the literature requirement of the College of Humanities and Sciences requirement in literature.

304 Advanced Composition. Semester course; 3 lecture hours. 3 credits. An advanced study of the writing of nonfiction prose, such as interviews, reviews and criticism, satire and humor, scientific and analytic writing. Techniques of rewriting and publishing will also be considered. May not be used to satisfy the literature requirement of the College of Humanities and Sciences.

305 Creative Writing: Genres. Semester course; 3 workshop hours. 3 credits. May be repeated once for credit. Sections: poetry, fiction, drama, or multigenre. A workshop primarily for students who have not produced a portfolio of finished creative work. Students will present a collection of their work at the end of each course. See *Schedule of Classes* for specific genres to be offered each semester. May not be used to satisfy the literature requirement of the College of Humanities and Sciences requirements in literature.

307/Education 307 Teaching Writing Skills. Semester course; 3 lecture hours. 3 credits. Studies the theory and methods for teaching writing to students in middle and secondary schools. Teaches strategies for prewriting, composing, peer revision, evaluation, and topic construction. Includes extensive journal and essay writing. May not be used to satisfy the literature requirements of the College of Humanities and Sciences.

313 Southern Literature. Semester course; 3 lecture hours. 3 credits. A study of the literature of the South with attention to writers such as Byrd, Poe, Chopin, Faulkner, Welty, Wolfe, O'Connor, Walker, and Percy.

314/Afro-American Studies 314 Black American Writers. Semester course; 3 lecture hours. 3 credits. An examination

of the contribution of black writers in America from colonial times to the present.

315 The Modern Novel. Semester course; 3 lecture hours. 3 credits. An examination of the novel, chiefly British and European, in the twentieth century.

316 Modern Poetry. Semester course; 3 lecture hours. 3 credits. A study of British and American poetry in the first half of the twentieth century.

317 Modern Drama. Semester course; 3 lecture hours. 3 credits. A study of the development of Continental, English, and American drama since Ibsen.

318 Contemporary Poetry. Semester course; 3 lecture hours. 3 credits. A study of British and American poetry from approximately 1950 to the present for the purpose of determining the aesthetic and thematic concerns of contemporary poets.

319 Age of Dryden and Pope. Semester course; 3 lecture hours. 3 credits. English literature of the Restoration and early eighteenth century with special attention to Dryden, Defoe, Addison, Steele, Swift, Pope, and Gay.

320 Age of Johnson. Semester course; 3 lecture hours. 3 credits. English literature of the later eighteenth century with emphasis on the Johnson-Boswell circle.

321 Romantic Literature. Semester course; 3 lecture hours. 3 credits. A survey of the poetry and prose of Romanticism in England, usually including Blake, Wordsworth, Coleridge, Byron, the Shelleys, and Keats.

322 Victorian Poetry. Semester course; 3 lecture hours. 3 credits. A survey of the poetry of Victorian England, usually including Tennyson, the Brownings, Arnold, and the pre-Raphaelites.

323 Twentieth Century British Literature. Semester course; 3 lecture hours. 3 credits. Representative British poetry, fiction, and drama of the twentieth century, usually including Yeats, Joyce, Shaw, Lawrence, Conrad, Auden, Forster, Woolf, Thomas, and Orwell.

327/Business 327 Business and Technical Report Writing. Semester course; 3 lecture hours. 3 credits. Development of critical writing skills used in business, science, technology, and government, including instructions, descriptions, process explanations, reports, manuals, and proposals. The course will include such topics as communication theory, technical style, illustrations, formats for proposals, reports, and manuals. May not be used to satisfy the literature requirement of the College of Humanities and Sciences.

335 The Glories of the English Renaissance. Semester course; 3 lecture hours. 3 credits. An introduction to some of the most exciting works of a dynamic age, providing an understanding not only of the achievements of Shakespeare, Spenser, and Milton, but also of the literary period from which they emerged.

350 Approaches to Literature. Semester course; 3 lecture hours. 3 credits. The study and application of various critical approaches—historical, sociocultural, psychological, archetypal, and formalist—used in analyzing literary works.

351/Education 351 Children's Literature I. Semester course; 3 lecture hours. 3 credits. Designed to give students an appreciation of children's literature; includes biography, fable, myth, traditional and modern fanciful tales, and

poetry, as well as a survey of the history of children's literature. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

361/Religious Studies 361 The Bible As Literature. Semester course; 3 lecture hours. 3 credits. Literary aspects of the Bible will be considered. Also attention will be given to the history of the English Bible.

363/Afro-American Studies 363 African Literature. Semester course; 3 lecture hours. 3 credits. The study of African oral performances and written literatures in English with emphasis on the literature of West and South Africa.

365/Afro-American Studies 365 Caribbean Literature. Semester course; 3 lecture hours. 3 credits. A survey of West Indian writings. Attention will be given to African, European, and Amerindian influences, as well as to the emergence of a West Indian literary tradition.

367 Eastern Thought In Western Literature. Semester course; 3 lecture hours. 3 credits. An exploration of the influence of Eastern thought on Western writers, with emphasis on the period from the nineteenth century to the present.

371 American Literature: Colonial and Federal. Semester course; 3 lecture hours. 3 credits. A study of the most important writings from the founding of the first colonies to the establishment of the federal government with attention to such authors as Bradford, Byrd, Bradstreet, Taylor, Edwards, and Franklin.

372 American Literature: American Romanticism. Semester course; 3 lecture hours. 3 credits. A study of the most important writings of the American romantics in the nineteenth century, with attention to such authors as Poe, Emerson, Thoreau, Fuller, Hawthorne, Melville, and Whitman.

373 American Literature: Realism and Naturalism. Semester course; 3 lecture hours. 3 credits. A study of the most important writings from the end of the Civil War to the coming of World War I, with attention to such authors as Dickinson, Clemens, Howells, James, Wharton, Crane, Norris, and Dreiser.

374 American Literature: Early Twentieth Century. Semester course; 3 lecture hours. 3 credits. A study of the most important writings between World War I and World War II, with attention to such authors as Frost, Eliot, Stein, Glasgow, Moore, Fitzgerald, Wright, Cather, Hemingway, and Faulkner.

375 American Literature: Contemporary. Semester course; 3 lecture hours. 3 credits. A study of the most important writings since World War II, with some attention to such authors as Baldwin, Bellows, Ellison, Lowell, Mailer, Malamud, Updike, and Wilbur.

381 Fiction Into Film. Semester course; 2 lecture and 1 laboratory hour. 2 or 3 credits, 10 to 15 weeks, decided in advance. A study of the translation of literature into film. Topical approaches vary from semester to semester. Consideration is given to the literature in its original form and to the methods of translating it into film.

384/WST 384. Women Writers. Semester course; 3 lecture hours. 3 credits. A study of selected literature written by women and about women writers. May be repeated once when different writers are studied.

386/Anthropology 386 Introduction to Folklore. Semester course; 3 lecture hours. 3 credits. A survey of the basic forms of folklore including proverbs, riddles, ballads, folktales, legends, myths, and games. The survey will also include approaches to collecting material and examining its literary, social, and historical significance.

390 Studies In Satire. Semester course; 3 lecture hours. 3 credits. Studies in the satiric mode, with some attention to the definition and development of the mode.

391 Topics In Literature. Semester course; 3 lecture hours. 3 credits; maximum 12 credits in all topic courses at the upper-division level. Prerequisite: junior standing. An in-depth study of a literary genre, an aesthetic or cultural theme in literature, or of a major writer in English or American literature. See *Schedule of Classes* for specific topic to be offered each semester.

***400 Shakespeare: The Early Works.** Semester course; 3 lecture hours. 3 credits. Study of the plays and poems written before 1600, focusing primarily on the comedies and histories.

***401 Shakespeare: The Later Works.** Semester course; 3 lecture hours. 3 credits. Study of the plays written in 1600 and after, focusing primarily on the mature tragedies and late romances.

***402 Chaucer.** Semester course; 3 lecture hours. 3 credits. A study of *The Canterbury Tales* and *Troilus and Criseyde*, with some attention to the lesser works.

***403 Milton.** Semester course; 3 lecture hours. 3 credits. A study of shorter poems, selected prose, *Paradise Lost*, and *Samson Agonistes*.

407 Medieval Epic and Romance. Semester course; 3 lecture hours. 3 credits. A study of the vernacular epic and the romance in England and on the continent prior to 1500.

409 Medieval Studies:

Semester course; 3 lecture hours. 3 credits. Studies in the English language and literature of the Middle Ages. May be repeated with different topics for a maximum of six credits.

410 Renaissance Studies:

Semester course; 3 lecture hours. 3 credits. Studies in the English language and literature of the sixteenth and seventeenth centuries. May be repeated with different topics for a maximum of six credits.

414 American Novels and Narratives. Semester course; 3 lecture hours. 3 credits. A study of selected American novels from 1789 to the present with some attention to other forms of narrative that reflect the varied experiences of diverse groups of Americans.

415 English Novel, Eighteenth Century. Semester course; 3 lecture hours. 3 credits. A study of the English novel from its beginning through Jane Austen, usually including Defoe, Richardson, Fielding, Smollett, and Sterne.

416 English Novel, Nineteenth Century. Semester course; 3 lecture hours. 3 credits. A study of the English novel, usually including Dickens, Thackeray, the Brontes, Eliot, and Hardy.

421, 422/Comparative Literature 421, 422 Comparative Literature. Semester courses; 3 lecture hours. 3, 3 credits. A comparative study of the forms and contents of the literature of Western civilization in translation with some attention to

the dominant influence on and interrelationships between English and continental literatures. First semester: ancient, medieval, and renaissance. Second semester: neoclassical, romantic, and modern.

423 English Drama, 900–1642. Semester course; 3 lecture hours. 3 credits. A study of the origin of the English drama and its development until the closing of the theaters in 1642, exclusive of Shakespeare.

424 Restoration and Eighteenth Century Drama. Semester course; 3 lecture hours. 3 credits. A study of English drama from Dryden to Goldsmith, usually including the comedy of wit, sentimental comedy, ballad opera, farce, and heroic and bourgeois tragedy.

426–427/Theatre 426–427 Playwriting. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: ENG 317 or permission of instructor. A practical introduction to the creation of original scripts for theatre. Works may be selected for reading and performance. May not be used to satisfy the College of Humanities and Sciences requirements in literature.

429 Form and Theory of Poetry. Semester course; 3 lecture hours. 3 credits. A study of the poetic process with the aim of showing readers how poems are created and come to have meaning, and giving readers the language and methods of critical analysis and synthesis.

430 Form and Theory of Fiction. Semester course; 3 lecture hours. 3 credits. A study of the process of fiction writing with the air of showing readers how novels and stories are created and come to have meaning, and giving readers the language and methods of critical analysis and synthesis.

433/Education 433 Literature for Adolescents. Designed to acquaint the prospective secondary school English teacher with the nature, scope, and uses of adolescent literature. The student is acquainted with reading materials for meeting the varied needs and interests of adolescents. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

435, 436 Creative Writing: Poetry. Semester courses; 3 workshop hours. 3, 3 credits. Prerequisite: permission of instructor. Study of the craft of writing, with instruction and guidance toward constructive self-criticism. Workshop members will be expected to produce a substantial volume of quality work and to become proficient in critical analysis in order to evaluate and articulate the strength of their own poetry. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

437, 438 Creative Writing: Fiction. Semester courses; 3 workshop hours. 3, 3 credits. Prerequisite: permission of instructor. Study of the craft of fiction writing, with instruction and guidance toward constructive self-criticism. Workshop members will be expected to produce a substantial volume of short stories or portion of a novel and to become proficient in the critical analysis of fiction in order to evaluate and articulate the strength of their own work. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

***449/Linguistics 449 Introduction to Linguistics.** Semester course; 3 lecture hours. 3 credits. An introduction to methods of language analysis, emphasizing the study of sounds and sound patterns, and units of meaning and their

arrangements. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

***450/Linguistics 450 Modern Grammar.** Semester course; 3 lecture hours. 3 credits. Study of modern English grammar and usage with some attention to linguistic theory. Recommended for teachers at all levels. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

***451/Linguistics 451 History of the English Language.** Semester course; 3 lecture hours. 3 credits. The historical development of the English language; etymology, morphology, orthography, and semantics. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

453/Linguistics 453 Introduction to Modern Rhetoric. Semester course; 3 lecture hours. 3 credits. An introduction to the broad range of modern rhetorical theories, emphasizing their relationships with linguistics, literary criticism, and the process of writing. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

491 Topics in Literature. Semester course; 3 lecture hours. 3 credits; maximum 12 credits in all topics courses at the upper-division level. An in-depth study of a selected literary topic or genre or of one or two major writings in English or American literature. See *Schedule of Classes* for specific topic to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum 3 credits per semester. Student may take no more than 9 hours total. Generally open only to upper-class students with at least 12 hours of English. To register, the student must write a proposal and have it approved by the supervising instructor, the director of undergraduate studies, and the department chairperson. This course is designed for students who wish to do extensive reading and writing in a subject not duplicated by any English course in the *Bulletin*. It may not be used for a writing project.

493 English Internship. Semester course; 1–3 credit hours per semester, maximum total of 6 credits. Open to students with demonstrable writing ability; completion of ENG 302, 304, or 327 is recommended. Students will apply research, writing, and/or editing skills in an approved job in areas such as business, government, law, or financial services. Permission and determination of credit must be established prior to registration.

552/Education 552 Teaching English as a Second Language. Semester course; 3 lecture hours. 3 credits. Provides students who plan to teach English to people whose native language is not English with techniques used in teaching foreign languages. Contrastive analyses of morphology, phonology, and syntax are used to isolate areas of difficulty in learning English.

COURSES IN ENVIRONMENTAL STUDIES (ENS)

490 Research Seminar in Environmental Studies. Semester course; 3 lecture hours. 3 credits. Prerequisite: senior standing and at least 12 hours of approved environmental studies course work. An interdisciplinary examination of problems and issues central to environmental studies. Environmental research of VCU faculty will be reviewed,

and selected local environmental problems will be studied. A research project focusing on a specific environmental question will be completed by each student.

491 Topics in Environmental Studies. Semester course; variable credit, 1–3 credits per semester; may be repeated with different topics for a maximum of 6 credits. Prerequisites vary by topic; see class schedule for specific prerequisites. An in-depth study of a selected environmental topic.

492 Independent Study. Semester course; variable credit, maximum 3 credits per semester; maximum total credits for all topics courses 6 credits. Open generally to juniors or seniors who have declared environmental studies as a minor. Determination of the amount of credit and permission of instructor must be procured prior to registration for the course.

493 Environmental Studies Internship. Semester course; variable credit. 1–3 credits per semester; maximum total of 6 credits. Open generally to students of senior standing. Students receive credit for work on environmental projects with approved agencies. Participation requires the approval of both a faculty member and an agency.

COURSES IN EUROPEAN CULTURES (EUC)

307 Aspects of German Culture. Semester course; 3 lecture hours. 3 credits. A broad interdisciplinary approach to an understanding of German culture, language, and literature. Lectures in English by guest speakers and/or use of films as required. (This course will not satisfy foreign language requirements. No knowledge of German is required. All work is done in English.)

311 Classical Mythology. Semester course; 3 lecture hours. 3 credits. The basic myths of the Greek and Roman heritage. Their impact in culture then and now; from the origins of Greek myth to the superstitions of the late Roman and early Christian world.

340/Urban Studies 350 Culture and Urbanism in Great European Cities. Semester course; 3 lecture hours. 3 credits. Prerequisite: sophomore standing or permission of instructor. Course may be repeated under different topics for a total of six credits. An interdisciplinary course with a dual focus on the origin, expansion, and significance of an important European city and on reflections of urbanism in its culture. Particular emphasis will be placed on relating the physical, social and economic aspects of the city's growth and development to the cultural dimensions of urbanism, especially as the latter are manifested in major works of literature.

COURSES IN FOREIGN LITERATURE IN ENGLISH TRANSLATION (FLT)

311 The Humanist Quest in French Literature. Semester course; 3 lecture hours. 3 credits. A study of the developing concept of humanism in French literature from the Middle Ages to the end of the eighteenth century. (This course will not satisfy foreign language requirements. No knowledge of French is required. All work is done in English.)

312 Revolt and Renewal in Modern French Literature. Semester course; 3 lecture hours. 3 credits. A study of the

twin themes of revolt and renewal in French literature of the nineteenth and twentieth centuries. (This course will not satisfy foreign language requirements. No knowledge of French is required. All work is done in English.)

321 Early German Literature. Semester course; 3 lecture hours. 3 credits. Changing perspectives in German literature from its pagan beginnings, through the Medieval Golden Age, Baroque extremism, the Enlightenment, and Storm and Stress up to Classicism and Goethe's *Faust*. Treatment of *The Nibelungenlied*, the courtly epic, *Simplicissimus*, and selections by Lessing, Schiller, and Goethe. (This course will not satisfy foreign language requirements. No knowledge of German is required. All work is done in English.)

322 Modern German Literature. Semester course; 3 lecture hours. 3 credits. Growing psychological awareness and alienation of the individual in German literature of the nineteenth and twentieth centuries. Representative works chosen from among writers of the past century and such modern writers as Thomas Mann, Kafka, Hesse, Brecht, Boll, and Grass. (This course will not satisfy foreign language requirements. No knowledge of German is required. All work is done in English.)

391 Topics in Foreign Literature in English Translation. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a total of 12 credits. An in-depth study of selected topics in foreign literature. (This course will not satisfy foreign language requirements. No knowledge of a foreign language is required. All work is done in English.)

492 Independent Study. Semester course; 1, 2, or 3 credits, maximum 3 credits per semester; maximum total of all FLT independent study courses 6 credits. Open generally only to students of junior or senior standing who have acquired at least 12 hours in any literature courses. Determination of course content and permission of the instructor and department chairman must be obtained prior to registration for the course. A course designed to give students an opportunity to become involved in independent study in a literary or linguistic area or subject in which they have an interest and for which they have the necessary background.

COURSES IN FRENCH (FRE)

101–102 Elementary French. Continuous course; 5 lecture/recitation hours. 4–4 credits. Elementary grammar, reading, and oral drill.

201 Intermediate French. Semester course; 3 lecture hours. 3 credits. Continuation of the essentials of grammar with emphasis on achieving proficiency in aural comprehension, speaking, reading, and writing skills.

NOTE: In order to complete French through the intermediate level, a student may select French 202 or 205.

202 Intermediate French Readings. Semester course; 3 lecture hours. 3 credits. Prerequisite: FRE 201 or the equivalent. Designed to increase the student's proficiency through the study of selected cultural and literary texts.

205 Intermediate Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: FRE 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

301, 302 Survey of Literature. Semester courses; 3 lecture hours. 3, 3 credits. Conducted in French. Prerequisite: French through the intermediate level or the equivalent. First semester: through the eighteenth century. Second semester: nineteenth and twentieth centuries.

303, 304 Advanced Grammar and Writing. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: French through the intermediate level or the equivalent. A systematic review of French grammar with emphasis on the elements of style and vocabulary building; translation and composition.

305 French Conversation. Semester course; 3 lecture hours. 3 credits. Conducted in French. Prerequisite: French through the intermediate level or the equivalent. Practice in the spoken language with emphasis on discussions relating to topics of current interest.

306 French Civilization I. Semester course; 3 lecture hours. 3 credits. Conducted in French. Prerequisite: French through the intermediate level or the equivalent. A survey of the civilization and culture of France from the origins to the French Revolution.

307 French Civilization II. Semester course; 3 lecture hours. 3 credits. Prerequisite: French through the intermediate level or the equivalent. Conducted in French. A treatment of French culture from the Napoleonic era to the present with a particular focus on the French-speaking countries.

311 French Through the Media. Semester course; 3 lecture hours. 3 credits. Prerequisite: French through the intermediate level or the equivalent. A course designed to develop language proficiency by using material available through the various media; newspapers, magazines, films, slides, and radio broadcasts.

314 Commercial French. Semester course; 3 lecture hours. 3 credits. Prerequisite: French through the intermediate level or the equivalent. The course will develop the student's ability to use the French language as a means of oral and written communication in the business world. Particular emphasis will be given to the study of the technical tools necessary for the task of translating in specialized fields. This course may be used to satisfy degree requirements for the B.A. in French only within Track Three, the preprofessional track.

NOTE: FRE 301, 302, or 303, 304 are prerequisite to all of the following courses.

411 The Middle Ages. Semester course; 3 lecture hours. 3 credits. Reading and discussion of the following: *La Chanson de Roland*, Chretien de Troyes, *Erec et Enide*; *Aucassin et Nicolette*; Villon.

412 The Sixteenth Century. Semester course; 3 lecture hours. 3 credits. A study of the Rhetoriqueurs; Rabelais; the Court of Francis I; the Pleiade; selections from Montaigne's *Essais*; the Baroque poets.

413 The Seventeenth Century. Semester course; 3 lecture hours. 3 credits. Conducted in French. Baroque and Classical readings including prose, poetry, and drama of the authors of the reign of Louis XIV; Pascal, La Rochefoucauld, La Bruyere, Corneille, Racine, and Moliere.

416 The Eighteenth Century. Semester course; 3 lecture hours. 3 credits. Principal movements in the various genres; the "philosophies;" the growth of liberalism as reflected in

the literature of Montesquieu, Voltaire, Diderot, and Rousseau. Readings from Marivaux, Prevost, and Vauvenargues.

417 The Nineteenth Century. Semester course, 3 lecture hours. 3 credits. A detailed study of the major movements in nineteenth-century French literature: *Romanticism*-Chateaubriand, Lamartine, Hugo, Balzac, and Stendhal; *Realism*-Flaubert; *Naturalism*-Zola; and *Symbolism*-Baudelaire, Verlaine, Rimbaud, and Mallarme/.

420 The Twentieth Century. Semester course; 3 lecture hours. 3 credits. Readings and discussion of the novel from Proust to the "nouveau roman," of the drama from Surrealism to Antitheatre, and of poetry from Symbolism to contemporary poets.

491 Topics in French. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a total of six credits. An in-depth study of selected topics in French. See *Schedule of Classes* for specific topic to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum 3 credits per semester; maximum total for all independent study courses in French 6 credits. Open generally only to students of junior or senior standing who have six credits of upper-level French courses and/or have a demonstrated competency in the language. Determination of course content and permission of the instructor must be obtained prior to registration for the course. A course designed to give students an opportunity to become involved in independent study in a literary or linguistic area or subject in which they have an interest.

COURSES IN GEOGRAPHY (GEO)

102 Introduction to Cultural Geography. Semester course; 3 lecture hours. 3 credits. An introduction to the way in which man has modified his world, emphasizing the patterns of migration, the livelihoods of man, and the environments in which these modifications took place and continue to occur.

203, 204 Physical Geography. Semester courses; 3 lecture hours. 3, 3 credits. Analysis of the interrelated systems of the earth. First semester: the earth in space, atmosphere, climate, natural vegetation, soils. Second semester: landforms, hydrology, oceanography. Physical Geography Laboratories L203, L204 are optional.

L203, L204 Physical Geography Laboratory. Semester courses; 2 laboratory hours. 1, 1 credits. Pre- or corequisite; GEO 203 for L203, GEO 204 for L204. Optional. First semester: the earth in space, map reading, climates, vegetation, soils. Second semester: landforms, geologic maps, hydrology, oceanography.

207, 208 World Regions. Semester courses; 3 lecture hours. 3, 3 credits. An examination of the various regions of the earth, including land forms, climate, resources, peoples, agriculture, and urban conditions. First semester: Anglo-America, Latin America, Western Europe, Eastern Europe, USSR. Second semester: Middle East and North Africa, Africa (south of the Sahara), Indian Subcontinent, China, Japan, Southeast Asia, Oceania.

311/ANT 311, 312 History of Human Settlement. Semester courses; 3 lecture hours. 3, 3 credits. A cultural geography of

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man's diffusion over the earth, agricultural and urban systems, exploration, migration and colonization, and changing attitudes toward the environment. First semester: before 1750. Second semester: during and since the Industrial Revolution.

322 World Political Geography. Semester course; 3 lecture hours. 3 credits. A study of geographic factors in world power and international affairs, including such topics as resources, national unity, boundaries, etc. Specific areas of international tension may also be considered.

333/Afro-American Studies 333 Geography of Africa. Semester course; 3 lecture hours. 3 credits. A study of the land forms, climate, peoples, boundaries, trade, and cultural groupings of the African continent.

334 Regional Geography of _____. Semester course; 3 lecture hours. 3 credits. A study of the land forms, climate, resources, peoples, agricultural and urban conditions in a specific region such as North America, Europe, Latin America, the Middle East and India, the USSR, and Eastern Europe. See *Schedule of Classes* for specific region to be studied each semester.

391 Topics in Geography. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics to a maximum of nine credits. An in-depth study of a selected topic in geography. See *Schedule of Classes* for specific topics to be offered each semester.

451 Cultural Geography of Virginia. Semester course; 3 credits. Examination of various cultural geographic factors, focusing on such subjects as contemporary or historical settlement patterns, rural and/or urban development, ethnic groups and migration patterns, or environmental problems. May include field trips.

460 Richmond and its Environs. Semester course; 4 field/lecture hours. 3 credits. Prerequisite: upper-division standing or permission of instructor. An analysis through lectures, discussions, and field trips of Richmond's physical characteristics (its site); relationship with the counties surrounding it (its situation); and the changes in its site and situation caused by cultural, economic, historical, and physical factors.

492 Independent Study. Semester course; variable credit, 2–4 credits per semester; maximum total of 6 credits. Open generally only to students of junior or senior standing. Determination of the amount of credit and permission of instructor and department chairman must be obtained prior to registration for the course. To be eligible, students must have 12 credits in geography or in geography and geology.

COURSES IN GERMAN (GER)

101–102 Elementary German. Continuous courses; 5 lecture/recitation hours. 4–4 credits. Elementary grammar, reading, and oral drill.

201 Intermediate German. Semester course; 3 lecture hours. 3 credits. Continuation of the essentials of grammar with emphasis on achieving proficiency in aural comprehension, speaking, reading, and writing skills.

NOTE: In order to complete German through the intermediate level, a student may elect German 202 or 205.

202 Intermediate German Readings. Semester course; 3 lecture hours. 3 credits. Prerequisite: GER 201 or the

equivalent. Designed to increase the student's proficiency in German through the study of selected cultural and literary texts.

205 Intermediate Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: GER 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

301, 302 Survey of Literature. Semester courses; 3 lecture hours. 3, 3 credits. Conducted in German. Prerequisite: German through the intermediate level or the equivalent. First semester: beginnings of German literature through the literature of the first half of the nineteenth century. Second semester: contemporary German literature.

303, 304 Advanced Grammar and Writing. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: German through the intermediate level or the equivalent. A systematic review of German grammar with emphasis on the elements of style and vocabulary building.

305 German Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. Conducted in German. Practice in the spoken language with emphasis on discussions relating to topics of current interest.

306 German Civilization I. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. Conducted in German. A survey of German and Austrian culture from their origins to the founding of the German Empire in 1871.

307 German Civilization II. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. German 306 recommended. Conducted in German. A treatment of German and Austrian culture from the founding of the German Empire in 1871 to the present. Particular emphasis on life in modern-day Austria, the Federal Republic of Germany, and the German Democratic Republic.

311 German Through the Media. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. A course designed to develop language proficiency by using material available through the various media: newspapers, magazines, films, slides, radio broadcasts.

314 Commercial German. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. Designed to develop the student's ability to use German as a means of oral and written communication in the business world. Emphasis on the acquisition of technical tools necessary for business exchanges in specialized fields.

NOTE: GER 301, 302, or 303, 304 are prerequisite to all of the following courses.

416 The Age of Goethe. Semester course; 3 lecture hours. 3 credits. Conducted in German. A course centering on the major movements during Goethe's lifetime: enlightenment, storm and stress, classicism, and romanticism.

417 Literature of the Nineteenth Century. Semester course; 3 lecture hours. 3 credits. Conducted in German. A course covering the period of romanticism, *Biedermeier* and *Junges Deutschland*, and the periods of realism and naturalism.

420 Literature of the Early Twentieth Century. Semester course; 3 lecture hours. 3 credits. Conducted in German. A course dealing with the major authors of the periods of impressionism, expressionism, and *neue Sachlichkeit* during the first half of the twentieth century.

421 Modern Literature. Semester course; 3 lecture hours. 3 credits. Conducted in German. A course dealing with the literature of the post-war period leading up to the present.

491 Topics in German. Semester course; 3 lecture hours. 3 credits; may be repeated with different topics for a maximum of 6 credits. An in-depth study of selected topics in German. See *Schedule of Classes* for specific topics to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum 3 credits per semester; maximum total for all independent study courses in German 6 credits. Open generally only to students of junior or senior standing who have six credits of upper-level German courses and/or have a demonstrated competency in the language. Determination of course content and permission of the instructor must be obtained prior to registration for the course. A course designed to give students an opportunity to become involved in independent study in a literary or linguistic area or subject in which they have an interest.

COURSE IN HEALTH SCIENCES (HES)

101 Introduction to Health Related Professions. Semester course; 2 lecture hours. 1 credit. A study of the various health professions, their educational requirements, the duties involved, and their role in the health care team.

COURSES IN HISTORY (HIS)

101, 102 Introduction to European History. Semester courses; 3 lecture hours. 3, 3 credits. A survey of the development of European civilization. First semester: to sixteenth century. Second semester: sixteenth century to the present.

103, 104 Introduction to American History. Semester courses; 3 lecture hours. 3, 3 credits. The history and civilization of the United States from the Age of Discovery to the present, with emphasis on the forces and processes that were major influences in the development of American institutions and ideas. First semester: to Reconstruction. Second semester: Reconstruction to present.

105, 106/Afro American Studies 107, 108 Introduction to African History. Semester courses; 3 lecture hours. 3, 3 credits. An overview of African civilization from pre-history to the present, with emphasis on cultural developments as well as selected in-depth analyses of specific issues in African history. First semester: to 1800. Second semester: since 1800.

109, 110 Introduction to Latin American History. Semester courses; 3 lecture hours. 3, 3 credits. A survey of the history of the nations of Latin America from Indian civilizations to the present day. The first semester will go through the movements for independence ending in 1824. The second semester will cover the period since independence, 1824 to the present.

191 Topics in History. Semester course; variable credit. 1-3 credits per semester; maximum total of 6 credits. The study

of a selected topic or topics in history. See *Schedule of Classes* for specific topics to be offered each semester.

301, 302/Religious Studies 315, 316 The Ancient Near East. Semester courses; 3 lecture hours. 3, 3 credits. A study of the ancient Near Eastern civilizations of Mesopotamia, Egypt, Anatolia, and Syria-Palestine, from the preliterary period to that of the Archaemenid Empire of the Persians. First semester: preliterary period to the end of Kassite rule in Babylonia (c. 1160 B.C.). Second semester: the rise and fall of the great Neo-Assyrian, Neo-Babylonian, Hebrew, and Persian Empires (c. 331 B.C.).

303 Greek Civilization. Semester course; 3 lecture hours. 3 credits. A study of the unique cultural heritage of Greece and the historical patterns that rose from it, from the Heroic Age to the urban worlds after Alexander, 1400 B.C.-146 B.C.

304 Roman Civilization. Semester course; 3 lecture hours. 3 credits. A study of Roman history as it derived from Roman cultural institutions, from the Etruscan period through the conflict of the pagan and Christian worlds and advent of the barbarians, 753 B.C.-A.D. 454.

305 Introduction to Greek Archaeology. Semester course; 3 lecture hours. 3 credits. Selected centers of civilization in prehistoric, classical, and Hellenistic Greece: their rise, destruction, or renewal by urban planning; the history of classical archaeology, its growth, and impact on modern European art. Emphasis is on the living context of mature and complex peoples: Crete, Mycenaean, Classical, and Hellenistic Greece.

306 The Early Middle Ages. Semester course; 3 lecture hours. 3 credits. A topical, thematic, integrative, and problems approach to the emergence of a distinctive European community during the period frequently alluded to as the "Dark Ages."

307/Religious Studies 308 The High Middle Ages. Semester course; 3 lecture hours. 3 credits. A detailed historical analysis of the Gregorian Revolution, the Crusades, the Twelfth Century Renaissance, the Thomistic World, and the death of Medieval civilization.

308 Europe in Renaissance. Semester course; 3 lecture hours. 3 credits. Examination of the political, economic, social, cultural, and religious dimensions of the Italian and Northern European Renaissances.

309/Religious Studies 309 The Reformation. Semester course; 3 lecture hours. 3 credits. A careful and intensive inquiry into the spiritual and material forces and people involved in the reformation of Christendom in sixteenth century Europe.

310 Europe in Absolutism and Enlightenment, 1648-1815. Semester course; 3 lecture hours. 3 credits. Examines the political, social, and economic orders of Old Regime Europe in the context of their increasing contradictions; introduces the cultural and intellectual forces that helped challenge that regime; culminates in the French Revolution and Napoleon.

311 The Zenith of European Power, 1815-1914. Semester course; 3 lecture hours. 3 credits. A study of the period in which the nations of Europe reached their height of world power between the reconstruction of Europe after the Napoleonic Wars and the eve of World War I. Topics will include the rise of nationalism, liberalism, and socialism; the spread of capitalism and industrial society; the beginnings of

mass politics; the new imperialism; the diplomatic revolution in the European state system before World War I.

312 The Age of Total War: Europe, 1914–1945. Semester course; 3 lecture hours. 3 credits. A study of the transformation of European society precipitated by World War I and World War II. Emphasis will be placed on the origin, nature, and repercussions of total war; the crisis of democracy and the rise of modern dictatorships; changes in political, economic, and social institutions; and the decline of European power.

313 Post-War Europe, 1945 to the Present. Semester course; 3 lecture hours. 3 credits. An examination of Europe's social, economic, and political recovery after World War II and of the transformation of Europe from the center toward the periphery of world power.

315, 316 History of France. Semester courses; 3 lecture hours. 3, 3 credits. First semester: history of France from Gallo-Roman times through the French Revolution and the Napoleonic era. Second semester: from 1815 to the present.

317, 318 History of Germany. Semester courses; 3 lecture hours. 3, 3 credits. First semester: the rise of Prussia, decline of the Holy Roman Empire, and the German Confederation up to 1870. Second semester: Bismarck's Empire, the World Wars, Nazism, and post-1945 Germany.

319, 320 History of England. Semester courses; 3 lecture hours. 3, 3 credits. Traces the rise of England to world hegemony and the causes of its decline as a world power. First semester: Tudor Revolution in government, Reformation, English civil wars and Restoration. Second semester: Whig oligarchy, Industrial Revolution, Victorianism, impact of world wars, problems of Empire.

321, 322 History of Russia. Semester courses; 3 lecture hours. 3, 3 credits. Russian history from its origins to the present, emphasizing the development of political and social institutions and Russia's unique position between Europe and Asia. First semester: origins to 1861. Second semester: 1861 to the present.

323 History of Spain and Portugal. Semester course; 3 lecture hours. 3 credits. A survey of the history of the Iberian peninsula from ancient times to the present, with an emphasis on the distinctive culture and attitude toward life that developed south of the Pyrenees.

324 The Holocaust. Semester course; 3 lecture hours. 3 credits. A multidisciplinary examination of the events leading to and culminating in the Nazi extermination of six million Jews; the historical settings of European Jewry and of German fascism; the role of traditional anti-Semitism; the psychology of aggressor and victim; the Holocaust in art and literature, and the moral implications for today.

325, 326/Religious Studies 318, 319 History of the Jewish People. Semester courses; 3 lecture hours. 3, 3 credits. A study of the Jewish people from the destruction of the Second Temple in 70 A.D. to the present. First semester: Judea in Roman times, the Diaspora in Islam and in Europe, social and cultural trends, and the impact of the Emancipation. Second semester: the rise of the American Jewish community, the impact of modernism and growth of Reform, the beginnings and growth of Zionism, restoration in Palestine, the Holocaust, the creation of Israel, and the relations of Israel and World Jewry.

327/Religious Studies 327 History of Christianity. Semester course; 3 lecture hours. 3 credits. A historical and

theological examination of Christianity from its origin to the present. Emphasis will be upon an understanding of leading events, ideas, movements, and persons in their historical settings.

328 Modern Middle East. Semester course; 3 lecture hours. 3 credits. Analysis of the history, problems, and prospects of the nations and peoples of the Middle East with emphasis on developments since the Balfour Declaration of 1917.

329, 330 European Social History. Semester courses; 3 lecture hours. 3, 3 credits. Examines the institutions and structures of European society in the context of their changing interrelationships with politics, economics, ideas, and culture throughout European history. First semester: preindustrial Europe; Second semester: the Industrial Age.

331 Nazi Germany. Semester course; 3 lecture hours. 3 credits. The origin and nature of Hitler's Third Reich. A study of the failure of the Weimar Republic; genesis of the Nazi racial ideology and party structure; the Nazi political, social, and cultural order after the seizure of power; Nazi foreign policy leading to war and genocide; and an analysis of the personality of Hitler.

332 History in Film. Semester course; 3 lecture hours. 3 credits. An examination of the uses and misuses of historical events and personalities in film. Lectures and readings will be used to analyze critically films dealing with biographies, events, and propaganda.

333/Economics 419 History of Economic Thought. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 210–211. A survey of the ideas of major economic contributors to modern economic thought. Theories of value, growth, and distribution from the eighteenth through the twentieth centuries will be presented.

334 Comparative History of Revolutions. Semester course; 3 lecture hours. 3 credits. An historical investigation of the causes, events, results, and interpretation of revolution, focusing upon such subjects as revolutionary change in the ancient and medieval worlds, and the revolutions of the modern age in England, France, Mexico, Russia, China, and Cuba. Emphasis is on historical comparisons and the specific revolutions examined may vary.

335/Economics 320 Economic History of Europe. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 210–211 or 203. Studies of the origins and development of modern capitalistic economics with emphasis on transitional factors and institutional changes.

336 Modern European Intellectual History. Semester course; 3 lecture hours. 3 credits. An investigation of the main currents of European thought since 1750 which have shaped the contemporary mind. Emphasis on the interconnections between ideas and society placed in their historical contexts.

337/Art History 432 The Origins of Modernism, 1880–1930. Semester course; 3 lecture hours. 3 credits. An investigation of the interconnections between social, intellectual, and artistic change in Europe in the crucial period 1880–1930. Focus is placed on such major figures as Nietzsche, Freud, Einstein, Picasso, Duchamp, and Stravinsky in an attempt to locate the origins of contemporary artistic and intellectual experience.

338 History of Socialism. Semester course; 3 lecture hours. 3 credits. An examination of the roots of socialism in the

cultural and religious tradition of the West, its development during Europe's industrialization, its present status, and the alternative it presents to capitalism.

339/ Women's Studies 339 History of Women. Semester course; 3 lecture hours. 3 credits. Through lecture, reading, and discussion, this course will attempt to trace and analyze historical changes in the economic, political, legal, and cultural position of women, including such topics as changing employment opportunities, the struggle for suffrage and political rights, and the history of social and sexual reform movements.

342 Colonial America, 1585–1763. Semester course; 3 lecture hours. 3 credits. An examination of the development of the 13 original colonies; the establishment and growth of society, politics, and the economy; and modification in the relationship between the provinces and Great Britain.

343 Two American Revolutions, 1763–1800. Semester course; 3 lecture hours. 3 credits. An examination of the late eighteenth century revolutions which molded the American political system—the revolution of colonial Englishmen against Great Britain and the revolution of the nationalists against the government established by the American Revolution, which produced and firmly established the United States Constitution.

344 Age of Jefferson and Jackson, 1800–1850. Semester course; 3 lecture hours. 3 credits. A survey of the major personalities and patterns in American history from the presidential election of 1800 through the Compromise of 1850.

345 Civil War and Reconstruction. Semester course; 3 lecture hours. 3 credits. A study of the cultural and political origins of the crisis of the Union; of the events, personalities, and significance of the war years; and of the major issues of the Reconstruction that followed.

346 The Emergence of Modern America, 1877–1914. Semester course; 3 lecture hours. 3 credits. An examination of the major political, legal, social, and economic trends in the United States at this time, focusing on the industrialization of the nation and the resulting effects it had on such diverse matters as urbanization, immigration, economic distribution, and cultural affairs, culminating in the Progressive reform movement.

347, 348 Twentieth Century U.S. History. Semester courses; 3 lecture hours. 3, 3 credits. A study of the political, social, economic, and cultural history of the United States in the twentieth century, with emphasis on how the American people have responded to reform, war, prosperity, depression, international status, and changing relationships within government and society. First semester: to World War II. Second semester: since World War II.

349, 350 American Military History. Semester course; 3 lecture hours. 3, 3 credits. Analysis of the evolution, status, and conduct of the armed forces of the United States. Emphasis will be placed on the changing nature of American military thought and institutions, their performance in peace and war, and their relationship to civilian authority. First semester: to 1900. Second semester: 1900 to the present.

351, 352 History of the South. Semester courses; 3 lecture hours. 3, 3 credits. A regional history placing particular emphasis upon the distinctive culture and problems of the

South and its significance in the history of the United States. First semester: Old South, from colonial period to 1861. Second semester: New South, from 1865 to the present.

353, 354 Virginia History. Semester courses; 3 lecture hours. 3, 3 credits. A study of the political, economic, and cultural developments in the colony and commonwealth of Virginia. First semester: Elizabethan period to 1789. Second semester: 1789 to the present.

355 Virginia and the Civil War. Semester course; 3 lecture hours. 3 credits. Although attention is given to the coming of disunion and war, the focus is on the major personalities, events, and patterns on the battlefield and on the homefront in the Old Dominion from 1861 to 1865.

356 Virginia Indians and Their Neighbors. Semester course; 3 lecture hours. 3 credits. An examination of the history of Virginia natives from 1585 to the present. Emphasis will be placed on the seventeenth century European contact period and on the Indian interactions with the English settlers. The interaction of other coastal peoples with the Europeans will be examined for comparisons.

357, 358 American Social History. Semester courses; 3 lecture hours. 3, 3 credits. The social life of Americans is examined in all periods of their history, focusing on the changing structure and functions of social institutions and thought. First semester: to 1876. Second semester: 1877 to the present.

360 American Ethnic History. Semester course; 3 lecture hours. 3 credits. A history of immigrant groups in the United States and their impact upon the economic, political, and social mainstream of American life.

361, 362/ Afro American Studies 361, 362 Americans from Africa. Semester courses; 3 lecture hours. 3, 3 credits. A study of the history and culture of blacks in the United States, designed to analyze some of the most important aspects of black life and the attitudes of the dominant society within which blacks lived. The second semester emphasizes the changing status, expectations, and ideologies of black Americans in the twentieth century. First semester: to 1877. Second semester: since 1877.

363, 364 History of the American Urban Experience. Semester courses; 3 lecture hours. 3, 3 credits. First semester: the evolution of colonial towns into industrial metropolises will be examined, placing emphasis on how this change determined contemporary conditions in American cities. Second semester: an examination of post-1880 urban developments (including suburbanization) emphasizing twentieth-century reformers' and intellectuals' efforts to understand and improve contemporary cities.

365, 366 American Intellectual History. Semester courses; 3 lecture hours. 3, 3 credits. The development of American thought and attitudes, with emphasis on trends in social and religious ideas, the rise of educational and cultural institutions, and expressions in literature and the arts. First semester: Colonial period to 1860. Second semester: 1860 to the present.

369, 370 American Constitutional and Legal Development. Semester courses; 3 lecture hours. 3, 3 credits. An analysis of the development of American constitutionalism and of concomitant legal developments, emphasizing judicial review, the relationship between the Constitution and modern industrialized society, and civil rights, as well as the

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growth of case law and the rise of the legal profession. First semester: to 1877; Second semester since 1877.

374 History of the American Frontier. Semester course; 3 lecture hours. 3 credits. A survey of the western movement in the United States from the time the first outposts were established to the end of the frontier in the nineteenth century. Particular attention to the influence of the frontier upon the American mind and ideals.

375, 376 American Diplomatic History. Semester courses; 3 lecture hours. 3, 3 credits. A study of the role of the United States in international relations. Emphasis will be placed on institutional and theoretical development and continuity as well as the role of the individual. First semester: to 1900. Second semester: since 1900.

377/Economics 319 Economic History of the United States. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211. A study of American economic development from colonial beginnings to the present, treating such topics as agriculture, industry, commerce, finance, economic causes and effects of wars, interrelationships of government and business, role of the entrepreneur, and the economic basis of cultural progress.

378 History of Central America. Semester course; 3 lecture hours. 3 credits. An exploration of the history of the region beginning with pre-Hispanic Indian civilizations and continuing to the present. Topics to be studied include the Spanish conquest, the liberal-conservative struggle, U.S. gunboat diplomacy, the Sandinista Revolution, civil war in El Salvador, militarism in Guatemala, and democracy in Costa Rica.

383 Ancient Egypt. Semester course; 3 lecture hours. 3 credits. A general survey of the history and culture of ancient Egypt from the Predynastic period through the age of the New Kingdom. In addition to the historical reconstruction, emphasis will be placed on the art, literature, and religion of each of the major periods.

384 Latin America and World Affairs. Semester course; 3 lecture hours. 3 credits. A survey of the relation of Latin America since the sixteenth century to major world developments which have occurred and in which Latin America was involved.

385 History of Mexico. Semester course; 3 lecture hours. 3 credits. A study of Mexico and its culture, including early Indian civilizations, Spanish conquest, colonial period, independence, struggle for reform, revolution, and development as a modern state.

386 History of Brazil. Semester course; 3 lecture hours. 3 credits. A survey of the development of Brazilian culture and institutions from the Portuguese occupation of eastern South America through the Colonial period, independent empire, and the republic to the present time.

387/Afro-American Studies 387 History of West Africa. Semester course; 3 lecture hours. 3 credits. A study of the transformation of West African societies from the iron age to modern, independent nation-states, with stress on the roles of reforming Islam, European economic and cultural influences, and European colonialism.

389/Afro-American Studies 389 History of Southern Africa. Semester course; 3 lecture hours. 3 credits. A study of the history and culture of the peoples of southern Africa. Deals with the areas which presently are the Republic of

South Africa, Lesotho, Swaziland, Botswana, Namibia, and Zimbabwe. Emphasizes the interaction among the various communities and ethnolinguistic groups in southern Africa.

391 Topics in History. Semester course; 1, 2, or 3 lecture hours. Variable credit; may be repeated with different topics for a maximum of 9 credits. An in-depth study of a selected topic in history. See *Schedule of Classes* for specific topics to be offered each semester.

461–462 Archival and Historical Administration. Continuous course; 3 lecture and 3 workshop hours. 3–3 credits. First semester: an examination of the development of archival administration with emphasis on modern techniques and practices of archival and historical administration. Second semester: workshop in which each student will receive on-the-job training in various phases of archival administration.

483 Museum Methods. Semester course; 3 lecture hours. 3 credits. Practical presentation of techniques of working museums, presented in conjunction with local or regional museums.

485 Seminar in Historiography. Semester course; 3 lecture hours. 3 credits. May be repeated for a total of six credits with different topics. Introduction to questions in historiography, meaning, methodology, and interpretation in the teaching and writing of history.

486 Seminar In Historical Methodologies. Semester course; 3 lecture hours. 3 credits. An introduction to the various methodologies used in historical research and an analysis of their reliability and limitations: includes quantification, oral history, and psychohistory. See *Schedule of Classes* for each semester's offerings.

490 Seminar in History. Semester course; 3 lecture hours. 3 credits; maximum 9 credits. Research and analysis of a selected historical topic in a seminar setting. See *Schedule of Classes* for each semester's offerings.

492 Independent Study. Semester course; variable credit. 2–4 credits per semester; maximum total of 6 credits. Open generally only to students of junior and senior standing who have acquired 12 credits in the departmental disciplines. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course.

493 Internship. Semester course; variable credit. 2–4 credits per semester; maximum total of 6 credits. Open generally to students of senior standing. Students receive credit for work on historical projects with approved agencies. Determination of the amount of credit and permission of departmental internship coordinator must be procured prior to registration for the course.

498 Honors Seminar in History. Semester course; 3 lecture hours. 3 credits; maximum 6 credits. Research and analysis of selected historical topics in a seminar setting. Open only to students in the history honors program.

COURSES IN INTERNATIONAL STUDIES (INT)

203/Political Science 203 Issues in World Politics. Semester course; 3 lecture hours. 3 credits. An exploration of significant issues in world politics. Issues treated include: the nation state, war and peace, inequality, justice, terrorism,

genocide and human rights, as well as selected others. The course will also examine attempts to ameliorate problems and resolve conflict.

340/Urban Studies 340 The Urban Habitat. Semester course; 3 lecture hours. 3 credits. An examination of urban habitats in a variety of geographical regions with emphasis on their differences and their common experiences.

350/Anthropology 350 Peoples and Cultures of the World. Semester course; 3 lecture hours. 3 credits. Prerequisite: ANT 103. May be taken for a maximum of six credits in two different world areas. A survey of the culture and traditions within a specific geographic area such as Latin America, Oceania, or Southeast Asia. See *Schedule of Classes* for areas being offered in a particular semester.

398 Directed Study Abroad. Semester course; variable credit, 0–8 credits per semester; with approval of student's major department may be repeated up to a total of 8 credits. A course involving travel and/or residence in a foreign country as features of the student's work on a pre-arranged project. Intended primarily for students participating in student exchange programs. Permission of academic advisor required.

490 Seminar in International Issues. Semester course; 3 lecture hours. 3 credits. Prerequisite: INT 340 or permission of instructor. May be taken only once. An individualized research project focusing on international issues and undertaken in a seminar setting.

491 Topics in International Studies. Semester course; 3 lecture hours. 3 credits; may be repeated with different topics for a maximum of 6 credits. An in-depth study of a particular topic in international studies. See *Schedule of Classes* for specific topics to be offered each semester.

COURSES IN ITALIAN (ITA)

101–102 Elementary Italian. Continuous course; 5 lecture/recitation hours. 4–4 credits. Elementary grammar, reading, and oral drill.

201 Intermediate Italian. Semester course; 3 lecture hours. 3 credits. Continuation of the essentials of grammar with emphasis on achieving proficiency in aural comprehension, speaking, reading, and writing skills.

NOTE: In order to complete Italian through the intermediate level, a student may elect Italian 202 or 205.

202 Intermediate Italian Readings. Semester course; 3 lecture hours. 3 credits. Prerequisite: ITA 201 or the equivalent. Designed to increase the student's proficiency in Italian through the study of selected cultural and literary texts.

205 Intermediate Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: ITA 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

305 Italian Conversation and Civilization. Semester course; 3 lecture hours. 3 credits. Conducted in Italian. Prerequisite: Italian through the intermediate level or the equivalent. Practice in the spoken language with emphasis on discussion dealing with Italian civilization and culture.

COURSES IN LANGUAGE SKILLS (LSK)

103/Linguistics 103 Introduction to Languages. Semester course; 3 lecture hours. 3 credits. A course designed to help students understand how languages function through a survey and contrastive analysis of language systems, with attention to the sociocultural, psychological, and historical aspects of languages. (Completion of this course does not qualify a student to take the 200 level of a language without passing a language placement test.)

203 Classical Elements in the English Language. Semester course; 3 lecture hours. 3 credits. Development of English vocabulary through a study of Greek and Latin elements in English: derivatives, roots, and loan words. Some emphasis on the special vocabularies of the sciences.

COURSES IN LATIN (LAT)

101–102 Elementary Latin. Continuous course; 4 lecture hours. 4–4 credits. First semester: a study of the Latin language with emphasis on the Latin elements found in English. Latin vocabulary. Second semester: introduction to Latin authors and related aspects of Roman civilization.

201–202 Readings in Latin Literature. Continuous course; 3 lecture hours. 3–3 credits. Brief grammar review with a parallel study of political and literary trends and developments as found in several of the major Latin writers. First semester: prose, with emphasis on Cicero, Pliny the Younger, and Sallust. Second semester: poetry, with selected readings from Catullus, Tibullus, Ovid, and Vergil.

COURSE IN LIBRARY SKILLS (LRS)

101 Library Resources and Research Methods. Semester course; 1 lecture and 2 laboratory hours. 2 credits. Designed for students at all levels who wish to improve their ability to use libraries in general and the VCU libraries in particular. The course emphasizes the use of the card catalog, bibliographies, indexes, abstracts, and other library resources. Directed to the individual student's subject interest as far as possible.

COURSES IN LINGUISTICS (LIN)

103/Language Skills 103 Introduction to Languages. Semester course; 3 lecture hours. 3 credits. A course designed to help students understand how languages function through a survey and contrastive analysis of language systems, with attention to the sociocultural, psychological, and historical aspects of languages. (Completion of this course does not qualify a student to enroll in the 200 level of a language without passing a language placement test.)

316/Spanish 316 Spanish Linguistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. A study of Spanish phonetics with oral practice in pronunciation, an introduction to the history of the Spanish language, and a review of linguistics problems encountered in the teaching of Spanish.

403/Psychology 403 Introduction to Psycholinguistics. Semester course; 3 lecture hours. 3 credits. Method and theory in studying language behavior. Topics include the structure of communication using language, language

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acquisition, the role of language in thinking and remembering, and the relation of language to other ways of communicating.

***449/English 449 Introduction to Linguistics.** Semester course; 3 lecture hours. 3 credits. An introduction to methods of language analysis, emphasizing the study of sounds and sound patterns, and units of meaning and their arrangements. May not be used to satisfy the College of Humanities and Sciences requirement in English.

***450/English 450 Modern Grammar.** Semester course; 3 lecture hours. 3 credits. Study of modern English grammar and usage with some attention to linguistic theory. Recommended for teachers at all levels. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

***451/English 451 History of the English Language.** Semester course; 3 lecture hours. 3 credits. The historical development of the English language; etymology, morphology, orthography, and semantics. May not be used to satisfy the College of Humanities and Sciences requirement in English.

453/English 453 Introduction to Modern Rhetoric. Semester course; 3 lecture hours. 3 credits. An introduction to the broad range of modern rhetorical theories, emphasizing their relationships and linguistics, literary criticism, and the process of writing. May not be used to satisfy the College of Humanities and Sciences requirement in English.

552/Education 552 Teaching English as a Second Language. Semester course; 3 lecture hours. 3 credits. Provides students who plan to teach English to people whose native language is not English with techniques used in teaching foreign languages. Contrastive analyses of morphology, phonology and syntax are used to isolate areas of difficulty in learning English.

COURSES IN MASS COMMUNICATIONS (MAC)

101 Mass Communications. Semester course; 3 lecture hours. 3 credits. The influence of, and techniques used by mass media, including ethical considerations. Origin of newspapers and periodicals and their evolution to mass circulation journalism of today. Structure, organization, management, content, and operation of radio, television, and motion picture industries. Attention is paid to roles of advertising and public relations.

181 Principles of Advertising. Semester course; 3 lecture hours. 3 credits. A survey of all forms of advertising, principles of layout copy; production methods; campaign preparation; media selection. (Not open to Mass Communications majors.)

203 Newswriting. Semester course; 1 lecture and 4 laboratory hours. 3 credits. Prerequisites: ENG 101–102, typewriting proficiency of 35 wpm and successful completion of a language skills test. Study and practice in fact gathering and development of the basic skills needed for writing for the media. Course will focus on newspaper writing and will stress grammar skills. **Students must obtain permission to register from the Mass Communications School office.**

NOTE: For MAC majors only, MAC 101 and MAC 203 are prerequisites for the following courses.

300 Mass Media Graphics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. A course on the functions of visual and graphic communication in news in the print and electronic media, involving creative typographic and layout design, pictures, and nonverbal elements of communication and perception.

303 General Assignment Reporting. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Detailed study in gathering and reporting facts, with emphasis on clarity and maturity of writing. The intent is to build skills in interviewing, to provide practice in writing general news and features, and to prepare for entry-level reporting assignments.

305 Copy Editing. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisites: MAC 300. Instruction and practice in basic newspaper editing with a focus on practical experience in editing local and news service copy for publication. Includes emphasis on headline writing, development of news judgment, accuracy and fairness while exposing students to legal problems confronting a copy editor. Some attention will be paid to layout and design of newspapers.

320 Multi-Media Public Relations Production. Semester course; 2 lecture and 1 laboratory hour. 2 credits. A broad look at the skills needed and the tools available in modern public relations production. Will focus on computerized and broadcast production methods and practices.

323 Public Relations. Semester course; 3 lecture hours. 3 credits. Study of public relations principles and practices, including analysis of tools, media, ethical responsibilities and emerging technologies. Special attention to the theory and research literature on rational and ethical persuasion.

333 Public Relations Writing. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAC 323. An intensive writing course focusing on researching and writing materials in support of the public relations function. Practice in preparing materials for controlled and uncontrolled media, both print and broadcast, including news releases, interview protocols, special events background materials, press kits, employee newsletters, community relations materials and formal public speaking scripts. Explores routine, special event and crisis situations, and the link between written and audiovisual documents.

341 Feature and Article Writing. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 303 or 363 or permission of instructor. Practice in preparing articles and features for newspapers and magazines. Emphasis is on creative journalistic writing and development of writing skills.

361 Principles of Broadcasting. Semester course; 3 lecture hours. 3 credits. An examination of the regulatory, technical, economic and creative foundations of the broadcast media. Historical, contemporary, and ethical issues in broadcasting are also addressed.

MAC 362 Newscasting. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisites: SPE 262, MAC 363. Concentrates on developing on-air skills in radio and television studio and field situations. Emphasizes journalistic principles in delivery of news, public affairs, editorial and interviews. Grammar, diction and broadcast writing are stressed.

363–364 Broadcast Newswriting & Reporting. Continuous course; 1 lecture and 4 laboratory hours. 3–3 credits. In the

first semester students will concentrate on developing writing and reporting skills for radio. The Second semester will sharpen and broaden those skills as they are applied to television news. **MAC 363 to be taken concurrently with MAC 365.**

MAC 365 Introduction to Broadcast Production. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Students will learn the purpose, function, and basic operation of the studio, control room, and remote equipment used in radio and television production. Production organizational structure, individual crew roles, and the relationship between crew positions are also covered. **To be taken concurrently with MAC 363.**

375 Legislative Reporting. Semester course; laboratory. 1 credit. Prerequisite: MAC 303 or 363. Concentrated five-week course to permit advanced students to gain reporting experience with the Virginia General Assembly.

380 Introduction to Advertising. Semester course; 3 lecture hours. 3 credits. An overview of the advertising industry. A practitioner-oriented approach to the creation, preparation, and evaluation of advertising. The course views the subject from an advertising management perspective.

391 Newspaper Advertising. Semester course; 3 lecture hours. 3 credits. A course in the preparation, placing, and proofing of advertising in daily and weekly newspapers. Its aim is to improve the appearance, effectiveness, and originality of newspaper advertising. Some attention is given to the organization and management of the advertising function in newspapers.

392 Advertising Copywriting. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Study of the different types of advertising copy used by both local and national advertisers. Practice in writing consumer, trade, and industrial copy.

393 Television and Radio Advertising. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Principles and practices of successful radio-television advertising; emphasis on media research, rate structure, and programming creativity in broadcast commercials.

394 Advertising Layout and Production. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MAC 392. Study and practice in layout and design of advertising for all media. Ideas will be followed through from concept to production.

403 Advanced Reporting. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisites: MAC 303. *Intensive study of the techniques of reporting meetings and news of public affairs. Attention will be paid to covering governmental agencies at all levels. Quality of writing will be a paramount and continual consideration.*

404 Specialized/Project Reporting. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: MAC 403. An advanced course to provide news beat experience for students reporting on complex issues facing the public in the urban community. Emphasis also on team reporting, in-depth research and interviewing techniques, and use of public records.

405 Advanced Editing. Semester course; 1 lecture and 4 laboratory hours. 3 credits. Prerequisite: MAC 305. An advanced course in editing to prepare students for work on copy desks and news desks of daily newspapers. Emphasis on fine points of editing and the layout of newspaper pages.

408 Communications Law. Semester course; 3 lecture hours. 3 credits. Study of legal limitations affecting publishing, advertising, broadcasting, and telecasting and legal philosophy and ethics relating to the media of communications.

423 Public Relations Campaigns. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAC 323 and 333. Application of public relations theory and methods in the preparation of a plan for a public relations campaign. Special attention to the planning process, including issues analysis, and public relations research methods, including depth interviews, focus groups, simple opinion surveys and communication audits.

425 Public Opinion. Semester course; 3 lecture hours. 3 credits. A study of the formation, reinforcement, and change of opinions and of the role of major social and political institutions and of the mass media in attitude change.

426 Editing PR Publications. Semester course; 2 lecture and 2 laboratory hours. 2 credits. Prerequisites: MAC 300. A concentrated editing course focusing on newsletters, magazines, and other publications produced by business, government, and nonprofit institutions.

443 Magazine Editing and Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 305. To prepare students for editing and management careers with industrial, consumer, governmental, trade, and other periodicals. All phases of magazine production will be included in the course.

461 The Documentary. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisites: MAC 363–364, 365–366, or permission of instructor. An examination of documentary concepts through analysis of radio, television, and film documentaries. The course will center on the development, writing, and production of a documentary in the medium (radio, television, or film) of the student's choice.

463 Advanced Radio Production. Semester course; 2 lecture and 6 laboratory hours. 3 credits. Prerequisite: MAC 365. Students will write and produce radio programs in a variety of formats (including news, public affairs, advertising, and arts/performance). Studio and remote facilities/equipment will be used to create professional caliber projects.

464 Advanced Television Production. Semester course; 2 lecture and 6 laboratory hours. 3 credits. Prerequisite: MAC 365. Students will write, produce, and direct television programs in a variety of formats (including news, public affairs, advertising, and arts/performance). Studio and remote facilities/equipment will be used to create professional caliber projects.

467 Broadcast Newsroom Management. Semester course; 3 hour seminar. 3 credits. Prerequisites: MAC 363–364 and 365. A study of studio organization, business demands, and managerial skills in operation of radio and television newsrooms from the standpoint of the news manager.

480 Media Strategy. Semester course; 3 lecture hours. 3 credits. Media organization, costs and sales procedures. Development of media strategies to accomplish advertising objectives. Practical problems in planning and buying media.

481 Advertising Campaigns I. Semester course; 2 lecture hours. 2 credits. Prerequisite: MAC 380 or permission of

instructor. Introduction to the planning and preparation of advertising campaigns. Overviews the various steps in the development of an advertising campaign. Special stress placed on preparing students for MAC 482 Advertising Campaigns II.

482 Advertising Campaigns II. Semester course; 2 lecture hours. 2 credits. Prerequisite: MAC 481 or permission of instructor. Intensive study in the planning and preparation of advertising campaigns. Working as advertising agencies, students develop complete advertising programs including research, basic advertising plans, media and creative strategies, sales promotion, and merchandising plans.

486 Creative Advertising Workshops. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MAC 394 or permission of instructor. A concentrated study of principles of advertising message development. Creative strategies will be developed to accomplish advertising objectives. Students develop and defend campaign themes and message ideas including print layouts and television story-boards. Emphasis on creating messages for multi-media exposure.

487 Seminar in Advertising in Society. Semester course; 3 lecture hours. 3 credits. An examination of the role of advertising in modern life in America in light of historical and recent development in advertising and distribution.

489 Sales Promotion. Semester course; 3 lecture hours. 3 credits. Describes and analyzes sales promotion between the manufacturer and three other levels: the distribution system, the consumer, and the sales force. Effective use of special media, merchandising activities, and sales aids are also discussed.

491 Topics in Communications. Semester course; variable credit. 1, 2, or 3 credits per semester; maximum total 3 credits. Prerequisite: permission of instructor. An intensive study of a specialized field of mass communications.

492 Independent Study. Semester course; variable credit, maximum 3 credits per semester; maximum total for all independent study courses 6 credits. Prerequisite: open generally only to students of junior and senior standing who have acquired at least 12 credits of Mass Communications. The course is designed for students who wish to study subject matter not offered elsewhere in the Mass Communications' curriculum. To register, a student must write a proposal and have it approved by the student's advisor, supervising instructor and School director or assistant director.

493 Fieldwork/Internship. Semester course; variable credit. 1, 2, or 3 credits per semester; maximum total 3 credits toward graduation. Prerequisite: permission of faculty member and of internship coordinator. Selected students will receive on-the-job training under the supervision of an instructor and the employer. Internships are available in newspapers, magazines, public relations, advertising, radio, and television.

499 Problems and Issues in Mass Communications. Semester course; variable credit. 1, 2, or 3 credits per semester; maximum total 3 credits. Open only to students who have successfully completed at least 12 credits in mass communications. Determination of amount of credit and permission of instructor and school director must be obtained prior to registration for course. A concentrated examination of specific areas of mass communications.

Each mini-course will be five weeks in length. Topics announced in advance.

MATHEMATICAL SCIENCES

Students registering for CSC 150, 201, 255, MAT 100, 111, 112, 116, 200, 211, or STA 213 must have taken the VCU Mathematics Placement Test within the one-year period immediately preceding the beginning of the course. An exception to this policy is made in the case in which the stated alternative prerequisite course has been completed at VCU.

COURSES IN COMPUTER SCIENCE (CSC)

150 BASIC Computer Concepts. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: MAT 001 or satisfactory score on the Mathematics Placement Test. The BASIC language will be used to provide an introduction to understanding and programming digital computers. Several computer uses and their societal impact will be presented. Students may not receive degree credit for both CSC 150 and BUS 161, 162, or 163.

191 Topics in Computer Science. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of the instructor. This course will teach selected topics in computer science. May be repeated for credit. See *Schedule of Classes* for specific topics and prerequisites.

201 Introduction to Computing Using FORTRAN. 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: MAT 101 or MAT/BUS 111 or satisfactory score on the Mathematics Placement Test. Introduction to the concept and practice of structured programming using FORTRAN. Elementary computer concepts, problem solving, top-down design of algorithms, basic FORTRAN syntax, including control structures, arrays, and subroutines.

255 Structured Programming. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: MAT 101 or MAT/BUS 111 or a satisfactory score on the Mathematics Placement Test. Introduction to the concept and practice of structured programming using Pascal. Problem solving, top-down design of algorithms, basic Pascal syntax including control structures, procedures, and functions, scalar data types, and arrays. (CSC 255 is a core course for mathematical sciences.)

256 Data Structures and Advanced Programming. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisites: CSC 255 and MAT 211. Topics include records, sets, files, strings, pointers, linked lists, stacks, queues, binary trees, recursion, program design, and basic searching and sorting techniques.

301 Introduction to Discrete Structures. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 255 and MAT 211. A continuation of MAT 211. Recursion and induction. Operations on sets and relations. Formal languages with an emphasis on finite state automata and grammars. Monoids and graphs (trees in particular). Elementary combinatorics and advanced Boolean algebra.

311 Assembler Language. Semester course; 4 lecture hours. 4 credits. Prerequisite: CSC 256. Introduction to and

application of assembler language concepts and related topics such as internal data representation, addressing modes, registers, and macros.

312 Introduction to Operating Systems. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 311. Computer systems design, I/O processing, secondary memory organization, command languages, memory management, and job scheduling.

358 Computer Assisted Visual Design. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Corequisite: CDE 437. Introductory study of the uses of computers as aids to generating images and solving design problems. Primarily for students in the School of the Arts. May not be used to satisfy a general education requirement in the College of Humanities and Sciences. May not be applied toward a major in mathematical sciences.

391 Topics In Computer Science. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of the instructor. This course will teach selected topics in computer science. May be repeated for credit. See *Schedule of Classes* for specific topics and prerequisites.

401 Algorithm Analysis with Advanced Data Structures. Semester course; 3 lecture hours; 3 credits. Prerequisites: CSC 256 and CSC 301. Introduction to algorithm analysis and complexity classes. Advanced data structures topics include multiple linked lists, height-balanced trees, B-trees, file organization, and graphs. Analysis of various searching and sorting algorithms. Algorithm design topics include divide-and-conquer, dynamic programming, greedy methods, and heuristic search.

403 Programming Languages. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 256 and CSC 301. Survey of representative modern programming languages. Formal definition of programming languages including specifications of syntax and semantics. Precedence, infix, prefix, and postfix notation. Global properties of algorithmic languages. Sub-routines, co-routines, and tasks. List processing, string manipulation, data description, and simulation languages. Run-time representation of program and data structures.

492 Independent Study. Semester course; variable credit, 2, 3, 4 credits per semester; maximum 4 credits per semester; maximum total of 6 credits. Generally open only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. The student must submit a proposal for investigating some area or problem not contained in the regular curriculum. The results of the student's study will be presented in a report.

502 Concepts of Concurrency. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 312 and CSC 401. Software and hardware mechanisms for providing mutual exclusion in uniprocessor and multiprocessor environments. Concurrency problems and solutions in a distributed environment including message passing and remote procedure calls.

504 Compiler Construction. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 401 and 403. Review of programming language structures, translation, loading, execution, and storage allocation. Compilation of simple

expressions and statements. Organization of a compiler. Use of bootstrapping and compiler writing languages.

505 Computer Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 301 and CSC 311. Basic digital circuits. Combinational logic, data transfer, and digital arithmetic. Memory and memory access, control functions, CPU organization, microprogramming, input/output interfaces.

506 Computer Networks and Communications. Semester course. 3 lecture hours. 3 credits. Prerequisite: CSC 312. Theoretical and applied analysis of basic data communication systems. Design of networks in the framework of the OSI reference model. Local and Wide Area Networks. Performance analysis of networks. Error control and security.

508 Data Base Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSC 401. Design and implementation of hierarchical, network, and relational data base systems. Relational algebra, normal forms, and normalization.

509 Artificial Intelligence. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 401 and CSC 403. Problem spaces, problem-solving methods, game playing, knowledge representations, expert systems, natural language understanding.

511 Computer Graphics. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 256 and either MAT 307 or MAT 310. 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).

519 Software Engineering. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSC 401. Systematic approach to the development and maintenance of software and the associated documentation. Includes software life cycle, scheduling and budgeting, configuration management, quality assurance, and software tools.

521 Introduction to the Theory of Computation. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSC 301. An introduction to automata theory, formal languages, and computability. Finite automata, pushdown automata, Turing machines, decidability, and computational complexity.

526 Theory of Programming Languages. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSC 403. An introduction to the formal semantics of programming languages, logic programming and functional programming. Denotational semantics, attribute grammars, Backus Formal Functional Programming, fixed point semantics, model-theoretic semantics, and PROLOG.

554 Applications of Computers in the Teaching of Mathematics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisites: a college calculus course and 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 certificate program, B.S. or M.S. degree in mathematical sciences.

591 Topics in Computer Science. Semester course; 3 lecture hours. 3 credits. Prerequisites may vary. Permission of the instructor is required. Selected topics in computer science

such as theory of data bases, information retrieval, and artificial intelligence. Course is open to qualified undergraduates. May be repeated for credit. See *Schedule of Classes* for specific topics and prerequisites.

See also MAT 515–516 Numerical Analysis.

COURSES IN MATHEMATICS (MAT)

NO MORE THAN THREE CREDITS MAY BE EARNED FROM AMONG MAT 101 AND MAT 111/BUS 111.

100 Unitized Mathematics. Students requiring any of the mathematics courses numbered 001, 101, or 102 listed below, must register for MAT 100. On the basis of their background and placement examination scores, students will be assigned to an appropriate course.

001 Elementary Algebra. Semester course; 3 lecture hours or 3 laboratory-tutorial hours. No credit. Prerequisite: permission of the department. The purpose of this course is to provide laboratory and tutorial instruction for those seeking remediation or review of high school algebra. Topics include basic properties of real numbers, operations with algebraic expressions, solution of equations and inequalities, exponents and radicals, introduction to functions, and graphing.

101 College Algebra. Semester course; 3 lecture hours or 3 laboratory-tutorial hours. 3 credits. Prerequisite: MAT 001 or satisfactory score on the Mathematics Placement Test. Topics include solutions of equations, linear, quadratic, and higher degree polynomials; inverse functions, exponential and logarithmic functions, systems of equations and inequalities; binomial theorems, sequences and series, complex numbers, permutations, and combinations.

102 Trigonometry. 3 lecture hours or 3 laboratory-tutorial hours. 3 credits. Prerequisite: MAT 101 or a satisfactory score on the Mathematics Placement Test. Topics include circular functions, periodic functions, graphs, identities, inverse functions, solutions of equations, solutions of triangles, and complex numbers.

111/Business 111 Basic Mathematics for the Behavioral, Social, and Management Sciences. Semester course; 3 lecture hours. 3 credits. Prerequisites: one year of high school algebra and a satisfactory score on the Mathematics Placement Test. Topics include sets, functions, exponents, logarithms, mathematics of finance, matrix algebra, systems of equations, and linear programming. Students may not receive degree credit for both MAT/BUS 111 and MAT 101.

112/Business 112 Elements of Calculus for the Behavioral, Social, and Management Sciences. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 101 or 111. Differential calculus and integral calculus.

116 Modern Elementary Mathematics. 3 lecture hours. 3 credits. Prerequisite: Mathematics 101 or 111 or a satisfactory score on the Mathematics Placement Test. Concepts of probability, statistics, geometry, and the real number system. (Open only to majors in elementary, early childhood, and special education.)

191 Topics in Mathematics. Semester course; 1–3 credits per semester. A study of selected topics in mathematics. See

Schedule of Classes for specific topics and prerequisites. May be repeated for credit. For a course to meet the general education requirements it must be so stated in the *Schedule of Classes*.

200–201 Calculus with Analytic Geometry. Continuous course; 4 lecture hours. 4–4 credits. Prerequisite for MAT 200: MAT 101 or satisfactory score on the Mathematics Placement Test (algebra portion). Prerequisites for MAT 201: MAT 200 and either MAT 102 or satisfactory score on the Mathematics Placement Test (trigonometry portion). Limits, continuity, derivatives, differentials, antiderivatives, and definite integrals. Applications of differentiation and integration. Selected topics in analytic geometry. Infinite series.

211 Mathematical Structures. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 101 or a satisfactory score on the Mathematics Placement Test. An introduction to mathematical logic and set theory, including applications in Boolean algebras and graph theory. (A core course for mathematical sciences.)

291 Topics in Mathematics. Semester course; 1–3 credits per semester. A study of selected topics in mathematics. See *Schedule of Classes* for specific topics and prerequisites. May be repeated for credit.

301 Differential Equations. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 201. Solution of ordinary differential equations of first order. Linear differential equations with constant coefficients using operator methods. Series solutions and applications.

302 Numerical Calculus. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisites: CSC 201 or demonstrated knowledge of FORTRAN and MAT 201. An introduction to numerical algorithms for solving systems of linear equations, finding zeroes, definite integration, minimization, etc. Those features of FORTRAN that affect the precision of numerical computations will be included.

305 Elementary Number Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 211. Divisibility, congruences, Euler phi-function, Fermat's Theorem, primitive roots, Diophantine equations.

307 Multivariate Calculus. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 201. The calculus of vector-valued functions and of functions of more than one variable. Partial derivatives, multiple integrals, line integrals, surface integrals, and curvilinear coordinates. Lagrange multipliers; theorems of Green, Gauss, and Stokes. Applications.

309 Introduction to Probability Theory. Semester course; 3 lecture hours. 3 credits. Co-requisite: MAT 201. A study of the mathematical theory, including finite and infinite sample spaces, random variables, discrete and continuous distributions, mathematical expectation, functions of random variables, and sampling distributions.

310 Linear Algebra. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 201. Systems of linear equations, vector spaces, linear dependence, bases, dimensions, linear mappings, matrices, determinants, quadratic forms, orthogonal reduction to diagonal form, eigenvalues, and geometric applications.

327 Mathematical Modeling. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 200. Fundamental concepts of mathematical modeling. Differential equation

models. Optimization models. Probabilistic models. Practical problems will be discussed throughout.

351 Applied Abstract Algebra. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 211. A survey of several areas in applied abstract algebra which have applications in computer science such as groups, codes, matrix algebra, finite fields, and advanced graph theory.

391 Topics in Mathematics. Semester course; 1–3 credits per semester. A study of selected topics in mathematics. See *Schedule of Classes* for specific topics and prerequisites. May be repeated for credit.

437 Applied Partial Differential Equations. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 301 and 307. Parabolic (heat), hyperbolic (wave), and elliptic (steady-state) partial differential equations are studied. Solution techniques are demonstrated, including separation of variables and integral transforms. Practical problems and applications are emphasized.

492 Independent Study. Semester course; variable credit, 2, 3, 4 credits per semester; maximum 4 credits per semester; maximum total of 6 credits. Generally open only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. The student must submit a proposal for investigating some area or problem not contained in the regular curriculum. The results of the student's study will be presented in a report.

493 Mathematical Sciences Internship. Semester course; the equivalent of at least 15 work-hours per week for a 15-week semester. 3 credits. Mathematical sciences majors only with junior or senior standing. Admission by permission from the department chairman. Through placement in a position in business, industry, government, or the university, the student will serve as an intern in order to obtain a broader knowledge of the mathematical sciences and their applications.

501 Introduction to Abstract Algebra. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 211 and 310. An introduction to groups, rings, and fields from an axiomatic point of view. Coset decomposition and basic morphisms.

505 Modern Geometry. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 307; corequisite: 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–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 or equivalent. 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, and compactification.

511 Applied Linear Algebra. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 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 Complex Analysis for Applications. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 307. A rigorous development of those parts of the theory of analytic functions of a single complex variable which are prominent in applications.

515 Numerical Analysis I. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 302 or permission of instructor. Solutions of equations, interpolation and approximation, numerical integration, iterative methods for solving linear equations, calculation of eigenvalues and eigenvectors. Selected algorithms may be programmed for solution on computers.

516 Numerical Analysis II. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 515. Numerical solution of initial value problems in ordinary differential equations, 2 point boundary value problems. Introduction to numerical techniques for solving partial differential equations. Selected algorithms may be programmed for solution on computers.

517–518 Methods of Applied Mathematics. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: MAT 301 and MAT 307. Vector analysis, matrices, complex analysis, special functions. Legendre and Hermite polynomials, Fourier series, Laplace transforms, integral equations, 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 theorem, optimal strategies.

521 Introduction to Algebraic Number Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 501. 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 Operations Research. Continuous course; 3 lecture hours. 3–3 credits. Prerequisites: CSC 255 or 201, MAT 310 and 309 (second semester); STA 503 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 History of Mathematics. Semester course; 3 lecture hours. 3 credits. Prerequisite: 17 credits at the 200 level or above in mathematical sciences or permission of instructor. Surveys major trends in the development of mathematics from ancient times through the nineteenth century and

considers the cultural and social contexts of mathematical activity. Either MAT 530 or MAT 531 (but not both) may be applied to the master's degree in mathematical sciences or the M.S. degree in computer science. Both MAT 530 and MAT 531 may be applied to the M.Ed. degree in mathematics education.

531 Expositions in Modern Mathematics. Semester course; 3 lecture hours. 3 credits. Prerequisite: six credits at the 400 level or above in mathematical sciences. Studies descriptively several major ideas relevant to present-day mathematics, such as the advent of pure abstraction, difficulties in the logical foundations of mathematics, the impact of mathematics and statistics in the twentieth century, and the computer revolution. Either MAT 530 or MAT 531 (but not both) may be applied to the master's degree in mathematical sciences or the M.S. degree in computer science. Both MAT 530 and MAT 531 may be applied to the M.Ed. degree in mathematics education.

591 Topics in Mathematics. Semester course; 1–3 credits per semester. A study of selected topics in mathematics. See *Schedule of Classes* for specific topics and prerequisites. Open to qualified undergraduates. May be repeated for credit.

COURSES IN STATISTICS (STA)

212 Concepts of Statistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 200 and 211. An introduction to the nature of statistical thinking and the application of abstract systems to the resolution of nonabstract problems. Probability models for stochastic events. Parametric representations. Estimation, testing hypotheses and interval estimation with application to classical models. (A core course for mathematical sciences.)

213 Introduction to Statistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 101 or MAT/BUS 111 or a satisfactory score on the Mathematics Placement Test. Description of data, elementary probability, random sampling, estimation, and hypothesis testing for proportions and means; chi-square tests, or some other special application. (Not open to students in mathematical sciences.) Students may not receive degree credit for both STA 213 and BUS 301.

214 Applications of Statistics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. A study of the nature and application of statistical methods including analysis of variance, regression, and correlation. Special topics include distribution free methods in various statistical problems. (Psychology majors see PSY 214; sociology, anthropology, and political science majors see SOC 214.)

291 Topics in Statistics. Semester course; 1–3 lecture hours. 1–3 credits per semester. A study of selected topics in statistics. Specific topics may fulfill General Education Requirements. See *Schedule of Classes* for specific topics and prerequisites.

321 Introduction to Statistical Computing. Semester course; 3 lecture hours. 3 credits. Prerequisites: STA 212, CSC 201 or CSC 255, and MAT 200, or their equivalents. An overview of topics central to the applications of computers in statistical practice: data storage and retrieval, data *modification and file handling*, use of statistical software

(SAS, SPSS[®], BMDP, etc.), statistical algorithms, random number generation, and applications.

391 Topics in Statistics. Semester course; 1–3 lecture hours. 1–3 credits per semester. A study of selected topics in statistics. See *Schedule of Classes* for specific topics and prerequisites.

404 Introduction to Statistical Inference. Semester course; 3 lecture hours. 3 credits. Prerequisites: Both STA 212 and MAT 309, or permission of instructor. Framework for statistical inference. Point and interval estimation of population parameters. Hypothesis testing concepts, power functions, Neyman-Pearson lemma, and likelihood ratio tests. Elementary decision theory concepts.

439/Business 439 Statistical Quality Control. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301 or STA 212, or consent of instructor. Methodology for improving and maintaining the quality of product and services, including attribute and variable sampling, control charts, CUSUM charts, sampling plans, and processing modeling.

492 Independent Study. Semester course; variable credit, 2, 3, 4 credits per semester; maximum 4 credits per semester; maximum total of 6 credits. Generally open only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. The student must submit a proposal for investigating some area or problem not contained in the regular curriculum. The results of the student's study will be presented in a report.

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/Biostatistics 513–514 Mathematical Statistics. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: MAT 307. Probability, random variables and their properties, distributions, conditional distributions, moment generating functions, limit theorems, estimators and their properties, Neyman-Pearson and likelihood ratio criteria for testing hypotheses.

523/Biostatistics 523 Nonparametric Statistical Methods. 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. Tests of randomness, Kolmogorov-Smirnov tests, 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.

541 Applied Statistics for Engineers and Scientists. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 200–201 or equivalent and operational knowledge of MS-DOS. An introduction to applied statistics intended primarily for graduate students in Mathematical Sciences

and the Cooperative Graduate Engineering Program. The fundamental ideas of the collection and display of information, descriptive statistics and exploratory data analysis, elementary probability theory, frequency distributions, and sampling are covered. Other topics include tests of hypotheses and confidence intervals for one and two sample problems; ANOVA, principles of one-factor experimental designs including block designs and Latin squares, fixed and random effects, multiple comparisons; correlation and linear regression analysis; control charts; contingency tables and goodness-of-fit. Students may not receive degree credits for both STA 541 and STA 543.

543/BIS 543 Statistical Methods I. Semester course; 3 lecture hours. 3 credits. Prerequisite: graduate standing, or one course in statistics and permission of instructor. Basic concepts and techniques of statistical methods, including: the collection and display of information, data analysis, and statistical measures; variation, sampling, and sampling distributions; point estimation, confidence intervals, and tests of hypotheses for one and two sample problems; principles of one-factor experimental design, one-way analysis of variance, and multiple comparisons; correlation and simple linear regression analysis; contingency tables and tests for goodness of fit. Students may not receive degree credit for both STA 541 and STA 543.

544/BIS 544 Statistical Methods II. Semester course; 3 lecture hours. 3 credits. Prerequisite: STA 541 or STA 543, or equivalent. Introductory treatment of the design of experiments and the statistical analysis of experimental data based on analysis of variance (ANOVA) and multiple-regression models. Block designs, factorial designs, repeated measures designs, response-surface methods, analysis of covariance, and variable selection in multiple-regression problems will be covered. Includes the use of a statistical software package for data analysis.

591 Topics in Statistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: Permission of the instructor. Selected topics in statistics. Course open to qualified undergraduates. May be repeated for credit.

See also: **MAT 309 Introduction to Probability Theory.**

COURSES IN MILITARY SCIENCE (MIS)

101 Basic Military Science. Semester course; 2 lecture hours. 2 credits. Study of the United States Defense Department and the organization and structure of the Army.

102 Basic Military Science. Semester course; 2 lecture hours. 2 credits. Factors of military leadership. Uses case studies to examine common character traits of leaders in relation to different leadership styles. Introduces the professional military ethic and helps the student to identify personal leadership traits through practical exercises.

201 Basic Military Science. Semester course; 2 lecture hours. 2 credits. Examines professional ethics and their relationship to military leadership and operations, including decision making and reasoning, ethical boundaries, the Just War tradition, and Utilitarian ethics.

203 Basic Military Sciences. Optional ROTC Basic Camp. 0–6 credits. Six weeks of training at a military installation. Travel pay and salary stipend provided through the military science department. Student not obligated to any military

service. Basic Camp graduates are eligible to enroll in advanced military sciences courses.

Prerequisites for enrolling in advanced military science courses are successful completion of three basic military science courses or MIS 203 Basic Military Science for six credits. An approved military history course (preferably HIS 350) is a prerequisite for commissioning as an officer and should be taken prior to beginning the advanced course.

For College of Humanities and Science majors, only three of the eight 300-level military science credits may be used in fulfillment of the 45 upper-level credit requirement for graduation.

301–302 Advanced Military Science. Continuous course; 2 lecture and 1½ laboratory hours. 2–2 credits. Management principles and leadership; instructional methods; organization and function of Army branches; theory and dynamics of unit operations and exercise of command.

303–304 Advanced Military Science. Continuous course; 2 lecture and 1 laboratory hour. 2–2 credits. Staff organization and procedures, orders and operations, training management, logistics, military law, and the exercise of command.

306 Military Science. ROTC Advanced Camp. 0 credits. Prerequisite: MIS 302. The ROTC camp summer practicum is six weeks long. Individual and group experience for application of leadership training. Exposure to leadership situations which require decisions made under physical and mental stress conditions.

COURSES IN PHILOSOPHY (PHI)

101 Introduction to Philosophy. Semester course; 3 lecture hours. 3 credits. An introduction to some of the main branches of philosophy. Some of the issues that might be addressed are: What is knowledge? Is reason or experience the basis for all knowledge? Can we have knowledge of the past, or of the future? What is Truth? Does God Exist? Is there a mental realm separate from the material realm? Are the laws of nature deterministic? Do we have free will? What makes an action morally permissible? What is the proper role of the State in regulating our lives? **This course is directed primarily at first and second year students.**

103, 104 Introduction to the History of Western Philosophy. Semester courses; 3 lecture hours. 3–3 credits. A survey of the development of critical and speculative thought in the Western World. First semester: ancient Greek through Medieval. Second semester: Renaissance through the nineteenth century.

211 History of Ethics. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 102 by course or placement. A philosophical investigation of the main concepts and theories of ethics and their application to fundamental moral questions, as illustrated by the ethical systems of such historically important Western philosophers as Plato, Aristotle, Augustine, Hume, Mill and Kant.

212 Ethics and Applications. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 102 by course or placement. A philosophical investigation of the main concepts and theories of ethics, with applications to fundamental moral questions as they arise in different areas. Such

problems as abortion, the welfare of animals, world hunger, pornography, capital punishment, nuclear defense, sexual behavior, environmental ethics, and reverse discrimination may be used as illustrations.

213 Ethics and Health Care. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 102 by course or placement. A philosophical investigation of the main concepts and theories of ethics, with applications to fundamental moral questions as they arise in health care. The following issues may be used as illustrations: abortion, euthanasia and the right to die, human experimentation, treating mental illness, genetic technologies, the concepts of health and disease, and the funding of health care.

214 Ethics and Business. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 102 by course or placement. A philosophical investigation of the main concepts and theories of ethics, with applications to fundamental moral questions as they arise in business. The following issues may be used as illustrations: affirmative action, investment in unethical companies or countries, product safety, whistleblowing, and advertising.

221 Critical Thinking. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 101 by course or placement. An introduction to inductive and deductive reasoning, with emphasis on common errors and fallacies.

222 Introduction to Symbolic Logic. Semester course; 3 lecture hours. 3 credits. Prerequisite: placement into MAT 101 or above. An evaluation of deductive arguments utilizing the methods of symbolic logic.

291 Topics in Philosophy. Semester course. Variable credit. 1–4 credits. Prerequisite as specified in the schedule of courses or written permission of instructor. An introductory study of an individual philosopher, a particular philosophical problem or a narrowly-defined period or school. See *Schedule of Classes* for specific topic to be offered each semester.

301 Mind and Reality. Semester course; 3 lecture hours. 3 credits. Prerequisites: nine credits in philosophy including PHI 221 and one of PHI 101, 103, or 104 or permission of instructor. An examination of central metaphysical issues, for example, the mind-body problem, free will, causality, action, realism, and the problems of universals.

302 Reason and Knowledge. Semester course; 3 lecture hours. 3 credits. Prerequisites: nine credits in philosophy including PHI 221 and one of PHI 101, 103, or 104 or permission of instructor. An examination of central epistemological issues, for example, the problem of justification, empirical knowledge, perception, rationality, and truth.

320 Philosophy of Law. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHI 221 and one of PHI 211, 212, 213 or 214. A critical examination of the nature of law and criminal justice in the light of important human values. The following topics will be considered: the nature of law and legal reasoning, the legal enforcement of morality, and such controversies as punishment versus rehabilitation, and the right to due process versus the need for public safety.

326 Existentialism. Semester course; 3 lecture hours. 3 credits. Prerequisite: three credits in Philosophy (exclusive of PHI 221 and PHI 222) or permission of instructor. An examination of the nature of truth, freedom, responsibility, individuality, and interpersonal relations as found in some

principal writings of Kierkegaard, Nietzsche, Jaspers, Sartre, Heidegger, Camus, Buber, Marcel.

327 Ethical Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: nine credits in philosophy including PHI 221 and one of PHI 211, 212, 213, or 214. A study of the problems of philosophical ethics, including relativism, egoism, utilitarianism, intrinsic value, and the meaning and justification of ethical principles. Both historical and contemporary thinkers will be considered.

331 Philosophy of Science. Semester course; 3 lecture hours. 3 credits. Prerequisite: three credits of philosophy and six credits of natural sciences courses. An examination of the bases of scientific inquiry in both the natural and social sciences; including a study of such topics as hypothesis formation and testing, and the nature of scientific laws, theories, and explanations.

335 Social and Political Philosophy. Semester course; 3 lecture hours. 3 credits. Prerequisite: nine credits in philosophy including PHI 221 and one of PHI 211, 212, 213 or 214, or POS 341 or 342. A critical examination of political power and of the relationship between the individual and his society. Possible topics include: anarchism and the justification of having a state at all; political views about what sort of state is justified (e.g., conservatism, liberalism, communitarianism, feminism, Marxism); private vs collective property; market vs planned economies; democracy vs totalitarianism; and civil disobedience and revolution.

391 Topics in Philosophy. Semester course; variable credit. 1–4 credits. Prerequisite as specified in the schedule of courses or permission of instructor. A study of an individual philosopher, a particular philosophical problem or a narrowly-defined period or school. See *Schedule of Classes* for specific topic to be offered each semester.

408/Religious Studies 408 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 development.

410/Religious Studies 410 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.

412/Religious Studies 412 Zen Buddhism. Semester course; 3 lecture hours. 3 credits. A study of Zen Buddhism, including backgrounds in Indian philosophy and practice, development in China and Korea, and present day Zen theory and practice in Japan and in Western countries.

421 Aesthetics. Semester course; 3 lecture hours. 3 credits. Prerequisite: three credits in philosophy (exclusive of PHI 221 and PHI 222) or permission of instructor. A critical survey of philosophies of art from antiquity to the twentieth century. Topics include: the nature of art, creativity, aesthetic experience, and aesthetic judgments.

430/Religious Studies 430 Philosophy of Religion. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 credits in philosophy (exclusive of PHI 221 and PHI 222) or permission of instructor. A critical analysis of such topics as

the concept of God, arguments for the existence of God, the problem of evil, the concept of faith, religious language, and the conceptual problems posed by the plurality of religions.

440/Religious Studies 440 Mysticism. Semester course; 3 lecture hours. 3 credits. Prerequisite: one course in philosophy or religious studies. A critical analysis of the varieties of mysticism in world religions. Arguments for and against mysticism will be emphasized. Mysticism will be related to art, psychology, science, philosophy, theology, and magic.

490 Seminar in Philosophy. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum of 6 credits. Prerequisite: one of PHI 301, 302, 327, 335 or permission of instructor in exceptional cases. Research and analysis of selected philosophical topic in a seminar setting.

492 Independent Study. Semester course; variable credit, maximum 6 credits per semester; maximum total for all independent study courses 12 credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. An independent study course to allow interested majors in philosophy to do research, under the direction of a professor qualified in that field, in an area of major interest.

591 Topics in Philosophy. Semester course; variable credit; 1–4 credits. Prerequisite: written permission of instructor or graduate standing. A graduate level, in-depth study of an individual philosopher, a particular philosophical problem or a narrowly-defined period or school. See *Schedule of Classes* for specific topic to be offered each semester.

COURSES IN PHYSICS (PHY)

101 Foundations of Physics. Continuous course; 3 lecture hours. 3 credits. Introduction to the concepts of classical physics essential to the understanding of modern developments. See PHY 102. Presented within an historical and societal framework. For non-science majors. An optional laboratory may be taken with this course. See PHY L101.

L101 Foundations of Physics Laboratory. Semester course; 2 laboratory hours. 1 credit. Corequisite: PHY 101. An optional laboratory consisting of experiments and activities correlated with PHY 101.

102 Frontiers of Physics. Continuous course; 3 lecture hours. 3 credits. Prerequisite: PHY 101. An introduction to the concepts of modern physics with applications to selected technologies and implications for tomorrow's world. For non-science majors. An optional laboratory may be taken with this course. See PHY L102.

L102 Frontiers of Physics Laboratory. Semester course; 2 laboratory hours. 1 credit. Corequisite: PHY 102. An optional laboratory consisting of experiments and activities correlated with PHY 102.

103 Elementary Astronomy. Semester course; 3 lecture hours. 3 credits. A descriptive approach to astronomy dealing with basic features of our solar system, our galaxy, and the universe. Not applicable toward physics major requirements. An optional laboratory may be taken with this course. See PHY L103.

L103 Elementary Astronomy Laboratory. Semester course; 2 laboratory hours. 1 credit. Corequisite or prerequisite: PHY 103. An optional laboratory course consisting of experiments and activities related to PHY 103.

105 Physical Geology. Semester course; 3 lecture hours. 3 credits. A descriptive approach to physical geology dealing with the history and structure of the earth, catastrophic events, and geology as it relates to the contemporary environment. Not applicable toward physics major requirement. An optional laboratory may be taken with this course. See PHY L105.

L105 Physical Geology Laboratory. Semester course; 2 laboratory hours. 1 credit. Corequisite or prerequisite: PHY 105. An optional laboratory course consisting of experiments and activities related to PHY 105.

107–108 The Wonders of Technology. Continuous course; 3 lecture hours. 3–3 credits. Semiquantitative approach to the physical principles underlying the organization of the materials, processes, and devices in the context of today's technology. Open to non-majors. Not applicable toward the physics major.

201–202 General Physics. Continuous course; 3 lecture and 3 laboratory hours. 4–4 credits. Prerequisite: MAT 101. First semester: basic concepts of motion, waves, and heat. Second semester: basic concepts of electricity, magnetism, light, and modern physics. Designed primarily for life-science majors. Not applicable toward physics major requirement.

207 University Physics I. Continuous course; 4 lecture and 3 laboratory hours. 5 credits. Corequisite: MAT 200. A vector-and calculus-based introduction to the fundamental concepts of mechanics, heat, and wave motion.

208 University Physics II. Continuous course; 4 lecture and 3 laboratory hours. 5 credits. Prerequisite: PHY 207. Corequisite: MAT 201. A vector- and calculus-based introduction to the fundamentals of electricity, magnetism, and optics.

291 Topics in Physical Science. Semester course; variable credit. 1–3 lecture or laboratory hours. 1–3 credits per semester. Not applicable toward physics major requirements. A study of a selected topic in physics, astronomy, geology, meteorology, or oceanography. See *Schedule of Classes* for specific topic(s) and possible prerequisites.

301 Classical Mechanics I. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHY 208. Corequisite: MAT 301. Introduction to the dynamics of a single particle.

302 Classical Mechanics II. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHY 301. Corequisite: MAT 307. Introduction to rigid body dynamics and the dynamics of continuous media with particular emphasis on wave phenomena.

315 Energy and the Environment. Semester course; 3 lecture hours. 3 credits. Open to non-majors. Not applicable to the physics major. Prerequisite: junior or senior standing. Man and his physical environment; a semi-quantitative study of man's physical needs for energy and environmental problems associated with these requirements.

320 Introduction to Modern Physics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 208. Foundations of modern physics including special relativity, thermal

radiation and quantization, wave-particle duality of radiation and matter. A continuation of PHY 208.

L320 Modern Physics Laboratory. Semester course; 3 laboratory hours. 1 credit. Prerequisite or corequisite: PHY 320. Experimental work correlated with PHY 320.

322 Optics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 202 or PHY 208 or permission of instructor. An introduction to geometric, physical, and quantum optics.

330 Electrical Circuits. Semester course; 1 lecture and 2 laboratory hours. 2 credits. Prerequisites: PHY 208 or PHY 202 and MAT 201 or permission of instructor. Simple AC and DC circuits emphasizing passive circuit elements.

331 Introductory Electronics. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: PHY 330 or permission of instructor. Active circuit elements including semiconductor devices, discrete and integrated linear circuits.

335 Microprocessor-based Instrumentation. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Corequisite: PHY 330 or permission of instructor. Basic microprocessor architecture, machine and assembly language for input/output configuration, and introduction to interfacing.

340 Introduction to Statistical Physics and Thermodynamics. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHY 301 or permission of instructor. Corequisite: MAT 307. Introduction to classical thermodynamics, kinetic theory, and statistical mechanics.

350 Advanced Laboratory. Semester course; 3 laboratory hours. 1 credit. Prerequisite: PHY L320. Experiments with fundamental particles and radiation. May be taken for a maximum of 2 credits.

376 Electromagnetism. Semester course; 3 lecture hours. 3 credits. Corequisite: PHY 302 or permission of instructor. Electrostatics, magnetism, and electromagnetic properties of matter.

380 Modern Physics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 302 and 320. Quantum mechanical phenomena with applications to atomic, solid, and nuclear systems.

391 Topics in Physics. Semester course; variable credit, 1–3 lecture hours. 1–3 credits per semester; maximum total of 6 credits. Not applicable toward physics major requirement. In-depth study of a selected topic in physics or physics-related technology, usually at a level requiring only elementary algebra. See *Schedule of Classes* for specific topic(s), credit, and possible prerequisites.

397 Directed Study. Semester course; variable credit. 1–3 credits per semester; maximum of 3 credits applicable toward physics major requirement; maximum total of 4 credits. Open to nonmajors. Determination of amount of credit and permission of instructor must be obtained before registration for course. Intended to allow nonmajors and majors to examine in detail an area of physics of physics-related technology not otherwise available in upper-level courses. May involve either directed readings or directed laboratory work.

407 Introduction to Material Science. Semester course; 3 lecture hours. 3 credits. Prerequisites: CHE 102 and PHY 320 or permission of instructor. A first course in the relation

of physical and mechanical properties of materials to their structure and external conditions. Includes introductions to crystallography, physical metallurgy, and ceramics with emphasis on industrial applications.

408 Physical Metallurgy. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHY 407 or permission of instructor. A course which investigates the origins of the structure and physical properties of metals and alloys. Topics include the metallic state, phase diagrams, diffusion of defects, physical properties, elastic and plastic deformations, and mechanical properties.

432 Digital Electronics. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite PHY 331 or permission of instructor. Discrete and integrated digital circuits; noise; electronic instrumentation for control and measurement.

440 Fundamentals of Solid State Physics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 380 and 376. Bonding and structure of crystals, theory of electrons in solids, lattice vibrations, transport properties.

490 Seminar in Physics. Semester course; variable credit. 1–2 credits per semester; maximum total of 4 credits. Generally open only to physics majors with junior or senior standing. Investigation of a selected topic in a seminar setting. See *Schedule of Classes* for current offerings.

491 Topics in Physics. Semester course; 3 lecture hours. 3 credits; maximum of 3 credits applicable toward physics major requirement; maximum total of 6 credits. An in-depth study of a selected topic in physics. See *Schedule of Classes* for specific topic(s) and prerequisites.

492 Independent Study. Semester course; variable credit, 1–3 credits per semester; maximum of 3 credits applicable toward physics major requirement; maximum total of 8 credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. Independent projects in experimental or theoretical physics.

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

576 Electromagnetic Theory. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 376 and MAT 301 or permission of instructor. Maxwell's equation of electromagnetism, vector and scalar potentials, electromagnetic waves, and radiation theory.

580 Quantum Mechanics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 380. 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.

591 Topics in Physics. Semester course; variable credit. 1–3 credits. Open to graduate students and undergraduate students with advanced standing. Applicable towards physics major requirements. An in-depth study of a selected topic in advanced physics. See *Schedule of Classes* for specific topic(s) and additional prerequisites.

With permission, the following courses may be taken by advanced undergraduates:

- 507 Materials Characterization
- 532 Introduction to Instrumentation
- 535 Advanced Interfacing
- 550 Graduate Laboratory
- 591 Topics in Physics

COURSES IN POLITICAL SCIENCE (POS)

101, 102 U.S. Government. Semester courses; 3 lecture hours. 3–3 credits. A study of American national government focusing on its underlying political ideas, constitutional basis, major institutions, and their interactions in the determination of public policy. First semester: basic principles and theories of American government, development of the constitutional context, the federal system, political behavior, and the role of parties and interest groups. Second semester: structure, powers, and functions of the presidency, Congress, Supreme Court, and bureaucracy; and the process and content of domestic and foreign policy.

201 Introduction to Politics. Semester course; 3 lecture hours. 3 credits. This course examines the basic concepts involved in the study of politics. Topics include nature of the state, purpose of government, justice, power, etc.

202 Comparative Politics. Semester course; 3 lecture hours. 3 credits. Comparative study of politics and governments. Introduces concepts and approaches used in the analysis of political systems. Attention focuses on historical experiences, cultural foundations, socio-economic structures, and political institutions of both developed and developing countries.

203/International Studies 203 Issues in World Politics. Semester course; 3 lecture hours. 3 credits. An exploration of significant issues in world politics. Issues treated include: the nation state, war and peace, inequality, justice, terrorism, genocide and human rights, as well as selected others. The course will also examine attempts to ameliorate problems and resolve conflict.

214/Sociology 214 Applications of Statistics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. The application of descriptive and inferential statistics for the social sciences.

301 U.S. Parties and Elections. Semester course; 3 lecture hours. 3 credits. An overview of political parties and elections in the U.S. Topics will include the history, organization, and methods of U.S. political parties, presidential nominations and elections; Congressional elections.

303 Political Attitudes and Behavior. Semester course; 3 lecture hours. 3 credits. Study of the political behavior of individual citizens. Topics include public opinion and its measurement; how political attitudes are created and shaped; the role of the news media in influencing political behavior; political participation.

306 The Congress. Semester course; 3 lecture hours. 3 credits. Prerequisites: POS 101 and 102. A study of the behavior of legislators and the structures and processes of legislative decision-making in the U.S. Congress. Analysis will include both the internal and external environment of congressional policy-making, and an assessment of the impact of congressional policy.

308 U.S. Presidency. Semester course; 3 lecture hours. 3 credits. A political and institutional study of the chief

executive, focusing especially on the presidential personality, his relations with Congress, the bureaucracy, the courts, and the shaping of domestic and foreign policy.

310 Public Policy. Semester course; 3 lecture hours. 3 credits. An analytical survey of policy formulation and implementation in the United States, together with an examination of the impact of policy upon individuals and groups in American society.

311 Politics of the Environment. Semester course; 3 lecture hours. 3 credits. An exploration of the current controversy about environmental politics and the issues and crisis it centers on. Special attention will be given to the constitutional, political, and geographical factors in the development of environmental policy and the organized effort to deal with governmental actions and inaction and its impact on policy outcomes.

314 U.S. Constitutional Law. Semester course; 3 lecture hours. 3 credits. A survey of the development of the Constitution through judicial interpretation. Topics to be covered include an introduction to the operation of the Supreme Court, decisions on federalism, the powers of Congress, the president, and the judiciary and civil rights, and civil liberties.

315 U.S. Judicial Policymaking. Semester course; 3 lecture hours. 3 credits. Prerequisite: POS 314. A study of theories and models of judicial decision making in the Supreme Court, focusing on judicial structure and procedures, policy-making analysis, political ideology, and judicial activism.

318/Women's Studies 318 Politics of Race, Class and Gender. Semester course; 3 lecture hours. 3 credits. A study of the racial, class and gender influences on the history and development of political values, conflicts, processes, structures and public policy in the United States.

320/Sociology 320 Research Methods in the Social Sciences. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. Current methods of research in the social sciences.

321 Urban Government and Politics. Semester course; 3 lecture hours. 3 credits. An examination of urban political power and influence, governance, and public policy. Topics include: power and influence, governmental structures and the political process, public policy, and service delivery.

322 State and Local Government and Politics. Semester course; 3 lecture hours. 3 credits. An examination of the politics and governance of states and localities. Attention is devoted to political culture, interest groups, political parties, the legislative, executive, and judicial components of state government, along with the structure and political processes of local governments.

323 Virginia Government and Politics. Semester course; 3 lecture hours. 3 credits. An examination of Virginia state government and politics, with appropriate attention given to political culture, interest groups, political parties, the media, and the legislative, executive, and judicial branches of government.

329 Intergovernmental Relations. Semester course; 3 lecture hours. 3 credits. An examination of vertical and horizontal intergovernmental relations. Attention will be given to the major variants of federalism. The role of categorical and block grants in programmatic federalism

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will be assessed. Trends in intergovernmental relations will be advanced.

331 Public Administration. Semester course; 3 lecture hours. 3 credits. A study of the concepts and practices of public administration in the United States. Particular attention will be given to the administrative procedures and practices of the national government and of the government in Virginia.

334 Public Personnel Administration. Semester course; 3 lecture hours. 3 credits. An analysis of personnel management in government. Recruitment and selection, job and salary classification, work standards and training, and relations of public personnel to the executive and legislative branches of government will be included among the topics to be discussed.

341, 342 History of Political Thought. Semester courses; 3 lecture hours. 3–3 credits. A survey of political thought from the time of Plato to the present. First semester: leading political ideas of the ancient and medieval periods. Second semester: modern and contemporary thought.

343/Afro-American Studies 343 Black Political Thought. Semester course; 3 lecture hours. 3 credits. An historical and sociological perspective on the political and social ideas of black thinkers from David Walker to the present.

344 Contemporary Political Theory. Semester course; 3 lecture hours. 3 credits. This course provides a survey of recent trends in political theory. It examines updates of the major ideological traditions, arguments about the nature of modernity and recent developments in environment, feminist, and non-western thought.

351 Governments and Politics of the Middle East. Semester course; 3 lecture hours. 3 credits. A comparative analysis of political systems in the Middle East including the study of contemporary aspects of traditionalism, the political nature of transition, the instruments of political modernization, and evolution and revolution in the political process of Middle Eastern states. The course will explore the primary bases of cleavage and conflict and the principal forces that shape the policies and political dynamics of the region.

POS 352 European Governments and Politics. Semester course; 3 lecture hours. 3 credits. A comparative study of the political systems of selected western and eastern European countries.

353 Latin American Governments & Politics. Semester course; 3 lecture hours. 3 credits. A survey of politics characteristic of Latin American systems, including democratic reformism, military authoritarianism, and revolutionary socialism. The course also examines the contemporary problems of fledgling democracies as they cope with economic and debt crises and various opposition challenges.

354 The Soviet Political System. Semester course; 3 lecture hours. 3 credits. A study of the origins, institutions, and processes of the Soviet system with special emphasis on the ongoing changes initiated during the Gorbachev era.

POS 355 Asian Governments and Politics. Semester course; 3 lecture hours. 3 credits. A comparative analysis of the politics and governments of major Asian states, with a focus on Japan, China, and India.

356/Afro-American Studies 356 African Government and Politics. Semester course; 3 lecture hours. 3 credits. This

course will introduce the student to the basic outlines of government and politics in Africa. The course will consider such topics as colonialism, elites and nationalism, and modernization strategies. Using the comparative approach, the course will primarily focus on West, East, and Central Africa.

357/Afro-American Studies 357 Politics of Southern Africa. Semester course; 3 lecture hours. 3 credits. An examination of racial and political developments in the southern tip of Africa. While South Africa will be the primary focus of analysis, other countries in the region, such as Zimbabwe, Angola, and Mozambique, will be studied.

361 International Relations. Semester course; 3 lecture hours. 3 credits. An analysis of interstate relations and world affairs. Attention focuses on human and economic resources, military capabilities, geopolitical considerations, diplomacy, and other factors of international relations.

362 International Organizations and Institutions. Semester course; 3 lecture hours. 3 credits. A study of the background development structure and operations of organizations and institutions such as the United Nations, the European Community, the Organization of American States.

363 U.S. Foreign Policy. Semester course; 3 lecture hours. 3 credits. An analytical survey of processes and practices in the formulation of United States foreign policy, including an introduction to the goals, problems of implementation, and current challenges faced by policy-makers.

364 Vietnam. Semester course; 3 lecture hours. 3 credits. An analysis of the complete record of the conflict in Vietnam. The primary focus will be on the period of United States involvement. The course will examine closely how and why the U.S. became involved in Vietnam and what impact the Vietnam war has had on political institutions and behavior. In particular, the course will examine what impact the period of U.S. involvement has had upon U.S. foreign policy. The course will also consider additional topics including: public opinion and the war, the relationship between President and Congress in light of the War, and contemporary U.S. politics as a backlash against the political movements of the 1960s.

391 Topics in Political Science. Semester course; 3 lecture hours. 3 credits; maximum total of 9 credits in all departmental topics courses may be applied to the major. An intensive survey of a specialized field of political interest. See *Schedule of Classes* for specific topics to be offered each semester.

409 Continuity and Change in American Politics. Semester course; 3 lecture hours. 3 credits. Prerequisites: POS 101, 102 or permission of instructor. This course is concerned with the role of cultural, economic, and social variables in shaping American politics and public policy. Particular attention will be devoted to the impact of socioeconomic change upon individual and group behavior, and the structures and processes of American national government.

420 Seminar in Urban Politics. Semester course; 3 lecture hours. 3 credits. Attention will be devoted to concerns bearing on community power and influence, the dynamics of the urban political process, the nature of urban public policy, and metropolitan governmental structure.

425 Public Policy in the States. Semester course; 3 lecture hours. 3 credits. The course focuses primarily upon the

policy outcomes of state political systems rather than upon institutional processes. Social, economic, political, and governmental structures and their relationship to state policy are analyzed; means of policy evaluation are considered; and the insights developed are applied to substantive areas of state policy.

432 Public Bureaucracy. Semester course; 3 lecture hours. 3 credits. Prerequisite: POS 331. An analysis of the nature of bureaucracy and bureaucratic phenomena in American governments; the role and involvement of the bureaucracy in politics and the policy-making process. Primary focus on theories and approaches to understanding the central role of bureaucracy in modern society and its use and abuse of power.

448 Scope and Method of Political Science. Semester course; 3 lecture hours. 3 credits. Prerequisites: POS 101, 102, 201, or permission of instructor. A comprehensive and systematic study of the philosophy of political science, various theories seeking to explain political phenomena, and some of the techniques of political analysis.

452 Seminar in the Politics of Developing Areas. Semester course; 3 lecture hours. 3 credits. Analysis of the processes of political and economic development. Includes a study of various challenges facing developing countries, such as economic inequalities, environmental degradation, mass political participation, military coups, revolution, and civil war. 1992

468 Seminar on Comparative Foreign Policy. Semester course; 3 lecture hours. 3 credits. Prerequisite: POS 201 or permission of instructor. A study of theories, models, and hypotheses of foreign policy behavior in various types of political systems with emphasis on empirical research and analysis of differences and similarities.

491 Topics in Political Science. Semester course; 3 lecture hours. 3 credits; maximum total of 9 credits in all departmental topics courses may be applied to the major. An intensive survey of a specialized field of political interest. See *Schedule of Classes* for specific topics to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum 4 credits per semester; maximum total for all independent study courses 6 credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in political science. Determination of the amount of credit and permission of the instructor and department chairman must be obtained prior to registration for the course. An independent study course which allows a political science major or other student who meets the requirement to do research, under the direction of an instructor qualified in that area, in a subject or field of major interest.

493/Urban Studies 493 Urban Government Internship. Semester course; 150 clock hours in a local legislative body or administrative agency. 3 credits, may be repeated once for a maximum total of six credits; or 300 clock hours, 6 credits. Approval of selection committee required. Under supervision of a faculty committee and a field supervisor, the internship is designed to present opportunities for qualified students to acquire exposure to aspects of public decision-making processes by participation in (1) local legislative bodies of the Richmond metropolitan area; (2) local and regional administrative agencies and commissions; and (3)

private organizations that have demonstrated interest in local government and politics.

494 Political Science Internship. Semester course; 3 or 6 credits. Cannot be repeated. Designed to provide the student with an opportunity to relate theory to practice through observation and actual experience through internship in the judicial and legislative branches of government.

498 Political Science Honors. Semester course; 3 lecture hours. 3 credits. Prerequisite: admission to the Honors in Political Science Program or permission of the political science honors coordinator. This course will focus primarily on various approaches to the study of politics and will draw together the diverse strands of political science that are the most representative, coherent, and lively in the field. Its purpose is to acquaint the students with various conceptual frameworks for the study of politics or to develop their understanding of the state of the discipline.

499 Political Science Honors Project. Semester course; 3 lecture hours. 3 credits. Prerequisite: successful completion of POS 498 with a "B" grade or above. This course will entail the planning and execution of a major research project demonstrating a thorough understanding and use of research techniques in political analysis, knowledge of relevant literature, sophisticated writing and research ability under the direction of the honors coordinator.

COURSES IN PSYCHOLOGY (PSY)

101 Introduction to Psychology. Semester course; 3 lecture hours. 3 credits. A prerequisite for upper-level work in the field of psychology. A survey of the basic principles, methods of investigation, and fields of study and application.

NOTE: PSY 101 is a prerequisite for the following courses.

201 Career Development in Psychology. Semester course; 2 lecture hours. 2 credits. Introduction to the discipline of psychology and the career alternatives available in various specialties. Self-assessment, career decision-making skills, educational program planning methods will be covered. Special topics will include graduate/professional school options, opportunities for minority students, and job search strategies for the B.A. or B.S. psychology major.

214 Applications of Statistics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. Frequency distributions, measures of central tendency and variability; sampling, probability, correlation, and significance tests as applied in psychological data.

301 Child Psychology. Semester course; 3 lecture hours. 3 credits. A study is made of the growth and development of the child until puberty. Childlife is viewed in terms of physical, mental, social, emotional, and educational factors. (PSY 304 Developmental Psychology may not also be taken for credit.)

302 Psychology of Adolescence. Semester course; 3 lecture hours. 3 credits. Prerequisite: Either PSY 301 Child Psychology or PSY 304 Developmental Psychology. A study of mental, moral, social, and physical development from puberty to maturity viewed as in child psychology. Designed for secondary school teachers, youth leaders, and professional psychologists.

303 Effective Behavior and Contemporary Psychology. Semester course; 3 lecture hours. 3 credits. Surveys psychological difficulties that often arise in normal human existence, such as depression, self-control difficulties, interpersonal relationship problems, stress, anxiety, and others. Strategies for coping with these problems are covered within a framework of current psychological theories.

304 Developmental Psychology. Semester course; 3 lecture hours. 3 credits. Reviews the basic concepts and principles of physical, cognitive, and social development at each major stage of life—prenatal, infancy, toddlerhood, preschool, middle childhood, adolescence, adulthood, and old age. Consideration is given to the study of development at each stage of life and to different theoretical explanations for development. (PSY 301 Child Psychology may not also be taken for credit.)

305/Education 305 Educational Psychology. Semester course; 3 lecture hours. 3 credits. The application of psychological principles to the teaching-learning process with special emphasis on theories of learning and development.

306 Psychology of Adult Development. Semester course; 3 lecture hours. 3 credits. Prerequisite: Either PSY 301 Child Psychology or PSY 304 Developmental Psychology. The life stages and transitions of the young adult, middle age, and young-old phases of the life cycle are considered, following a review of methods of research within life-span developmental psychology. Topics include the impact of events such as birth of the first child, job relocation, mid-life reevaluation, and anticipated retirement.

308 Stress and Its Management. Semester course; 3 lecture hours. 3 credits. Physiological and psychological aspects of stressors and the stress response. Review of principles, research, and methods of stress management, such as relaxation, self-suggestions, meditation, and biofeedback.

309 Personality. Semester course; 3 lecture hours. 3 credits. The study of the various approaches to understanding human behavior in terms of personality theory. Various theories will be examined for commonality and uniqueness in assumptions, dynamics, and development of personality.

310 Industrial Psychology. Semester course; 3 lecture hours. 3 credits. Application of psychological principles and techniques to problems in personnel management and human engineering; recruitment, selection, training, and placement in industry; criteria in testing and test development; morale evaluation and improvement, employee counseling; work-management communications; human engineering in equipment design, quality control, working conditions, and safety.

317 Experimental Methods. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: PSY 214. Introduction to experimental procedures and laboratory techniques in psychology. Demonstrations and experiments in sensation, perception, learning, emotion, and motivation.

318 Principles of Psychological Tests and Measurement. Semester course; 3 lecture hours. 3 credits. Prerequisite: PSY 214. Concepts in psychological measurement and a survey of commonly used tests; testing procedures and rationale underlying these tests; tests of intelligence, aptitude, achievement, interest, and personality critically examined, procedures described for selecting and evaluating specific group tests in these areas.

321 Social Psychology. Semester course; 3 lecture hours. 3 credits. Survey theory and research in social psychology. Topics include interpersonal and social influence processes, attitudes and social cognition, the impact of personality on social behavior, conformity, leadership, and small group behavior.

322/Afro-American Studies 322 Personality and Behavior of the Afro-American. Semester course; 3 lecture hours. 3 credits. A study of personality factors such as motivation, ego-functioning, and the socialization processes, with special emphasis on living conditions of Afro-Americans.

323 Interpersonal Relations. Semester course; 3 lecture hours. 3 credits. Analyzes human relations from various theoretical perspectives. Typical topics include the effects of attraction, friendship, love, and dependency on relationships; the evolution of relationships from initiation through termination. Strategies for increasing effectiveness of communication between individuals are also addressed.

324 Psychology of Advertising. Semester course; 3 lecture hours. 3 credits. Psychological factors involved in determining attention, attitudes, and suggestibility as related to consumer preferences and purchasing habits; the role of advertising in influencing consumer behavior.

333/Religious Studies 333 Psychology and Religious Experience. Semester course; 3 lecture hours. 3 credits. Religious belief and experience as viewed by major psychological theorists. How psychological methodology has been used to study religious experience. Topics include personality factors and development, conversion experiences, religious experiences and mental health, and human values.

335/Women's Studies 335 Psychology of Women. Semester course; 3 lecture hours. 3 credits. Overview of issues in psychology relevant to women. Topics include: research methods of women's issues; sex-role socialization; women and hormones; psychological androgyny; personality theory and counseling strategies for women; women and language; women and violence; and rape and abuse.

340 Introduction to the Helping Relationship. Semester course; 3 lecture hours. 3 credits. Overview to the dynamics of communication in a helping relationship. Didactic material includes the principles of empathy, nonverbal behavior, problem solving, crisis intervention, and interview techniques. Basic paraprofessional counselor skills will be demonstrated and practiced through structured exercises.

341/Sociology 341 Group Dynamics. Semester course; 3 lecture hours. 3 credits. Social and psychological principles and research related to the individual in groups. Specific topics include motivation for individuals forming and joining groups, performance and productivity of group members, group leadership, and majority and minority influence. The group will be examined in relation to the larger society and as a subculture in itself.

401 Physiological Psychology. Semester course; 3 lecture hours. 3 credits. Data from the fields of anatomy and physiology are presented, and their implications for psychology are discussed. The central nervous system, internal environment, vision, audition, reflexes, emotion, learning behavior disorders, and their physiological components. Behavior of human organism is studied from the biopsychological point of view.

403/Linguistics 403 Introduction to Psycholinguistics. Semester course; 3 lecture hours. 3 credits. Method and theory in studying language behavior. Topics include the structure of communication using language, language acquisition, the role of language in thinking and remembering, and the relation of language to other ways of communicating.

404/Sociology 404 Social Psychology of Emotions. Semester course; 3 lecture hours. 3 credits. Prerequisites: PSY 101, SOC 101. An examination of the social shaping of emotion as well as its function in maintaining the social process. Cross-cultural uniformities and diversity in basic emotions and their expression are addressed as well as selected social psychological theories of emotions.

405 Humanistic Psychology. Semester course; 3 lecture hours. 3 credits. A critical examination of "third force" psychology, emphasizing person-centered and growth-oriented frameworks for the analysis of behaviors believed unique to humans. The course addresses theory and research on the psychological foundations of consciousness, self-awareness, intentionality, symbol manipulation, and related topics which may define human nature as distinct from that of other species.

406 Perception. Semester course; 3 lecture hours. 3 credits. Perception of information from sensory systems with concentration on vision and hearing. Research and theories on how we learn and judge color, form, movement, depth, and how we integrate these in object identification.

407 Psychology of the Abnormal. Semester course; 3 lecture hours. 3 credits. Development of personality is discussed, with emphasis on factors leading to maladjustment. Lectures and reading cover the symptom groups of emotional disorders of both psychological and organic origin. Methods of assessing and treating these disorders are surveyed.

408 Nonverbal Communication in Human Interaction. Semester course; 3 lecture hours. 3 credits. Theory and research in nonverbal communication including facial expression, body movements, postures, interpersonal space, voice qualities, etc. Importance of nonverbal messages in expressing emotion and in conducting interpersonal transactions, with applications to abnormal behavior and psychotherapy.

410 Principles of Learning and Cognition. Semester course; 3 lecture hours. 3 credits. Comprehensive treatment of learning and cognition with emphasis of humans, from behavioral, cognitive, biological, and developmental viewpoints. Topics include conditioning, information processing, memory, sociobiology, and cognitive and moral development.

412 Health Psychology. Semester course; 3 lecture hours. 3 credits. Prerequisites: PSY 101, PSY 308 or PSY 401, or consent of instructor. Application of the principles and techniques of psychology to the field of medicine, to health maintenance, and to illness. The integration of theoretical, research, and applied issues is emphasized in the analysis of such topics as psychological/behavior factors contributing to and protecting against physical illness (stress, smoking, exercise), factors relating to treatment and recovery (coping, treatment compliance), psychological problems resulting from illness and injury, and specific techniques and problem areas in health psychology (such as biofeedback, pain management, pediatric psychology, geropsychology, rehabilitation psychology, and lifestyle change.)

426 Child Psychopathology. Semester course; 3 lecture hours. 3 credits. Prerequisite: Either PSY 301 Child Psychology or PSY 304 Developmental Psychology. Principal childhood behavioral abnormalities. A review of causes, assessment, and diagnostic methods, and treatment, intervention, and prevention approaches.

430 Engineering Psychology. Semester course; 3 lecture hours. 3 credits. Theory and research related to man-machine-environment systems, their design and effectiveness. Human sensory processes as they relate to information input, human information processing, and human output activities. Application of knowledge in these areas to the design and use of mechanical systems and to man-machine system compatibility.

451 History and Systems of Psychology. Semester course; 3 lecture hours. 3 credits. Prerequisite: Open to PSY major students of junior or senior standing. The history of psychological ideas and theories emphasizing the origins and interrelationships of the major viewpoints and systems from ancient Greece to the present.

491 Topics in Psychology. Semester course; 3 lecture hours. 3 credits; maximum total of 6 credits in topics courses. An in-depth study of selected topics and issues in psychology. See *Schedule of Classes* for specific topics to be offered.

NOTE PSY 492 Independent Study; PSY 493 Field Work: Human Services; PSY 494 Research Internship in Psychology may be repeated for a total of six credits but a maximum of 12 credits total for all three courses is allowed.

492 Independent Study. Semester course; variable credit, 1, 2, or 3 credits per semester; maximum total for all independent study courses 6 credits. Open only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. Independent study is defined as student-conceived and initiated readings or research project which is supervised by a psychology faculty member. An oral examination or written, comprehensive paper is required at the end of the semester.

493 Field Work: Human Services. Semester course; 1 full day per week. 3 credits. Prerequisite: PSY 340. Students are placed in an agency which will provide supervised work experience in various aspects of helping other people. The setting might be a government or private community agency, or a corporation, depending on the student's goals. The student works one full day a week. This course is designed to enhance the psychology major's career pursuits for either graduate-level training or post-baccalaureate employment.

494 Research Internship in Psychology. Semester course; variable credit, 1, 2, or 3 credits per semester. May be repeated, with advisor's approval, for a total of 6 credits. Permission of faculty research supervisor must be obtained prior to registration. Prerequisites: PSY 214, 317, or permission of supervisor. Students will work on various phases of a research project (design, data collection, data analysis, manuscript writing) under a psychology faculty member's close supervision. This course is designed to enhance the psychology major's career pursuits for either graduate-level training or post-baccalaureate employment.

498-499 Honors in Psychology. Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: consent of undergraduate committee of the Psychology Department. Discussion will include advanced research strategies, related professional issues, and topics determined by the student's interest. Students are required to develop and complete a senior honors thesis which will be the major emphasis of the second semester.

COURSES IN RELIGIOUS STUDIES (RST)

101 Introduction to Religious Studies. Semester course; 3 lecture hours. 3 credits. An introduction to various methodologies for the study of religion and to recurring issues and problems involved in religious life and thought.

211 Christian Ethics. Semester course; 3 lecture hours. 3 credits. An historical and systematic consideration of ethical norms and their application to current problems.

250 Death: Myth and Reality. Semester course; 3 lecture hours. 3 credits. A study of intellectual and emotional responses to death and dying with emphasis upon their role in the development of religious thought and practice. Special attention will be paid to the death theme in literature, funeral practices, and beliefs concerning the afterlife in selected world religions.

301 Introduction to the Old Testament. Semester course; 3 lecture hours. 3 credits. A survey of the Old Testament from its beginning through the post-Exile period. Emphasis given to the literary and historical development of the text.

302 Introduction to the New Testament. Semester course; 3 lecture hours. 3 credits. A survey of the New Testament with particular emphasis given to the historical development of the Canon.

303 Intertestamental Literature and Thought. Semester course; 3 lecture hours. 3 credits. Prerequisite: RST 301 or 302. The period between the Old and New Testaments as seen through the literature of the era, with emphasis on the writings of the Apocrypha, Pseudepigrapha, and Josephus.

304 Introduction to Judaism. Semester course; 3 lecture hours. 3 credits. A general survey of the dynamics and characteristic patterns of Jewish civilization encompassing history, practices, and beliefs.

305 Hebrew Prophets. Semester course; 3 lecture hours. 3 credits. Prerequisite: RST 301. A survey of the literature and history of Israel as seen through the work of the writing prophets. Emphasis will be placed on the second part of the Hebrew Canon and the Book of Daniel.

307/Afro-American Studies 307 Black Religion. Semester course; 3 lecture hours. 3 credits. An analysis of the role of religion in the lives of blacks with an emphasis on African religions and philosophies, the black church in America, and the roles of the various faiths, sects, and cults.

308/History 307 The High Middle Ages. Semester course; 3 lecture hours. 3 credits. A detailed historical analysis of the Gregorian Revolution, the Crusades, the twelfth century Renaissance, the Thomistic World, and the death of medieval civilization.

309/History 309 The Reformation. Semester course; 3 lecture hours. 3 credits. A careful and intensive inquiry into

the spiritual and material forces and people involved in the reformation of Christendom in sixteenth century Europe.

311, 312 Religions of the World. Semester course; 3 lecture hours. 3, 3 credits. An investigation of the historical, cultural, and theological foundations and development of major world religions. First semester: Hinduism, Buddhism, Confucianism, Taoism, and Shinto. Second semester: Zoroastrianism, Judaism, Christianity, and Islam.

313 Life and Literature of Paul. Semester course; 3 lecture hours. 3 credits. Prerequisite: RST 302. A survey of the life and literature of Paul as given in Acts and the Epistles, involving special consideration of Paul's contribution to the expansion of Christianity.

314 Jesus in the New Testament Tradition. Semester course; 3 lecture hours. 3 credits. A study of the Christ of faith and the Jesus of history as presented in New Testament literature and as interpreted in the works of selected scholars from the Church fathers to the present.

315, 316/History 301, 302 The Ancient Near East. Semester course; 3 lecture hours. 3, 3 credits. A study of the ancient Near Eastern civilizations of Mesopotamia, Egypt, Anatolia, and Syria-Palestine, from the pre-literary period to that of the Archaemenid Empire of the Persians. First semester: pre-literary period to the end of Kassite rule in Babylonia (c.-1160 B.C.). Second semester: the rise and fall of the great Neo-Assyrian, Neo-Babylonian, Hebrew, and Persian Empires (c.-311 B.C.).

317 The Formative Period of Islam. Semester course; 3 lecture hours. 3 credits. A study of the emergence of Islam in Arabia in the seventh century (A.D.). The course focuses on such Islamic sciences as the study of the Qur'an and Hadith, and the relationship between God and man. The political, theological, and historical interaction between Islam and other civilizations and religions, especially Judaism, Christianity, Zoroastrianism, and Hinduism, will be explored, as well as the complex relationship between Greek philosophy and Islam (especially in the period between the second and the sixth Islamic centuries). The developments in Islamic mysticism will be covered as well.

318, 319 History 325, 326 History of the Jewish People. Semester courses; 3 lecture hours. 3, 3 credits. A study of the Jewish people from the destruction of the Second Temple in 70 A.D. to the present. First semester: Judea in Roman times, the Diaspora in Islam and in Europe, social and cultural trends, and the impact of the Emancipation. Second semester: the rise of the American Jewish community, the impact of modernism and growth of Reform, the beginnings and growth of Zionism, restoration in Palestine, the Holocaust, the creation of Israel, and the relations of Israel and World Jewry.

320 Taoism. Semester course; 3 lecture hours. 3 credits. A study of one of the most fundamental and influential philosophies of life in Chinese culture, focusing on the theory and practice of the basic principles of Taoism as formulated by the legendary Lao Tzu and further developed by Chuang Tzu.

326/Philosophy 326 Existentialism. Semester course; 3 lecture hours. 3 credits. Prerequisite: three credits in philosophy (exclusive of logic) or permission of instructor. An examination of the nature of truth, freedom, responsibility, individuality, and interpersonal relations as found in some principal writings of Kierkegaard, Nietzsche, Jaspers, Sartre, Heidegger, Camus, Buber, Marcel.

327/History 327 History of Christianity. Semester course; 3 lecture hours. 3 credits. An historical and theological examination of Christianity from its origin to the present. Emphasis will be upon an understanding of leading events, ideas, movements, and persons in their historical settings.

331 Christianity and Culture. Semester course; 3 lecture hours. 3 credits. Prerequisite: three credits of religious studies. A study of the interaction of Christianity and Western culture.

333/Psychology 333 Psychology and Religious Experience. Semester course; 3 lecture hours. 3 credits. Religious belief and experience as viewed by major psychological theorists. How psychological methodology has been used to study religious experience. Topics include personality factors and development, conversion experiences, religious experiences and mental health, and human values.

334 Religion in Contemporary America. Semester course; 3 lecture hours. 3 credits. Religious phenomena in American life and thought ranging from denominationalism to the Jesus Movement.

335 The American Jewish Experience. Semester course; 3 lecture hours. 3 credits. The religious, social, and cultural structure of American Jewry from the colonial era to the present. Central themes examined are the social and religious characteristics of the American Jewish community, the tension between traditional Jewish values and the demands of the American environment, imported versus indigenous ideologies, regional and denominational variations.

360/Sociology 360 Sociology of Religion. Semester course; 3 lecture hours. 3 credits. A systematic review and assessment of major sociological theories of and empirical research on religious behavior and groups. Topics include the structure of religious organizations; social correlates and functions of religion; denominationalism; religion and social class, social change and population.

361/English 361 The Bible as Literature. Semester course; 3 lecture hours. 3 credits. Literary aspects of the Bible will be considered. Also attention will be given to the history of the English Bible.

407 Modern Jewish Thought. Semester course; 3 lecture hours. 3 credits. A study of the writings of the leading Jewish thinkers of the nineteenth and twentieth centuries. Special reference will be made to the issues arising from the encounter of Judaism with the modern world: the nature of revelation and the authority of the Torah, the nature of God, the impact of the Holocaust, the meaning of redemption, and the significance of the state of Israel.

408/Philosophy 408 Indian Tradition. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHI 104 or RST 311. 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.

410/Philosophy 410 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.

412/Philosophy 412 Zen Buddhism. Semester course; 3 lecture hours. 3 credits. A study of Zen Buddhism, including backgrounds in Indian philosophy and practice, development in China and Korea, and present day Zen theory and practice in Japan and in Western countries.

430/Philosophy 430 Philosophy of Religion. Semester course; 3 lecture hours. 3 credits. Prerequisite: three credits in philosophy (exclusive of PHI 211 and PHI 212) or permission of instructor. 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.

431/MHT 431 Hymnology. Semester course; 3 lecture hours. 3 credits. A study of hymns and hymn tunes with emphasis on their development, style, and functions. Offered alternate years.

435/MHT 435 Liturgies. Semester course; 3 lecture hours. 3 credits. A study of the forms of public worship emphasizing the orders in current usage. The planning of weekly and special services. Offered alternate years.

440/Philosophy 440 Mysticism. Semester course; 3 lecture hours. 3 credits. Prerequisite: one course in philosophy or religious studies. A critical analysis of the varieties of mysticism in world religions. Arguments for and against mysticism will be emphasized. Mysticism will be related to art, psychology, science, philosophy, theology, and magic.

490 Seminar in Religious Studies. Semester course; 3 lecture hours. 3 credits; maximum 6 credits. Prerequisite: 12 hours in RST courses. Research methods and bibliography in the field of religious studies; application of techniques and resources on research topics with classroom guidance and critique.

491 Topics in Religious Studies. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for maximum of 6 credits. Prerequisite: written permission of instructor. An in-depth study of selected ideas or concepts, religious thinkers, or significant movements in the field of religion. See *Schedule of Classes* for specific topic to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum 4 credits per semester; maximum total for all independent study courses 6 credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. An independent study course to allow interested students in religious studies to do research in an area of major interest under the direction of a professor qualified in that field.

COURSES IN RUSSIAN (RUS)

101-102 Elementary Russian. Continuous course; 5 lecture/recitation hours. 4-4 credits. Elementary grammar, reading, and oral drill.

201 Intermediate Russian. Semester course; 3 lecture hours; 3 credits. Continuation of the essentials of grammar with emphasis on achieving proficiency in aural comprehension, speaking, reading, and writing skills.

NOTE: In order to complete Russian through the intermediate level, a student may elect Russian 202 or 205.

202 Intermediate Russian Readings. Semester course; 3 lecture hours; 3 credits. Prerequisite: Russian 201 or the equivalent. Designed to increase the student's proficiency through the study of selected cultural and literary texts.

205 Intermediate Russian Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: RUS 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

491 Topics in Russian. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum of 6 credits. An in-depth study of selected topics in Russian. See *Schedule of Classes* for specific topics to be offered each semester.

COURSES IN SOCIAL SCIENCES (SSC)

205 Course by Newspaper. Semester course; 3 credits, maximum total 6 credits. This course cannot count for credit towards a major nor as a prerequisite for other courses. A maximum of nine credits may be taken in courses by newspaper (HUM 205/SSC 205). A discussion of subjects of interest to students and the general public based on syndicated newspaper articles by distinguished scholars from a variety of perspectives. Students enrolled for credit will attend six sessions, four for lecture and discussion and two primarily for testing. Midterm and final exam will be based on the newspaper series, course reader, study guide, and any other materials which the instructor may assign. Two assigned papers related to topics of the course will be required.

206 Course by Broadcasting. Semester course; 3 credits, maximum total 6 credits. This course cannot count toward credit for a major or meet any prerequisites for other courses but may be used for elective credit. It involves discussion of subjects of interest to students and the general public in conjunction with presentations on television or radio. Students enrolled for credit will attend a minimum of four meetings for lecture and discussion and two meetings primarily for testing. Midterm and final examinations will be based on the broadcast series, course reader, study guide, and other materials which the instructor may assign. Two assigned papers related to topics in the course will be required.

291 Issues in Social Science. Semester course; variable credits, 1–3 credits per semester; maximum total 6 credits. An interdisciplinary course structured around social issues pertinent to today's society. See *Schedule of Classes* for particular issue to be covered and the semester credit for which each course will be offered.

301 The Ascent of Man. Semester course; 3 credits. A course through television. The series traces the development of science as an expression of man.

303 Marriage and Family Relationships. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. Marriage and the family in contemporary society. Topics discussed will include the effects of masculine and feminine roles on marital and parent-child relationships, how role problems are resolved, sexual adjustments, financial adjustment, family planning, and retirement.

330 The Psychology and Sociology of Death. Semester course; 3 lecture hours. 3 credits. Prerequisite: PSY 101 or SOC 101. An interdisciplinary study of the encounter with death, death and personality, the organizational processing of death, and demographic regularities of dying. The course is jointly taught by sociologists and psychologists.

340 Human Sexuality. Semester course; 3 lecture hours. 3 credits. A study of the variety of the forms, sources, and consequences of human sexual behaviors and the attitudes, beliefs, and values associated with them. The data and its analysis are directed to the significance of sex in human experience.

350 The Construction of Culture. Semester course; 3 lecture hours. 3 credits. An examination, using methods from several disciplines, of the ways in which human beings construct the shared meanings which constitute culture.

351 The Imposition of Domination. Semester course; 3 lecture hours. 3 credits. An examination of the relationship between culture and power. The focus will be upon a critical analysis of contemporary American life.

380 Divorce and After. Semester course; 3 lecture hours. 3 credits. A study of the social, legal, and personal aspects of divorce. Emphasis will be on the social consequences of divorce and its impact on husbands, wives, and children and their adjustment to it.

COURSES IN SOCIOLOGY (SOC)

101 General Sociology. Semester course; 3 lecture hours. 3 credits. An introduction to the study of human society. The basic concepts of society and culture and their relationships to each other are studied and then used to analyze the major social institutions.

102 Contemporary Social Problems. Semester course; 3 lecture hours. 3 credits. A sociological approach to selected contemporary social problems through use of such analytical concepts as role, social class, and subculture.

105/Afro-American Studies 105 Sociology of Racism. Semester course; 3 lecture hours. 3 credits. The course will explore the direct and indirect ways in which racial attitudes are acquired, their effect on the individuals and society, and the institutional and ideological manifestations of racism as a "faith system," as exploitation, and as a form of human conflict. The central focus of interest will be on black-white relationships.

200 The Community. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A comparative analysis of communities from different parts of the world.

203 Sociology of Deviant Behavior. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. An analysis of the relationship between social structure, social control, and patterns of social deviance; a survey and critique of present social science theories in light of empirical research and application of the theories to selected problem areas.

210 Crowds, Riots, and Social Movements. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. An analysis of non-institutional forms of behavior, including mobs, riots, and social movements.

214/Political Science 214 Applications of Statistics. Semester course; 2 lecture and 2 laboratory hours. 3 credits.

Prerequisite: STA 213. The application of descriptive and inferential statistics for the social sciences.

304/Anthropology 304/Women's Studies 304 The Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or ANT 103. The family in its social and cultural context. Analysis of child rearing, marriage, kinship, family crises, and family change in various societies around the world.

305/Afro-American Studies 305/Women's Studies 305 Sociology of the Black Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. A socio-history of the development of the dynamics of the black family.

315 Education and Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Analysis of education as a social institution in the societal context. Cross-cultural comparative perspectives on education.

318 Social Thought. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A review of the ideas of major social philosophers whose works are now the foundation of much modern sociology.

320/Political Science 320 Research Methods in the Social Sciences. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. Current methods of research in sociology.

321 Class, Status, and Power. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Analysis of social mobility, class, status, and power.

322 Minority Groups in the United States. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A study of the various racial, religious, and ethnic minority groups. Accommodation and assimilation. Relation of subcultures to the dominant culture.

327 Urban Sociology. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Origin, character, and significance of urban communities. Ecological and social factors are analyzed as well as changes in urban social organization and their consequences.

331 Juvenile Delinquency. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Analysis of the biological, cultural, psychological, and social factors involved in juvenile delinquency and their relation to current techniques of treatment, prevention, and control.

333/Women's Studies 333 Sociology of Sex and Gender. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. A cross-cultural and evolutionary exploration of the interdependence between male and female roles in the following social institutions: family, law, economics, politics, religion, education, and health.

334/Women's Studies 334 Sociology of Women. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or consent of instructor. This course will examine the position and status of women across societies and the social forces that maintain existing patterns and arrangements. The integration of family and work in women's lives will be emphasized.

340 Social Psychology. Semester course; 3 lecture hours. 3 credits. Focused discussion of the regularities in human behavior that arise due to man's participation in social

groups. Emphasis will be placed on such topics as communications, attitudes, language, interpersonal perception, personal identities, and social interaction.

341/Psychology 341 Group Dynamics. Semester course; 3 lecture hours. 3 credits. Prerequisite: PSY 101. Social and psychological principles and research related to the individual in groups. Specific topics include motivation for individuals forming and joining groups, performance and productivity of group members, group leadership, and majority and minority influence. The group will be examined in relation to the larger society and as a subculture in itself.

350 Sociology of Leisure. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Study of the sociological determinants, contexts, and consequences of leisure in modern societies. Emphasis will be placed on such topics as work and leisure, social class and leisure, social change and leisure, popular culture, and sociology of sport.

355 Natural Resources and Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. An examination of social factors and issues related to the distribution, use, and production of resources vital to human societies. The focus will be on food, land, water, and energy. Implications of alternative choices regarding environmental quality, food processing, growth, and conservation will be reviewed and evaluated.

360/Religious Studies 360 Sociology of Religion. Semester course; 3 lecture hours. 3 credits. A systematic review and assessment of major sociological theories of and empirical research on religious behavior and groups. Topics include the structure of religious organizations; social correlates and functions of religion; denominationalism; religion and social class, social change and population.

370 Mass Media and Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101, MAC 101, or POS 102. An analysis of the major types of mass media communication as socializing agents and instruments of social change. The significance of the mass media for cultural patterns and social values will be explored, and the structure and functions of the media in different societies will be compared.

380/Anthropology 380 Drugs, Society, and Culture. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or ANT 103. An examination of the anthropological and sociological significance of drugs and drug use from prehistoric cultures through modern societies.

391 Topics in Sociology. Semester course; 3 lecture hours. 3 credits, maximum 6 credits per semester; maximum total of 18 credits in all departmental topics courses which may be applied to the major. A discussion of specialized areas of sociological interest. See *Schedule of Classes* for specific topics to be offered each semester. Check with department for specific prerequisites.

402 Sociological Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A study of the works of the major sociological theorists of the twentieth century.

403 Criminology. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Analysis of the nature, extent, and distribution of crime emphasizing theories of and research on causation, prediction, and prevention.

404/Psychology 404 Social Psychology of Emotions. Semester course; 3 lecture hours. 3 credits. Prerequisites: PSY 101, SOC 101. An examination of the social shaping of emotion as well as its function in maintaining the social process. Cross-cultural uniformities and diversity in basic emotions and their expression are addressed as well as selected social psychological theories of emotions.

421 Applied Social Research. Semester course; variable credit; may be repeated for a total of 6 credits. Prerequisites: SOC 214 and 320. A laboratory course providing training in the application of social research methods under laboratory and field situations to problems of mutual interest to community policymakers and professionals in the disciplines of sociology, social psychology, and anthropology. This course is designed to enhance the skills of students in applied social research. With direct supervision by the instructor, individuals or small groups of students will address themselves to the tasks of defining, designing, and executing research projects.

426 Population Dynamics. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. The study of trends in fertility, mortality, population growth, distribution, migration, and composition. The mutual influences of these factors and social organization.

430 Politics, Power, and Ideology. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Sociological analysis of political organization and behavior. Such subjects as distribution and uses of power, creation and management of group conflict, development and diffusion of political ideologies, and problems of bureaucracy and mass society will be considered.

432 Soviet Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. An analysis of social institutions in Russia before Lenin and the nature of Soviet public and private life since the Revolution. Particular emphasis will be placed on changes in the Soviet Union under Gorbachev.

436 Work and Management in Modern Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. The study of industrial plants and business organizations as social systems.

445 Medical Sociology. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A survey of the social, economic, cultural, and social psychological factors in health and illness; the sociology of health and medical care organizations and settings; the sociology of health occupations; and the techniques of research in medical sociology.

446 Sociology of Mental Illness. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A survey of selected social, economic, cultural, and social psychological factors in mental health and illness. Such problems as defining mental illness; social factors in the distribution, diagnosis, etiology, and treatment of mental disorders; mental illness as a social role; and research methods used in the sociology of mental illness will be considered.

475 Organizations and Human Behavior. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A survey of theory and research in social organizations, including the study of behavior in modern complex human organizations.

476 Labor, Occupations, and Careers. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. An examina-

tion of labor force participation in terms of the individual worker's experience, the work setting, the nature of occupations, and labor force composition.

492 Independent Study. Semester course; variable credit, maximum 6 credits per semester; maximum total for all independent study courses 12 credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of the instructor and department chairman must be procured prior to registration for the course. Cannot be used in place of existing courses.

493 Field Research Internship. Semester course; 3 credits, maximum 6 credits. Prerequisite: for sociology and anthropology majors of junior or senior standing. Applications must be approved by a faculty advisor and by the internship coordinator. Students are placed in organizations that offer supervised work or research experience appropriate to their interests. Each student must work 150 clock hours in the organization and write a sociological analysis of experiences using appropriate field work methodological techniques.

501 The Foundations of Sociological Theory. Semester course; 3 lecture hours. 3 credits. The foundations of theoretical explanation of the social world are addressed from an historical and philosophical perspective. The emergence of contemporary sociological theory in the nineteenth and twentieth centuries is reviewed.

502 Contemporary Sociological Theory. Semester course; 3 lecture hours. 3 credits. A critical assessment is given of such contemporary theoretical orientations as functionalism, conflict theory, exchange theory, symbolic interactionism, and phenomenology.

COURSES IN SPANISH (SPA)

101–102 Elementary Spanish. Continuous course; 5 lecture/recitation hours. 4–4 credits. Elementary grammar, reading, and oral drills.

201 Intermediate Spanish. Semester course; 3 lecture hours. 3 credits. Continuation of the essentials of grammar, with emphasis on achieving proficiency in aural comprehension, speaking, reading, and writing skills.

NOTE: In order to complete Spanish through the intermediate level, a student may select SPA 202 or 205.

202 Intermediate Spanish Readings. Semester course; 3 lecture hours. 3 credits. Prerequisite: SPA 201 or the equivalent. Designed to increase the student's proficiency through the study of selected cultural and literary texts.

205 Intermediate Spanish Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: SPA 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

301, 302 Survey of Literature. Semester course; 3 lecture hours. 3, 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. Conducted in Spanish. A survey of Spanish literature up to the present.

303, 304 Advanced Grammar and Writing. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. A system-

atic review of Spanish grammar with emphasis on the elements of style and vocabulary building; translation and composition.

305 Spanish Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. Conducted in Spanish. Practice in the spoken language with emphasis on discussions relating to topics of current interest.

306 The Civilization of Spain. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. Conducted in Spanish. A treatment of salient manifestations of Spanish culture and civilization from its origins to the present.

307 Latin American Civilization. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. Spanish 306 recommended. Conducted in Spanish. A treatment of the main manifestations of Latin American culture and civilization from Pre-Colombian times to the present. Particular emphasis on twentieth-century developments.

311 Spanish through the Media. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. A course designed to develop language proficiency by using material available through the various media: newspapers, magazines, films, slides, and radio broadcasts.

314 Commercial Spanish. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. The course will develop the student's ability to use the Spanish language as a means of oral and written communication in the business world.

316/Linguistics 316 Spanish Linguistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. A study of Spanish phonetics with oral practice in pronunciation; an introduction to the history of the Spanish language, and a review of linguistic problems encountered in the teaching of Spanish.

321, 322 Survey of the Literature of Spanish America. Semester courses; 3 lecture hours. 3, 3 credits. Conducted in Spanish. Prerequisite: Spanish through the intermediate level or the equivalent. An introduction to major authors and trends. First semester: from discovery to independence. Second semester: from the independence to the present.

NOTE: SPA 301, 302 or 303, 304 are prerequisite to all of the following courses.

411 The Middle Ages. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. Reading and discussion of such representative works as the following: *El Poema de Mio Cid* (anonymous); selections from the lyric poetry; selections from the works of Gonzalo de Berceo; *El Auto de los Reyes Magos*; *El Libro del Conde Lucanor*, Don Juan Manuel; *El Libro de Buen Amor*, Arcipreste de Hita.

412 The Golden Age: Renaissance. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. Reading and discussion of such representative works as *Lazarillo de Tormes*, *Amadis de Gaula*, *El Romancero* (anonymous), and such authors as Antonio de Guevara, Juan de la Cueva, Luis de Leon, Garcilaso de la Vega, and Fernando de Rojas.

413 The Golden Age: Baroque. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. A reading and

discussion of representative works of Cervantes, Lope de Vega, Tirso de Molina, Calderon, Gongora, and Quevedo.

417 Nineteenth-Century Literature. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. A reading and discussion of representative works of Valera, Fernan Caballero, Pereda, Galdos, Clarin, Larra, Espronceda, Duque de Rivas, and Pardo Bazan.

420 The Twentieth Century. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. Reading and discussion of representative works of Ganivet, Azorin, Unamuno, Baroja, Valle-Inclan, Perez de Ayala, Garcia Lorca, Sotela, Ortega, Gironella, Cela, Goytisolo, Laforet, and Matute.

425 Spanish-American Literature: Prose Fiction. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. An in-depth reading and discussion of novels and short stories.

426 Spanish-American Literature: Poetry, Drama, Essay. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. An in-depth reading and discussion of outstanding works of each of these three genres.

491 Topics in Spanish. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum total of 6 credits. An in-depth study of selected topics in Spanish. See *Schedule of Classes* for specific topic to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum 3 credits per semester; maximum total for all independent study courses in Spanish 6 credits. Open generally only to students of junior or senior standing who have six credits of upper-level Spanish courses and/or have demonstrated a competency in the language. Determination of course content and permission of instructor and department chairman must be obtained prior to registration for the course. A course designed to give students an opportunity to become involved in independent study in a literary or linguistic area or subject in which they have an interest.

COURSES IN STATISTICS (STA)

Statistics is one of the mathematical sciences. See mathematical sciences for course descriptions.

COURSES IN WOMEN'S STUDIES (WST)

201 Introduction to Women's Studies. Semester course; 3 lecture hours. 3 credits. An interdisciplinary and cross-cultural introduction to the perspectives and core concerns of women's studies.

236/English 236 Women in Literature. Semester course; 3 lecture hours. 3 credits. A study of literature by and about women with the intent of exploring images of women as reflected in fiction, poetry, and drama.

304/Sociology 304/Anthropology 304 The Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or ANT 103. The family in its social and cultural context. Analysis of child rearing, marriage, kinship, family crises, and family change in various societies around the world.

305/Afro-American Studies 305/Sociology 305 Sociology of the Black Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. A socio-history of the development of the dynamics of the black family.

318/Political Science 318 Politics of Race, Class and Gender. Semester course; 3 lecture hours; 3 credits. A study of the racial, class and gender influences on the history and development of political values, conflicts, processes, structures and public policy in the United States.

333/Sociology 333 Sociology of Sex and Gender. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. A cross-cultural and evolutionary exploration of the interdependence between male and female roles in the following social institutions: family, law, economics, politics, religion, education, and health.

334/Sociology 334 Sociology of Women. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or consent of instructor. This course will examine the position and status of women across societies and the social forces that maintain existing patterns and arrangements. The integration of family and work in women's lives will be emphasized.

335/Psychology 335 Psychology of Women. Semester course; 3 lecture hours. 3 credits. Overview of issues in psychology relevant to women. Topics include: research methods of women's issues; sex-role socialization; women and hormones; psychological androgyny; personality theory and counseling strategies for women; women and language; women and violence; and rape and abuse.

339/History 339 History of Women. Semester course; 3 lecture hours. 3 credits. Through lecture, reading, and discussion, this course will attempt to trace and analyze historical changes in the economic, political, legal, and cultural position of women, including such topics as changing employment opportunities, the struggle for suffrage and political rights, and the history of social and sexual reform movements.

384/English 384. Women Writers. Semester course; 3 lecture hours. 3 credits. A study of selected literature written by women and about women writers. May be repeated once when different writers are studied.

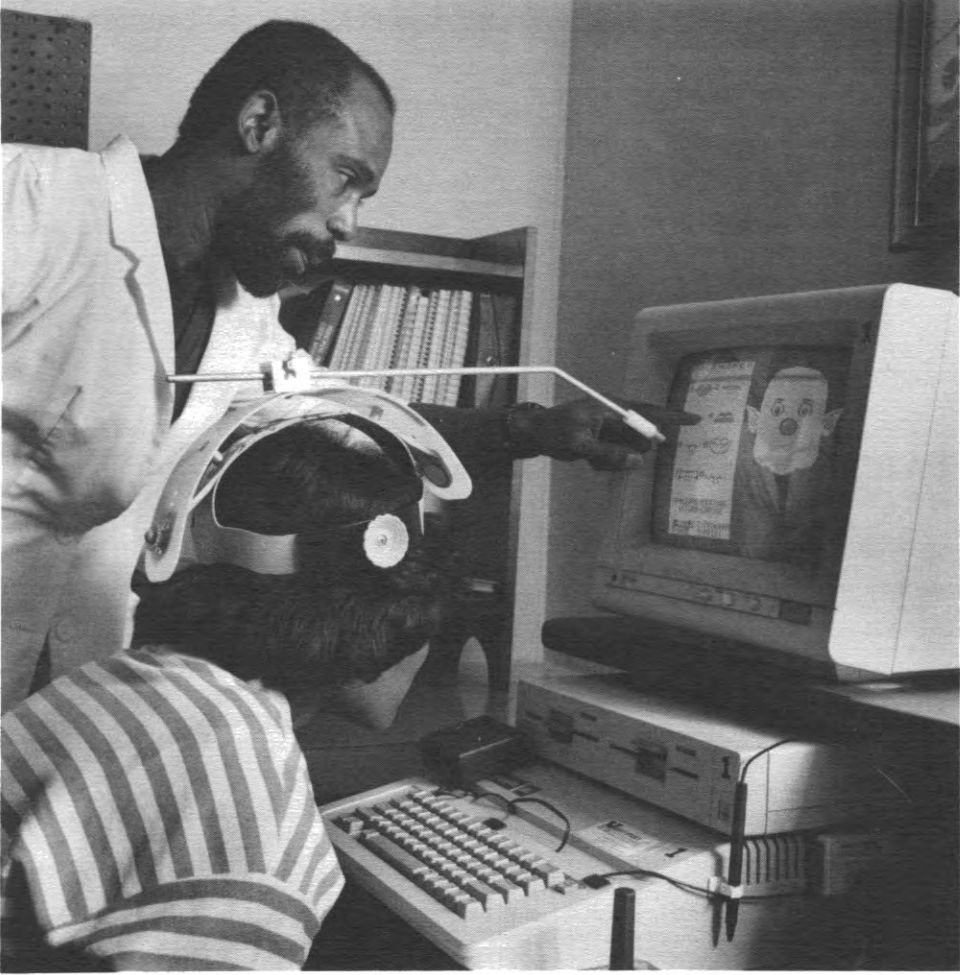
391 Topics in Women's Studies. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum of 6 credits. An in-depth examination of specialized areas of interest in women's studies.

457/Art History 457 Women, Art and Society. Semester course; 3 lecture hours. 3 credits. A re-examination of a variety of issues concerning women, art, and society: the position assigned women within the history of art as it relates to historical place and the aesthetic values of the canon, the gendering of style, patronage, audience, and gaze. Through a survey of images of and by women, as well as through an analysis of art historical and critical texts, this course addresses the question: "How are the processes of sexual differentiation played out across the representations of art and art history?"

492 Independent Study. Semester course; variable credit. Maximum 4 credits per semester. Maximum total in all independent study courses 4 credits. Open generally only to students of junior and senior standing who have acquired at least 12 credits in women's studies courses. Determination of the amount of credit and permission of the instructor and coordinator must be obtained prior to registration for the course.

COURSE IN UNIVERSITY STUDIES (UNS)

291 Interdisciplinary Topics: Semester course; variable credits; 1-4 credits per semester, maximum total in all university studies courses 8 credits. An interdisciplinary course designed to give the student an overview of a topic not associated with a particular discipline.



PART VII — School of Allied Health Professions

THOMAS C. BARKER

Dean

LARRIE J. DEAN

Associate Dean

DEBRA A. ROPELEWSKI

Assistant Dean for Fiscal Affairs

JENNIE D. SEATON

Assistant Dean for Interdisciplinary and Student Affairs

The School of Allied Health Professions was established within the Medical College of Virginia of Virginia Commonwealth University 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 the growing need for allied health manpower. At the outset, the school incorporated existing educational programs for hospital administration, medical technology, physical therapy, radiologic technology, and X-ray technicians. 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; and, also in 1970, a teaching program in patient counseling formerly based within MCV Hospitals was integrated with the school. A Bachelor of Science degree with a major in health care management was introduced in 1973 as a cooperative venture with the School of Business. The latest offerings are a Bachelor of Science degree

program in health information management (medical record administration) which began in the fall of 1978, a Bachelor of Science program in clinical radiation sciences, and the Master of Science program in nurse anesthesia, both of which were offered for the first time in 1979. In January 1985, the existing Department of Gerontology was transferred administratively to the School of Allied Health Professions.

UNDERGRADUATE DEGREE PROGRAMS

Degree programs offered through the School of Allied Health Professions are

Bachelor of Science:

Health Care Management

Health Information Management (Medical Record Administration)

Long-Term Care Administration

Medical Technology

Occupational Therapy

Physical Therapy

Clinical Radiation Sciences

Associate in Science:

Radiologic Technology

Due to budget constraints, the programs of health care management, health information management, and long-term care administration may be discontinued. For a status update call the Department of Health Administration at (804) 786-0719.

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the

School of Allied Health Professions, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or *Graduate Bulletin*.

ACCREDITATION

Virginia Commonwealth University and its component schools are accredited by the Southern Association of Colleges and Schools, the general accrediting agency for colleges in the region. 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. Each program in the school is approved or accredited by the appropriate national professional or educational organizations.

LICENSURE/CERTIFICATION

Graduates of most of the programs offered in the School of Allied Health Professions are required or eligible to take national/state certification of licensure examinations. Requirements of licensing and certification agencies vary. Some licensure and certification agencies consider individuals convicted of a felony ineligible for licensure or certification. For specific information, prospective students should contact the licensure or certification agency for their allied health disciplines.

LONG-TERM AND HEALTH CARE MANAGEMENT PROGRAM

Two formalized programs of study at the baccalaureate level train graduates to assume positions in health care management and long-term care administration. Those who concentrate in long-term care administration prepare to manage nursing homes or other long-term care facilities and, upon graduation, are qualified to take the national and state license examinations for nursing home administrators. Health care management, a more general field of study, prepares students for management careers in hospitals, group practices, clinics, and other settings.

The B.S. degree with either concentration is a two-year, upper-division curriculum offered by the Department of Health Administration, School of Allied Health Professions, in cooperation with the School of Business. Applicants are accepted into this program after completing a minimum of 60 semester hours of undergraduate

work and meeting established prerequisites and qualifications.

It is anticipated that most candidates for the B.S. degree will be full-time students. However, part-time students will be accepted. The part-time degree program is intended primarily for persons who are already employed in the health industry. The admission standards and degree requirements for part-time degree candidates are the same as those for full-time degree candidates.

ADMISSION REQUIREMENTS FOR LTC AND HCM

Long-term care and health care management majors must meet the following admission requirements:

1. The applicant must have attained a junior standing or have completed a minimum of 60 credits from schools within Virginia Commonwealth University and/or from other accredited colleges and universities including community colleges. (If a student possesses a diploma awarded by a two- or three-year nurse training program, is currently licensed as a registered nurse, and has at least three years experience in a responsible administrative position in a health care organization immediately prior to application, the program may award up to 45 credits toward the B.S. degree.)
2. A significant portion of the minimum of 60 credits to have been completed prior to admission into the program should be made up of general foundation courses. The foundation course credits should be distributed as follows:

<i>Courses</i>	<i>Credits</i>
English	6
Humanities	6
Social Sciences	9
Accounting	3
Economics	3
Mathematics	3
Science	6
Total	36

Should an applicant lack some of the foundation courses prior to entering the program, these courses must be taken during the junior year. No grade below "C" in any of the foundation courses (entry requirements in English, humanities, social sciences, accounting, economics,

mathematics, and science) will be accepted as transfer into the program.

3. Applicants must have a minimum 2.0 grade-point average on a 4.0 scale.
4. A writing sample must be submitted as part of the application.

Health care management is a general field of study especially designed for individuals with prior clinical training and experience and prepares graduates for a variety of management careers in health care organizations. Increasing sophistication in these organizations has opened up many administrative positions that are essential for assuring that efficiency and quality objectives are met. This requires well prepared management talent, which is the traditional product of the Health Care Management Program. Opportunities for management are diverse and include employment in positions as department heads of hospitals and managers of clinics, medical group practices, and community health agencies. Admission to the general health care management concentration will be limited to those applicants with prior training in the health professions or who are currently employed in health care positions.

Rapid growth in the health care industry, already one of the largest in the country, will continue to create demand for skilled administrators, a trend especially true in long-term care. Due to the aging of the American population, the long-term care field is emerging rapidly as one of the fastest growing segments of the health care industry. Long-term care administrators manage complex organizations that provide a wide range of services to residents, patients, families, and the public at large. Nursing homes, the traditional mainstay of the industry, are expanding; and their roles are being augmented by hospitals in order to fulfill a growing demand. Management in this diversified industry requires a special type of individual, particularly one who is sophisticated, skillful, and imaginative. Competition fosters innovation, and innovative leadership in health care delivery is a tradition on the MCV Campus. Graduates in the long-term care concentration are fully prepared to enter this dynamic field.

JUNIOR AND SENIOR YEAR CURRICULUM FOR LTC AND HCM

For the baccalaureate degree, students from both concentrations must satisfactorily complete

39 hours of required courses within a core curriculum offered by the Department of Health Administration and the School of Business. In addition to the core curriculum, students in each concentration must complete 12 hours of specialized courses.

Core Courses (39 credits)

BUS 204	Introduction to Accounting II (BUS 203 prerequisite)
BUS 161	Computer Concepts and Literacy
BUS 162	Application Packages for Computers
BUS 163	BASIC Computer Programming
BUS 360	Business Information Systems
STA 213	Introduction to Statistics (Algebra prerequisite)
BUS 311	Financial Management (BUS 204 prerequisite)
BUS 323	Legal Environment of Business
ENG 327	Business and Technical Report Writing
GTU 410	Introduction to Gerontology
HCM 300	Health Care Organization and Services
HCM 301	Aspects of Illness and Disability
HCM 308	Fundamentals of Management in Health Care Facilities
HCM 404	Financial Management in Health Care Facilities (BUS 311 and HCM 300 prerequisites)
HCM 405	Health Law (BUS 323 and HCM 300 prerequisites)
BUS 331	Personnel Management
HCM 407	Health Planning and Marketing (HCM 300 prerequisite)
HCM 411	Resources Management in Health Care Facilities (BUS 161, 162, 163 Information Systems and BUS 301 or STA 213 prerequisite)

Courses for Concentration in Long-term Care Administration (12 credits)

HCM 302	Structure and Functions of Long-term Care Organizations
HCM 409	Management in Long-term Care Facilities (6 credit hours) (HCM 302, HCM 308, and permission of instructor prerequisites)
HCM 493	Practicum in Long-term Care (HCM 302 prerequisite)

HCM 493 Practicum in Long-term Care Administration is an integral part of the course work in the Concentration in Long-term Care Administration. The basic purpose of fieldwork is to provide the student with the opportunity to apply and develop administrative knowledge and skill through a period of applied educational experience. The fieldwork is directly supervised by faculty members of the Department of Health Administration and administrators designated as preceptors within institutions or agencies. This experiential component of the program usually falls in the summer between the junior and senior years and consists of 420 hours of work on the site.

Courses for Concentration in Health Care Management (12 credits)

- HCM 408 Management in Health Care Facilities (BUS 321 or HCM 308 prerequisite)
- HCM 492 Applied Aspects of General Health Care Management (HCM 300, HCM 308, and permission of instructor prerequisites)

Students must elect two of the following courses as part of the concentration:

- BUS 308 Introduction to Marketing (ECO 201 prerequisite)
- BUS 324 Legal Aspects of the Management Process (BUS 323 prerequisite)
- BUS 325 Business Communications
- BUS 333 Risk and Insurance
- BUS 379 Logistics and Physical Distribution (HCM 407 or BUS 308 prerequisite)
- BUS 417 Cases in Financial Management (BUS 311 prerequisite)
- BUS 420 Seminar in Industrial Relations (permission of instructor or HCM 406 or BUS 331 prerequisite)
- BUS 427 Labor Law and Legislation (BUS 323 prerequisite)
- BUS 428 Employee Benefit Planning
- BUS 430 Social Insurance
- BUS 433 Compensation Management (permission of instructor or BUS 331 prerequisite)
- BUS 435 Seminar in Personnel Management (permission of instructor or BUS 331 prerequisite)
- SOC 445 Medical Sociology (SOC 101 prerequisite)
- SOC 446 Sociology of Mental Illness (SOC 101 prerequisite)
- SRA 300 Regulatory Aspects of Safety, Security, and Health
- STA 214 Applications to Statistics (STA 213 prerequisite)

The remainder of the 126 hours required for the Bachelor of Science degree is satisfied by taking elective courses selected on an individual basis by the student with the assistance of a faculty advisor.

HEALTH INFORMATION MANAGEMENT PROGRAM

The Health Information Management Program was established in 1978 as the Program in Medical Record Administration. It was integrated into the Department of Health Administration in 1986.

Health information is the foundation upon which the health care organization operates. The health information manager is responsible for developing and maintaining a patient health information system that is capable of providing data needed to patients, health care professionals, administration, and the community.

This multifaceted professional utilizes knowledge and skills related to management, law, computerization, statistics, information handling, and health care research to

- plan and develop health information systems that meet standards of accrediting and regulating agencies;
- design health information systems appropriate for various sizes and types of health care facilities;
- manage the human, financial, and physical resources of health information services;
- participate with the medical and other related professional staff in developing methods for evaluating care of patients;
- collect and analyze patient and facility data for reimbursement, facility planning, marketing, risk management, utilization management, quality assessment, and research;
- serve as an advocate for privacy and confidentiality of health information;
- plan and offer inservice educational programs for health care personnel.

Increased responsibilities in data quality management, computer-based information systems, and quality assurance programs have further contributed to the expanding role of the health information manager in today's health care environment.

Excellent opportunities continue to be available for qualified health information managers to fill an increasing number of positions in acute-care hospitals, outpatient facilities, research centers, alternate care facilities, industry, law firms, and health agencies both nationally and internationally.

ACCREDITATION

The program is accredited by the Committee on Allied Health Education and Accreditation, American Medical Association, in collaboration with the American Medical Record Association.

Upon satisfactory completion of the program, the student is awarded a Bachelor of Science degree by Virginia Commonwealth University and becomes eligible to take the examination for registration as a Registered Record Administrator (RRA) by the American Medical Record Association.

ADMISSION REQUIREMENTS FOR HIM

Students are admitted to the program as juniors and must have completed 62 hours at an accredited college or university. This minimum requirement is to include:

Humanities	<i>Credits</i>
English	6
(Composition and Literature)	

Speech	2
Biological Sciences	12
Including a minimum of five semester hours of Human Anatomy and Physiology with laboratory	
Arts and Sciences	
College Mathematics or Algebra	3
Economics	2
Psychology	2
Sociology	2
Statistics	3
Electives	30
Total	62

No grade below "C" in any of the foundation courses (entry requirements in the humanities, biological sciences and arts and sciences) will be accepted as transfer into the program.

JUNIOR AND SENIOR YEAR CURRICULUM

Students in this program must satisfactorily complete the following courses:

<i>Junior Year, Fall Semester</i>		<i>Credits</i>
HIM 300	Medical Terminology	2
PMC 371	Pathophysiology I	3
BUS 360	Business Information Systems	3
BUS 323	Legal Environment of Business	3
BUS 203	Introduction to Accounting I	3
HCM 300	Health Care Organization and Services	3
		17

<i>Junior Year, Spring Semester</i>		
HIM 313L	Health Information Systems Management	4
HIM 314	Classification Systems	3
PMC 382	Pathophysiology II	3
HCM 308	Fundamentals of Management in Health Care	3
BUS 204	Introduction to Accounting II	3
		16

<i>Senior Year, Summer Session</i>		
HIM 393	Clinical Practicum: Technical Component	4
	Elective (optional)	3
		4-7

<i>Senior Year, Fall Semester</i>		
HCM 411	Resource Management Systems in Health	3
BUS 331	Personnel Management	3
HCM 405	Health Law	3
BUS 346	Automated Office Concepts	3
BUS 311	Financial Management	3
	Elective (optional)	3
		15-18

<i>Senior Year, Spring Semester</i>		
HIM 420	Quality Assurance	3
HIM 404	Financial Management in Health Care	3
HCM 408	Management in Health Care Facilities	3

HIM 494	Clinical Practicum: Management Affiliation	3
		12
Total		64-70

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632.

Due to budget constraints, the programs of health care management, health information management, and long-term care administration may be discontinued. For a status update call the Department of Health Administration at (804) 786-0719.

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the Department of Health Administration, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or the *Graduate Bulletin*.

PROGRAM IN MEDICAL TECHNOLOGY

Medical technologists have been trained at MCV since 1932. However, the Department (formerly school) of Medical Technology was not formally established until 1952. The school offered a certificate and/or degree program meeting the requirements of the American Medical Association as implemented through the Board of Schools of the American Society of Clinical Pathologists (ASCP). In 1961-62, the certificate program was discontinued, and all students accepted must have previously completed 90 semester hours, which included medical technology prerequisites. Upon completion of the course, the students were awarded a Bachelor of Science degree.

In 1952, the program was established as six months of didactic experience with lectures and laboratory sessions held in the department, followed by a six-month rotation through the clinical laboratories. From 1952-1967, two classes were admitted each year, but the practice was discontinued with the graduation of the class of 1967. From 1968-74, only one class was admitted each year.

Beginning with the 1974 fall term, the program changed to a 2+2 format. Prior to entrance,

students must have completed 60 semester hours including medical technology prerequisites. Upon completion of the prescribed curriculum, the student is awarded a Bachelor of Science degree. In 1967, a graduate program was begun leading to a Master of Science degree.

The department offers a baccalaureate program consisting of two semesters of didactic education, followed by a four-week summer session in a hospital laboratory somewhere in Virginia. During the senior year, students spend 15 weeks in the clinical laboratories. In addition to the clinical laboratory experience, the senior year includes advanced courses in each medical science discipline: one course in basic education and supervision and one course in computer applications in the clinical laboratory. Certified medical technicians may complete the program with less class time by transfer of credits and/or successfully completing challenge exams for certain courses.

ACCREDITATION

The Medical Technology Program is accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association. A Bachelor of Science degree in medical technology is granted by Virginia Commonwealth University upon satisfactory completion of the prescribed curriculum. Upon completion of the program, the student is eligible to sit for the national examinations given by the Board of Registry of the American Society of Clinical Pathologists and the National Certification Agency for Medical Laboratory Personnel (NCAMLP).

ACADEMIC ADMISSION REQUIREMENTS

To qualify for admission, a candidate must have completed a minimum of 60 credit hours of collegiate training in any college or university approved by a recognized regional accrediting agency. Accredited collegiate training in preparation for the study of medical technology, as for any professional career, should provide the opportunity for broad general education to include English, the social sciences, the arts, and the humanities. On entry to the department, the student must have completed 12 hours of chemistry (eight hours of general required; the remaining four hours preferred in the following order: quantitative, organic, or qualitative; other

courses may be accepted); 12 hours of biology (preferred—four hours of general, four hours of human physiology, and four hours of human anatomy); three hours of mathematics; and six hours of English.

Special Admissions. Certified medical technicians (or those eligible for certification) may qualify for special admissions. An MLT applicant must have a minimum of 44 non-MLT semester hours of transferable credit for admission as a full-time student, or 38 non-MLT semester hours for admission as a part-time student. The transfer hours must include eight hours of biology, eight hours of chemistry, three hours of mathematics, and six hours of English. MLTs admitted under special status are required to complete the science requirement for regular admission (12 hours of chemistry and 12 hours of biology) before they qualify for graduation. MLT transfer credits are accepted for some MT courses. Challenge examinations are offered.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632.

JUNIOR AND SENIOR YEAR CURRICULUM

<i>Junior Year</i>		<i>Credits</i>
MET 300	Basic Concepts	2
MET 301-302	Hematology and Hemostasis ...	2
MET 303	Parasitology	1.5
MET 304	Clinical Microscopy	2
MET 306	Blood Banking	4
MET 307	Introduction to Pathogenic Microbiology	3.5
MET 308	Microbiology	5
MET 310	Clinical Immunology	4.5
MET 311-312	Biochemistry	8
MET 314	Instrumentation	3
<i>Summer Session</i>		
MET 337	Clinical Education	1
		<hr/> 42.5
<i>Senior Year</i>		
MET 406	Advanced Immunology	1
MET 407	Interpretive Immunohematology	2
MET 408	Advanced Microbiology	2
MET 409	Interpretive Hematology	2
MET 410	Advanced Biochemistry	2
MET 411	Principles of Education Management	3.5
MET 412	Clinical Correlations	1

MET 414	Advanced Instrumentation	2.5
MET 415	Special Topics in Clinical Laboratory Sciences (7 sections)	1-6
MET 483	Biochemistry Practicum	4.5
MET 484	Immunopathology/Virology Practicum	1
MET 485	Hematology Practicum	4.5
MET 486	Hemostasis Practicum	1
MET 493	Microbiology Practicum	4.5
MET 494	Clinical Microscopy Practicum	1
MET 496	Blood Bank Practicum	4.5
MET 497	Research Paper	1
		39-44

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the Department of Medical Technology, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or the *Graduate Bulletin*.

PROGRAM IN 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 developmental deficits—the aging process, poverty and cultural differences, physical injury or illness, or psychological and social disability.

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.

ACCREDITATION

Both the undergraduate and professional master's degree programs in occupational therapy at Virginia Commonwealth University are accredited by the American Occupational Therapy Association and the Committee on Allied Health Education and Accreditation, American Medical Association.

ADMISSION REQUIREMENTS

Students wishing to pursue a course of study leading to a Bachelor of Science degree with a major in occupational therapy offered through the School of Allied Health Professions may be admitted after two years of college work. A total of 62 semester credits from an accredited college or university is required for entrance into the professional curriculum. Criteria for admission include grade-point average, writing skills, volunteer or paid employment, and personal qualities. Preference will be given to students who exhibit good potential for occupational therapy. An interview by members of the Admissions Committee is required in addition to information related to other criteria.

Prerequisites for Admission

English	6 credits
Must include 3 credits composition	
Biological Sciences	12 credits
Must include laboratory courses in human physiology and anatomy	
Psychology	12 credits
Must include developmental psychology and abnormal psychology	
Sociology	6 credits
Statistics	2 credits

These are considered minimum requirements. Students are encouraged to pursue further study in liberal arts and science courses which develop intellectual competence, enrich interest areas, and promote an awareness of a breadth of social and cultural values.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632.

JUNIOR AND SENIOR YEAR CURRICULUM

<i>Junior Year, Fall Semester</i>		<i>Credits</i>
BIO 465	Functional Human Anatomy	4
OCT 301	Communications and Group Dynamics	3
OCT 303	Developmental Tasks and Occupational Roles I	1
OCT 304	Developmental Tasks and Occupational Roles II	1
OCT 307	Psychosocial Dysfunction and Occupational Therapy I	3
OCT 309	Skills Laboratory I	3
		15

<i>Junior Year, Spring Semester</i>		
BIO 429	Neuroanatomy	3
OCT 305	Physical Dysfunction and Occupational Therapy I	3
OCT 306	Physical Dysfunction and Occupational Therapy II	3
OCT 308	Psychosocial Dysfunction and Occupational Therapy II	3
OCT 310	Skills Laboratory II	2
		14
<i>Senior Year, Fall Semester</i>		
OCT 403	Developmental Tasks and Occupational Roles III	2
OCT 405	Physical Dysfunction and Occupational Therapy III	5
OCT 407	Psychosocial Dysfunction and Occupational Therapy III	5
OCT 409	Skills Laboratory III	2
OCT 411	Theories of Occupational Therapy	2
		16
<i>Senior Year, Spring Semester</i>		
OCT 412	Administration and Supervision of Occupational Therapy Services	3
OCT 414	Research Methods in Occupational Therapy	3
OCT 418	Occupational Therapy in Health Care	3
OCT 491	Special Topics in Occupational Therapy	3
	Elective	3
		15
<i>Fieldwork Sessions</i>		
OCT 493	Fieldwork—Psychosocial	1-9
OCT 494	Fieldwork—Physical Dysfunction	1-9
OCT 495	Fieldwork—Specialty (Optional) ...	1-9

Upon successful completion of the program, students are eligible to take the national certification examination. Certification is required as proof of professional competence.

Correspondence relating to the curriculum in occupational therapy should be addressed to the Chairman, Department of Occupational Therapy, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0008.

For application to the professional curriculum and catalog, requests should be addressed to University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632.

PROGRAM IN PHYSICAL THERAPY

The Department of Physical Therapy was established in 1945 to provide basic preparation for the practice of physical therapy. Between 1945 and 1954, the program consisted of a 12-month professional course designed to train

students for entry into the profession based upon at least three years of college work or the possession of an R.N. certificate. A two-year professional program after two years of preparatory college work was initiated in 1954. This program led to the degree of Bachelor of Science in physical therapy. In 1968, the Department of Physical Therapy became part of the School of Allied Health Professions. The two-year professional program leading to the Bachelor of Science degree continued through the 1988-89 academic year.

Currently, the Department of Physical Therapy, School of Allied Health Professions, offers a three-year professional program based on three years of previous college work. This program prepares individuals to enter the physical therapy profession and leads to a Master of Science degree.

ACCREDITATION

The program offered by the Department of Physical Therapy is accredited by the American Physical Therapy Association.

ACADEMIC ADMISSION REQUIREMENTS

Prerequisites for admission to the entry-level physical therapy program include a minimum of 90 semester hours (or 120 quarter hours) in an accredited college or university. A grade of "D" in any required courses is not acceptable. A minimum grade-point average of 2.7 (in a 4.0 system) is required to be considered for admission. Scores from the Graduate Record Examination are required also. This program must include a minimum of

1. English—6 semester hours of English. Advanced Placement or CLEP credits may be substituted for up to 3 semester hour credits. Courses in composition or scientific writing are strongly recommended.
2. Biological Sciences—12 semester hours including laboratory experience. Must include one course in physiology. May include general biology or general zoology. No more than 4 credits in botany may be applied to meet this requirement. Advanced Placement or CLEP credits may not be used to meet these prerequisites.
3. Chemistry—8 semester hours of general chemistry with laboratory. Advanced Placement or CLEP credits may be used to meet

these prerequisites.

4. Physics—8 semester hours of general physics including laboratory experiences. Courses that emphasize mechanics, electricity, heat, and light are highly recommended. Advanced Placement or CLEP credits may be used to meet these prerequisites.
5. Mathematics—3 semester hours in mathematics. These credits must be in college algebra or trigonometry or equivalent. Advanced Placement or CLEP credits may be used to meet these prerequisites.
6. Statistics—3 semester hours in statistics.
7. Psychology—6 semester hours in psychology. Three semester hours must be in general psychology. Advanced Placement or CLEP credits may be used to meet these prerequisites.
8. Social Science—6 semester hours in social sciences such as sociology, economics, anthropology, history, etc. Advanced Placement credits may be used to meet these prerequisites.
9. Humanities—3 semester hours beyond what is listed above.

Approximately 60 of the 90 hours are thus specified. At least 8 hours of electives must be upper level.

In order to complete the social science, psychology, and humanities requirements, students are encouraged to choose courses from the following categories: child, adolescent or abnormal psychology, personality, development, psychology of adjustment, sociology, anthropology, economics, history, philosophy or logic, counseling, and human relations.

In order to complete the total requirements, students are encouraged to elect courses from the following categories: computer science, embryology, histology, comparative anatomy, vertebrate or human anatomy, kinesiology, physiology, foreign languages, and courses in physical education dealing with an analytical approach to human movement or motor learning.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or *Graduate Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632. Inquiries about the entry-level

program should be directed to the Chairman, Department of Physical Therapy, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0224. (804) 786-0234.

DEPARTMENT OF RADIATION SCIENCES

HISTORY

Radiologic technology education began at the Medical College of Virginia in the 1930's with a one-year training program. In 1961, this certificate program became more formalized and was lengthened to two years. The certificate program was discontinued when the last class graduated in 1973.

In 1966, a curriculum leading to an Associate in Science degree was implemented to complement the existing certificate program. Originally a three-year program, the program was revised in 1978 to reduce the length to twenty-four months to bring it more in line with requirements for other associate degrees. This was accomplished by combining liberal arts and professional course work into the two-year period and permits entry of high school graduates directly into the program.

An undergraduate baccalaureate program for radiologic technologists was implemented in 1979. The program leading to a Bachelor of Science degree offers concentrations in radiologic technology education, radiology administration, nuclear medicine technology and radiation therapy technology. Further information on undergraduate programs descriptions may be found in the *Virginia Commonwealth University Medical College of Virginia Bulletin*.

ASSOCIATE IN SCIENCE PROGRAM

The Department of Radiation Sciences offers a program in radiologic technology leading to the Associate in Science degree. The program is designed to provide academic and technical knowledge for individuals who wish to become radiologic technologists.

ACCREDITATION

The Program of Radiologic Technology (Associate in Science degree) is accredited by the Committee on Allied Health Education and Accreditation. Upon completion of the program, the student is eligible for the national certifica-

tion examination given by the American Registry of Radiologic Technologists.

ACADEMIC ADMISSION REQUIREMENTS

Candidates for admission to the program must have completed high school or have passed a GED examination. Transcripts of high school work and Scholastic Aptitude Test (SAT) scores must be submitted with the application. Candidates are encouraged to obtain some hospital experience, either as a volunteer or as an employee. Such experience should preferably be in a department of radiology but may be elsewhere in the hospital.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632.

BACHELOR OF SCIENCE PROGRAM

The Department of Radiation Sciences offers a program leading to the Bachelor of Science degree, with areas of concentration in education, administration, nuclear medicine technology, or radiation therapy technology. The program is designed to provide advanced theoretical and practical education for the individual who wants to become an educator in radiologic technology or an administrator in a radiology department. The core curriculum consists of professional courses offered within the department. Additional course requirements in the area of concentration are offered in other departments of the University.

In an effort to provide upward career mobility to radiographers through advanced education and specialization and to meet manpower needs, the department also offers nuclear medicine technology and radiation therapy technology as areas of concentration within the baccalaureate curriculum. The curriculum includes core courses within the department and academic and clinical work in the area of specialization.

ACCREDITATION

The Program in Nuclear Medicine Technology and the Program in Radiation Therapy Technology are accredited by the Committee on

Allied Health Accreditation. Upon completion of the program, the student is eligible for the national certification examinations given by the American Registry of Radiologic Technologists and/or by the Nuclear Medicine Technology Certification Board.

ACADEMIC ADMISSION REQUIREMENTS

Candidates for admission to the upper-division program must meet one of the following requirements:

A. Be a registered or registry-eligible radiologic technologist (A.R.R.T.) and possess an associate degree from an accredited college or university

or

B. Be a registered radiologic technologist (A.R.R.T.) and have successfully completed ("C" grade or better) three semester credits of college algebra or equivalent and three semester credits of basic college English.

or

C. THIS OPTION IS AVAILABLE ONLY TO NUCLEAR MEDICINE APPLICANTS

Have two years of postsecondary education that include

human anatomy and physiology — 8 semester credits

general physics — 8 semester credits

general chemistry — 8 semester credits

English composition — 6 semester credits

college algebra — 3 semester credits

general psychology — 3 semester credits

additional course work — to TOTAL no less than 60 semester credits

A high school transcript, transcripts of all college work and/or radiography training, and a copy of the registry examination report must be submitted with the application.

Students admitted without an associate degree (option B under admission requirements), must complete the following liberal arts requirements in addition to their major curriculum:

college algebra3 semester credits

English6 semester credits

general psychology3 semester credits

anatomy/physiology6 semester credits

general physics8 semester credits

Students applying for the nuclear medicine curriculum under Option A or B above are strongly encouraged to have completed two semesters of general college chemistry prior to admission. If this is not taken prior to admission, the student will be required to complete it as part of the required curriculum.

Most students will be required to appear for a personal interview as part of the application process. Part of this interview will be a written physics exam. (Information concerning this examination is provided prior to the interview.)

For information about additional requirements for admission, the specific procedures for application for admission and requirements for promotion and graduation, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632.

FIRST AND SECOND YEAR CURRICULUM

	Credits	
	Fall	Spring
<i>First Year</i>		
ENG 101	Composition and Rhetoric	3
ENG 102	Composition and Rhetoric	3
BIO 109	General Biology	4
BIO 205	Basic Human Anatomy	4
*RTE 101	Radiographic Procedures I	4
*RTE 103	Principles of Radiographic Exposure I	2
*RTE 104	Principles of Radiographic Exposure II	4
*RTE 105	Patient Care and Ethics	3
*RTE 194	Clinical Education	3
MAT 101	College Algebra I	3
		<hr/>
		16 17

Summer Session

BIO 206	Human Physiology	4
*RTE 196	Clinical Education II	5
RTE 291	Directed Study: Radiography	2
		<hr/>
		11

Second Year

	Credits	
	Fall	Spring
PHY 101	Foundations of Physics	3
PHY 102	Frontiers of Physics	3
*RTE 201	Radiographic Procedures II	4
RTE 203	Medical and Surgical Diseases I	2
RTE 204	Medical and Surgical Diseases II	2
RTE 213	Advanced Radiographic Imaging	3
*RTE 293	Clinical Education III	5
*RTE 294	Clinical Education IV	5
*RTE 208	Radiation Safety	2
PSY 101	General Psychology	3
		<hr/>
		17 15

Summer Session

*RTE 207	Radiographic Physics	3
*RTE 211	Radiographic Procedures III	1
*RTE 295	Clinical Education V	5
		<hr/>
		9

JUNIOR AND SENIOR YEAR CURRICULUM EDUCATION CONCENTRATION¹

<i>Junior Year, Fall Semester</i>		Credits
CRS 301	Pathophysiology for Radiographers I	1
CRS 309	Advanced Radiographic Physics	4
HCM 300	Health Care Organization and Services	3
HCM 301	Aspects of Illness and Disability	3
EDU 300	Foundations of Education	3
*AHP 351	Learning Theories	3
		<hr/>
		17

Junior Year, Spring Semester

CRS 302	Pathophysiology for Radiographers II	1
CSC 150	BASIC Computer Concepts	3
*ADE 402	How Adults Learn	3
PSY 321	Social Psychology	3
PSY 340	Introduction to Helping Relations	3
	Elective	3
		<hr/>
		16

Senior Year, Fall Semester

CRS 411	Theory and Practice of Quality Assurance	3
*AHP 401	Instructional Strategies	3
EDU 407	Educational Media: Utilization	3
SPE 321	Speech for Business and the Professions	3
	Elective	3
		<hr/>
		15

Senior Year, Spring Semester

CRS 412	Radiation Health	3
*CRS 493	Education Practicum	6
*AHP 491	Issues in Allied Health Education	3
	Electives	3
		<hr/>
		15

Total 63

*requires grade of "C" or better

JUNIOR AND SENIOR YEAR CURRICULUM ADMINISTRATION CONCENTRATION¹

<i>Junior Year, Fall Semester</i>		Credits
CRS 301	Pathophysiology for Radiographers I	1
CRS 309	Advanced Radiographic Physics	4
HCM 300	Health Care Organization and Services	3
HCM 301	Aspects of Illness and Disability	3

¹Due to budget constraints, HCM courses may be eliminated. In this event, all HCM courses would be replaced with suitable equivalents. Please contact the department for further information.

HCM 308	Fundamentals of Management in Health Care Facilities	3
BUS 203	Introduction to Accounting I	3
		<u>17</u>

Junior Year, Spring Semester

CRS 302	Pathophysiology for Radiographers II	1
HCM 408	Management in Health Care Facilities	3
BUS 204	Introduction to Accounting II	3
BUS 323	Legal Environment of Business	3
	†Computer course	3
	Elective	3
		<u>16</u>

Senior Year, Fall Semester

*CRS 405	Applied Radiology Management	3
CRS 411	Theory and Practice of Quality Assurance	3
HCM 405	Health Law	3
BUS 331	Personnel Management	3
	†Computer course	3
		<u>15</u>

Senior Year, Spring Semester

CRS 412	Radiation Health	3
*CRS 494	Management Practicum	3
ECO 203	Introduction to Economics	3
	Electives	6
		<u>15</u>
Total		62

*requires grade of "C" or better

†6 semester hours of computer courses required; may choose from CSC 150, BUS 360, and BUS 361 subject to approval of faculty advisor.

JUNIOR AND SENIOR YEAR CURRICULUM NUCLEAR MEDICINE TECHNOLOGY¹

<i>Junior Year, Fall Semester</i>	<i>Credits</i>	
*CRS 303	Orientation to Nuclear Medicine	2
CRS 309	Advanced Radiographic Physics	4
HCM 300	Health Care Organization and Services	3
HCM 301	Aspects of Illness and Disability	3
	Restricted Elective	3
		<u>15</u>

Junior Year, Spring Semester

*CRS 312	Nuclear Medicine Instrumentation and Computer Techniques	4
*CRS 394	Clinical Education I	2
CRS 419	Physics for Nuclear Medicine	3
CSC 150	BASIC Computer Concepts	3
	Elective	3
		<u>15</u>

Junior Year, Summer Session

*CRS 313	Clinical NM—Non-imaging Techniques	3
*CRS 318	Clinical NM—Imaging Techniques ..	3
*CRS 396	Clinical Education II	5
		<u>11</u>

Senior Year, Fall Semester

*CRS 413	Theory and Practice of Quality Assurance for Nuclear Medicine ..	3
*CRS 417	Radiopharmaceutical Preparation and Quality Control	3
*CRS 495	Clinical Education III	7
CRS 497	Senior Nuclear Medicine Project	3
		<u>16</u>

Senior Year, Spring Semester

CRS 304	Pathophysiology for Nuclear Medicine	2
CRS 412	Radiation Health	3
*CRS 491	Senior Seminar: Nuclear Medicine ..	1
*CRS 496	Clinical Education IV	8
		<u>14</u>
Total		71

*requires grade of "C" or better.

JUNIOR AND SENIOR YEAR CURRICULUM RADIATION THERAPY TECHNOLOGY

The curriculum for this program is currently under development. Please contact the department for further information.

¹ Due to budget constraints, HCM courses may be eliminated. In this event, all HCM courses would be replaced with suitable equivalents. Please contact the department for further information.



PART VIII — School of the Arts

MURRY N. DEPILLARS
Dean

THOMAS H. DESMIDT
Associate Dean

SUE ANN MESSMER
Associate Dean

LYDIA C. THOMPSON
Assistant Dean

STEVEN HIGH, Director
Anderson Gallery

JOHN BRYAN, Director
Faculty Research and Development

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 programs 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 visual arts programs of the School of the Arts are accredited by the National Association of Schools of Art and Design. The Department of Music is accredited by the National Association of Schools of Music and the Department of Interior Design is accredited by the Foundation for Interior Design Research.

The School of the Arts offers a distinctly professional program in which students devote

the greater portion of each day to professional courses in the arts. Located within an urban complex of higher education, students are provided with the advantages of comprehensive facilities as well as professionally competent faculty. It is the only state-aided professional school of the arts in the South, and one of the few in the nation, offering a professional curriculum within a combined academic and professional environment.

The purpose of the School of the Arts is to enliven and enrich literacy in the visual and performing arts through the advanced thought and perception of its students and its faculty. Its intent is to develop innovative approaches to the making and comprehension of works of art which elaborate upon the complexities of contemporary man. These works of art clarify and give meaning to the circumstances within which men find themselves. To sustain inquiry into the nature of being and becoming, and to strengthen the artistic process and products that reflect that inquiry, constitute a major objective for the School of the Arts.

Each department contributes to the solution of, and encourages students to approach and resolve aesthetic, intellectual, and technical problems with scholarly analysis and experimentation, informed discrimination, and environmental awareness. In short, the School of the Arts encourages students to develop a highly professional attitude toward their work and the solution of significant creative problems.

DEGREE PROGRAMS

Baccalaureate programs within the School of the Arts are designed to prepare creative leaders in the visual and performing arts professions. Emphasis is placed on the development of individual competencies in the arts through the following departments which make up the School of the Arts:

- Art Education
- Art History
- Communication Arts and Design
- Crafts
- Dance/Choreography
- Fashion
- Interior Design
- Music
- Painting and Printmaking
- Photography (no undergraduate degree offered)
- Sculpture
- Theatre

The School of the Arts offers graduate programs leading to the Master of Fine Arts (M.F.A.), Master of Art Education (M.A.E.), Master of Arts (M.A.), and Master of Music (M.M.), degrees with major and minor concentrations in various departments. Detailed information is available through the *VCU Graduate Bulletin*.

TRANSFER STUDENTS

Placement in all upper-level courses is determined by departmental faculty committees, following evaluation of the student's record, performance, audition, and/or the student's creative work. The student should contact the appropriate department chairman at the time of acceptance in order to arrange for such evaluation prior to enrollment.

SPECIAL CHARGES

All full-time majors enrolled in the School of the Arts are charged a comprehensive fee of \$100 each semester. Part-time majors are charged \$25. The money is prorated to the individual departments, and they determine the expenditures which result in a return to the students through materials, services and/or equipment, and may include models, field trips, or special lectures. 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 Accounting.

INTERNSHIPS AND COOPERATIVE EDUCATION

Several departments within the School of the Arts offer a limited number of carefully selected internships to qualified students. Further information regarding internship availability and qualifications may be obtained from department offices.

The School of the Arts also participates with the Cooperative Education Program. The Cooperative Education Program is available through most departments to qualifying students. A full description of the program appears in Part XIX of this *Bulletin*.

ACADEMIC REQUIREMENTS

All majors within the School of the Arts are expected to earn a minimum of "C" in all major work attempted in order to remain in their departments.

Evaluation of the record of each student will be made periodically by the department and the student's advisor. If, at any time during undergraduate studies, the department faculty concludes that a student is not demonstrating adequate progress in the area of concentration, the student will be advised to withdraw from that department.

GENERAL EDUCATION REQUIREMENTS

All students seeking the baccalaureate within the School of the Arts are required to fulfill specific general education requirements. These requirements are to be distributed as follows:

General Requirements	<i>Credits</i>
A. English 101-102.....	6
B. Restricted Electives—At least three credits must be earned as electives in each of the following areas, unless they are required elsewhere in the curriculum.	
1. Natural Sciences/Mathematics—all students who have not started or completed the mathematics sequence indicated in their curriculum must take the Mathematics Placement Test.....	3
2. Social/Behavioral Sciences.....	3
3. Humanities	3

Students majoring in the School of the Arts should become familiar with the approved departmental restricted elective requirements in the department in which they are working. The student's faculty advisor will have a complete list of approved departmental restricted electives.

GENERAL INFORMATION

Matriculated students in a professional curriculum receive preference in enrolling for courses in that program. However, unless otherwise indicated, all courses are open to any student within the University.

In view of the sequence in which course work is arranged, only transfer students will be considered for admission at midyear.

With the exception of those in art history, all courses must be taken in the numerical sequence unless approved by the chairman of the department in which they are listed.

In many of the courses, a considerable amount of work is necessarily done outside of class. Such work is done in addition to that of the scheduled classes which students are required to attend.

Departments within the School of the Arts reserve the right to retain examples of student work for permanent collections.

Students should contact the appropriate department chairman, prior to enrollment, for a more detailed curriculum outline than that which is contained in this *Bulletin*.

UNDERGRADUATE CREDIT BY EXAMINATION

Recognizing that Virginia Commonwealth University enrolls students of varying backgrounds and experiences, the School of the Arts provides its students the opportunity to accelerate their education through "credit by-examination." The conditions under which credit by examination may be given and the procedure for doing so are outlined in Part V of this *Bulletin*.

HONORS PROGRAM

The Virginia Commonwealth University Honors Program was established to attract gifted students and to provide them with a challenging opportunity to achieve their highest academic potential. The program is open to all qualified undergraduate students. For a detailed description of qualifications and requirements see Part II of this *Bulletin*.

ART FOUNDATION PROGRAM

CHARLES F. BLEICK
Director

In the visual arts all beginning and transfer students, as necessary, are enrolled in the Art Foundation Program, which is the prerequisite

that provides the basic concepts, skills, and experiences necessary for admittance to advanced professional studio work in each department. In the program, career opportunities in the various fields of art are discussed. The student who has been accepted and placed in the Art Foundation Program will not have a departmental affiliation until after the screening of portfolios which occurs during the spring semester of the freshman year. At that time a student will be given the opportunity to apply to the department of his or her choice. Departmental acceptances will be based on individual student performance and competency in the chosen area.

Art Foundation Curriculum

	<i>Credits</i>	
	<i>1st</i>	<i>2nd</i>
	<i>Sem.</i>	<i>Sem.</i>
Studios		
AFO 101-102 Communication and Presentation	2	2
AFO 103-104 Communication Vehicles	2	2
AFO 109-110 Drawing Vehicles	2	2
AFO 111-112 Drawing Studio	2	2
General Studies		
AFO 105-106 Survey of World Art.....	4	4
AFO 107-108 Introduction to the Arts or Electives	1	1
ENG 101-102 Composition and Rhetoric	3	3
	16	16

ART EDUCATION

DANIEL J. REEVES
Chairman of the Department
Charles F. Bleick David Burton
Michael H. Ferris Priscilla C. Hynson
Alan L. Landis Betty Tisinger
A. James Wright

The Department of Art Education provides the structure and resources for highly integrated courses of study designed to prepare students as comprehensive arts educators. Majors in the department are involved in a continuous, developmental sequence of experiences individually planned to capitalize on both the students' and the university's potentials for acquiring new knowledge and effecting viable alternatives for arts education in contemporary culture. The program reflects a strong emphasis on extensive preparation in the arts as a means for developing artistic sensitivity, critical analysis, perception, and interpretation of art forms.

Graduates of the program are eligible for concurrent teacher certification for elementary,

middle, and secondary levels. The National Association of State Directors of Teacher Education and Certification (NASDTEC) has established a national system of reciprocity for teacher certification. More than thirty states, including Virginia, operate under this system of reciprocal agreements. The undergraduate degree in art education has an approved program status with the State Department of Education, and is therefore a part of the NASDTEC system.

Admission to the degree program follows successful completion of the freshman foundation program (or equivalent preparation in the case of transfer students from other institutions.) Admission should not be construed as a guarantee to graduation. The faculty reserves the right to counsel out of the degree program those students whose overall performance is unacceptable according to the administration's and faculty's standards, or whose performance indicates that their potential cannot be fully recognized as a result of misalignment between the student's goals and the department's objectives.

The department also offers a variety of course options for persons of all ages from the community-at-large and for majors of other disciplines within the university. These offerings provide alternatives for persons to increase aesthetic sensitivities and to explore the potential of the creative process for extending human capacities.

Degree Requirements in Art Education

	<i>Credits</i>
Foundation Program Studios	16
Professional Education	
Includes Art Education Methods and Seminar, Human Development, and Student Teaching.....	37
Studios and Approved Electives	39
General Studies	
Includes English, Art History, Literature, Introduction to the Arts, Mathematics, Laboratory Science, American History, and Social Science	39
Health and Physical Education	4
	135

ART HISTORY

BRUCE M. KOPLIN

Acting Chairman of the Department

Maurice Bonds (Professor Emeritus)	Anne Glenn Crowe
Robert C. Hobbs	Sharon Jones Hill
François-Auguste de Montêquin	Sue Ann Messmer
Howard Risatti	Regenia A. Perry

Part-Time—

Kevin C. Concannon	Dennis H. Halloran
Susan A. Hanson	Fredrika Jacobs
Michael Jones	Jon D. Longaker
William M.S. Rasmussen	Donald R. Schrader
Evdokia S. Terrono	Robert Winthrop

The Department of Art History offers its undergraduate majors a program of study which acquaints them with the humanistic discipline of art historical inquiry. While providing students with the opportunity for a broad education actively drawing upon the liberal arts and humanities, the department also emphasizes a close bond with the studio and performing arts, and enjoys a close relationship with the professional art school of which it is a part.

Recognizing the diverse interests of undergraduate students and the varied practical applications of art history after graduation, the department offers its majors a choice among three distinct curricula resulting in either the Bachelor of Arts (B.A.) or Bachelor of Fine Arts (B.F.A.) degree. The B.A. degree (curricula A, B, and C) provides a course of study focusing upon academic disciplines in the liberal arts while the B.F.A. degree (curriculum D) is designed to integrate the study of art history with that of art studio.

Curriculum A: a program of study with a liberal arts curriculum comprised of an academic course of study opening to the student the scholarship and research methods of not only art history, but related disciplines in the humanities. This program offers the student the best possible background for future graduate work in art history.

Curriculum B: a comprehensive architectural history program which emphasizes the study of both Western and non-Western architecture, with strong liberal arts and studio components. The program offers the student an excellent background for graduate work in architectural and/or art history, as well as career opportunities as practitioners in the field. Given the region's rich and diverse architectural resources, this program provides an unusual opportunity for on-site studies. By providing the student with additional training in such areas as art history, studios (such as architectural presentation graphics), and urban studies and planning, this program offers a well-rounded knowledge of architectural history.

Curriculum C: a program with a museum studies orientation which calls upon the excellent

resources in the Richmond and Virginia areas. The uniqueness of the program, as well as its strength, is the opportunity it provides the student to intern in a regional museum.

Curriculum D: a program with a studio orientation providing the student with the opportunity to study art history with simultaneous involvement in the studio areas. The opportunity to delve into the interrelationships between the study of art and the actual making of objects is an ideal program for the artist who is vitally concerned with discovering the past and understanding the present.

A minor in art history is also available, consisting of a minimum of 18 credits in art history. These must include either 6 credits in the Survey of Western Art (or 8 credits in the Survey of World Art); plus four period courses of 3 credits each. The period courses must include one each from any of the following areas: Classical, Medieval, Renaissance, Baroque/Rococo, 19th and 20th Century, or Non-Western.

Degree Requirements in Art History

	<i>Credits</i>
Art Historical Curriculum (A)	
Studios	7
Art History	42
Aesthetics or Criticism	3
General Studies	
English 101–102	6
Literature	6
German or any applicable Romance language	14
History	15
Archaeology, Religion, Anthropology, or Cultural Geography	9
Electives (must include 3 credits in natural sciences/mathematics)	24
	126
Architectural History Curriculum (B)	
Studios	
Foundation Program	8
Interior Design Graphics	6
Photography	4
Architectural History	24
Art History	18
Aesthetics or Criticism	3
General Studies	
German or any applicable Romance language	14
History	12
English 101–102	6
Literature 201–202	6
Anthropology 103	3
Archaeology 105	3
Science	
Physics 101, L101	4
Geology 105, L105	4
Religious Studies 311 or 312	3
Urban Studies 116, 240, 513	8

Electives (2 courses)	6
	132
Museum Studies Curriculum (C)	
Studios	
Fine Arts	9
Conservation	9
Photography	2
Art History	36
Museum Studies	15
Aesthetics or Criticism	3
General Studies	
English 101–102	6
Literature	6
German or any applicable Romance language	14
History	9
Business	3
Humanities Electives	6
Electives (must include 3 credits in natural sciences/mathematics)	9
	127
Art Historical/Studio Curriculum (D)	
Studios	
Foundation Program	16
Fine Arts	56
Art History	29
Introduction to the Arts	2
Aesthetics or Criticism	3
General Studies	
English 101–102	6
Literature	6
German or any applicable Romance language	10
History	6
Electives (must include 3 credits in natural sciences/mathematics)	6
	140

COMMUNICATION ARTS AND DESIGN

JOHN DEMAQ

Chairman of the Department

JOHN MALINOSKI

Assistant Chairman of the Department

Nicolas A. Apgar	William O. Bevilaqua
Alex Bostic	(Professor Emeritus)
Lindsay Brinks	Richard Carlyon
Robert C. Carter	Ben Day
Durwood Dommissé	Robert L. Foster
John T. Hilton	Mike Hodges
(Professor Emeritus)	Mary Anna LaFratta
Mary McLaughlin	Robert Meganck
Philip B. Meggs	Akira Ouchi
Kathleen F. Quarterman	Dennis Rexroad
Charles B. Scalin	Nancy L. Strube
Giuseppe Trogu	

Part-time—
Jerry Bates

The Department of Communication Arts and Design, in close cooperation with the Department of Photography, offers intense curricula in visual communications and design. Focus is upon the development of innovative thinking

and creative problem solving abilities required for future professional excellence. The curriculum is oriented toward developing an understanding of visual form and structure, professional skills, and social and environmental awareness. The information/communication orientation of contemporary society calls upon this discipline to create visual images and concepts, relating people to their economic, social, cultural, and political lives.

In an era of rapid technological change, the department attempts to prepare students for future societal needs by fostering a spirit of experimentation and inquiry, and by integrating computer and electronic media study into the program.

After completion of the Art Foundation Program, a sophomore core program further develops fundamental design and drawing skills and introduces the major areas of visual communications: graphic design, electronic media, illustration, and photography. In the junior and senior years, students select an area of emphasis from the following:

1. **Design.** This concentration explores the design of visual communications. Intended primarily for those who wish to study graphic design, typography, and art direction, emphasis is upon visual design as a means to bring order and clarity to communications. In addition to traditional print media, students may elect courses in three-dimensional design and computer-assisted design.
2. **Electronic media.** This concentration is designed for students who desire major study in cinematography, video, computer graphics, and audio-visual communications. Emphasis is placed upon the artistic potential and communicative uses of kinetic media in contemporary society.
3. **Illustration.** The illustration concentration stresses the creation of images for communication, exploring a variety of traditional and experimental media. Drawing and the development of a personal approach to visual communications are emphasized.
4. **Photography.** This concentration focuses upon the creative and technical aspects of photography. It is designed for students who wish to explore photography as a personal language for artistic expression and as a means of creating images for visual communications.
5. **Multi-disciplinary program.** Students with clearly defined personal goals may develop an individual program of study after the sophomore year. A program plan encompassing two of the above emphasis areas is developed in close cooperation with the faculty advisor. To allow for sufficient in-depth study in two separate emphasis areas, successful completion of an additional 16 credits in upper-level studio courses is required. These courses are to be divided between the selected areas and must be taken in Emphasis Area Studios. An additional semester beyond what would normally be taken may be required to complete this option. The individual program proposal requires the approval of the department chairman.

Degree Requirements in Communication Arts and Design

	<i>Credits</i>
Studios	
Foundation Program	16
Visual Communications Fundamentals	24
Emphasis Area	32
Technical Workshops	8
General Studies	
Introduction to the Arts	2
English 101, 102	6
English 201, 202, 203, 204, 205, or 206	6
Art History and Theory	20
Approved Electives (must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	12
Open Electives	6
	132

Advancement in this department is based on completion of prerequisite courses. Successful completion of the entire Art Foundation Program is required as a prerequisite for all 200 level studio courses in the Department of Communication Arts and Design. Because of enrollment pressures, admission to the department is by portfolio review at the end of the foundation year. Acceptance into and successful completion of the Art Foundation Program does not guarantee entry into the Department of Communication Arts and Design. Twenty-four credits of visual communications fundamentals must be completed prior to entry into 300 and 400 level studio courses. Specific prerequisites for profes-

sional courses are identified in the course listings. Nonmajors who have completed the Art Foundation Program are permitted to take courses in the department by permission of the instructor when space is available.

Equipment, materials, and supplies in this program may cost \$1,000 per year, depending on the course of study.

CRAFTS

NANCY K. THOMPSON

Chairman of the Department

- | | |
|----------------------|-----------------|
| Allan A. Eastman | Bill Hammersley |
| (Professor Emeritus) | John Hawthorne |
| Kent Ipsen | Susan Iverson |
| C. James Meyer | Allan Rosenbaum |
| Christopher Silliman | |

The Department of Crafts offers a professionally oriented program of study leading to the Bachelor of Fine Arts degree in ceramics, fiber-work/fabric design, glassworking, metalsmithing/jewelry, woodworking/furniture design.

Within the areas of specialization, courses are designed to assist the students in developing concepts, personal directions, and the necessary skills and technical competencies which will enable them to pursue a professional career or graduate study.

In addition to the major area of study, the students have the opportunity for a broad education in the liberal arts and humanities. Students are encouraged to select courses in other schools on the Academic Campus that will add to their general knowledge and educational experience. A student may elect a minor area of study in any department or program offering a minor. The minor may be used to fulfill career objectives or to investigate a discipline of secondary interest.

Career opportunities for craft majors include setting up an independent studio or business, operating or working in a gallery, restoration or repair work, teaching or participating in Artist-in-Residence programs in public schools, and consulting or designing for industry.

Courses in the department are open to all students in the university but must be taken in sequence starting at the 200 level.

Degree Requirements in Crafts

	<i>Credits</i>
Studios	
Foundation Program	16
Basic Crafts	16
Orientation to Crafts	1
Advanced Crafts	32

Painting/Printmaking or Sculpture Studio	8
General Studies	
Introduction to the Arts	2
English 101-102	6
Literature	6
Art History and Theory	14
Approved electives (must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	18
Senior Seminar	1
Open Electives	10
	130

Minor in Crafts

Successful completion of the Art Foundation Program is a prerequisite for the minor concentration which shall consist of a minimum of 18 credits in crafts courses. Of these 18 credits a minimum of nine credits is required in upper-level courses.

DANCE/CHOREOGRAPHY

CHRIS BURNSIDE

Chairman of the Department

- | | |
|---------------|----------------------|
| Martha Curtis | Audrey Jung |
| Sharon Kinney | Melanie Richards |
| Judith Steel | Frances Wessells |
| | (Associate Professor |
| | (Emerita) |

Part-time/Adjunct

- | | |
|-----------------|------------------|
| Bruce Berryhill | Anna Compton |
| Nesbit Hatch | Karen Kessler |
| Arnott Mader | John Massey |
| Cas Overton | Joseph Tornabene |
| Faye Walker | |

The Department of Dance/Choreography offers an intense, professionally oriented program of study designed to prepare students for the rigorous and competitive demands in the field of dance.

Students are trained to be performers, choreographers, and teachers in a curriculum which emphasizes modern dance and offers dance courses in modern, improvisation, composition, choreography, music for dancers, and dance history as well as ballet, jazz, tap, folk, Afro-Caribbean, ballroom, contact improvisation, T'ai Chi, kinesiology, video/choreography, lighting design, and dancer as teacher. In addition, the program provides a variety of experiences in performance, choreography, and production. These offerings enable students as dancers to develop themselves as sensitive, expressive individual artists with professional training in dance technique, a knowledge of dance philosophies, and a foundation in history which encour-

ages them to function as independent and creative artists in the field of dance.

**Degree Requirements in Dance/
Choreography**

	<i>Credits</i>
Dance Technique	
Modern	*24 or 28
Ballet	*12 or 16
Tap	2
Ballroom and Folk, African-Caribbean, Tai Chi, or Jazz	2
Dance Workshop	8
Improvisation	4
Dance Composition	6
Dance History	6
Repertory	3
Music for Dancers	3
Music Appreciation	3
Dancer as Teacher	3
Lighting Design and Lab	4
Elective in Theater	3
Choreography/Performance	6
Senior Project	3
Approved Electives (Dance)	2 or 3
Contact Improvisation or Video/Choreography Workshop	
General Studies	
English 101-102	6
Kinesiology	3
Art History	3
Social Behavioral Science Elective	3
Math or Natural Science Elective	3
Approved Electives (General Education)	3
Humanities or Social Behavioral Science Elective	
Open Electives	<u>14 or 15</u>
	134

*The total for modern and ballet must be 40.

The B.F.A. degree program in dance/choreography contains a core curriculum of 88 credits from a total degree requirement of 134 credits. The dance major is encouraged to take two technique classes a day, which includes a required modern technique class. A continuous study of ballet is a strong component of the curriculum, and dance majors are required to fulfill 12-16 hours in the study of ballet. Beyond the first level of technique, students progress to the higher levels through audition or with permission of the instructor. There are opportunities for independent study within the core, including a possible semester spent in an intensive investigation of a dance-related subject in a professional environment.

As a culmination of their studies, students are required to complete a Senior Project which is a practical presentation in both performance and choreography.

Within the School of the Arts, dance students have many opportunities to work collaboratively with other students in the arts. Possibilities include the visual arts, participation in multimedia events, and productions outside the dance department.

All dance majors have the opportunity to perform in numerous formal concerts, informal showings, and lecture-demonstrations produced by the department.

Opportunities are provided for training in teaching, but students interested in earning state certification should consult their advisors.

An audition is required for acceptance into the dance program. Applicants for the B.F.A. in dance/choreography will follow the admissions guidelines for arts students as described in the *VCU Undergraduate Bulletin*.

Minor in Dance

Students from any department in the University may declare a minor in dance. The minor consists of 27 credits: 14 credits of approved dance technique credits, (a combination of modern, ballet, tap, t'ai chi, contact improvisation or african-caribbean); DAN 105-106 Improvisation, four credits; DAN 205 Composition, three credits; DAN 206 Composition or DAN 319, 320 Video/Choreography, three credits; and DAN 307 or 308 Dance History, three credits.

FASHION

VACANT

Chairman of the Department

CHARLES KOERNER

Assistant Chairman

Don Breitinger	Monique Burnett
Donald Earley	Karen Edelmann
Karen Guthrie	Cindi Pierce
Nancy Hollomon-Pursley	Henry Swartz
Janus Watson	Sandra Wilkins
Otti Windmueller	
(Professor Emerita)	

Part-time—

Margaret Dillard	Donna Gainous
Trish R. Hug	Paulette Markham
Billy Pillow	Geno South
Nancy Scott	Mike Wilson

Fashion V.C.U. offers three curricula: Fashion Art and Advertising and Fashion Design leading to a Bachelor of Fine Arts degree, and Fashion Merchandising leading to a Bachelor of Arts Degree.

The Fashion Art and Advertising curriculum

has been designed to develop the students' skills in the illustration of the fashion figure, the design of fashion related print advertising and the fundamentals of print advertising production. These skills combine with the students' creativity and visual problem-solving ability in the development of fashion advertising concepts and strategy. Emphasis will be placed on portfolio development.

The Fashion Design curriculum offers technical courses which provide basic skills required in the industry in the area of ready-to-wear and also haute couture. Individual designs are presented in two-dimensional form, developed and perfected through techniques employed in the fashion industry, and then executed in final three-dimensional form in fabric(s) appropriate to the design. Expenses for fabric and equipment average \$200 to \$600 a year.

The Fashion Merchandising curriculum offers courses related to the business aspect of the garment industry. An awareness of contemporary styles, production techniques, quality control, consumer needs, and wholesale and retail marketing procedures are explored in depth in order to prepare the student to market merchandise that relates to a consumer from a variety of economic, cultural, and social lifestyles. Strong math skills and the ability to master college algebra are considered essential to the completion of the Fashion Merchandising program.

The fashion programs, especially Fashion Design and Fashion Art and Advertising, are very time demanding. Students are encouraged and expected to place class attendance and study time above other campus activities or employment.

Students must take classes in the order prescribed by the Department; and adhere to all prerequisites and course restrictions. Failure to comply can lengthen the number of semesters needed to complete degree requirements and may be considered as a breach of the University Ethics Policy.

Guest lecturers and critics are frequent visitors to the department. Students are *required* to attend.

Degree Requirements in Fashion

Fashion Art and Advertising

	Credits
Studios	
Foundation Program	16
Life Drawing	12

Typography	4
Basic Photography	4
2-D Composition	2
Fashion Art and Advertising/Illustration	24
Fashion Ad Design	8
Print Production	2
Computer Techniques for Fashion Art and Advertising	2
General Studies	
English 101-102	6
Literature	6
Art History	8
Introduction to the Arts	2
Introduction to the Apparel Industry	3
Twentieth Century Fashion	3
Fashion Seminar	2
Approved Electives (Must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	22
	126

Minor in Fashion Art and Advertising

Successful completion of the Art Foundation Program is a prerequisite for the minor concentration which shall consist of a minimum of 19 credits in fashion art and advertising courses. A minimum of nine credits is required in upper-level FDE courses. A Department of Fashion faculty advisor will counsel each student.

Fashion Design

	Credits
Studios	
Foundation Program	16
Garment Construction	4
Design	12
Draping	18
Patternmaking	8
Fashion Drawing	12
Tailoring	2
General Studies	
English 101-102	6
Textiles for Fashion	4
Art History	16
Introduction to the Arts	2
Literature	6
Twentieth Century Fashion	3
Fashion Seminar	2
Approved Electives (Must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	18
	126

Fashion Merchandising

	Credits
Drawing Studios	4
General Studies	
English 101-102	6
Literature	6
Art History	6
Mathematics and Accounting	9
Computer Science	3

Economics	3
Business Courses	12
Introduction to Psychology	3
General Sociology	3
Mass Communications	3
Speech	3
Introduction to the Apparel Industry	3
Fashion Merchandising	28
Twentieth Century Fashion	3
Textiles for Fashion	4
Fashion Seminar	2
Approved Electives	25
	<hr/>
	126

Minor in Fashion Merchandising

Students from any department in the university may declare a minor in fashion merchandising. The fashion merchandising minor consists of 19 credits. A minimum of nine credits is required in upper-level FDE courses. A minimum grade-point average of 2.0 must be achieved in the minor. A Department of Fashion faculty advisor will counsel each student.

INTERIOR DESIGN

PAUL PETRIE

Chairman of the Department

Edward A. Dorsa	J. Jewett Field
Ben. D. Gunter	(Professor Emeritus)
Dorothy T. Hamilton	M. Buie Harwood
(Associate Professor Emerita)	Robert F. Hester
	(Professor Emeritus)
Ki-Jeong Jeon	James T. Long
Craig H. Marlow	Han Schroeder
Camden Whitehead	(Professor Emerita)
Ringo Yung	

The Department of Interior Design offers a FIDER-accredited, professionally oriented program which seeks to produce competent creative designers whose realistic design solutions are based on human needs in the contemporary environment. Mastery of design techniques, knowledge of resources, and an awareness of interrelating disciplines equip the student to pursue responsible and varied creative design positions or to engage in further academic endeavor.

Admission to the degree program follows successful completion of the freshman foundation program (or equivalent preparation in the case of transfer students from other institutions).

Field trips are an important part of some of the departmental courses, and students are required to participate in these trips. The expense of these trips is in addition to the tuition and should not exceed \$250 per year.

The department has two scholarships avail-

able to full-time interior design majors on the junior or senior level. They are the Roger Baugh Scholarship and the Hamilton-Field Scholarship. For further information contact the department chairman.

Degree Requirements in Interior Design

	<i>Credits</i>
Studios	
Foundation Program	16
Creative Design	28
Technical Knowledge	18
Communication Skills	15
General Studies	
English 101-102	6
English	6
Introduction to the Arts	2
Art History (includes ARH 433 and IDE 321-322)	17
Approved Electives (must include 3 credits in Social/Behavioral Sciences and 3 credits in Natural Sciences/Mathematics)	21
Business Procedures	3
	<hr/>
	132

MUSIC

DAVID CORDLE

Chairman of the Department

SANDRA GUERARD

Assistant Chairman

Terry Austin	L. Wayne Batty
Francile Bilyeu	Landon A. Bilyeu
Allan Blank	Christopher Brooks
Loran Carrier	David Commanday
Melanie Kohn Day	Cynthia S. Donnell
John Guthmiller	Bruce Hammel
Ardyth J. Lohuis	Melissa Wuslich Marrion
Edward A. Mirr ¹	Robert Murray
Dika Newlin	Chinyerem Ohia
John Patykula	Douglas Richards
J. Lawrence Robinson	Frantisek Smetana
Ronald B. Thomas	(Professor Emeritus)
Sonia K. Vlahcevic	Charles West
Neil Wilson	
Part-Time—	
Ronald Baedke ¹	Paul Bedell ¹
Donald Bick ¹	Cory Blake
Jennifer Combs ¹	John D'Earth
Barry Dove	Rolla Durham ¹
Eve Ann Eichhorn	Michael Ess
Mary Jane Fitzpatrick	Edward R. Fraedrich
George Gales	Michelle Gulick
Anne Guthmiller	Karen Haid ¹
Bob Hallahan	Paul Hanson
Joanne Kong	Alan Paterson ¹
Reed Perkins	Ronda Plessinger-Coltrane
Barbara Prince	Keith Sacra
Joe Scott	Clarence Seay
Peter Spaar	Scott Taylor
Philip Teachey ¹	David Toussaint
Eddie Van Arsdall	Russell Wilson ¹
Zhezhi Xie	David Zerkel

¹ Member, Richmond Symphony Orchestra

The Department of Music, located in the Performing Arts Center, offers a comprehensive program designed to assist the student in acquiring those intellectual and musical competencies that are imperative for active musical participation in a modern society. The requirements for entrance and graduation are in accordance with the standards advocated by the National Association of Schools and Music. An audition and written general musicianship examination are necessary for admission, and students must meet the general admission requirements of the university. Audition information may be obtained by contacting Dr. Sandra Guerard, Assistant Chairman, Department of Music, 922 Park Avenue, Virginia Commonwealth University, Richmond, VA 23284-2004. All freshmen entering the department are classified as music foundation majors for their first year. During the second year of full-time study students may apply for admission into a specific degree program (performance, music education, composition).

The department's programs in performance, music education and composition lead to the Bachelor of Music degree. The music education program incorporates those requirements necessary to qualify for Virginia's Collegiate Professional Certificate. Music education degree requirements may be changed to satisfy requirements for certification in other states.

At the center of the instructional program is the Core Curriculum, comprising 38 credits of instruction in aspects of musicianship fundamental to all music degree programs. Included are courses in basic music theory, aural skills, music history and styles, conducting, and advanced theoretical studies.

Electives in Music

University students who major in a field other than music may register for ensembles, private or class lessons, and a wide variety of classroom courses in music. Class lessons in voice, piano and guitar, Music Appreciation, Afro-American Music, Introduction to Writing Music, Basic Music Skills, and Special Offerings in Music are specifically designed for the nonmusic major. Other courses are open to those who have adequate background.

Minor in Music

Students from any department in the university may declare a minor in music. The music

minor comprises 22 credits distributed among the areas of music history-theory, ensemble performance, private lessons, and music electives. Within the guidelines below, students have several options to meet their objectives. A music faculty adviser will counsel each minor regarding the selection of appropriate courses based on the student's competence and interest.

Music history and theory (9 credits) selected from MHT 106, 101, 102, 110, 135, 136, 243, 244, 245, 246, 421, 422.

Large ensemble (4 credits)

Private lessons (4 credits) one credit per semester; all credits to be earned on a single instrument. Students must earn Achievement Level I.

Music electives (5 credits) Suggested courses include MHT 117, 201, and music literature courses.

Graduate Study

Graduate degrees are offered in solo performance, composition, conducting and music education. See *Graduate Bulletin* for courses and curricula.

Fees

All students registering for private music lessons pay an applied music fee. This fee is in addition to the comprehensive fee charged only to majors in the School of the Arts. The cost for private lessons is \$130 per semester for one credit and \$260 per semester for two or three credits.

Community School of the Performing Arts

Pre-college, University, and adult students may receive private or class instruction through the Community School of the Performing Arts which is adjunct to the Department of Music. Information regarding registration and fee schedules may be obtained through the coordinator of the Community School of the Performing Arts, Dr. Glenn Winters, 367-1168. No degree credit is granted for either private or class lessons taken through the Community School.

Degree Requirements in Music

Applied Music Achievement Levels. Eight achievement levels have been established for applied instrumental and vocal study. These levels are explicit in terms of expected repertoire, musicianship/style, technique, and sight-reading. "Honors" may be earned by students in any

area who go beyond the eighth level. While freshmen normally earn Level I at their first-semester juries, transfer students may be awarded Level I or a higher level based on their entrance auditions. The table indicates the achievement levels required for graduation from each degree program.

Performance VIII*
 Music Education VI
 Composition VI in Composition
 IV in Performing Medium

*Synthesizer performance majors must also earn Level III in a secondary keyboard area.

Recital/Convocation Attendance. All undergraduate majors are required to pass four semesters of recital/convocation attendance for graduation. During each semester of enrollment, the student is required to attend a minimum of ten concerts or recitals plus 75 percent of all departmental convocations in order to earn credit.

Master Class. Consists of participation in weekly master classes in the student's applied major area. Eight semesters are required for the performance and composition degree programs; six semesters are required for music education.

Degree Requirements in Performance

Core Curriculum (all areas)	<i>Credits</i>
Integrated Theory	12
Aural Skills I-V	7
Introduction to Musical Styles	2
Survey of Music History	6
Form and Analysis I	2
Conducting	2
Core Electives (selected from Aural Skills VI-VIII, Performance Practice, and any MHT or MUC 300- or 400-level course not otherwise required in the student's curriculum)	7*

*Jazz Studies requires only 4 credits of core electives.

The following courses also are required of majors in the areas specified:

Brass, Percussion, Strings, Woodwinds	
Large Ensembles	5
Ensemble Electives	7
Keyboard Skills	4
Pedagogy	2
Principal Performing Medium	24
Secondary Performing Medium†	4
Recital/Convocation Attendance (4 semesters)	0
Master Class (8 semesters)	0
Junior Recital	0
Senior Recital	0
General Studies	
English 101-102	6

History 101-102	6
Mathematics/Natural Science Elective	3
Social/Behavioral Science Elective	3
Free Electives	26
	128

†The secondary performance area requirement must be fulfilled with studies on a different instrument.

Organ

Large Ensembles	5
Ensemble Electives	7
Keyboard Skills (APM 273-4, 373-4)	4
Pedagogy	2
Principal Performing Medium	24
Secondary Performing Medium†	4
Acoustics	3
Organ Literature and Design	2
Service Playing	2
Lyric Diction	6
Recital/Convocation Attendance (4 semesters)	0
Master Class (8 semesters)	0
Junior Recital	0
Senior Recital	0
General Studies	
English 101-102	6
History 101-102	6
Mathematics/natural Science Elective	3
Social/Behavioral Science Elective	3
Free Electives	15
	130

Piano

Large Ensembles	5
Ensemble Electives	5
Keyboard Skills (APM 273-4, 373-4)	4
Pedagogy	2
Principal Performing Medium	24
Secondary Performing Medium†	4
Jazz Improvisation	3
Piano Literature	4
Recital/Convocation Attendance (4 semesters)	0
Master Class (8 semesters)	0
Junior Recital	0
Senior Recital	0
General Studies	
English 101-102	6
History 101-102	6
Mathematics/Natural Science Elective	3
Social/Behavioral Science Elective	3
Free Electives	23
	130

Synthesizer

Large Ensembles	5
Ensemble Electives	7
Keyboard Skills	4
Performing Medium (Synthesizer)	18
Performing Medium (piano, organ, or harpsichord)	9
Computers in Music	3
MIDI Programming and Synthesis	3
Synthesizer and Composition	3
Recital/Convocation Attendance (4 semesters)	0
Master Class (at least 2 in keyboard area, 6 in synthesizer)	0
Junior Recital	0

Senior Recital.....	0
General Studies	
English 101–102.....	6
History 101–102.....	6
Media Arts Survey CDE 223.....	4
Sound Communication CDE 331.....	2
Mathematics/Natural Science Elective.....	3
Social/Behavioral Science Elective.....	3
Electives.....	18
	132

†The secondary performance area requirement must be fulfilled with studies on a different instrument.

Voice

Large Ensembles.....	5
Ensemble Electives.....	5
*Opera Theatre.....	2
Keyboard Skills.....	4
Pedagogy.....	2
Principal Performing Medium.....	24
Secondary Performing Medium†.....	4
Lyric Diction.....	6
Song Literature.....	2
Recital/Convocation Attendance (4 semesters).....	0
Master Class (8 semesters).....	0
Junior Recital.....	0
Senior Recital.....	0
General Studies	
English 101–102.....	6
Foreign Language 101–102.....	8
History 101–102.....	6
Mathematics/Natural Science Elective.....	3
Social/Behavioral Science Elective.....	3
Free Electives.....	14
	132

*THE 107 or DAN 101 can be substituted with departmental approval.

Jazz Studies

Large Ensembles.....	4
Jazz Ensembles.....	12
Keyboard Skills.....	4
Performing Medium.....	24
Jazz Improvisation.....	6
Jazz Arranging.....	6
Composition (Advanced Jazz Arranging).....	2
Recital/Convocation Attendance (4 semesters).....	0
Master Class (8 semesters).....	0
Junior Recital.....	0
Senior Recital.....	0
General Studies	
English 101–102.....	6
History (Jazz).....	3
Mathematics/Natural Science Elective.....	3
Social/Behavioral Science Elective.....	3
Free Electives.....	22
	130

Degree Requirements in Composition

Core Curriculum	
Integrated Theory.....	12
Aural Skills I-V.....	7
Introduction to Musical Styles.....	2
Survey of Music History.....	6
Form and Analysis I.....	2

Conducting.....	2
Core Electives (selected from Aural Skills VI-VIII, Performance Practice, and any MHT or MUC 300- or 400-level course not otherwise required in the student's curriculum).....	5
Keyboard Skills.....	6
Class Composition I.....	2
Private Composition.....	13
Performing Medium.....	12
Counterpoint I.....	3
MIDI Programming and Synthesis.....	3
Orchestration.....	3
Form and Analysis II.....	2
Large Ensembles.....	5
Ensemble Electives.....	7
Master Class (8 semesters; at least 4 each in performing medium and composition).....	0
Recital/Convocation Attendance (4 semesters).....	0
Senior Recital.....	0
General Studies	
English 101–102.....	6
History 101–102.....	6
Foreign Language.....	8
Mathematics/Natural Science Elective.....	3
Social/Behavioral Science Elective.....	3
Free Electives.....	14
	132

†The secondary performance area requirement must be fulfilled with studies on a different instrument.

Degree Requirements in Music Education

	Instrumental Vocal	
General Studies	Major	Major
English.....	9	9
Mathematics.....	3	3
Mathematics or Science Elective.....	3	3
American History.....	3	3
Social Science Electives.....	9	9
Physical Education.....	1	1
Computers in Music or Math Elective.....	3	3
Acoustics or Lab Science Elective.....	3	3
Professional Education		
Human Development and Learning.....	3	3
Music in General Education.....	2	2
Pedagogical Rehearsal Technique.....	3	3
Observation in Music Education.....	1	1
Processes of Music Education.....	3	3
Student Teaching.....	12	12
Music Coursework		
Core Curriculum		
Integrated Theory.....	12	12
Aural Skills I-V.....	7	7
Introduction to Musical Styles.....	2	2
Survey of Music History.....	6	6
Form and Analysis I.....	2	2
Conducting (APM 381).....	2	2
Conducting (APM 382).....	2	2
Conducting Lab Ensembles.....	1	1
Lyric Diction.....	0	3**
Class Instruments APM 181, 183, 184, 185, 187, 193*.....	5	4

Keyboard Skills	4	4
Principal Performing Medium.....	21	21
Secondary Performing Medium ...	3	3
Large Ensembles	7	7
Junior Recital	0	0
Master Class (6 semesters)	0	0
Recital/Convocation Attendance (4 semesters)	0	0
Electives	6	4
	139	139

*Required of instrumental majors only
 **Required of vocal majors only.

PAINTING AND PRINTMAKING

MICHAEL H. DROUGHT

Chairman of the Department

Ruth Bolduan	James A. Bradford
James A. Bumgardner	Jewett Campbell
Gerald A. Donato	(Professor Emeritus)
David Freed	Ann Renee Gower
Richard Kevorkian	Bernard Martin
James Miller	Theresa Pollak
Milo Russell	(Professor Emerita)
(Professor Emeritus)	Javier Tapia
Barbara Tisserat	Philip S. Wetton
Morris Yarowsky	

The Department of Painting and Printmaking attempts to establish a foundation for the creative person who desires to attain professional status as a painter or printmaker.

As the students progress, they are given an increasing amount of freedom; and as they demonstrate their acquisition of skill and insight, they are encouraged to explore more individually in all areas of their creative work. During the junior and senior years most students concentrate in the area of either painting or printmaking.

Degree Requirements in Painting and Printmaking

	<i>Credits</i>
Studios	
Foundation Program.....	16
Sculpture or Crafts.....	4
Sculpture	4
Painting	16
Drawing	12
Printmaking	12
General Studies	
English 101-102	6
Literature	6
Introduction to the Arts	2
Art History.....	17
Approved Electives (must include 3 credits in the social/behavioral sciences and 3 credits in natural sciences/mathematics)	12
Open Electives	11
Painting and Printmaking Department Electives ...	12
	130

Minor in Painting and Printmaking

Successful completion of the Art Foundation Program is a prerequisite for the minor concentration which shall consist of a minimum of 18 credits in painting and printmaking courses. Of these 18 credits, a minimum of nine credits is required in upper-level courses.

PHOTOGRAPHY AND FILM

GEORGE D. NAN

Chairman of the Department

David M. Bremer	Clifton Dixon
John N. Heroy	Dale Quarterman
Joan Strommer	Nancy Lensen-Tomasson

The Department of Photography contributes to the educational need of the School of the Arts and the university at large. The department offers both basic and intermediate courses in black and white photography, and color photography to those who already have two years of course work or a sound photographic background, and advanced black and white and color workshops.

Beginning courses deal with fundamentals and techniques and develop the visual senses while the advanced courses expand in depth a student's knowledge of the visual senses and help the student to put together a well developed portfolio.

A limited number of classes in Super 8 and 16mm filmmaking techniques are offered on the intermediate and advanced level. No undergraduate degree is offered in photography.

Minor in Photography Film

Successful completion of the Art Foundation Program is a prerequisite for the minor concentration which shall consist of a minimum of 18 credits in photography/film courses. Of these 18 credits a minimum of ten credits is required in upper-level courses.

SCULPTURE

JOSEPH H. SEIPEL

Chairman of the Department

Myron Helfgott	Charles R. Henry
Elizabeth King	Harold E. North
Lester Van Winkle	

The Department of Sculpture exists primarily for individuals who wish to structure their ideas by manipulating tangible materials. Students are encouraged to develop methods of problem solving and attitudes which will sustain them in their professional and personal growth.

Degree Requirements in Sculpture

	<i>Credits</i>
Studios	
Foundation Program	16
Sculpture	40
Painting and Printmaking	14
General Studies	
Introduction to the Arts	2
Art History	14
English 101-102	6
Literature	6
Approved Electives (must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	10
Open Electives	22
	130

Minor in Sculpture

Successful completion of the Art Foundation Program is a prerequisite for the minor concentration which shall consist of a minimum of 18 credits in sculpture courses. Of these 18 credits, a minimum of nine credits is required in upper-level courses.

THEATRE

RICHARD L. NEWDICK
 Chair of the Department
 LAWRENCE A. BROGLIO
 Assistant Chair
 Kenneth Campbell
 Paul T. M. Hemenway
 Elizabeth W. Hopper
 Gary C. Hopper
 James W. Parker
 Louis J. Szari

Maurice L. Erickson
 C. Thomas Holloway
 (Professor Emeritus)
 Ronald E. Keller
 Janet Rodgers

The Department of Theatre offers an intensive program designed to provide students with the professional and cultural foundation essential to attaining the highest standards of the art. Applicants are admitted only upon satisfactory demonstration of ability and genuine interest by means of interview as well as audition and/or *portfolio presentation*.

The department offers two Bachelor of Fine Arts degrees. One is in Theatre with emphasis in either performance or design/production. The other is in Theatre Education which leads to the certification required for teaching theatre, speech, and English in the public schools.

In these pre-professional programs an environment exists where all aspects of theatre as art, craft, business, and education are experienced together. The curriculum is designed to immerse the student in the practicalities of theatre. During the first and succeeding years, the performer works daily with voice, body, and imag-

ination, while the designer/technician is involved in studio classes and practical application. Prospective theatre educators engage in intensive teacher training activities leading to certification.

The department also serves the University with offerings in speech communication.

Degree Requirements in Theatre

	<i>Credits</i>
Performance Emphasis	
Acting	24
Voice	8
Movement	8
Theatre Design and Crafts	14
General Studies	
English 101-102	6
Literature	12
Arts History	12
Approved electives (must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	6
Open Electives	30
	130

Design/Technical Emphasis

Art Foundation	8
Acting	6
Theatre Design and Crafts	20
Design/Tech Electives	41
General Studies	
English 101-102	6
Literature	21
Arts History	12
Approved electives (must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	6
Open Electives	10
	130

Theatre Education

Acting	6
Voice/Speech	9
Movement	4
Theatre Design and Crafts	15
Directing/Practicum in Theatre	9
General Studies	
English	12
Literature	24
Arts History	6
Social Science	12
Math/Science	11
Professional Education Health	27
	135

COURSES IN ARTS (ART)

Unless otherwise indicated, courses must be taken in numerical sequence.

001 Open Studio Workshop. Semester course; hours to be arranged. No credit.

190 Advanced Workshop, Drawing. Semester course; 1 lecture and 6 studio hours. 3 credits. Special summer work

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in drawing for the freshman applicant whose work shows potential worthy of consideration for advanced placement in September. Must be taken concurrently with ART 191 and 192. Students are admitted only by invitation of the dean of the School of the Arts.

191 Advanced Workshop, Design. Semester course; 1 lecture and 9 studio hours. 4 credits. Special summer work in design for the freshman applicant whose work shows potential worthy of consideration for advanced placement in September. Must be taken concurrently with ART 190 and 192. Students are admitted only by invitation of the dean of the School of the Arts.

192 Advanced Workshop, Art History. Semester course; 2 lecture hours. 2 credits. Special summer work in art history for the freshman applicant whose work shows potential worthy of consideration for advanced placement in September. Must be taken concurrently with ART 190 and 191. Students are admitted only by invitation of the dean of the School of the Arts.

392 and 492 Independent Study. Semester courses; 3 to 18 studio hours. 1 to 6 credits. Prerequisite: consent of department head and instructor. This course will be limited to those few students who have demonstrated an unusual level of ability and intense commitment to a particular area. The student must be enrolled in a regularly scheduled 300-level studio course. Offered to School of the Arts major only.

370, 371 Topics in Art. Semester courses; 3 lecture or 9 studio hours (or combinations thereof). 3, 3 credits. An in-depth study of a selected topic in art. See *Schedule of Classes* for specific topics to be offered each semester.

430/530 Guided Study Abroad. 3–9 credits. Permission of instructor required. Designed to enhance the student's knowledge by providing first-hand experience with the most significant contribution of aesthetic import within the geographic areas traveled.

COURSES IN ART FOUNDATION (AFO)

101-102 Communication and Presentation. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. A foundation course with the emphasis on conceptualization, sensing, and knowing. This course includes studies in preconceptions, value systems, visual semantics, attitudes, criticism, and analysis of visual phenomena. This course is also an introduction to the concepts and nature of materials. For beginning students in the School of the Arts. Offered to art majors only.

103-104 Communication Vehicles. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. A foundation course with emphasis on systems and nonsystems of spatial order, as well as color applications and theory. For beginning students in the School of the Arts. Offered to art majors only.

105-106 Survey of World Art. Continuous course; 4 lecture hours. 4–4 credits. A survey of the history and development of painting, sculpture, architecture, and related visual arts of major world cultures, including European, American, Oriental, African, Islamic, and Pre-Columbian. For beginning students in the School of the Arts only.

107, 108 Introduction to the Arts. Semester courses; 1 lecture hour. 1, 1 credits. An orientation course designed to

provide a comprehensive understanding of the role of the visual arts as a significant contributing factor in the creation of a meaningful human environment. Attendance at selected music and theatre department performances required. For beginning students in the School of the Arts. Offered to art majors only.

109-110 Drawing Vehicles. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. A foundation course with the emphasis on traditional drawing, including perspective, anatomy, and artistic judgment. For beginning students in the School of the Arts. Offered to art majors only.

111-112 Drawing Studio. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. A foundation course with the emphasis on invention and imagination. This course is designed to challenge and develop the student's facility for combining known phenomena and personal imagery. For beginning students in the School of the Arts. Offered to art majors only.

121-122 Introduction to Drawing. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. An introduction to the fundamentals of freehand drawing with an emphasis on representational drawing skills, perception, and traditional drawing materials. Not for art majors. Does not fulfill Art Foundation Program core requirements.

COURSES IN ART EDUCATION (AEN)

121-122 The Individual In the Creative Process. Continuous course; 1 lecture, 1 seminar, and 2 studio hours. 3–3 credits. Analysis of creative processes via reflection on the self-in-action. Participation in art experiences as a means to the interpretation and enjoyment of art forms, and the implication of art for society. The course aims to increase perceptual openness, sensitivity to, and understanding of the artistic experience. Not offered for credit to art majors.

301-302 Art for Elementary Teachers. Continuous course; 1 lecture, 1 seminar, and 2 studio hours. 3–3 credits. The nature of art and its function in the lives of individuals and society is considered in addition to materials and methods for guiding the visual expression of children.

310 Concepts of Art Education I: Foundations of Art in Education. Semester course; 4 lecture hours. 4 credits. An examination of art education within the curricular structure of educational programs. Students will develop an understanding of the historical, philosophical, and sociological foundations of art in education, including art education's development and current roles. For art education majors only, or by approval of the department chairman.

311 Concepts of Art Education II: Curriculum and Instructional Procedures. Semester course; 3 lecture and 3 studio hours. 4 credits. A study of the principles of learning, instruction, and curriculum in art education programs. Students will develop teaching competencies through micro teaching experiences, analysis of instructional methods, and teaching styles. For art education majors only, or by approval of the department chairman.

340 Exploring the Visual Arts. Semester course; 1 lecture, 1 seminar, and 2 studio hours. 3 credits. Exploration of the nature and history of the arts, to include direct involvement in creative studio processes and experiences designed to increase aesthetic awareness, analysis, and evaluation skills.

353 Art and Perceptual Communication. Semester course; 3 lecture hours. 3 credits. A study of the function of art as communicative media through the senses. Emphasis will be placed on the analysis of the principles of art and design which affect the perception of various art forms.

401 Concepts In Art Education III: Elementary Materials and Practicum. Semester course; 3 lecture and 3 studio hours. 4 credits. A preparatory experience with observation and participation in art programs in elementary grades and nontraditional settings prior to student teaching. This course explores art materials and techniques suitable for this level, examines developmental performance levels and analyzes evaluation methods appropriate for art. For art education majors only, or by the approval of the department chairman.

402 Concepts In Art Education IV: Secondary Materials and Practicum. Semester course; 3 lecture and 3 studio hours. 4 credits. A preparatory experience with observation and participation in art programs in middle school, secondary school, and nontraditional settings prior to student teaching. This course explores art materials and techniques suitable for these levels, examines developmental performance levels, and analyzes evaluation methods appropriate for art. For art education majors only, or by approval of the department chairman.

404 Student Teaching Seminar. 3 seminar hours; 3 credits. A seminar concurrent with student teaching which gives the students an opportunity to discuss and evaluate their progress in teaching assignments and other related activities. For art education majors only.

406 Art Education Seminar. 3 seminar hours; 3 credits. Students will focus upon the future of art education by reviewing and projecting changes in philosophy, curriculum development, and evaluation. Students will examine important issues and problems confronting education in general and the art program/teacher in particular. As future education, the students will explore pragmatic strategies for consideration and potential implementation.

408 Two-Dimensional Art Experiences. Semester course; 1 seminar and 4 studio hours. 3 credits. The course explores the media, techniques, and concepts of drawing, painting, and printmaking. Not offered for credit to art majors.

409 Three-Dimensional Art Experiences. Semester course; 1 seminar and 4 studio hours. 3 credits. Exploration of sculptural concepts with three-dimensional materials such as wood, metal, clay, fiber, plaster, plastic, and glass. Not offered for credit to art majors.

411–112 Fashion Media. Continuous course; 1 lecture and 4 studio hours. 3–3 credits. Exploration of design concepts, media techniques, and actual execution in fabrics, jewelry, and ceramics with considerations for application to fashion design. For fashion design majors.

420 The Related Arts In Education. Semester course; 1 lecture, 1 seminar, and 2 studio hours. 3 credits. Investigation of contemporary patterns of expression which combine the visual and performing arts and their implications for elementary, middle, and secondary schools. Involvement in aesthetic experiences will serve as a vehicle for analysis of interrelationships among expressive forms and provide concepts for developmental growth in relation to curriculum designing. Open to all majors.

430 The Arts and Humanities in Education. Semester course; 1 lecture, 1 seminar, and 2 studio hours. 3 credits. Exploration of the perceptual and creative facets of arts and humanities curricula design in middle and secondary schools. The course establishes common denominators of human experience as a basis for integrating traditional disciplines into new patterns for aesthetic experiences through the students' direct involvement in a wide range of artistic activity. For teacher education majors only.

450 Art for the Exceptional Student. Semester course; 2 lecture and 3 studio hours. 3 credits. A study of the unique characteristics of exceptional students as related to involvement in the arts. The course examines handicapped, aged, gifted, talented, and other exceptional learners, and includes practicum and field experiences. Open to all majors.

491 Special Topics. Semester course; variable credit. May be repeated for a maximum of nine credits. A seminar and/or workshop offered on a variety of art education issues not included in the regular curriculum. See *Schedule of Classes* for particular topic covered each semester.

COURSES IN ART HISTORY (ARH)

103, 104 Survey of Western Art. Semester courses; 3 lecture hours. 3, 3 credits. First semester: Prehistoric through Gothic. Second semester: Italian Renaissance through Modern. Illustrated lectures.

145, 146 Survey of Oriental Art. Semester courses; 3 lecture hours. 3, 3 credits. First semester: the art of India, Southeast Asia, and the Middle East. Second semester: the art of China, Korea, and Japan. Illustrated lectures.

209, 210/English 209, 210 American Art and Literature. Semester course; 3 lecture hours. 3, 3 credits. A general survey of the form and content of American art and literature with special emphasis on the relationships between visual and literary works. First semester: before 1865. Second semester: since 1865.

211, 212/English 211, 212 Western World Art and Literature. Semester courses; 3 lecture hours. 3, 3 credits. A general survey of the form and content of Western world art and literature with special emphasis on the relationships between visual and literary works. First semester: ancient Greece through the sixteenth century. Second semester: seventeenth century to the present.

270, 271 History of the Motion Picture. Semester courses; 3 lecture hours. 3, 3 credits. The history of development of the motion picture from its early beginnings to the present, with both technical and aesthetic consideration. Appropriate films are shown in addition to lectures.

300 Prehistoric and Ancient Art and Architecture. Semester course; 3 lecture hours. 3 credits. A survey of the artistic expressions of the major prehistoric and ancient cultures of Europe, the near East, Egypt, and the Aegean.

305 Classical Art and Architecture. Semester course; 3 lecture hours. 3 credits. A survey of the development of Greek, Etruscan, and Roman architecture, sculpture, painting, and the minor arts from their beginnings to the early fourth century A.D.

310 Medieval Art and Architecture. Semester course; 3 lecture hours. 3 credits. Survey of Western art and architecture between 300 and 1400 A.D.

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315 Renaissance Art and Architecture. Semester course; 3 lecture hours. 3 credits. An examination of the Renaissance in Italy and Northern Europe. Painting, sculpture, and architecture of the fourteenth, fifteenth, and sixteenth centuries.

316 Northern Renaissance Art and Architecture. Semester course; 3 lecture hours. 3 credits. Painting, architecture, and sculpture during the North European Renaissance.

317, 318 History of Architecture. Semester courses; 3 lecture hours. 3, 3 credits. First semester: major architectural forms from ancient Egypt through Medieval period. Second semester: architecture in Europe and America from the Renaissance to the present.

320 Baroque and Rococo Art and Architecture. Semester course; 3 lecture hours. 3 credits. The art and architecture of Italy and northern Europe between 1600 and 1750.

325 Nineteenth Century Art and Architecture in Europe. Semester course; 3 lecture hours. 3 credits. ARH 103, 104 Study of European art and architecture between 1770 and 1900.

330 Twentieth Century Art and Architecture. Semester course; 3 lecture hours. 3 credits. A survey of twentieth century art with emphasis on architecture, painting, and sculpture.

335 Pre-Columbian Art and Architecture. Semester course; 3 lecture hours. 3 credits. A study of the major artistic traditions of ancient America (i.e. Maya, Aztec, and Inca). The course concentrates on Meso-America and the Audean Region.

338 Art and Architecture of Latin America. Semester course; 3 lecture hours. 3 credits. A study of the major artistic traditions in Latin America from the 16th to the end of the 18th century.

340 Art and Architecture of the United States. Semester course; 3 lecture hours. 3 credits. A survey of painting, sculpture, and architecture from the Colonial period to the present.

342 Afro-American Art. Semester course; 3 lecture hours. 3 credits. A study of the art forms produced by Americans of African origin from the seventeenth century to the present with an emphasis on contemporary trends in black art.

350 African and Oceanic Art. Semester course; 3 lecture hours. 3 credits. A study of the artifacts of some of the major art-producing tribes of Africa and Oceania.

355 Symbolic Expression in the Visual Arts. Semester course; 3 lecture hours. 3 credits. The nature of myth and allegory is presented through an introduction to central themes in Western art, such as saints, heroes, gods, and archetypes with some comparisons to non-Western art.

360 Introduction to Conservation. Semester course; 3 lecture hours. 3 credits. An introduction to the art and science of art conservation. The course is designed to acquaint artists and art historians with the basic methods of deterioration, examination, and treatment of works of art.

370 History of Animated Film. Semester course; 3 lecture hours. 3 credits. The history of animation as an art form, from early experimental to popular culture to independent animation. Design, structure, and technique are considered.

401 Art and Architecture of the Ancient Near East. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An in-depth analysis of the artistic developments in Mesopotamia, Iran, Anatolia, and the areas peripheral to these cultural centers from ca. 6000 B.C. to Ca. 300 B.C.

402 Art and Architecture of Ancient Egypt. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An in-depth analysis of the development of Egyptian styles from the origins of ancient Egyptian culture to its absorption in the Roman Empire. The major iconographical themes, both religious and secular, will be studied.

404 Studies in Prehistoric and Ancient Art. Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of six credits. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

405 Studies in Greek, Etruscan, and Roman Art and Architecture. Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of six credits. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

412 Early Medieval Art and Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An investigation of medieval concepts of the late Roman and Byzantine Empires, and the art of Migrations. Subsequent developments in Carolingian, Ottonian, and Romanesque art and architecture are the main topics to be considered.

413 Gothic Art. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. Origins and developments of the Gothic style with emphasis on the architecture and sculpture of France.

414 Studies in Medieval Art and Architecture. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

415 Early Italian Renaissance Art and Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An investigation of painting, sculpture, and architecture of the Duecento, Trecento, and Quattrocento in Italy.

417 The High Renaissance. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. Intensive consideration of the great masters of Italian art in the early sixteenth century.

419 Studies in Renaissance Art and Architecture. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

420, 421 The Baroque In Northern Europe; The Baroque In Southern Europe. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: three hours of art history or permission of instructor. First semester: an investigation of the painting, sculpture, and architecture of France and the Low Countries. Particular emphasis will be given to the diverse characteristics of the aristocratic and bourgeois stylistic

trends of the period. Second semester: an investigation of the painting, sculpture, and architecture of Italy, Spain, Germany, and Austria. The relationship of church and state will be a primary theme of the course.

423 Rococo and Other Eighteenth Century Art. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An in-depth analysis of Rococo painting, sculpture, and architecture in Central Europe and a study of major movements of this period in France and England.

424 Studies in Baroque and Rococo Art and Architecture. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

425, 426 Neoclassicism, Romanticism, Realism, and Impressionism through Fin-de-Siecle. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: three hours of art history or permission of instructor. First semester: a detailed analysis of European art during the first half of the nineteenth century with special emphasis on French and English painting. Consideration will also be given to artistic and cultural interrelationships marking the transition from the eighteenth to the nineteenth century. Second semester: a detailed analysis of European art during the latter nineteenth century. Consideration will also be given to artistic and cultural interrelationships heralding the transition to the twentieth century.

427 Renaissance, Baroque, and Rococo Art and Architecture of Mexico, Central America, and the Caribbean. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An in-depth study of the major monuments produced in this region from the 16th century through the 18th century.

428 Renaissance, Baroque, and Rococo Art and Architecture of South America. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. A study of the major artists and movements of Peru, Bolivia, Colombia, Ecuador, Argentina, and Brazil in the 16th, 17th, and 18th centuries.

429 Studies in Nineteenth Century Art. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

430 Modern Painting. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An analysis of the major movements in twentieth century painting.

431 Modern Sculpture. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. The evolution of twentieth century sculpture considering major movements and artists.

432/History 337 The Origins of Modernism, 1880–1930. Semester course; 3 lecture hours. 3 credits. An investigation of the interconnections between social, intellectual, and artistic change in Europe in the crucial period, 1880–1930. Focus is placed on such major figures as Nietzsche, Freud, Einstein, Picasso, Duchamp, and Stravinsky in an attempt to locate the origins of contemporary artistic and intellectual experience.

433 Modern Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An investigation of major architectural periods and achievements in commercial and residential designs from 1850 to the present; tracing the development of the International Style, traditional architecture, the evolution of the skyscraper, *Art Nouveau*, and the works of Henry Hobson Richardson, Louis Sullivan, and Frank Lloyd Wright.

435, 436 Contemporary Art I, II. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: three hours of art history or permission of instructor. First semester: an in-depth examination of art from 1940–1960. Will include discussion of background and context. Second semester: a continuation of detailed analysis of art from 1960 to the present.

437 Modern and Contemporary Art and Architecture of Latin America. Semester course; 3 lecture hours. 3 credits. A study of 19th and 20th century art in Latin America focusing on the major movements and artists of Mexico, the Caribbean, Central and South America.

439 Studies in Twentieth Century Art. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

441 Architecture of the United States. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An in-depth investigation of major architectural developments from the Colonial period to the present, including an analysis of European prototypes.

442 Architecture in Richmond. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. History and origins of Richmond area architecture.

443 Folk Art of the United States. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An examination of the development and history of three centuries of tradition in folk art applicable to the five major areas: painting, sculpture, furniture, decorated household objects, and architectural decoration.

444 Studies In the Art of the United States. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

445 The Art of India. Semester course; 3 lecture hours. 3 credits. Prerequisite: general background in art, history, or religion of the area. The Indus Valley civilization through Maurya, Sunga, Kushana, Andhra, Gupta, and Pallava periods.

447 The Art of Southeast Asia. Semester course; 3 lecture hours. 3 credits. Prerequisites: ARH 145, 146, or general background in the art, history, or religion of the area. The art of Burma, Malaya, Thailand, Cambodia, Indochina, and Indonesia.

449 Studies in Asian Art. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

450 Art and Architecture of Mesoamerica. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An in-depth study of the artistic traditions of Mesoamerica (i.e. Maya, Aztec, and Olmec).

451 Art and Architecture of Andean America. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An in-depth study of the Pre-Columbian art production of the Andean region (i.e. Chavin, Moche, and Inca art).

452 Studies in Pre-Columbian Art and Architecture. Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of six credits. An in-depth examination of selected art and issues of the period (Ancient America). See *Schedule of Classes* for specific subject to be offered.

454 Studies In African and Oceanic Art. Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of six credits. An in-depth examination of selected art and issues of the period. See *Schedule of Classes* for specific subject to be offered each semester.

455 Aesthetics and Modern Theories of Art. Semester course; 3 lecture hours. 3 credits. An investigation of modern aesthetic theories and concepts in art with a foundation in pre-modern aesthetics.

456 Ideas and Criticism in Art. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. An in-depth examination of modern concepts in the literature of art criticism with particular emphasis on the principle writings of leading American critics.

459 Studies in Aesthetics, Theory, and Criticism of Art. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected topics. See *Schedule of Classes* for specific subject to be offered each semester.

469 Studies in Museum Methods. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. An in-depth examination of selected topics. See *Schedule of Classes* for specific subject to be offered each semester.

470 History of Animated Feature Film. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An analysis of selected animated feature films, including animation combined with live action. Both American and foreign films will be considered.

471 Film Theory. Semester course; 3 lecture hours. 3 credits. Theories and criticism dealing with the medium, form, function, and psychology of film. Students will examine the medium through reading and discussion of such film theorists and aestheticians as Munsterberg, Eisenstein, Arnheim, Bazin, Kracauer, Burch, and Langer as well as through a comparison of film and the other arts.

472 History of Photography. Semester course; 3 lecture hours. 3 credits. Prerequisite: three hours of art history or permission of instructor. An investigation of the basic trends in the history of photography. This course will deal with the chronological development of the art, the role of the photographer, the properties of photography which make it unique, and those which ally it to the other visual arts.

474 Studies in Film. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected topics. See *Schedule of Classes* for specific subject to be offered each semester.

489 Topics in Advanced Art History. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth study of a selected topic in art history not included in the curriculum. See *Schedule of Classes* for specific topics to be offered each semester.

493 Museum Internship. Semester course; 9 to 18 studio hours. 3 to 6 credits. Course may be repeated with changing content to a maximum of 12 semester credits. Prerequisites: ARH 469 and permission of chairman of the art history department. Field work in a local or regional museum.

497 Directed Research Project. Semester course; 3 credits. Prerequisite: permission of instructor and department chairman. Advanced individual work on subject to be formulated in writing by student and instructor.

COURSES IN COMMUNICATION ARTS AND DESIGN (CDE)

201 Introduction to Typography. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: completion of Art Foundation Program. An introductory study of typography as a tool for visual communication. Not open to communication arts and design majors.

211 Typographics I. Semester course; 3 lecture and 3 studio hours. 4 credits. An introduction to communication problem solving through the visual media of language. The fundamentals of typography and typographic design are explored in experimental and practical projects.

212 The Design Process. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 211. An introduction to communication design principles. The fundamentals of communication theory and the creation and manipulation of signs are explored in experimental and practical projects.

224 Introduction to Illustrative Drawing. Semester course; 3 lecture and 3 studio hours. 4 credits. An intermediate drawing course with emphasis on drawing methods and illustrative techniques to prepare the student for upper-level study in communication arts and design.

225 Visual Thinking. Semester course; 3 lecture and 3 studio hours. 4 credits. An exploration of systems processes and media for expressing mental concepts in visual terms.

238 Computer Graphics I. Semester course; 3 lecture and 3 studio hours. 4 credits. An introduction to and exploration of the use of the computer as a tool and medium for visual communication and personal expression.

252 Twentieth Century Visual Communications. Semester course; 3 lecture hours. 3 credits. An investigation of contemporary visual communications concepts, media, and images and their role in contemporary society.

253 Theoretical and Philosophical Aspects of Contemporary Communication Arts and Design. Semester course; 3 lecture hours. 3 credits. A study of current theoretical and philosophical issues having an impact on the understanding of communication arts and design.

301 Print Production. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 211. A study of the tools and processes used in preparing a design for reproduction.

302 Graphics Processes and Techniques. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 211. A workshop in graphics lab equipment and materials as design tools. Emphasis is on image creation and processing.

303 Two-Dimensional Comping. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 211. A technical workshop which explores the techniques, materials, and procedures of making comprehensives.

305 Line Techniques for Illustration. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 224. A workshop exploring various line drawing techniques as used in illustration.

306 Anatomical Aspects of Illustration. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 224. An advanced investigation of human structure and motion as applied to illustration. In addition to assigned readings, students will execute a series of anatomical drawings.

308 Computer Techniques for Graphic Design. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 212. Must be taken concurrently with, or before CDE 311 and CDE 312. A workshop in microprocessor hardware operations and software procedures necessary for contemporary typography and graphic design practice.

309 Introduction to Video. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 238 or permission of instructor. A study of the processes and equipment necessary for producing and editing work with videotape.

311 Graphic Design I. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 212. Must be taken concurrently with, or after CDE 308. A course in designing visual communications exploring various design strategies, conceptual approaches, and form/content relationships. Projects stress theory, application, and the computer as a design process tool.

312 Typographics II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 212. Must be taken concurrently, or after CDE 308. An intermediate exploration of typography as an expressive and functional communication vehicle. Emphasis is placed on defining effective design criteria to meet the reader's needs and the communicator's intent, and the designer's formal sensibilities.

321 Illustration Media and Techniques I. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 224. A fundamental course exploring various traditional wet media techniques in depicting representational form in illustration.

322 Illustration Media and Techniques II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 224. A fundamental course exploring various mixed media techniques, including both two-dimensional and three-dimensional approaches to unusual and innovative solutions.

323 Figure in Illustration I. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 224. An introduction to the visual representation of the human form as it applies to illustration.

324 Figure in Illustration II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 224. An advanced course investigating visually expressive modification of the human form as it applies to illustration.

325 Objective Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 321. An advanced course exploring illustration as a tool to communicate objective information.

331 Sound Communication. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 233. A technical workshop in the basic theory and production of audio tapes.

336 Video I. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 309. A comprehensive course in video communication exploring conceptual approaches and form/content relationships. Projects stress theory and application.

338 Computer Graphics II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 233. Corequisite: CSC 358. Exploration of the potentials of electronic image-making and development of programming skills necessary for the creation of well-designed and expressive sequences of images.

339 Media Synthesis I. Semester course; 3 lecture and 3 studio hours. 4 credits. An introduction to the synthesis of sound and visual imagery for creating effective media presentation.

351 Origins of Visual Communications. Semester course; 3 lecture hours. 3 credits. A history of visual communications and design from prehistoric times to the twentieth century.

355 Design Methods in Visual Communication. Semester course; 3 lecture hours. 3 credits. An in-depth investigation of the theoretical aspects of the design process within the context of designing effective visual communications.

356 Studio Management. Semester course; 3 lecture hours. 3 credits. A study of business and management factors that relate to creative design. Topics include marketing, structure and organization, financial factors, ethical and legal aspects, and management of design, illustration, photography studios.

391 Topics in Design. Semester course; variable credit, 1–3 credits per semester. May be repeated to a maximum of nine credits. Topical lectures in design issues and visual communications.

392 Research/Individual Study. Semester course; 1 to 2 lecture and 3 to 6 studio hours. 2 to 4 credits. The structuring, research, execution, and presentation of an independent project in visual communications under the direction of a faculty advisor. The student will be encouraged to become a self-generating problem seeker and solver with the ability to carry out self-stated goals. May be repeated for credit.

402 Electronic Pre-press. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 308. A study of electronic tools, processes, and techniques, their integration with traditional production methods, and their use in preparing design work for production.

403 Senior Studio. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: senior status in the Department of Communication Arts and Design. Critical analysis and development of the student portfolio with emphasis upon an assessment of personal philosophy and objectives.

411 Graphic Design II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. An advanced course in visual communications and computer graphics exploring multicomponent graphic design problems that convey complex information.

412 Typographics III. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. Advanced study in typographic design which focuses on the development of comprehensive and functional approaches to solving complex typographic problems.

413 Package Design. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. A workshop in three-dimensional structures and two-dimensional graphics applied to problems of package design.

414 Exhibition and Environmental Graphic Design. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 411 and 412. Study of the presentation of information in large-scale, three-dimensional formats. Exploration of exhibition and environmental design, including developing imagery and typography, understanding the use of "wayfinding" and human factors, communicating of programmed content.

415 Systems in Design. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. An investigation of the application of systems to various aspects of the design process in the field of visual communications.

416 Motivational Graphics. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. Study in the development of visual communication performance criteria and practical strategies which influence audience attitudes and behavior.

417 Interdisciplinary Team Design. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. Advanced projects in visual communication in which student design teams solve complex problems requiring collaboration.

418 Design Center. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311, 312, and portfolio review by faculty. Course may be repeated for credit. A professional studio to give students practical experience working with faculty on design projects for university clients and nonprofit community organizations.

419 Electronic Imaging. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311, CDE 321, or CDE 338. An advanced exploration into the use of the computer and other electronic peripheral devices in the creation of expressive imagery and functional communications.

421 Illustration for Business Communications. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 324 and 325. An advanced course developing illustrations appropriate for business communications.

423 Editorial Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 321 and 311. An advanced course developing the student's skill at interpreting an author's manuscript. The major emphasis is given to illustrations appearing in books and magazines.

424 Visual Journalism in Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 321 and 324. An advanced course developing the student's skill

in commenting upon contemporary issues and themes independently of existing manuscripts.

425 Experimental Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 321. An advanced course encouraging the student to discover unusual techniques and to develop innovative solutions. The course stresses experimentation with novel media and surfaces.

427 Imagery for Children. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 321. An advanced course developing illustrations intended for the preschool and elementary child.

429 Personal Style and Directions in Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: permission of faculty. An advanced course to refine, strengthen, and focus the visual style and concepts inherent within the student. Emphasis will be upon developing personal insights, viewpoints, and a conceptual basis for illustrative form.

433 Animation Survey. Semester course; 3 lecture and 3 studio hours. 4 credits. A survey of the various techniques of animation, introducing students to the potentials of the medium and its artistic applications.

434 Animation Techniques. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 433. An extension of Animation Survey in which each student produces a short experimental animated film with sound.

436 Video II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 336. An advanced exploration of video as an expressive and functional communication vehicle. Emphasis is placed on defining effective criteria to meet the viewer's needs and communicator's intent.

437 Interactive Video. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 308 or CDE 309 and senior standing. An advanced course investigating interactive video disc technology and its application to communication design problems.

438 Computer Graphics III. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 437. Further development of programming skills and application of these skills to problems involving images in sequence and in motion.

439 Media Synthesis II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 435. An in-depth exploration of complex mixed-media presentations and sensory environments and their effects on perception and content of communicated messages.

491 Studio Topics in Communication Arts and Design. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: Completion of junior-level study and permission of instructor. Topical studio focusing on research and experimentation in specialized visual communication media. May be repeated for a maximum of 8 credits.

COURSES IN CRAFTS (CRA)

201-202 Metalsmithing. Continuous course; 2 lecture and 6 studio hours. 4-4 credits. Investigation of metal forming processes such as forging, raising, and construction. Research in contemporary and historical metal forms.

211–212 Jewelry. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Investigation of jewelry making processes such as construction, repousse/chasing, surface embellishment, stone setting, and casting. Research in contemporary and historical jewelry forms.

221 Woodworking Techniques. Semester course; 2 lecture and 6 studio hours. 4 credits. May be repeated for maximum of 8 credits with permission of chairman. Introduction to techniques of woodworking. Includes the use of hand tools; hand and machine joinery; shaping and carving; finishing; and techniques involving jigs and fixtures. Students participate in studio work.

241 Ceramics: Handbuilding. Semester course; 2 lecture and 6 studio hours. 4 credits. Basic construction techniques for fabricating ceramic objects. Includes mold-making, slip-casting, and press-molding as well as the use and application of low-fire slips, underglazes, glazes, and the firing of these objects in kilns.

242 Ceramics: Wheelthrowing. Semester course; 2 lecture and 6 studio hours. 4 credits. Introduction to the use of the potter's wheel. The objective is to develop the skill, dexterity, and coordination required to use the wheel as one tool of the ceramic forming process. Includes the properties and uses of high-fire clays and glazes. Students participate in kiln firings.

CRA 251, 252 Introduction to Glassworking. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. An investigation of techniques, tools, equipment, materials involved in hot and cold glassworking processes. First semester covers basic molten glass furnace techniques such as blowing and casting, mold-making, and *Pate de Verre* (fusing crushed glass in a mold). Second semester explores colored glass fusing, use of enamels and glazes, mold-making for slumped forms, and stained glass.

261, 262 Beginning Textiles. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. In the first semester, techniques of tapestry, weaving, spinning, chemical dyeing, feltmaking, and basketry are covered. Second semester focuses on applique, papermaking, trapunto, embroidery, fabric collage, and piecing and quilting. Materials, tools, history, and modern application of each technique will be examined through lectures, demonstrations, and studio work.

282 Orientation to Crafts: Semester course; 1 lecture hour. 1 credit. Discussion of a variety of approaches to study within the craft media, stressing elements of creative activity which are basic to any involvement in making visually-oriented objects.

301, 302/401, 402 Advanced Metalsmithing or Jewelry. Semester courses; 2 lecture and 6 or 12 studio hours. 4 or 6 credits per semester. Prerequisite: CRA 201–202 or 211–212. This course offers opportunity for specialization and development of techniques.

320 Furniture Design. Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisite: CRA 221. May be repeated for maximum of 8 credits. The course explores the development of ideas through drawings, mock-ups and the planning and execution of a small furniture object utilizing basic and specialized woodworking techniques.

321, 322/421, 422 Advanced Woodworking and Furniture Design. Semester courses; 1 lecture and 6 or 12 studio hours. 4 or 6 credits per semester. Prerequisite: CRA 221 and 320.

Advanced design and construction investigation of varied materials, and machine processes.

341, 342/441, 442 Advanced Ceramics. Semester courses; 2 lecture and 6 or 12 studio hours. 4 or 6 credits per semester. Prerequisites: CRA 241 and 242. Advanced problems in the design and production of functional and nonfunctional ceramic products.

351, 352/451, 452 Glassworking. Semester courses; 2 lecture and 6 or 12 studio hours. 4 or 6 credits per semester. Prerequisite: CRA 251, 252. Opportunity for further investigation and specialization in glassworking design and technical mastery.

361, 362/461, 462 Advanced Textiles. Semester courses; 2 lecture and 6 or 12 studio hours. 4 or 6 credits per semester. Prerequisites: CRA 261 and 262 or permission of instructor. Emphasis on development and concentrated studio work in contemporary and traditional loom techniques along with continuing individual pursuit of the other textile techniques.

363–364 Fabric Design. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Exploration of pattern as a design concept and the development of technical skills for silk-screening on fabric.

367, 368 Tapestry. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. Origins of tapestry forms and execution of techniques.

369 Ancient Peruvian Textile Techniques. Semester course; 2 lecture and 6 or 12 studio hours. 4 credits. An examination of textile techniques perfected in ancient Peru and their application to contemporary fiber work. Pre-Columbian cultures will be studied to understand textile development. Course includes student duplication of techniques to better understand “structure” and the production of a personal object(s) utilizing these techniques and information.

409 Summer Metal and Jewelry Workshop. Semester course; variable credit, 1, 2, 3 credits per course. 3, 6, 9 studio hours. Prerequisite: permission of instructor. Exploration of specific metal processes and techniques, such as fabrication, forging, forming, casting, enamelling, and electroforming. May be repeated for credit. See *Schedule of Classes* for specific course offerings.

429 Summer Woodworking Workshop. Semester course; variable credit, 1, 2, 3 credits per course. 3, 6, 9 studio hours. Prerequisite: permission of instructor. Exploration of specific woodworking processes and techniques, such as joinery methods, laminate bending, steambending, etc. May be repeated for credit. See *Schedule of Classes* for specific course offerings.

445 Technological Developments in Ceramics. Semester course; 3 lecture hours. 3 credits. An examination of significant developments in the design and technology of ceramics from the prehistoric period to the present. The historical outline will include ceramics of Europe, the Orient, and the Americas. Illustrated lectures.

446 Glaze Technology. Semester course; 3 lecture hours. 3 credits. Development, formulation, and application of ceramic glazes. The technology includes high, medium, and low firing ranges as well as color and analysis of glaze materials.

447 Ceramic Technology: Clay, Claybodies, and Slips. Semester course; 3 lecture hours. 3 credits. Study of clay

from geological origins to practical application. Course includes development and application of clay bodies in different firing ranges, englobes, and slips.

448, 449/548, 549 Ceramic Workshop. Semester course; 9 studio hours. 3, 3 credits. Exploration in specific ceramic techniques such as raku, salt glaze, primitive firing, low temperature glazing.

455, 456 Survey of Glass. Semester courses; 3 lecture hours. 3, 3 credits. An examination of significant technological developments in glass from the past to present. First semester: ancient to sixteenth century. Second semester: seventeenth to contemporary. Illustrated lectures.

459 Summer Glassworking Workshop. Semester course; variable credit, 1, 2, 3 credits per course. 3, 6, 9 studio hours. Prerequisite: permission of instructor. Exploration of specific glassworking processes, such as forming molten glass, casting, and coldworking technique. May be repeated for credit. See *Schedule of Classes* for specific course offerings.

463, 464 Fabric Design. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. Development of a personal direction and examination of direct color application techniques such as batik, airbrush, and fabric painting.

469 Summer Textile Workshop. Semester course; variable credit, 1, 2, 3 credits per course. 3, 6, 9 studio hours. Prerequisite: permission of instructor. Exploration of specific textile techniques and processes, such as multi-harness weaving, pulled warp, special dye processes, and designing for printed fabrics. May be repeated for credit. See *Schedule of Classes* for specific course offerings.

482 Senior Seminar. Semester course; 1 lecture hour. 1 credit. Resume and portfolio preparation, small business practices and selling, exhibition, and other topics deemed necessary to the producing craftsman.

491 Topics in Crafts. Semester course; 1–3 credits. May be repeated for a maximum of nine credits. Prerequisite: permission of instructor. A seminar or workshop on a selected issue or topic in the field of crafts. See *Schedule of Classes* for specific topic(s) to be offered each semester.

493, 494 Fieldwork. Semester courses; 18 studio hours. 6, 6 credits. Prerequisite: consent of department chairman. Senior students are assigned on an individual basis. Fieldwork supervisor will arrange student's work and evaluate performance.

COURSES IN DANCE/CHOREOGRAPHY (DAN)

101–102 Modern Dance Technique I. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Beginning study and training in principles of modern dance technique. Emphasis on body alignment, spatial patterning, flexibility, strength, and kinesthetic awareness to move the body in a chosen manner. Dance majors are required to take DAN L101–L102, concurrently.

L101–L102 Modern Dance Technique I Laboratory. Continuous course; 3 studio hours. 1–1 credit. An extension of DAN 101–102. Required of dance majors, concurrent with DAN 101–102.

105–106 Improvisation. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. An exploration of spontaneous

body movement with the purpose of increasing body awareness, movement invention, and movement creativity.

109, 110/209, 210/309, 310/409, 410 Dance Workshop. Semester courses; 2 studio hours. 1 credit. Prerequisite: dance major or permission of instructor. Group exploration of techniques related to all areas of dance.

111–112 Ballet Technique I. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Beginning study of the principles of ballet technique. Emphasis upon vocabulary terms, body alignment, spatial patterning, flexibility, strength, and kinesthetic awareness to move the body in the ballet style.

113 Ballet Technique I. Semester course; 1 lecture and 2 studio hours. 2 credits. Prerequisite: DAN 111–112 or permission of instructor. A continuation of study of ballet technique at the beginning level. Emphasis upon a stronger, more exact performance of the basic ballet steps, focusing on correct alignment, development of the body, and rhythmic and kinesthetic awareness. This course may be repeated for a maximum of 4 credits on the recommendation of the chairman.

114, 214, 314, 414 Summer Dance Workshops. Semester courses; variable credit. 1, 3 credits per semester. Flexible course offerings in dance technique, improvisation, composition, rhythmic training, and repertory. May be repeated for credit. See *Schedule of Classes* for specific course offerings.

121, 122/Afro-American Studies 121, 122 Tap Technique I. Semester courses; 1 lecture and 2 studio hours. 2, 2, credits. Beginning study and training in the principles of tap technique with emphasis upon style, body alignment, spatial patterning, flexibility, strength, and kinesthetic awareness to move the body in the style required for tap dancing.

126, 127/Afro-American Studies 126, 127 Afro-Caribbean Dance I. Semester courses; 1 lecture and 2 studio hours. 2, 2 credits. Dance based on the movements and rhythms of Africa and the Caribbean.

131 Folk Dance. Semester course; 2 studio hours. 1 credit. A study of folk dances indigenous to European and early American culture, including the learning and performing of the steps accompanied by their traditional music and a discussion of the culture from which they sprang. Also stressed is the knowledge of how to transcribe written versions of these dances and how to set them to their appropriate music.

141, 142 Ballroom Dancing. Semester courses; 2 studio hours. 1, 1 credits. A study of basic ballroom dance steps and practice in their performance.

151, 152/Afro-American Studies 151, 152 Jazz Dance Technique I. Semester courses; 1 lecture and 2 studio hours. 2, 2, credits. Prerequisite: DAN 102 or permission of instructor. Study and training in the principles and concepts of jazz technique. Emphasis on body alignment, flexibility, balance, rhythmic awareness, and mastery of isolated movements of body parts. The course includes the exploration of the relationship between jazz music and jazz dance.

161, 162/261, 262/361, 362/461, 462 Rehearsal and Performance. Semester courses; hours arranged. 1 to 3 credits. Open to nonmajors by permission of instructor. Dance rehearsals and production work for a major dance concert. Each student is expected to devote a minimum of 50 hours per credit per semester to receive credit.

171, 172 T'ai Chi. Semester courses; 1 lecture and 2 studio hours. 2 credits. Study and practice of T'ai Chi, a Chinese exercise form, which is designed to bring one to full potential through balancing, aligning, and breathing exercises. The short Yang form, based on Taoist principles, strengthens the body while allowing for deep relaxation to take place. Application of T'ai Chi to creative dance technique is explored as a springboard for improvisation.

201–202 Modern Dance Technique II. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN 102 or permission of instructor. Corequisite: DAN L201–L202. Further study and training in the principles of modern dance technique on a low intermediate level with the expectation of better coordination of all elements into a sense of dance. This course may be repeated for a maximum of 8 credits on the recommendation of the chairman.

L201–L202 Modern Dance Technique II Laboratory. Continuous course; 3 studio hours. 1–1 credit. Prerequisite: DAN 102 and DAN L102 or permission of instructor. Corequisite: DAN 201–202. An extension of DAN 201–202. This course may be repeated for a maximum of 4 credits on the recommendation of the chairman.

205–206 Composition. Continuous course; 2 lecture and 2 studio hours. 3–3 credits. Prerequisite: DAN 105–106 or permission of instructor. An introduction to the basic elements of choreography.

211–212 Ballet Technique II. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN 112 or permission of instructor. Further training and practice in ballet technique. Emphasis upon a stronger, more exact performance of the ballet steps, focusing still on correct alignment, development of the body, and kinesthetic awareness. This course may be repeated for a maximum of 8 credits on the recommendation of the chairman.

221, 222 Tap Technique II. Semester courses; 1 lecture and 2 studio hours. 2, 2 credits. Prerequisite: audition or permission of instructor. Further study and training in the principles of tap technique.

226 Afro-American Studies 226 Afro-Caribbean II. Semester course; 1 lecture and 2 studio hours. 2 credits. Prerequisite: DAN 126, 127, audition, or permission of instructor. Further training and study in dances based on the movements and rhythms of Africa and the Caribbean.

232 Music for Dancers. Semester course; 3 lecture hours. 3 credits. Prerequisites: MHT 243 and DAN 101 or permission of instructor. An examination of the various traditional and nontraditional concepts which the dancer uses in collaboration with music. Course includes lecture, reading, listening, and movement assignments. Focus will be on the dancer's intelligent and justifiable choice of music through movement analysis.

243 Dynamic Alignment. Semester course; 1 lecture and 2 studio hours. 2 credits. Study of the basic principles of mechanical balance and postural alignment. Practice in the application of the major theories of alignment and techniques of realignment. Corrective exercises, breathing techniques, relaxation, guided imagery, self-awareness exercises, and Body Image work will be learned and practiced.

251, 252 Jazz Technique II. 1 lecture and 2 studio hours. 2, 2 credits. Prerequisites: DAN 151, 152 or permission of

instructor. An in-depth study of movement styles and qualities in jazz dance. Advanced work on integrating music and movement with focus upon chronology of jazz music and corresponding dance forms.

271, 272 T'ai Chi II. Semester course; 1 lecture and 2 studio hours. 2 credits. Prerequisite: DAN 171 or 172, or permission of instructor. Extended training and in-depth application of T'ai Chi with special attention to development of improvisational form by each individual student.

301–302 Modern Dance Technique III. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN 202 or permission of instructor. Corequisite: DAN L301–L302. High intermediate study and training in principles of modern dance technique. Movement studies demanding greater strength and flexibility. Spatial patterns demanding increased coordination, kinesthetic awareness, and aesthetic sensitivity. This course may be repeated for a maximum of eight credits on the recommendation of the chairman.

L301–L302 Modern Dance Technique III Laboratory. Continuous course; 3 studio hours. 1–1 credit. Prerequisite: DAN 202 and DAN L202 or permission of the instructor. Corequisite: DAN 301–302. An extension of DAN 301–302. This course may be repeated for a maximum of 4 credits on the recommendation of the chairman.

303–304 Choreography/Performance. Continuous course; 2 lecture and 2 studio hours. 3–3 credits. Prerequisite: DAN 205–206 or permission of instructor. The craft of choreography and performing techniques are explored extensively as students develop solo and group pieces while rotating in the roles of choreographer/director and performer.

307–308 Dance History. Continuous course; 3 lecture hours. 3–3 credits. A study and analysis of the history of dance including motivations, philosophies, and styles as well as specific dancers in their relationships with one another and to history.

311–312 Ballet Technique III. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN 212 or permission of instructor. Continued development in the skills and aesthetics of ballet. This course may be repeated for a maximum of 12 credits on the recommendation of the chairman.

DAN 315, 316 Contact Improvisation. Semester course; 1 lecture and 2 studio hours. 2 credits. Prerequisite: DAN 101, 102 or permission of instructor. Exploration of the technique of partnering and the exchange of weight in an improvisational format. Emphasis is on a shared process that explores gravity, lifting, and the give and take of body weight.

319, 320 Video/Choreography Workshop. Semester course; 2 lecture and 2 studio hours. 3, 3 credits. Prerequisite: experience in movement, performance, and/or video/film, or permission of instructor. Students gain practical skills as well as basic theoretical foundation in the principles of working with video and choreography.

371, 372 Repertory. Semester courses; 2 lecture and 2 studio hours. 3, 3 credits. Prerequisites: DAN 101–102 and permission of instructor. Study and rehearsal of roles in choreography produced by the faculty and/or guest artists, with the objective of achieving a performance level.

401–402 Modern Dance Technique IV. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN

302 or permission of instructor. Corequisite: DAN L401–L402. Advanced study and training in modern dance technique. This course may be repeated for a maximum of 12 credits on the recommendation of the chairman.

L401–L402 Modern Dance Technique IV Laboratory. Continuous course; 3 studio hours. 1–1 credit. Prerequisite: DAN 302 and L302 or permission of the instructor. Corequisite: DAN 401–402. An extension of DAN 401–402. This course may be repeated for a maximum of 4 credits on the recommendation of the chairman.

407 The Dancer as Teacher. Semester course; 2 lecture and 2 studio hours. 3 credits. Prerequisite: permission of instructor. The student learns to analyze and communicate movement in a variety of teaching situations. The student will have an opportunity to observe different teaching techniques and to practically apply learned teaching concepts and theories.

450 Professional Project. Semester course; 3–9 credits. An individualized program in research and/or practicum within a professionally-oriented organization subject to approval of the department faculty. May be repeated for a maximum of 12 credits.

451 Careers in Dance. Semester course; 3 lecture hours. 3 credits. Realistic aspects of the dance profession, as performer, teacher, and researcher.

490 Senior Project. Semester course; 3 lecture hours. 3 credits. The culmination of the student's learning experience in a final project which enhances and challenges the student in both areas of performance and choreography. The project must attain public performance status.

COURSES IN FASHION (FDE)

NOTE: Students must complete all 100- and 200-level course requirements before they can advance to 300- and 400-level classes. Courses must be taken in the order prescribed by the department.

190 Introduction to the Apparel Industry. Semester course; 3 lecture hours. 3 credits. A survey of the apparel industry covering the various stages of production of men's, women's and children's apparel.

201–202 Garment Construction for the Professional. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. The basic principles involved in garment construction with emphasis on professional design-room practices in sewing, pressing, and finishing of garments. Knowledge of basic sewing skills is advisable.

205–206 Patternmaking. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Basic principles of patternmaking, developing various styles from master pattern, and creating designs to be constructed in muslin.

207–208 Fashion Drawing I. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Basic drawing of the fashion figure. An anatomical study using various media.

210 Visual Merchandising. Semester course; 3 lecture hours. 3 credits. Theory and practice of the principles and techniques applied in visual merchandising/display for retail businesses.

211–212 Garment Construction. Semester courses; 1 lecture and 2 studio hours. 2, 2 credits. Students are exposed to basic

sewing with emphasis on detailed construction, basic fitting, and pressing techniques. Simple garments will be constructed from commercial patterns. Not open to fashion design majors.

213–214 Design Theory. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Basic principles of design: line, color, and texture are employed to develop styles in two-dimensional form for specific markets within the garment industry. Exposure to various sources for design inspiration will be encouraged.

215–216 Draping. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Basic principles of draping muslin on the dress form, the three-dimensional technique of making patterns.

218 Fashion Ad Art I. Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: Completion of Art Foundation Program. Introduces drawing formulas and techniques used to create the fashion figures (men, women and children) according to industry standards and guidelines. Work in various black and white media.

219 Fashion Ad Art II. Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: CDE 201 and FDE 218. Combines information and skills learned in FDE 218 and CDE 201 to explore fundamental design problems involving type and fashion imagery. Work with color and explore graphic techniques and processes.

231–232 Fashion Model Life Drawing I. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: Art Foundation Program. Introduction to the interpretation of the fashion figure from the live model.

FDE 240 Introduction to Fashion Merchandising. Semester course; 3 lecture hours. 3 credits. Survey of the historical development, merchandising practices and operational procedures in various types of retail establishments associated with the fashion industry.

FDE 241 Retail Buying Concepts. Semester course; 3 lecture hours. 3 credits. Prerequisite: FDE 240 or permission of chairman. Study of the role of the buyer and the theories relating to the buying process.

243 Fashion Salesmanship. Semester course; 3 lecture hours. 3 credits. Prerequisite: FDE 240. Principles of salesmanship are taught and techniques of salesmanship are developed by role-playing, and videotaped performances. Students learn modern sales procedures and practices.

301–302 Advanced Draping I. Continuous course; 1 lecture and 6 studio hours. 3–3 credits. Prerequisites: FDE 202, 206, 208, 214, and 216. Corequisite: 303–304. Advanced methods of draping on the dress form, development of designs from sketches, and the creation of original designs. Frequent critique of student designs.

303–304 Advanced Design I. Continuous course; 2 lecture hours. 2–2 credits. Prerequisite: junior standing with completion of all sophomore FDE studio requirements. Development of fashion designs related to the apparel industry. Weekly assignments of original ideas are presented in 2D sketches for discussion and critique. Development of a collection is analyzed. Extensive research in design and also fabrication of design(s) will be stressed. Classroom participation is imperative.

305–306 Advanced Patternmaking. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: FDE 202 and 206. Methods of developing and grading professional patterns. Production techniques used in the garment industry will include layout, marking, cutting, and construction of designs.

313–314 Fashion Drawing II. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: FDE 208. Advanced drawing and rendering techniques of apparel on the fashion figure.

319 Twentieth Century Fashions. Semester course; 3 lecture hours. 3 credits. An in-depth study of twentieth century fashions from the historical and socioeconomic point of view. An analysis of current trends.

321–322 Fashion Illustration I. Continuous course; 2 lecture and 3 studio hours. 3–3 credits. Prerequisite: FDE 219. Students concentrate on accurately drawing the fashion figure: proportions, color, tone, texture, and pattern of fabric using gouache, mixed media, brush and ink wash techniques.

323–324 Fashion Ad Design. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Prerequisites: FDE 219 and CDE 201. Composition of fashion figures and related merchandise (accessories, hard-line goods, etc.) in layout form. Advertising campaigns, promotional layouts and related ad design with respect to the design and reproduction in various types of publications.

331–332 Fashion Model Life Drawing II. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisites: FDE 219 and 232 or equivalent. A continuation of FDE 232. A progression from realistic drawing of the figure to fashion proportions of the figure as used in the industry.

Drawing from live models will be used in most studio classes.

340 Computer Techniques for Fashion Art and Advertising. Semester course; 1 lecture and 3 studio hours. 2 credits. Introduction to the computer and its use as a tool and medium in the design and production of materials for fashion advertising.

341 Computations for Merchandise Planning and Control. Semester course; 3 lecture hours. 3 credits. Prerequisites: FDE 241, BUS 111. Practical application of buying practices and procedures as related to the fashion buyer. Subject matter covered includes retail inventory, markdowns, markups, turnover, open-to-buy etc.

343 Fashion Trends and the Consumer. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 308 or FDE 240–241. Survey of trends and consumer reaction and how they relate to marketing. The application of motivating influences such as consumer branding and fashion adoption.

350 Fashion Promotion. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Co-requisite: FDE L 350. Students learn sales promotion techniques unique to the fashion industry including fashion show production, trend seminars, commentary composition, and story board production.

L350 Fashion Promotion Laboratory. Semester course; 3 studio hours. 1 credit. Co-requisite: FDE 350. The practical application of ideas, principles and concepts discussed in Fashion Promotion lecture.

390 Textiles for Fashion. Semester course; 4 lecture hours. 4 credits. The study of the construction, finishes, and the properties of both man-made and natural fibers used in the fashion industry.

391 Fashion Workshop. Semester course; variable credits 1–2 per semester; may be repeated for maximum total of 6 credits. A topical workshop offered in various areas of fashion not included in the regular curriculum. See *Schedule of Classes* for particular area to be covered each semester.

401–402 Advanced Draping II. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Prerequisites: FDE 302, 304, 306, and 314. Corequisites: 413–414. Advanced methods and techniques for the designer of haute couture. Individual creativity and uniqueness of style are encouraged. Frequent critique of student designs.

403–404 Fashion Drawing III. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: FDE 314. First semester: emphasis on a variety of media and rendering techniques to communicate students' designs. Second semester: development of a portfolio.

405 Tailoring I. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: FDE 202 or equivalent. Construction techniques unique to tailoring.

413–414 Advanced Design II. Continuous course; 2 lecture hours. 2–2 credits. Prerequisite: senior standing with completion of all junior FDE studio requirements. Development of fashion design related to the apparel industry. Weekly assignments of original ideas are presented in 2D sketches for discussion and critique. Extensive research and classroom participation are imperative.

421–422 Portfolio Development. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Prerequisites: FDE 322. Students work in a variety of media and rendering techniques to develop an individual style for inclusion in their portfolios.

423–424 Fashion Advertising Techniques. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. An in-depth analysis of the diverse techniques used in the field.

431–432 Fashion Model Drawing III. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: FDE 332 or equivalent. A continuation of FDE 332 with emphasis on developing individual style.

443 Supervision and Management in Fashion Merchandising. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. This course will develop leadership skills needed by first-line supervisors. The study of human relations in the management hierarchy of the fashion industry will be emphasized.

445 Specialties in Fashion Merchandising. Semester course; 3 lecture hours. 3 credits. Prerequisites: FDE 241 and 341. Analyzes various marketing practices as applied to special areas of soft goods. Market dates, discount advertising, commissions, etc., will be covered in bridal, imports, cosmetics, and other fashion accessories.

490 Fashion Seminar. 2 lecture hours. 2 credits. A professional seminar for senior fashion majors. Lectures will cover career opportunities, job preparation, and other topics according to the needs of the class.

493 Fashion Internship. 3 credits. Open to senior fashion majors only. A practicum in which students apply on-the-job

the formal classroom and studio training they have received in their option (design, illustration, merchandising) on campus. It may be a single internship for three credits or several (maximum three) totaling three credits.

COURSES IN INTERIOR DESIGN (IDE)

103-104 Introductory Studio Course. Continuous course; 1 lecture and 2 laboratory hours. 2-2 credits. A practical course in which the student becomes familiar with fundamentals of interior design through work with floor plans, furniture selection and arrangement, floor and wall composition, color harmony, wall paper, and other aspects of design. Not open to interior design majors. Offered evenings only.

201 Interior Design Studio I. Semester course; 9 studio hours. 3 credits. Identification and applications of fundamental interior design issues through applied projects: problem definition and expansion, analysis, design processes, behavior and perception. Interior design majors only.

202 Interior Design Studio II. Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisites: IDE 201 and IDE 221. Discussion and application of design theories and techniques with emphasis on interior design through applied projects: design processes and procedures, spatial and functional analysis and design, applied human factors, behavior and perception, the selection of materials and furnishings. Interior design majors only.

211 Introduction to Interior Design I. Semester course; 3 lecture hours. 3 credits. Contemporary theory and technique in interior design: manipulation of space, form, and light, behavior, anthropometrics, ergonomics.

212 Introduction to Interior Design II. Semester course; 3 lecture hours. 3 credits. Contemporary theory and technique in interior design: research methods and programming.

221-222 Interior Design Graphics. Continuous course; 1 lecture and 6 studio hours. 3-3 credits. Introduction to the various presentation media and techniques to provide basic communication skills such as drafting, rendering, perspective drawing, layout organizations, and model making for professional graphic presentations.

251 Design in Historic Interiors and Architecture I. Semester course; 3 lecture hours. 3 credits. Prerequisites: AFO 105-106 or ARH 103, 104. A survey of the major styles in interior and exterior architecture and furnishings from antiquity through the Baroque Period.

252 Design in Historic Interiors and Architecture II. Semester course; 3 lecture hours. 3 credits. Prerequisites: AFO 105-106 or ARH 103, 104. A survey of the major styles in interior and exterior architecture and furnishings from the Rococo to the turn of the twentieth century.

301 Interior Design Studio: Retail and Exhibition Design. Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisites: IDE 202, IDE 212, and IDE 222. Design is emphasized within retail and exhibition interior design. Interior design majors only.

302 Interior Design Studio: Office and Institutional Design. Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisites: IDE 202, IDE 212, and IDE 222. Design is emphasized within office and institutional environments. Interior design majors only.

303 Interior Design Studio: Hospitality and Public Spaces. Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisites: IDE 202, IDE 212, and IDE 222. Design is emphasized in hospitality and public space interior design. Interior design majors only.

321 Advanced Interior Design Graphics I. Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisites: IDE 202 and 222. Study of advanced interior design graphic communication skills, including working drawings and interior details.

322 Advanced Interior Graphics II. Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisites: IDE 202 and 222. Study of advanced interior design graphic communication skills including complex three-dimensional space delineation and experimentation with a variety of techniques and media.

323 CAD for Interior Design. Semester course; 1 lecture and 6 studio hours. 3 credits. Introduction to computer-aided design, its uses and applications for interior design. Interior design majors only.

351 Design In Twentieth Century Interiors and Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisite: AFO 105-106 or ARH 103, 104. Investigation and analysis of the major design theories and movements of the twentieth century and the growth of the profession of interior design.

401 Advanced Interior Design. Semester course; 2 lecture and 6 studio hours. 3 credits. Prerequisites: IDE 301, IDE 302, IDE 303, IDE 332, and IDE 441. Problems exploring period and contemporary design and their relationships are planned to meet the needs of specific clients. To prepare students for the professional world, the problems are as varied as possible. Interior design majors only.

431 Business Procedures. Semester course; 3 lecture hours. 3 credits. Study of interior design business practices. Interior design majors only.

441 Color and Light. Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: IDE 202 and IDE 222. Basic electricity and illumination and color and their influence on interior spaces; theory and practical applications.

442 Materials and Systems. Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: IDE 202 and IDE 222. Contemporary theory and technique in the design of buildings as related to interior design. Structural, HVAC, sound and water systems, and the nature of materials.

443 Furniture Design I. Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisite: IDE 222. Original student designs are developed for cabinetmaking and millwork in interior design.

444 Furniture Design II. Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisite: IDE 222. Original student designs are developed through the study of structure and materials. Design for mass production is explored.

445 Furnishings and Interior Materials. Semester course; 3 lecture hours. 3 credits. Investigation and practical application of furnishings and materials in the interior environment. Interior design majors only.

446 Textiles for Interior Design. Semester course; 3 lecture hours. 3 credits. Investigation and practical application of soft materials in the interior environment.

491 Topics in Interior Design. Semester course; 1–3 credits. May be repeated for a total of 6 credits. Prerequisite: permission of the instructor. An in-depth study of a topical issue in interior design. See *Schedule of Classes* for specific course offerings.

493 Interior Design Internship. Semester course; 3 credits. Prerequisite: consent of coordinator and department chairman. Supervised practical work experiences are coordinated with professional interior designers in the field. Interior design majors only.

COURSES IN APPLIED MUSIC (APM)

Upper-division undergraduate students may enroll for selected 500-level graduate courses with permission of the department chairman and instructor. See *VCU Graduate Bulletin* for course descriptions.

161–162 Lyric Diction. Continuous course; 3 lecture hours. 3–3 credits. A study of English, Italian, ecclesiastical Latin, French, and German stage diction with practical experience in singing and phonetic transcription using the International Phonetic Alphabet.

165–166 Aural Skills I–II. Continuous course; 1 lecture and 2 laboratory hours, 2–2 credits. Development of skills in melodic and rhythmic dictation, harmonic identification, and sight-singing. Open to nonmusic majors by permission of department chairman.

173–174/273–274 Keyboard Skills. Continuous course; 2 laboratory hours, 1–1 credit. Acquisition of keyboard performance skills with emphasis on reading, keyboard harmony, and improvisation. Open only to music majors.

181–182 Class Lessons in Strings. Continuous course; 2 laboratory hours. 1–1 credit. Achievement of performance competencies on violin, viola, cello, or string bass. Acquisition of basic techniques on two additional string instruments.

183–184 Class Lessons in Woodwinds. Continuous course; 2 laboratory hours. 1–1 credit. Achievement of performance competencies on flute, clarinet, oboe, bassoon, or saxophone. Acquisition of basic techniques on two additional woodwind instruments.

185–186 Class Lessons in Brass. Continuous course; 2 laboratory hours. 1–1 credit. Achievement of performance competencies on trumpet, baritone, tuba, trombone, or French horn. Acquisition of basic techniques on two additional brass instruments.

187–188 Class Lessons in Percussion. Continuous course; 2 laboratory hours. 1–1 credit. Achievement of performance competencies on snare drum. Acquisition of basic techniques on xylophone or timpani.

191–192 Class Lessons in Piano. Continuous course; 2 laboratory hours. 1–1 credit. Achievement of performance competencies at the keyboard with emphasis on finger dexterity and reading. No prior knowledge of music required. Not open to music majors.

193–194 Class Lessons in Voice. Continuous course; 2 laboratory hours. 1–1 credit. Achievement of performance

competencies in voice including vocal production, diction, solo, and group performance.

195–196 Class Lessons in Guitar. Continuous course; 2 laboratory hours. 1–1 credit. Acquisition of performance competencies in guitar including chording, single-string technique, plectrum, and finger styles.

197–198 Class Lessons in Organ. Continuous course; 2 laboratory hours. 1–1 credit. Prerequisite: permission of instructor. Achievement of performance competencies in organ including pedal technique, coordination of hands and feet, and registration.

199 Recital/Convocation Attendance. Semester course; no credit. Course may be repeated without limit. Attendance at weekly departmental convocations and ten additional concerts or recitals each term. Music majors only.

251 Jazz Improvisation I. Semester course; 3 lecture hours. 3 credits. A study of basic compositional techniques that can be used in creating a musically effective improvised solo in the jazz medium.

252 Jazz Improvisation II. Semester course; 3 lecture hours. 3 credits. Prerequisite: APM 251 or permission of instructor. Advanced melodic, harmonic, and rhythmic improvisational techniques as applied to contemporary jazz compositions.

265–266/365–366/465–466 Aural Skills III–VIII. Continuous course; 2 laboratory hours. 1–1 credits. A continuation of APM 166. Open to nonmusic majors by permission of department chairman.

271 Sight Reading. Semester course; 1 lecture hour. 1 credit. A practical course for singers and instrumentalists designed to develop facility in sight reading.

282 Conducting Lab Ensembles. Semester course; 1 laboratory hour. .5 credit. May be repeated once for credit. Reading and conducting experience with a band, chorus, or orchestra. Literature emphasized will be appropriate for elementary through secondary school groups. Offered only in the spring semester.

299 Master Class. Semester course; no credit. Course may be repeated without limit. Participation in weekly master classes in student's applied major area.

300-Level Private Instruction: Principal and Secondary Performing Mediums. Semester courses; repeatable without limitations; one half-hour or one hour private lesson per week. 1 to 3 credits. Extra fee required. One hour practice daily for each credit. Lessons are available in the following areas: bassoon, carillon (1 credit only), cello, clarinet, composition (by permission of instructor), double bass, drum set (undergraduate, 1 credit only), euphonium, flute, French horn, guitar, harp, harpsichord, oboe, organ, percussion, piano, saxophone, synthesizer, trombone, trumpet, tuba, viola, violin, and voice. In order to register for any private lesson, nonmusic majors must obtain correct course number in either Room 132, Performing Arts Center, or at the music table in the Mosque during registration; music majors need to consult their advisors.

351 Jazz Improvisation III. Semester course; 3 lecture hours. 3 credits. Prerequisite: APM 252 or permission of instructor. Techniques of thematic improvisation, stating a melody, and improvising on contemporary jazz compositions. Availability contingent upon student demand and faculty resources.

352 Jazz Improvisation IV. Semester course; 3 lecture hours. 3 credits. Prerequisite: APM 351 or permission of instructor. Special emphasis on non-tonal and pan-tonal improvisation. Availability contingent upon student demand and faculty resources.

362 Service Playing. Semester course; 1 lecture and 2 laboratory hours. 2 credits. The development of skills necessary for church service playing; transcription of piano and orchestral scores; accompanying and hymn playing; conducting from the console; the accompaniment of chant. Offered alternate years.

370 Large Ensembles. Semester course; 3 laboratory hours. 1 credit. An audition is prerequisite for sections 1, 3, and 4. Sections: (1) orchestra, (2) University Band, (3) symphonic wind ensemble, (4) Commonwealth Singers, (5) Choral Arts Society. Each section may be repeated up to eight times for credit.

373-374 Advanced Keyboard Skills. Continuous course; 2 laboratory hours. 1-1 credit. Prerequisite: APM 274 or permission of instructor. Emphasis is on harmonization with correct style and voice-leading, reading figured bass and lead sheets, improvisation, and reducing scores at the keyboard.

375-376 Score Reading. Continuous course; 2 laboratory hours. 1-1 credit. Prerequisite: APM 274 or equivalent. Acquisition of skill in reducing scores at the keyboard, beginning with simple three-part works and progressing to full instrumentation.

381-382 Conducting. Continuous course; 1 lecture and 2 laboratory hours. 2-2 credits. The student will put into practice his elementary knowledge of conducting to solve complicated or unusual musical situations such as those of irregular meters, conducting from the keyboard, and uncommon scoring.

383, 384 Musical Theater. Semester course; 4 laboratory hours. 2, 2 credits. Prerequisite: APM 193 or equivalent. An exploration of the fundamentals of musical theater including production, staging, and performing. Each course may be repeated for credit three times.

385 Opera Theater. Semester course; 1 lecture and 4 studio hours. 2 credits. Permission of instructor required. Explores aspects of opera through study, written research, and fully-staged public performances of operatic scenes and/or one-act operas. May be repeated four times for credit.

390 Small Ensembles. Semester course; 2 or 3 laboratory hours. 0.5 or 1 credit. Auditions required for all sections. Each section may be repeated up to eight times for credit. Sections: (1) Ensemble for New Music, (2) The Madrigalists, (3) Collegium Musicum, (4) Women's Chorus, (5) vocal ensembles, (6) piano ensembles, (7) accompanying, (8) Percussion Ensemble, (9) Percussion Lab Ensemble, (10) woodwind ensembles, (11) brass ensembles, (12) chamber orchestra, (13) string ensembles, (14) guitar ensembles, (15) small jazz ensembles, (16) Jazz Orchestra I, (17) Jazz Orchestra II, (18) Jazz Orchestra III, (19) Basketball Pep Band.

393 Junior Project. No credit. Individual research project in the student's major field under the supervision of faculty.

394 Junior Recital. No credit. Public presentation of a half-length recital.

463-464/563-564 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, (8) guitar. 463 is offered alternate years; APM 464 availability is contingent upon student demand and faculty resources.

485 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 instrumental 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.

493 Senior Project. No credit. Individual research project in the student's major field under the supervision of faculty.

494 Senior Recital. No credit. Public presentation of a full-length recital.

COURSES IN MUSIC COMPOSITION (MUC)

111 MIDI Programming and Synthesis. Semester course; 2 lecture and 2 laboratory hours. 3 credits. A study of MIDI (Musical Instrument Digital Interface) programming techniques as applied to synthesis and composition on electronic musical instruments.

112 Synthesizer and Composition. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MUC 111 or permission of instructor. An in-depth use of the MIDI (Musical Instrument Digital Interface) synthesizer as an instrument for performance and composition. Projects will involve utilization of the computer in conjunction with synthesizers.

201 Class Composition I. Semester course; 2 lecture hours. 2 credits. Prerequisites: APM 166, MHT 136, and permission of instructor. Open to all music majors and required of potential composition majors; the emphasis of this class will be on simple rhythmic and melodic studies.

202 Class Composition II. Semester course; spring semester; 2 lecture hours. 2 credits. Prerequisite: MUC 201 or permission of instructor. An extension of Class Composition I and an introduction to two-part vocal and instrumental writing, improvisational studies, and modal and synthetic scales. The emphasis throughout will be on original composition. Availability contingent upon student demand and faculty resources.

311 Introduction to Digital Synthesis. Semester course; 3 lecture hours. 3 credits. Prerequisites: MUC 112, MHT 117, and CDE 331 or permission of instructor. A study and application of digital sampling and sound modification for the production of multi-track recordings. Availability contingent upon student demand and faculty resources.

312 Digital Synthesis. Semester course; 3 lecture hours. 3 credits. Prerequisite: MUC 311 or permission of instructor. A study and application of digital synthesis and advanced techniques in sound modification through computer control. Availability contingent upon student demand and faculty resources.

315 Counterpoint I. Semester course; 3 lecture hours. 3 credits. Prerequisite: MHT 236. This class concentrates on two-part writing, canons, species exercises, short two-voiced pieces, and inventions.

316 Counterpoint II. Semester course; 3 lecture hours. 3 credits. Prerequisite: MHT 236. Three- and four-part writing, forms based on the chorale, contrapuntal variation forms, and fugue will be studied. Availability contingent upon student demand and faculty resources.

405 Twentieth Century Techniques. Semester course; 3 lecture hours. 3 credits. Prerequisite: MHT 236 or permission of instructor. Composition in and analysis of techniques associated with late Romanticism, Impressionism, Neo-Classicism, Expressionism, Serialism, and current avant-garde music. No degree credit for graduate composition majors.

406 Orchestration. Semester course; 3 lecture hours. 3 credits. Prerequisite: MHT 236. Application of idiomatic scoring devices for orchestral instruments and voices in both large and small combinations. No degree credit for graduate composition majors.

425, 426 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.

450 Composition Seminar. Semester course; 1 lecture hour. 1 credit. A forum for performance, discussion, and critical evaluation of student compositions. May be repeated for a maximum of four credits.

COURSES IN MUSIC EDUCATION (MUE)

Upper-division undergraduate students may also enroll in the following graduate courses with permission: MUE 597 Human Response to Music; MUE 595 Music and the Exceptional Individual. See *VCU Graduate Bulletin* for course descriptions.

281 Basic Music Skills. Semester course; 3 lecture hours. 3 credits. Development of basic creative and performance competencies for instructional purposes and the integration of music with other subject areas. Not open to music majors.

290 Music in General Education. Semester course; 1 lecture and 2 laboratory hours. 2 credits. The role of music in *general educational curricula* with emphasis on trends in music education, philosophy, learning theories as they apply to music, concepts of curriculum and music in the educational environment. Laboratory hours will involve observations of selected school environments.

331 Multiple Choir Program. Semester course; 3 lecture hours. 3 credits. The organization of multi-choir programs in the church; children's choir methods and materials; handbell choirs. Offered alternate years.

383 Observation in Music Education. Semester course; 2 laboratory hours. 1 credit. Prerequisite: MUE 290. Observations and field experiences in public/private schools and in-class discussion and analysis of observed techniques and procedures.

391 Processes of Music Education. Semester course; 3 lecture hours. 3 credits. Prerequisite: MUE 290. Study of

current methods and materials of music in education. Orff, Dalcroze, Kodaly, Manhattanville, and other modern music education systems will be discussed, observed, and demonstrated.

392 Pedagogical and Rehearsal Techniques for Performing Organizations. Semester course; 3 lecture hours. 3 credits. Prerequisite: MUE 290. Study of the problems related to public school performance groups and the developmental stages of children. Included will be techniques for psychological and physiological pacing, selecting appropriate material, and development of musical skills pertinent to various ages.

479 Music Instrument Repair. Semester course; 2 laboratory hours. 1 credit. A study of problems related to intonation and tone quality in band and orchestra instruments; the relationship of mouthpieces and reeds to intonation; emphasis on acquiring knowledge and skill in the care and repair of music instruments.

483 Special Workshop in Music Education. Semester course; 0.5–3 credits. Flexible term courses on selected aspects of music education. See *Schedule of Classes* for specific offerings each term.

COURSES IN MUSIC HISTORY LITERATURE, AND THEORY (MHT)

100/200 Special Offerings in Music. Flexible term course; variable credit. 1–3 credits. Course may be repeated. Semester or short-term course designed for non-music majors which deals with a variety of subjects in music. Subject matter will change from term to term and may involve lecture and/or laboratory. See *Schedule of Classes* for specific offerings each semester.

101–102 Introduction to Musical Styles. Continuous course; 2 laboratory hours. 1–1 credits. A study of the major styles and forms of Western music with emphasis on aural perception.

105–106 Introduction to Writing Music. Continuous course; 3 lecture hours. 3–3 credits. Creating and harmonizing melodies, principles of notation, and elementary music theory. Second-semester emphasis is on creative aspects. For nonmusic majors only.

110 Elements of Music. Semester course; 2 lecture and 2 laboratory hours. 3 credits. A study of music notation, scale, and triad forms. Aural skill development will parallel the theoretical studies. Intended to prepare music majors for core curriculum study; no degree credit for music majors.

117 Computers in Music. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Study and application of music software on mainframe and personal computers. The student will be expected to demonstrate competence in the high-level languages, PASCAL and BASIC. Projects will focus on programming for educators and composers.

135–136/235–236 Integrated Theory. Continuous course; 3 lecture hours. 3–3 credits. The first year is a study of diatonic harmony with emphasis on melodic structure, harmonization and analysis. The second year continues with the study of chromatic harmony, modulation, and an introduction to twentieth-century harmony, melody, and rhythm. Open to nonmusic majors by permission of department chairman.

201 Acoustics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Physical properties of sound and wave mechanics applied to the study and analysis of music and musical instruments. Topics will include instrumental and vocal sound production and perception, timbral characteristics, and pitch theory.

243 Music Appreciation. Semester course; 3 lecture hours. 3 credits. Designed to encourage intelligent listening and understanding of finer music from all periods. Not open to music majors.

245, 246/Afro-American Studies 245, 246 Introduction to Afro-American Music. Semester courses; 3 lecture hours. 3, 3 credits. An introductory survey of black involvement with the development of music in America from 1607 to the present. Afro-American musical styles will be studied from many aspects, including their African roots and contemporary popular expression.

271 Jazz History and Literature. Semester course; 3 lecture hours. 3 credits. An historical and analytical survey of each major jazz era. Primary focus is on the contributions and improvisational styles of the principle soloists.

280 Survey of Twentieth Century American Popular Music. Semester course; 3 lecture hours. 3 credits. A stylistic and historical survey of representative styles and trends of American popular music, from the turn of the century to the present. Performance practices will be analyzed through selected recordings and live performances.

302 Late Romantic Harmony. Semester course; 3 lecture hours. 3 credits. A review of common practice harmony and a study of chromatic harmony in the nineteenth and twentieth centuries.

303, 304 Piano Literature. Semester courses; 2 lecture hours. 2, 2 credits. A survey of stringed keyboard literature. Historical, formal, and stylistic considerations of the various periods and composers of keyboard music. Listening and reading assignments included.

305 Form and Analysis I. Semester course; 2 lecture hours. 2 credits. Prerequisite: MHT 236. A study of the traditional musical forms utilized in the late baroque, classic, and early romantic periods.

306 Form and Analysis II. Semester course; 2 lecture hours. 2 credits. Prerequisite: MHT 305 or permission of instructor. An analytical study of musical forms and salient features of melody, harmony, rhythm, and timbre of late romantic and twentieth-century compositions.

311 Jazz Arranging I. Semester course; 3 lecture hours. 3 credits. Prerequisite: MHT 236 or permission of instructor. A study of the basic harmonic, melodic, notational, and orchestrational techniques needed to draft a successful jazz arrangement. The final project will be to write an arrangement for a 12-piece jazz ensemble.

312 Jazz Arranging II. Semester course; 3 lecture hours. 3 credits. Prerequisite: MUC 311 or permission of instructor. Advanced harmonic, melodic, and orchestrational techniques applied to writing for the small jazz ensemble, vocal group, and large jazz orchestra.

320 Music in Films. Semester course; 3 lecture hours, 3 credits. Significant film music from the 1930s to the present. The course will focus on techniques for listening and evaluation. Functional, social, technical, and aesthetic considerations of film music will be examined. Students will

prepare a critical analysis of each of the films viewed in class based on their perceptions as listeners/viewers. Music reading ability not required.

336 Organ Literature and Design. Semester course; 2 lecture hours. 2 credits. Prerequisite: MHT 201 or permission of instructor. A survey of organ music with correlating studies in the design and construction of pipe organs from 1500 to the present.

380 Survey of the Music Industry. Semester course; 3 lecture hours. 3 credits. Commercial aspects of the music industry. Topics include copyright, music production and technology, management, radio and television, live venues and recording.

401 Seminar in Music History. Semester course; 2 lecture hours. 2 credits. Research and discussion of selected topic, in music history and literature. May be repeated for a maximum of six credits.

407 Arranging Modern Popular Music. Semester course; 3 lecture hours. 3 credits. Adapting and scoring music for ensembles incorporating popular commercial performance styles.

411 Jazz Arranging III. Semester course; 3 lecture hours. 3 credits. Techniques of arranging for the contemporary pop medium. Availability contingent upon student demand and faculty resources.

412 Jazz Arranging IV. Semester course; 3 lecture hours, 3 credits. A study of the techniques used in modal, blues, and other forms of contemporary jazz composition. Availability contingent upon student demand and faculty resources.

413 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 organization.

421, 422 Survey of Music History. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: MHT 101-102 or 243-244. A study of Western music in an historical context from antiquity to the present. First semester will conclude with the baroque era; second semester will commence with the classic period.

431/Religious Studies 431 Hymnology. Semester course; 3 lecture hours. 3 credits. A study of hymns and hymn tunes with emphasis on their development, style, and functions. Offered alternate years.

434 Choral Literature. Semester course; 2 lecture hours. 2 credits. A survey of part-music for mature voices including both sacred and secular works. Primary emphasis will be on mixed-voice repertoire.

435/Religious Studies 435 Liturgics. Semester course; 3 lecture hours. 3 credits. A study of the forms of public worship emphasizing the orders in current usage. The planning of weekly and special services. Offered alternate years.

441 American Music. Semester course; 2 lecture hours. 2 credits. The growth and development of music in the United States from 1607 to the present. 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.

442 Twentieth Century Music. Semester course; 2 lecture hours. 2 credits. Impressionistic, expressionistic, neoclassic, and neoromantic influences and styles of music. Development of new sound-generating techniques and methods for ordering the new tonal materials.

450 Performance Practice. Semester course; 2 lecture and 2 laboratory hours. 3 credits. A study of performance practices including ornamentation, instrumentation, and stylistic considerations. Topics and emphases will change from term to term. Course may be repeated up to four times.

451, 452, Orchestral Repertoire. Semester courses; 1 lecture hour (1 credit) or 1 lecture and 2 laboratory hours (2 credits). Performance and study of selected major symphonic works from historical, analytical, and stylistic perspective. 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.

465, 466 Song Literature. Semester courses; 2 lecture hours. 2, 2 credits. A survey of the vocal literature of Germany, France, England, and other countries. Students will perform material.

481 Topics in Music. Semester course; variable credit; 1–3 credits per semester. May be repeated for a maximum of nine credits. Flexible term courses in selected aspects of music performance, theory, literature, or history. See *Schedule of Classes* for specific topics to be offered each semester.

COURSES IN PAINTING AND PRINTMAKING (PAP)

155–156 Drawing and Painting, Basic. Semester course; 3 studio hours. 1–1 credit. Introduction to painting with emphasis on learning basic techniques. Discussion of materials and their use. Models—both nude and clothed are used.

203, 204 Painting and Design, Basic. Semester courses; 9 studio hours. 3, 3 credits. Painting and structure are discussed in terms of space, form, and content. Work may be carried on out-of-doors or indoors. (Summer School offering only.)

205 Painting, Basic Composition. Semester course; 2 lecture and 6 studio hours. 4 credits. May be repeated up to eight credits. An introduction to the use of paints with an *emphasis on the organization* of the artistic image, through the use of plastic form and color, coupled with analysis of historical and contemporary work.

207 Painting Techniques. Semester course; 2 lecture and 6 studio hours. 4 credits. An investigation of pigments, glazes, underpainting, mixed media, materials, and other studio techniques.

209 Materials: Printmaking. Semester course; 2 lecture and 6 studio hours. 4 credits. An introduction to three principal printmaking techniques: etching, lithography, and screenprinting.

214 Printmaking, Basic. Semester course; 1 lecture and 6 studio hours. 3 credits. Fundamentals of printmaking. Introduction of basic problems of techniques and composition. (Summer School offering only.)

221 Drawing, Basic. Semester course; 9 studio hours. 3 credits. May be repeated up to six credits. Drawing instruction with attention to extension of the student's knowledge of the tools of drawing. Materials and techniques will be related to pictorial organization.

223, 224 Drawing, Basic. Semester courses; 1 lecture and 6 studio hours. 3, 3 credits. Course introducing drawing fundamentals and spatial relationships. Concern is given to materials and the development of the students' visual perceptions. (Summer School offering only.)

255–256 Drawing and Painting, Basic. Continuous course; 1 lecture and 6 studio hours. 3–3 credits. Development of basic skills; exploring structure, color, form, and image. Students will be exposed to class critiques as a means of analyzing their creative works.

303, 304 Painting, Intermediate. Semester courses; 1 lecture and 6 studio hours. 3, 3 credits. Prerequisite: three credits of basic painting or permission of instructor. Primary emphasis on the development of an individual direction in the context of contemporary ideas and images in painting. (Summer School offering only.)

305 Painting, Intermediate. Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisite: four credits of basic painting or permission of instructor. May be repeated up to eight credits. Primary emphasis on the development of an individual direction in the context of contemporary ideas and images in painting.

312 Printmaking, Intermediate (Lithography). Semester course; 9 studio hours. 3 credits. Prerequisite: 3 credits of basic printmaking or permission of instructor. Investigation of techniques and technical printing problems. Stones and plates are used. (Summer School offering only.)

313 Printmaking, Intermediate (Etching). Semester course; 9 studio hours. 3 credits. Prerequisite: 3 credits of basic printmaking or permission of instructor. Techniques and technical problems in the printmaking area are investigated. (Summer School offering only.)

314 Printmaking, Intermediate (Screenprinting). Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisite: basic or beginning printmaking. Investigation of techniques and technical problems in the printmaking area. (Summer School offering only.)

315 Printmaking, Intermediate (Etching). Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisite: PAP 209 or permission of instructor. May be repeated up to eight credits. Investigation etching printmaking, drypoint, engraving, aquatint, soft grounds, and related techniques.

317 Printmaking, Intermediate (Lithography). Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisite: PAP 209 or permission of instructor. May be repeated up to eight credits. Investigation of techniques and technical printing problems in lithographic printing process from stones and plates.

319 Printmaking, Intermediate (Screenprinting). Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisite: PAP 209 or permission of instructor. May be repeated up to eight credits. An investigation of cut, hand-drawn, and photographic stencil techniques and printing on a variety of surfaces.

321 Drawing, Intermediate. Semester course; 9 studio hours. 3 credits. Prerequisite: three credits of basic drawing

or permission of instructor. May be repeated up to six credits. Drawing for advanced students with special emphasis on creative response to the drawing as a work of art.

324 Drawing, Intermediate. Semester course; 9 studio hours. 3 credits. Prerequisite: three credits of basic drawing or permission of instructor. Drawing for intermediate students with emphasis on problematic thinking and dealing with drawing as an aesthetic form. (Summer School offering only.)

326 Color. Semester course; 3 lecture hours. 3 credits. A course examining the concepts governing the use of color. Historical and contemporary concepts and methods of application will be explored.

329 Life Drawing. Semester course; 6 studio hours. 3 credits. Prerequisite: foundation drawing. May be repeated up to nine credits. Explores the structural and muscular systems of the human body with emphasis upon proportional relationships, chiaroscuro, contour, volume, and foreshortening.

355–356 Drawing and Painting, Intermediate. Semester course; 9 studio hours. 3–3 credits. Prerequisite: three credits of basic drawing or painting or permission of instructor. Intermediate instruction in drawing and painting. Models, both nude and clothed, and still life are used.

403, 404 Painting, Advanced. Semester courses; 1 lecture and 6 studio hours. 3, 3 credits. Prerequisite: three credits of intermediate painting or permission of instructor. More ambitious projects with the aim of developing in the senior student a highly professional approach and achievement in his work. Individual as well as group discussions. (Summer School offering only.)

405 Painting, Advanced. Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisite: four credits of intermediate painting or permission of instructor. May be repeated up to 20 credits. More ambitious projects with the aim of developing in senior students a highly professional approach and achievement in their work. Individual as well as group discussions.

412 Printmaking, Advanced (Lithography). Semester course; 9 studio hours. 3 credits. Prerequisite: three credits of intermediate printmaking or permission of instructor. Specialization in one medium. Aesthetic suitability of the design to a particular medium is emphasized. (Summer School offering only.)

413 Printmaking, Advanced (Etching). Semester course; 9 studio hours. 3 credits. Prerequisite: three credits of intermediate printmaking or permission of instructor. Concentration on one medium with emphasis on creative techniques. (Summer School offering only.)

414 Printmaking, Advanced (Screenprinting). Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisite: three credits of intermediate printmaking or permission of instructor. Cut, hand-drawn, and photographic stencil techniques are explored. Printing will be done on a variety of surfaces. (Summer School offering only.)

415 Printmaking, Advanced (Etching). Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisite: four credits of intermediate printmaking or permission of instructor. May be repeated up to 20 credits. Specialization in one medium with emphasis upon technical research and

aesthetic suitability of the design to the particular medium used.

417 Printmaking, Advanced (Lithography). Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisite: four credits of intermediate printmaking or permission of instructor. May be repeated up to 20 credits. Further investigation of techniques and technical printing problems in the lithographic printing process from stones and plates.

419 Printmaking, Advanced (Screenprinting). Semester course; 2 lecture and 6 studio hours. 4 credits. Prerequisite: four credits of intermediate printmaking or permission of instructor. May be repeated up to 20 credits. Further exploration of cut, hand-drawn, and photographic stencil techniques and printing on a variety of surfaces.

421 Drawing, Advanced. Semester course; 9 studio hours. 3 credits. Prerequisite: three credits of intermediate drawing or permission of instructor. May be repeated up to 15 credits. A studio for drawing with individual criticism. Special attention is given to contemporary concepts.

423 Experimental Printmaking. Semester course; 2 lecture and 6 studio hours. 4 credits. Repeatable to eight credits. Prerequisite: three credits of intermediate printmaking or permission of instructor. Relief printing, collographs, mono-prints, photoengraving, and mixed media will be investigated.

424 Drawing, Advanced. Semester course; 9 studio hours. 3 credits. Prerequisite: three credits of intermediate drawing or permission of instructor. A studio drawing course set up with individual criticism dealing with contemporary concepts. (Summer School offering only.)

PAP 490 Senior Seminar. Semester course; 3 lecture hours. 2 credits. Information to help graduating seniors in the Painting and Printmaking Department meet the professional requirements involved in exhibiting and promoting their creative work and in functioning as an artist.

448–449 Mural Painting. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Prerequisite: permission of instructor. An investigation of the concepts and procedures involved in mural painting. The class will execute at least two murals during the year.

455–456 Drawing and Painting, Advanced. Continuous course; 9 studio hours. 3–3 credits. Prerequisite: three credits of intermediate drawing or painting or permission of instructor. Advanced instruction in drawing and painting. Models, both nude and clothed, and still life are used.

The following courses may be taken by undergraduates for degree credit:

525 Issues in Contemporary Visual Art
527, 528 Art and Critical Theory

COURSES IN PHOTOGRAPHY AND FILM (PTY)

233 Media Arts Survey. Semester course; 3 lecture and 3 studio hours. 4 credits. A survey of the artistic and communication uses of media in contemporary society. Cinematography, video, and computer graphics technology will be introduced.

233/Photography 233 Media Arts Survey. Semester course; 3 lecture and 3 studio hours. 4 credits. A survey of the artistic

and communication uses of media in contemporary society. Cinematography, video, and computer graphics technology will be introduced.

243–244 Basic Photography. Continuous course; 1–2 lecture and 3 studio hours. 2–3 credits. Study of fundamental camera techniques and basic photographic processes in relation to visual communication. An emphasis will be placed on photography's expressive possibilities. Adjustable camera required.

245 Principles of Photography. Semester course; 3 lecture and 3 studio hours. 4 credits. A comprehensive beginning class covering an introduction to the camera, the process of exposure, developing, and black and white printmaking. The emphasis is on proper procedures in the darkroom, as well as providing an introduction to the photographic and visual concepts, critiques, and experience with shooting a variety of subjects.

301–302 Basic Photo Journalism. Continuous course; 2 lecture and 2 laboratory hours. 3–3 credits. Study of fundamentals of photography and techniques of camera use in relation to the fields of journalism and visual communications. Adjustable camera required.

325–326 The Zone System. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: PTY 243–244 or permission of instructor. Lectures deal with the testing of camera, lens, film, and printing methods to allow the student to visualize images made in the camera.

341, 342 Photography Workshop. Semester courses; 3 lecture and 3 studio hours. 4, 4 credits. Prerequisites: PTY 243–244, 245, or permission of instructor. A workshop that affords the student an opportunity to develop a personal approach to the photographic medium. Adjustable camera required.

345, 346 Intermediate Photography. Semester courses; 1 lecture and 3 studio hours. 2, 2 credits. Prerequisite: PTY 243–244. Class problems in advanced photographic techniques. Emphasis is placed on individual solutions to various photographic problems.

347 Photographic Processes and Techniques. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: PTY 245. An in-depth, and concentrated exploration of various photographic techniques. Emphasis is placed upon image creation and processing.

348 Underwater Photography. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: Valid Basic Scuba Certification Card. (Tanks, regulators, underwater camera, and weights will be supplied.) Basic photography principles, selection and care of equipment, and how to make underwater photographs. Basic scuba equipment (mask, fins, snorkel, B.C. vest) required.

350 Photography for Visual Communications. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: PTY 245 or permission of instructor. Expanding photographic knowledge through the exploration of contemporary trends in photographic style. Technical and aesthetic emphasis is placed on developing individual solutions to visual photographic problems.

371, 372 Cinematography. Semester courses; 3 lecture and 3 studio hours. 4, 4 credits. The production of motion picture films with emphasis on fundamental shots and transitional

elements. Students usually work with 16mm film and equipment.

373 16mm Camera Systems. Semester course; 2 lecture hours. 2 credits. Study of 16mm camera systems used for motion picture photography.

374 Film Pre-Production and Post-Production. Semester course; 2 lecture hours. 2 credits. An overview of techniques in planning and producing an independent film.

375 Filmmaking I. Semester course; 3 lecture and 3 studio hours. 4 credits. Techniques for production of silent films. Not open to CDE majors.

376 Filmmaking II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: PTY 375 or PTY 233. Emphasis on technical aspects of film production.

377 The Film Image. Semester course; 3 lecture hours. 3 credits. An examination of production techniques and problems encountered by the filmmaker in creating the motion picture image. A selected number of entertainment films, documentaries, topical films, and others will be viewed as source material and will be dealt with from a production point of view.

379 View Camera Operation and Processing. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: PTY 245. A course exploring and using the view camera for optimum photographic results. Emphasis is on understanding how the camera functions and learning processing techniques associated with the medium.

441, 442 Photographic Studio. Semester course; 3 lecture and 3 studio hours. 4, 4 credits. Prerequisite: PTY 341, 342 or permission of instructor. Students will work on photographic problems relating to their areas of major interest. Options include both black and white photography and color photography.

445–446 Color Photography. Continuous course; 1 lecture and 6 studio hours. 3–3 credits. Prerequisites: PTY 345 and 346. A workshop dealing with various color processes and professional work.

475–476 Filmmaking Workshop. Continuous course; 1 lecture and 6 studio hours. 3–3 credits. Permission of instructor required. The production of a motion picture to be directed by faculty with the assistance of students in the various production crew roles.

481 Filmmaking III. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: PTY 376. Techniques for production of sound motion pictures.

482 Filmmaking IV. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: PTY 481 and permission of instructor. Advanced projects in film production.

490–491 Motion Picture Special Effects. Continuous course; 1 lecture and 6 studio hours. 3–3 credits. Prerequisite: PTY 376 or permission of instructor. An exploration of special effects for film production which may be created both in the camera and with a printer.

500 Photographic Studio and Seminar. Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisite: permission of instructor. Experimentation in the studio with various processes for creating the photographic image, leading to producing a cohesive body of work. The seminar examines the technical and aesthetic components of these processes and the language and theories of photographic criticism.

COURSES IN SCULPTURE (SCU)

209, 210 Introduction to Sculpture. Semester courses; 2 lecture and 3 studio hours. 3, 3 credits. The course will offer an opportunity for students to work with some of the ideas and materials of sculpture through slides, lecture, and studio involvement.

211, 212 Sculpture. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. The primary goal of this course is the effective expression of ideas. The student is introduced to the basic tools, materials, and techniques with attention given to problem solving.

217, 218, Sculptural Concepts. Semester courses; 3 lecture and 3 studio hours. 4, 4 credits. Prerequisite: permission of instructor. A study of contemporary technology, philosophy, criticism, and their relation to material resources and technical practices.

311, 312 Sculpture. Semester courses; 3 lecture and 6 studio hours. 4, 4 credits. The emphasis in this course is on creative independence. The student is encouraged to utilize a variety of materials in order to express his ideas. May be repeated for a maximum of eight credits.

313, 314/413, 414 Dimensional Concepts. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. An opportunity for the sculpture student to extend and expand upon traditional methods of expression and to explore new areas.

411, 412 Sculpture. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. The majority of the student's activities occur in his own studio with emphasis on the development of a personal style. May be repeated for a maximum of 16 credits.

417 Seminar in Contemporary Sculpture. Semester course; 3 lecture hours. 3 credits. A forum for consideration and discussion of recent developments. May be repeated for a total of 12 credits.

419 Professional Studio Practicum. Semester course; 9 studio hours. 3 credits. Prerequisite: permission of chairman. A studio class that provides a continuation of the student's work in sculpture. This course will be recorded as an elective for a sculpture major. May be repeated.

491 Topics in Sculpture. Semester course; 1-4 credits. Prerequisite: permission of instructor. A seminar or workshop on a selected issue or topic in the field of sculpture. See *Schedule of Classes* for specific topic(s) to be offered each semester.

COURSES IN THEATRE (THE)

103 Stagecraft. Semester course; 3 lecture hours. 3 credits. The fundamental methods, materials, and techniques of set construction for the stage. Participation in departmental productions.

104 Costume Construction. Semester course; 3 lecture hours. 3 credits. The fundamental methods, materials, and techniques of costume construction for the stage. Participation in departmental productions.

107, 108 Introduction to Stage Performance. Semester courses; 3 lecture hours. 3, 3 credits. A survey and application of the basic elements in stage performing; acting, scene study, voice, and movement. For non-theatre majors.

113-114 Acting. I. Continuous course; 2 lecture and 2 studio hours. 3-3 credits. Development of personal resources; an exploration of performance skills through theatre games, role playing, improvisation, and work on basic script units. Open only to theatre majors upon satisfactory audition.

201-202 Stage Voice and Speech. Continuous course; 2 lecture and 2 studio hours. 3-3 credits. A study of the basic elements of voice and speech to include International Phonetic Alphabet, ear training, sound production, breathing, and application of voice and speech elements to prose and poetry. Open only to theatre majors upon satisfactory audition.

211-212 Introduction to Drama. Continuous course; 3 lecture hours. 3-3 credits. Analysis and critical examination of plays for methods of interpretation and production qualities.

213-214 Acting II. Continuous course; 2 lecture and 2 studio hours. 3-3 credits. Prerequisite: THE 113-114 or equivalent. A practical application of the psychophysical basis of acting through exploration, improvisation, scoring, and performance of scenes. Open only to theatre majors upon satisfactory audition.

221 Basic Scene Design. Semester course; 3 lecture hours. 3 credits. A study of the basic techniques used in designing space for theatre productions. Participation in departmental productions.

L221 Basic Scene Design Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

223-224 Practicum in Theatre Technology. Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: THE 103, 104. Advanced problem solving in one or more areas of technical theatre.

L223, L224 Practicum in Theatre Technology Laboratory. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

225 Basic Stage Electronics-Lighting. Semester course; 3 lecture hours. 3 credits. A study of the properties and basic principles of electricity as they relate to the utilization of light on the stage. Participation in departmental productions.

L225 Basic Stage Electronics-Lighting Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

227-228 Basic Stage Costuming and Makeup. Continuous course; 2 lecture and 2 studio hours. 3-3 credits. Prerequisite: THE 104 or permission of instructor. A study of the techniques used to dress the performer, including design theory and makeup application. Participation in departmental productions.

L227, L228 Basic Stage Costuming and Makeup Laboratory. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

229 Introduction to Lighting Design. Semester course; 2 lecture and 2 studio hours. 3 credits. Basic elements of lighting design, composition, orchestration, and color. Participation in departmental productions.

L229 Introduction to Lighting Design Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

251, 252/351, 352/451, 452 Rehearsal and Performance. Semester courses; 2, 4, or 6 studio hours. 1, 2, or 3 credits. Work in acting, management, design, or technical areas within a Theatre VCU production.

300 The Enjoyment of Theatre. Semester course; 3 lecture hours. 3 credits. An exploration of how theatre as an art form and as popular entertainment has evolved, its role in society, and its reflection in contemporary media.

301-302 Advanced Stage Voice and Speech. Continuous course; 2 lecture and 2 studio hours. 3-3 credits. May be repeated for a maximum of 6-6 credits. First semester: study and practice in the use of voice and speech applied to the plays of Shakespeare. Second semester: study of major stage dialects. Open only to theatre majors upon satisfactory audition.

303/Afro-American Studies 303 Black Theatre. Semester course; 3 lecture hours. 3 credits. A study of the major developments in the evolution of black theatre through readings and studio performances in black-related and black theatre dramaturgy.

305, 306 Scene Design. Semester courses; 1 lecture and 4 studio hours. 3, 3 credits. Prerequisite: THE 221 and permission of instructor. A study of the techniques and methods of scenic design. Participation in departmental productions.

L305, L306 Scene Design Laboratory. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories discussed in design technical courses.

307-308 History of the Theatre. Continuous course; 3 lecture hours. 3-3 credits. A study and analysis of theatre history: the architecture, the performer and performances, the stage, the production methods, and the audience.

309, 310 History of Costumes. Semester courses; 3 lecture hours. 3, 3 credits. Illustrated lectures on the history of costume from primitive times to the present.

313-314 Actor's Studio I. Continuous course; 1 lecture and 4 studio hours. 3-3 credits. Prerequisite: THE 213-214 or equivalent. Alternative forms of script analysis and character study. Concentrated work on specific acting problems. Open only to theatre majors upon satisfactory audition.

315 Audition. Semester course; 4 studio hours. 2 credits. Prerequisite: THE 214 and permission of instructor. A course designed to instruct students in the various techniques of auditioning as a discrete skill; to include choice, preparation, performance, and evaluation of audition material. Open only to theatre majors.

321, 322 Research Techniques for Costume Design. Semester courses; 2 lecture and 2 studio hours. 3, 3 credits. Prerequisite: permission of instructor. A seminar in research and design of costumes for the theatre, including discussion of fabrics and special construction methods used in stage costuming. Participation in departmental productions.

L321, L322 Research Techniques for Costume Design Laboratory. Semester courses; 2 studio hours. 1, 1 credit.

The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

323-324 Practicum in Advanced Theatre Technology. Continuous course; 6 studio hours. 3-3 credits. Prerequisite: permission of instructor. Advanced problem solving in technical theatre, with special emphasis on multimedia and new design materials.

L323, L324 Practicum in Advanced Theatre Technology. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

325 Stage Management. Semester course; 2 lecture and 2 studio hours. 3 credits. Prerequisite: permission of instructor. The fundamental responsibilities and techniques of professional stage management.

326 Basic Stage Electronics-Sound. Semester course; 3 lecture hours. 3 credits. A study of the basic techniques used to create sound for theatre productions. Participation in departmental productions.

L326 Basic Stage Electronics-Sound Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

327 Technical Drawing. Semester course; 3 lecture hours. 3 credits. Prerequisites: THE 221 and permission of instructor. A practical approach to drafting for the theatre, preparation and presentation, including perspective, rotation, development, and graphic solutions pertaining to theatrical construction problems. Open to theatre majors only.

330, 331/430, 431 Production. Semester courses; 1 or 2 lecture and 4 or 8 laboratory hours. 3 or 6 credits per semester. The design, rehearsal, and performance of dramatic works. Open only to theatre majors.

340, 341/440, 441 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.

361-362 Directing. Continuous course; 3 lecture hours. 3-3 credits. Lectures and discussions on the theories of stage direction; problems involved in the production of period plays and a study of modern theories. Open only to theatre majors.

403, 404 History of Dramatic Literature. Semester courses; 3 lecture hours. 3, 3 credits. Study and analysis of dramatic literature. First semester: Aeschylus through Shakespeare. Second semester: Corneille to Ibsen.

407 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.

L407 Advanced Scenic Technique Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

413-414 Actor's Studio II. Continuous course; 1 lecture and 4 studio hours. 3-3 credits. Prerequisite: THE 313-314 or

212 School of the Arts

equivalent. Advanced character and script analysis. Concentrated work on personal performance limitations and acting problems of each student.

421, 422 Advanced Costume Design. Semester courses; 2 lecture and 2 studio hours. 3, 3 credits. Prerequisite: THE 321, 322, or 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.

L421, L422 Advanced Costume Design Laboratory. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories, discussed in design/technical courses.

423, 424 Modern Drama. Semester courses; 3 lecture hours. 3, 3 credits. Intensive study of major continental and American plays.

429 Advanced Lighting Design. Semester course; 2 studio hours. 3 credits. A study of light as a method of creating mood within stage settings. Participation in departmental productions.

L429 Advanced Lighting Design Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

461, 462 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.

490 Senior Seminar. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Research and/or creative project in the drama major's area of special interest pursuant to graduate study or professional work in the student's chosen field.

491 Topics in Theatre. Semester course; variable credit. 1–3 credits per semester. May be repeated for a maximum of nine credits. Flexible term course in selected aspects of performance, theory, literature, or history. See *Schedule of Classes* for specific topics to be offered each semester.

493, 494 Professional Internship. Semester courses; 3–9 credits. A practicum in theatre conducted in cooperation with selected professional or semi-professional theatre organizations.

496 Practicum in Creative Dramatics. Semester course; 1 lecture and 4 studio hours. 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.

With permission of instructor, the following courses may be taken by undergraduates for degree credit:

501–502 Stage Voice and Speech

505–506 Stage Design

508 Scene Painting

513–514 Acting Styles

COURSES IN SPEECH (SPE)

103 Voice and Diction. Semester course; 1 lecture hour. 1 credit. Principles and techniques of effective production of the speaking voice and articulation of the sounds of American English.

121 Effective Speech. Semester course; 3 lecture hours. 3 credits. Structured speaking and critical listening experiences within the basic forms of speech communication: interpersonal, small group, and public.

262 Speech for Broadcast News. Semester course; 3 lecture hours. 3 credits. Theory and application of oral communication skills necessary to produce an effective general American speech pattern suitable for radio and television.

321 Speech for Business and the Professions. Semester course; 3 lecture hours. 3 credits. Theory and practice in the oral communication process. Organization and presentation of informative and persuasive subject matter in professional contexts related to the student's major area of interest.

401–402 Oral Interpretation of Literature. Continuous course; 3 lecture hours. 3–3 credits. Theory and practice in the analysis and oral presentation of prose, poetry, and dramatic literature.



JONAH L. LARRICK STUDENT CENTER



PART IX — School of Basic Health Sciences

S. GAYLEN BRADLEY

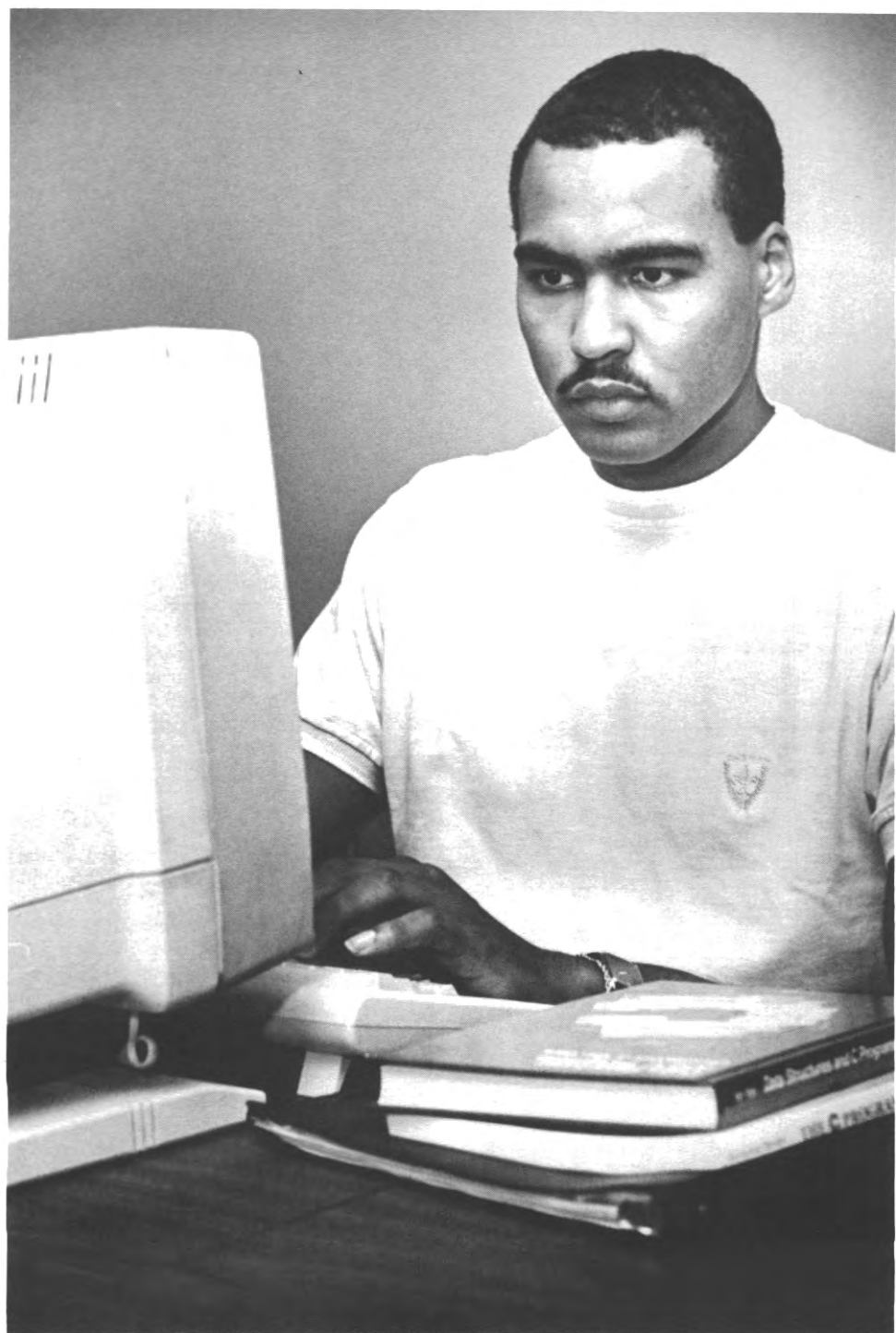
Dean

PHILIP H. COLEMAN

Assistant Dean

The School of Basic Health Sciences is one of the six schools located on the Medical College of Virginia Campus and consists of the Departments of Anatomy, Biochemistry and Molecular Biophysics, Biostatistics, Human Genetics, Microbiology and Immunology, Pharmacology and Toxicology, Physiology, and the Program in Biomedical Engineering, which includes a track in industrial hygiene. All departments provide instruction in basic science disciplines for first

professional, graduate, and undergraduate students in the other health sciences schools. A limited number of courses are available to undergraduate students enrolled in other programs in the University. Interested students should contact their advisors. The School of Basic Health Sciences maintains strong research programs in the biomedical sciences and offers only programs leading to the Master of Science or Doctor of Philosophy degrees. Detailed information on these programs and complete course listings may be found in the Virginia Commonwealth University *Graduate Bulletin* and *Medical College of Virginia Bulletin*.



PART X — School of Business

ROBERT R. TRUMBLE

Dean

E. G. MILLER

Associate Dean for Administration

IRIS W. JOHNSON

Associate Dean for Undergraduate Studies

MICHAEL W. LITTLE

Associate Dean for Graduate Studies

CHARLES J. GALLAGHER

Associate Dean for External Affairs

The primary objective of the School of Business is to prepare students for professional careers in business, government, research, and education. The general requirements for all students in the school are designed to provide a broad knowledge of life in general and of business in particular. The major requirements provide opportunity for extensive study in specific fields.

Within the primary objective, the School of Business has these goals:

1. To render service to the business community
2. To engage in and encourage research in business-related fields
3. To provide service to other schools in the University
4. To contribute to the identification and solution of problems related to the urban mission of the University

The School of Business offers degree programs in accounting, business administration, economics, finance, human resources management/industrial relations, information systems, management, marketing, office automation

management, production/operations management, and real estate and urban land development. The major in finance allows students to choose a specialization in finance or insurance/risk management. The major in management allows students to choose a specialization in general management or owner-managed business. The office automation management major allows student to choose a specialization in business teaching or office systems. The business teaching option is offered in cooperation with the School of Education.

ACCREDITATION

The School of Business is accredited by the American Assembly of Collegiate Schools of Business. The AACSB accredits programs of professional education for business at the collegiate level. Its standards include an evaluation of curriculum, faculty credentials, library facilities, physical plant and equipment, and financial support of the institution.

SCHOLARSHIPS AND AWARDS

A number of scholarships are awarded annually to students enrolled in the School of Business. These include the A. Kemp Rowe Memorial Real Estate Group Scholarship, American Institute of Real Estate Appraisers Scholarship, Ann/Leola Robertson Scholarship, Charles G. Thalheimer Family Scholarships, Central Fidelity Scholarship, Crestar Scholarships, Davis Ratcliffe Insurance Award, Dennis Scholar, Depart-

ment of Management Scholarship, Eskimo Pie Scholarship, Howard Klugman Award, Insurance Women of Richmond Scholarship, J. Sydney Mitchell Award, John A. Levering Memorial Real Estate Scholarship, Mid-Atlantic Coca-Cola Bottling Company Scholarships, National Association of Home Builders/Home Builders Association of Virginia Scholarships, National Association of Industrial and Office Parks Scholarship, Nelco Scholarship, Northern Virginia Board of Realtors Scholarship, Real Estate Educators Association Harwood Memorial Scholarship, Richmond Mortgage Bankers Association Scholarships, Risk and Insurance Managers Society Annual Award, S and K Scholarship, Society of Real Estate Appraisers Scholarship, State Fair of Virginia Scholarships, Sovran Scholarships, Tanner A. Slayden Scholarship, and William O. Edwards Scholarship.

In addition to University scholarships, students are eligible to apply and compete for scholarships awarded in various School of Business programs.

Several nonmonetary awards are given in recognition of scholastic achievement and service. These include the Delta Sigma Pi Scholarship Key, Outstanding Economics Senior Award, Virginia Society of Certified Public Accountants Award of Achievement, and the Wall Street Journal Award. The School of Business Honors Program is held annually to recognize outstanding students, faculty, and alumni.

HONORARY AND PROFESSIONAL ORGANIZATIONS

The school seeks to improve the quality of its programs and provide educational development opportunities for its students through honorary and professional organizations.

Beta Gamma Sigma, the national scholarship society founded in 1913 to encourage and reward scholarship and accomplishment among students in business, has an active chapter at VCU. Eligibility for election is restricted to the upper five percent of the junior class and the upper ten percent of the senior class.

Beta Alpha Psi is a national accounting honorary society that elects its members on the basis of scholarship achievement in accountancy courses. Omicron Delta Epsilon is a national honorary society that recognizes scholarship in economics. Alpha Mu Alpha is the national honor society in marketing. The School of Business also has a

chapter of the national honor society of the Financial Management Association.

Students are encouraged also to participate in the student professional organizations which include Delta Sigma Pi, an international business fraternity; Rho Epsilon, a national fraternity for students interested in real estate; the American Marketing Association; the Society for Advancement of Management; the Society for Human Resource Management; the Association for Systems Management; the VCU Entrepreneurs Club; and AIESEC, an international association of students in business and economics.

HONORS PROGRAM

The University Honors Program provides academic and other opportunities for superior students. Qualified students in the School of Business may follow a program of study that leads to graduation in the Honors Program. A complete description is given in Part II of the *Bulletin*. Dr. Dennis M. O'Toole is the honors advisor for School of Business students.

COOPERATIVE EDUCATION AND INTERNSHIPS

Students enrolled in the School of Business are eligible to participate in the University Cooperative Education Program. Qualified students who are placed with an employer will either alternate several semesters of full-time study with several semesters of work experience or combine study with part-time work experience during the same semester. The School of Business also offers internships in several majors that allow advanced students to pursue part-time work assignments with area employers for one or more semesters.

INTERNATIONAL BUSINESS

Students interested in international business are encouraged to participate in the programs available in the School of Business and in other divisions of the University. The international dimension of business is included in a number of courses required by School of Business students. In addition, the School of Business offers specialized courses that address specific international topics. A minor in international studies, coordinated by the Department of Urban Studies and Planning, is open to all students in the University. VCU students may also participate in ISEP

(International Student Exchange Program), that allows students to complete some course work toward a VCU degree while attending a foreign institution. The University also organizes specialized travel and study abroad programs through its Office of International Education. The School of Business has a local committee of AIESEC, an international association of students in business and economics. AIESEC promotes an understanding of multicultural issues in business through activities with international business professionals and short-term work experience, called traineeships, in foreign countries.

BUSINESS COUNCIL

The Business Council of the School of Business is composed of leading business executives. The council meets periodically to advise and assist the dean and faculty in the development of the total educational program and help in the school's continuing efforts to maintain excellence in the education of its students.

ACADEMIC POLICIES

Programs of study leading to a baccalaureate degree in the School of Business are organized into two components, the foundation program and the advanced program. Students admitted to the School of Business as freshmen and sophomores enroll in the foundation program. Continuing students who meet the required academic standards are admitted to a major at the beginning of the student's junior year. Transfer applicants may also be considered for admission to the foundation and advanced programs.

The selection of applicants for acceptance to a major is competitive and based on academic performance. In order to maintain the quality of its educational programs, the number of students admitted in any semester depends on the resources available to the school. All students admitted to a major must satisfy a grade-point average requirement and must have completed, prior to enrollment in the advanced program, a minimum of 54 credits in the foundation program (outlined on page 220) or the equivalent. Students admitted to the business foundation program prior to Fall 1991 must have a minimum cumulative grade-point average of 2.25 for admission to a major. Students admitted to the business foundation program in Fall 1991 and

thereafter must have a minimum cumulative grade-point average of 2.50 for admission to a major. Transfer students must also meet the 2.25/2.50 GPA requirement on courses taken at their former institution(s). The 54 credits completed must include the following courses or their equivalents: ENG 101-102, BUS 111-112, ECO 210-211, and BUS 203-204.

Applications and information for admission to all undergraduate programs in the School of Business may be obtained from University Enrollment Services, Virginia Commonwealth University, 821 West Franklin Street, Box 2526, Richmond, VA 23284-2526.

ADMISSION DEADLINES

Freshman applicants to the School of Business should follow the application submission dates for the University stated in part II of this bulletin. Applicants for readmission and transfer applicants should submit applications by January 1 for fall enrollment and by October 1 for spring enrollment.

Students currently enrolled in degree programs at VCU who wish to request a change of major to any School of Business program should file the request prior to the end of the eighth week of classes during the fall and spring semesters and by July 1 during the summer. The change, if approved, becomes effective at the beginning of the following semester.

Students completing the business foundation program must apply for admission to the advanced program by requesting a change of major. The request should be filed according to the above dates during the semester before they wish to enroll in advanced program courses.

ACCELERATED PROGRAM

Through the School of Business Accelerated Program, students may earn both the Bachelor of Science degree and a master's degree in business disciplines within four years. Students with a 1200 minimum SAT score and a high school rank in the upper 15 percent of their class are eligible to apply for the Accelerated Program; to continue in the program, a student must maintain a 3.5 VCU GPA. In addition to saving time and money, accelerated students may enjoy a number of opportunities and privileges: contacts with business leaders, enrichment opportunities, paid internships, scholarships, guaranteed admission to master's program, study

abroad in English for credit at no increase in cost, and eligibility for the University Honors Program with its many special privileges. Students admitted to the School of Business may apply for the Accelerated Program through the School of Business Undergraduate Studies Office, Room 3119.

GUARANTEED ADMISSION

VCU students who receive their undergraduate degrees in business are guaranteed admission into a VCU School of Business master degree program if they meet the following criteria: (a) 1200 minimum SAT score, (b) 3.5 minimum undergraduate cumulative GPA, (c) GMAT prior to entry into the master degree program, and (d) an on-campus interview.

ENROLLMENT IN BUSINESS COURSES

Business students who register during the first six weeks of advance registration will be guaranteed space (not a specific section) in School of Business classes for which they are eligible with the possible exception of classes taught in the computer laboratories.

All students attending the University are eligible for enrollment in freshman and sophomore courses offered by the School of Business (all 100–200 level courses with BUS and ECO prefixes), provided that appropriate course prerequisites are met. Eligibility for enrollment in upper division courses (BUS and ECO 300–400 level) is restricted to junior, senior, and graduate students admitted to a major field within the University and special students who have completed a baccalaureate degree. Students without these qualifications may enroll in only the following upper division courses, provided any course prerequisites are met:

BUS 301–302 Business Statistics
 BUS 305 Tax Planning for Individuals
 BUS 315 Personal Finance (no credit for business majors)
 BUS 316 Principles of Real Estate
 BUS 317 Real Property Management
 BUS 318 Real Estate Negotiating
 BUS 326 Real Estate Law
 BUS 333 Risk and Insurance
 BUS 349 Office Procedures
 BUS 358 Introduction to Structured Programming
 BUS 360 Business Information Systems
 BUS 362 Computer Hardware and Software
 BUS 421 Small Business Management
 BUS 423 Real Estate Brokerage
 BUS 425 Real Estate Appraisal
 BUS 428 Employee Benefit Planning

BUS 429 Real Estate Finance
 BUS 431 Advanced Real Estate Appraisal
 BUS 443–444 Word Processing Concepts and Procedures

LIMITATION ON TOTAL CREDITS EARNED BY NONBUSINESS MAJORS

The number of credits that nonbusiness majors may accumulate from enrollment in classes offered by the School of Business is limited to a maximum of 25 percent of the total credits required for graduation in the nonbusiness program. Students who desire to present for graduation credit more than 25 percent of their course work in business (BUS) and economics (ECO) courses must be admitted to a major in the School of Business, must complete a minimum of 27 credits from the School of Business advanced program after acceptance into the major, and must meet all graduation requirements of the School of Business.¹

TRANSFER POLICIES

In addition to the general requirements of the University and the School of Business, the following regulations apply to students who transfer from other institutions to enroll in an undergraduate program in the School of Business.

1. Calculation of the GPA requirement for admittance into the School of Business advanced program considers grades earned at *all* institutions attended.
2. Transfer of business and economics courses from two-year institutions shall be limited to such courses that the School of Business offers at the lower division (freshman and sophomore years).
3. Transfer of business and economics courses from baccalaureate degree-granting institutions shall be limited to courses offered at levels no lower than the levels of comparable courses offered in the School of Business.

STUDENT ADVISING

Each student admitted to a major is assigned a faculty advisor in the major field of study. Students enrolled in the foundation program are assigned advisors to assist them until the founda-

¹This does not limit the number of courses in economics for economics majors enrolled in the College of Humanities and Sciences.

tion program has been completed. The faculty advisor assists students in planning course work, becoming familiar with University services, interpreting University rules and procedures, and clarifying career objectives.

While the faculty of the School of Business will endeavor to provide timely and accurate advice, *the student has the responsibility to know and to satisfy the degree requirements of his/her academic program.* Each student should become familiar with the curriculum requirements on the following pages, the appropriate sequencing of courses and course prerequisites, and the academic regulations covered in Part V of this bulletin.

GENERAL REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN BUSINESS

A minimum of 126 credits is required. Of the 126 credits, no more than 4 may be in physical education (activity courses) and no more than 4 may be from the BUS 160 through BUS 168 courses. The foundation program specifies the course requirements during the freshman and sophomore years of study for students interested in pursuing a baccalaureate degree in the School of Business. Students who successfully complete a minimum of 54 credits in the foundation program, including ENG 101–102, ECO 210–211, BUS 111–112, and BUS 203–204, will have completed the course requirements for admission to a major in the School of Business. The advanced program outlines the course requirements for students admitted to a major in the School of Business. Candidates for the Bachelor of Science degree in the School of Business must complete the 126 credits outlined in the combination of the foundation and advanced programs.

FOUNDATION PROGRAM

	<i>Credits</i>
1. General Requirements (21 credits)	
ENG 101–102 Composition and Rhetoric	6
ECO 210–211 Principles of Economics	6
BUS 111–112 or MAT 111–112 Mathematics	6
SPE 121 Effective Speech or 321 Speech for Business and the Professions (only one may be used toward degree requirements)	3
2. Restricted Electives (24 credits)	
a. Natural Science	6
One of the following six credits:	
BIO 109–110 General Biology,	

CHE 101–102 General Chemistry,*
 CHE 103–104 Introduction to Modern Chemistry,
 PHY 101 Foundations of Physics and PHY 102 Frontiers of Physics,
 PHY 103 Elementary Astronomy and PHY 105 Physical Geology, or
 PHY 201–202 General Physics.

A recommended laboratory (1 credit) is optional in all courses except PHY 201–202 (required).
 *8 credits

b. Human Behavior	6
Any combination of six credits in Psychology, Sociology, and Anthropology (excluding PSY 214 Application of Statistics and SOC 214 Application of Statistics, which may not be taken for degree credit by School of Business majors).	
c. Institutional Studies ¹	6
One of the following six credits:	
POS 101, 102 American Government;	
HIS 101, 102 Introduction to European History;	
HIS 103, 104 Introduction to American History;	
or any six credits from:	
POS 201 Introduction to Politics;	
POS 202 Comparative Politics; and	
POS 203 Issues in World Politics.	
d. Literature or Language	6
Any combination of six credits from:	
ENG 201, 202 Western World Literature;	
ENG 203, 204 English Literature;	
ENG 205, 206 American Literature;	
ENG 241 Introduction to Shakespeare; and	
PHI 103, 104 Introduction to the History of Western Philosophy	
OR	
Any two-course sequence (6–8 credits) in one foreign language.	
3. Non-School of Business Electives (6 credits)	6
4. School of Business Core (6 credits)	
BUS 203–204 Introduction to Accounting	6
Total	57

ADVANCED PROGRAM

1. School of Business Core (30 credits)	
BUS 301 Business Statistics	3
BUS 308 Introduction to Marketing	3
BUS 311 Financial Management	3
BUS 319 Organizational Behavior	3
BUS 320 Production/Operations Management	3
² BUS 323 Legal Environment of Business	3
BUS 325 Organizational Communication	3
BUS 360 Business Information Systems	3
BUS 434 Strategic Management	3
ECO 303 Managerial Economics	3
2. Major Requirements (27 credits)—Listed under the major requirements section of each department	27

¹Students intending to major in accounting must take political science.

²Accounting majors are required to take BUS 481 instead of BUS 323.

3. Electives ³ (business or nonbusiness)	12
Total	69
TOTAL Foundation and Advanced Programs	126

ACCOUNTING

BILL N. SCHWARTZ

Chair of the Department	
Edward N. Coffman	Harry D. Dickinson
Wayne L. Edmunds	Ruth W. Epps
John O. Everett	Charles L. Holley
Raymond T. Holmes, Jr.	Rita P. Hull
Ruth Ann McEwen	Philip R. Olds
Edward C. Spede	John B. Sperry
Roxanne M. Spindle	Catherine L. Staples
Rasoul H. Tondkar	Jackie G. Williams

The accounting program is designed to prepare students for careers as professional accountants in public practice, industry, and government. Students are encouraged to sit for a professional examination in their final semester and the program is designed to support this recommendation.

Major Requirements

	<i>Credits</i>
BUS 303–304 Intermediate Accounting I and II	6
BUS 306 Cost Accounting	3
BUS 307 Accounting Systems	3
BUS 404 Advanced Accounting	3
BUS 405 Tax Accounting	3
BUS 406 Auditing	3
BUS 407 Advanced Auditing OR	
BUS 410 Advanced Tax Accounting	3
BUS 411 Accounting Opinions and Standards	3
Total	27

Recommended Electives

- BUS 401 Governmental and Not-For-Profit Accounting (1 credit)
- BUS 407 Advanced Auditing OR
- BUS 410 Advanced Tax Accounting
- BUS 482 Law for Accountants II

POST-BACCALAUREATE CERTIFICATE IN ACCOUNTING

The post-baccalaureate certificate in accounting is designed for individuals who have earned a baccalaureate degree in a field other than accounting and who desire to continue their educa-

tion beyond the undergraduate level but do not aspire to a master's degree. A complete description of the program is given in the *Graduate Bulletin*. For information relating to the certificate program, contact the Associate Dean for Graduate Studies, School of Business, Box 4000, 1015 Floyd Avenue, Richmond, VA 23284-4000.

BUSINESS ADMINISTRATION

The business administration major is designed to provide a broad education in business by allowing students to complete courses in several different subject areas.

Major Requirements

The business administration major includes the following required core courses and a choice of four courses as specified below.

	<i>Credits</i>
A. Core Courses (15 hours)	
BUS 302 Business Statistics	3
BUS 331 Personnel Management	3
BUS 339 Management Science	3
BUS 419 Managing Dynamic Organizations	3
BUS 489 Managerial Applications and Skills Development	3
B. Select four courses from the following six areas; at least one course must be taken in each of three different areas	
Total	12
	27

Finance

- BUS 312 Intermediate Financial Management
- BUS 314 Investments
- BUS 414 Security Analysis and Portfolio Management
- BUS 417 Cases in Financial Management
- BUS 437 Funds Management in Financial Institutions

Insurance/Risk Management

- BUS 333 Risk and Insurance
- BUS 424 Property and Liability Insurance
- BUS 426 Life and Health Insurance
- BUS 428 Employee Benefit Planning
- BUS 430 Social Insurance
- BUS 432 Insurance Law

Owner-Managed Business

- BUS 421 Small Business Management
- BUS 436 Analysis of the Small Firm

Human Resources Management/Industrial Relations

- BUS 420 Seminar in Industrial Relations
- BUS 427 Labor and Employment Relations Law
- BUS 433 Compensation Management
- BUS 435 Seminar in Personnel Management

Production/Operations Management

- BUS 385 Production/Operations Management II
- BUS 439/STA 439 Statistical Quality Control

³Different requirements exist for the following students:

- a. Students who intend to pursue graduate study in business should take BUS 302.
- b. Students majoring in finance, marketing, and in real estate and urban land development must take BUS 302.
- c. Accounting majors should consider the recommended electives listed below the accounting major requirements.
- d. Accounting students are expected to have competency in computer-based word processing and spreadsheet skills—such as those taught in BUS 161, 162—in some of the accounting major courses. Students without this proficiency should consult their advisor.

BUS 440 Forecasting Methods and Process
 BUS 441 Production Planning and Control Systems

*Real Estate and Urban Land
 Development*

BUS 316 Principles of Real Estate
 BUS 317 Real Property Management
 BUS 326 Real Estate Law
 BUS 423 Real Estate Brokerage
 BUS 425 Real Estate Appraisal
 BUS 429 Real Estate Finance
 BUS 431 Advanced Real Estate Appraisal

**DECISION SCIENCES AND
 BUSINESS LAW**

DON M. MILLER

Chair of the Department

Robert L. Andrews	Donna G. Byrd
George C. Canavos	William H. Daughtrey, Jr.
Glenn H. Gilbreath	Walter S. Griggs, Jr.
Ibrahim Kurtulus	Howard R. Mead, Jr.
Kim Melton	Elliott Minor
Subhash C. Narula	Carol D. Rasic
Alfred L. Smith, Jr.	Charles H. Smith
Michael A. Spinelli	Annie M. Stith-Willis

The department offers a variety of courses for all business students in the disciplines of business law, mathematics, management science, statistics, and production/operations management.

The major in production/operations management is designed to prepare students for careers involving the planning and control of operations that produce goods or services. Graduates of this program will find job opportunities in such areas as quality management and quality control, scheduling, materials and inventory management, purchasing, and forecasting. Positions in production/operations management are found in both manufacturing and service organizations.

**Production/Operations Management
 Major Requirements**

Credits

A. Core Courses (15 credits)	
BUS 302 Business Statistics	3
BUS 331 Personnel Management	3
BUS 339 Management Science	3
BUS 385 Production/Operations Management II	3
BUS 439/STA 439 Statistical Quality Control	3
B. Select four courses from the following list (12 credits)	12
Total	27
BUS 306 Cost Accounting	
BUS 386 Logistics and Physical Distribution	
BUS 440 Forecasting Methods and Process	
BUS 441 Production Planning and Control Systems	
BUS 491 Topics in Business (approved topic)	
Approved Elective — choose from:	

PSY 310 Industrial Psychology
 BUS 324 Legal Aspects of the Management
 Process
 BUS 361 Systems Analysis
 BUS 419 Managing Dynamic Organizations
 BUS 420 Seminar in Industrial Relations

ECONOMICS

MICHAEL D. PRATT

Chair of the Department

Larry G. Beall	John H. Bowman
Douglas D. Davis	Charles J. Gallagher
William B. Harrison	Ronald M. Harstad
George E. Hoffer	Edward L. Millner
Shannon K. Mitchell	Max Moszer
Dennis M. O'Toole	Steven P. Peterson
Robert J. Reilly	Abdelaleem M. Sharshar
Eleanor C. Snellings	James N. Wetzel
Jang H. Yoo	

The major in economics offers an introduction to the fundamentals of business and economics, with a concentration in the third and fourth years on methods of economic analysis. The curriculum prepares students for positions in business and government and for graduate study. The department also offers courses in economics to meet the needs of students in other curricula offered by the university.

A major in economics is also offered in the College of Humanities and Sciences for those students who prefer a liberal arts core curriculum.

Major Requirements

Credits

ECO 301 Microeconomic Theory	3
ECO 302 Macroeconomic Theory	3
ECO 307 Money and Banking	3
ECO 489 Senior Seminar in Economics	3
ECO Electives	12
BUS 302 Business Statistics	3
Total	27

Minor in Economics

A minor in economics is offered. The requirements for the minor are listed in Part VI of this bulletin.

FINANCE AND MARKETING

HEIKO de B. WIJNHOLDS

Chair of the Department

Sam G. Berry	James H. Boykin
Deborah L. Cowles	Kenneth N. Daniels
Clifford J. Elliott	Jerry T. Ferguson
Frank J. Franzak	Elliott Hubbard
Michael W. Little	Howard E. McCoy
Dennis R. McDermott	E. G. Miller
Neil B. Murphy	Phyllis S. Myers

Daniel P. Salandro
David E. Upton

Tai S. Shin
David J. Urban

The department offers majors in finance, marketing, and real estate and urban land development.

Finance

The major in finance prepares graduates to pursue additional study in finance at the graduate level and to enter a variety of financial careers including corporate finance, the securities industry, banking, and insurance. Students may choose a concentration in one of two tracks: finance or insurance/risk management.

Major Requirements

	<i>Credits</i>
BUS 312 Intermediate Financial Management ...	3
BUS 314 Investments	3
BUS 333 Risk and Insurance	3
BUS 437 Funds Management in Financial Institutions	3
Select one of the two tracks (15 hours)	<u>15</u>
Total	27

Finance Track

BUS 414 Security Analysis and Portfolio Management	3
BUS 416 International Financial Management ..	3
BUS 417 Cases in Financial Management	3
BUS 455 Options, Futures, and Swaps	3
Approved Finance Elective	<u>3</u>
	15

Insurance/Risk Management Track

BUS 424 Property and Liability Insurance	3
BUS 428 Employee Benefit Planning	3
Choose two of the following	6
BUS 426 Life and Health Insurance	
BUS 430 Social Insurance	
BUS 432 Insurance Law	
Approved Insurance/Risk Management Elective	<u>3</u>
	15

Approved Electives for the Finance Track

- BUS 303 Intermediate Accounting I
- BUS 306 Cost Accounting
- BUS 424 Property and Liability Insurance
- BUS 426 Life and Health Insurance
- BUS 429 Real Estate Finance
- BUS 491 Topics in Business (approved finance topics)
- ECO 307 Money and Banking
- ECO 402 Business Cycles and Forecasting

Approved Electives for the Insurance/Risk Management Track

- BUS 305 Tax Planning for Individuals
- BUS 331 Personnel Management
- BUS 350 Tort Law

- BUS 416 International Financial Management
- BUS 417 Cases in Financial Management
- ECO 307 Money and Banking
- ECO 421 Government and Business
- SRA 440 Incident Investigation
- SRA 430 Systems Safety

Marketing

The major in marketing is designed to give the student a broad working knowledge of contemporary marketing philosophy and practice. Students working closely with their advisors will be able to choose from a number of available marketing courses those that most closely meet their interests and career aspirations. Graduates of this program will find career opportunities in such fields as marketing management, advertising, sales, marketing research, public relations, retailing, and management of non-business organizations.

Major Requirements

	<i>Credits</i>
BUS 309 Marketing in the Changing World	3
BUS 310 Introduction to Marketing Research	3
BUS 471 International Marketing	3
BUS 476 Marketing Management	3
Five electives from the following group	<u>15</u>
	27

- BUS 371 Elements in Advertising Strategy
- BUS 372 Product Development and Management
- BUS 373 Consumer Behavior
- BUS 374 Marketing Research: Field Work
- BUS 376 Dynamics of Retail Management
- BUS 377 Channel Systems
- BUS 472 Trends in Retailing
- BUS 474 Personal Selling and Sales Management
- BUS 491 Topics in Business
- BUS 492 Independent Study
- BUS 493 Internship

Real Estate and Urban Land Development

The major in real estate and urban land development is designed to prepare students for careers in land development, brokerage, valuation and investment counseling, site analysis and selection, real property management, mortgage lending, and bank trust and corporate real estate departments, as well as other real estate related private and governmental careers.

Major Requirements

	<i>Credits</i>
BUS 310 Introduction to Marketing Research	3
BUS 316 Principles of Real Estate	3
BUS 326 Real Estate Law	3
BUS 423 Real Estate Brokerage	

or

224 School of Business

BUS 431 Advanced Real Estate Appraisal 3
 BUS 425 Real Estate Appraisal 3
 BUS 429 Real Estate Finance 3
 BUS 437 Funds Management in Financial Institutions
 or
 ECO 307 Money and Banking 3
 21
 plus any two of the following three courses
 BUS 317 Real Property Management
 BUS 318 Real Estate Negotiating
 USP 533 Land Use and Site Planning 6
 27

**POST-BACCALAUREATE CERTIFICATE
 IN REAL ESTATE AND URBAN LAND
 DEVELOPMENT**

The post-baccalaureate certificate is designed for individuals who have earned a baccalaureate degree in a field other than real estate and urban land development and who desire to continue their education beyond the undergraduate level but do not aspire to a master's degree. A complete description of the program is given in the *Graduate Bulletin*. For information relating to the certificate program, contact the Associate Dean for Graduate Studies, School of Business, 1015 Floyd Avenue, Box 4000, Richmond, VA 23284-4000.

INFORMATION SYSTEMS

A. JAMES WYNNE
 Chair of the Department
 David A. Ameen
 Edwin E. Blanks
 Robert W. Duvall
 Jean B. Gasen
 Lynn A. Jensen
 Robert I. Mann
 Ago M. Quay
 J. William Riehl
 H. Roland Weistroffer

William S. Bice
 Richard J. Coppins
 F. Paul Fuhs
 Bartow Hodge
 Kai S. Koong
 Josephine F. Morecroft
 Richard T. Redmond
 John W. Sutherland
 Howard B. Wilson

The major in information systems is designed to prepare students for professional careers in data processing. Through required and elective courses, students will be prepared for positions of programmer, systems analyst, or software analyst. The department also offers courses in information systems to meet the needs of students in other curricula offered by the university.

Major Requirements

	<i>Credits</i>
BUS 358 Introduction to Structured Programming ...	3
BUS 359 Advanced Program Design Techniques.....	3
BUS 361 Systems Analysis	3
BUS 362 Computer Hardware and Software	3
BUS 363 COBOL Programming	3
BUS 365 System Design	3

BUS 464 Data Base Systems 3
 Two electives from the following group 6
 27

BUS 366 Computerware Analysis
 BUS 460 Assembler Programming
 BUS 461 Systems Project Planning
 BUS 463 Selected Programming Languages
 BUS 466 Applications Programming
 BUS 467 Distributed Data Processing and
 Telecommunications
 BUS 468 Direction and Coordination of
 Information Systems Organizations
 BUS 469 Information and Decision Systems
 in Organizations
 BUS 470 Data Communication Networks
 BUS 493 Internship

**POST-BACCALAUREATE CERTIFICATE
 IN INFORMATION SYSTEMS**

The post-baccalaureate certificate in information systems is designed for students who have earned a baccalaureate degree in a field other than information systems and who desire to continue their education beyond the undergraduate level but do not aspire to a master's degree. A complete description of the program is given in the *Graduate Bulletin*. For information relating to the certificate program, contact the Associate Dean for Graduate Studies, School of Business, 1015 Floyd Avenue, Box 4000, Richmond, VA 23284-4000.

MANAGEMENT

R. JON ACKLEY
 Chair of the Department
 Randolph T. Barker
 Charles M. Byles
 George R. Gray
 Eugene H. Hunt
 Iris W. Johnson
 John D. Lambert
 C. Glenn Pearce
 George W. Rimler
 Robert R. Trumble

Darrell R. Brown
 Guy J. DeGenaro
 Barbara S. Hall
 J. Howard Jackson
 Wallace R. Johnston
 Donald W. Myers
 Michael W. Pitts
 Randall G. Sleeth
 D. Robley Wood

The department offers majors in human resources management/industrial relations and management.

**Human Resources Management/Industrial
 Relations**

The major in human resources management/industrial relations offers students a broad overview to the educational and application aspects of human resources management/industrial relations. Students pursue an in-depth study

in a variety of topical areas, including personnel management, labor and employment relations law, compensation management, and employee benefits. Students are also encouraged to broaden their knowledge base by completing electives in industrial psychology. After completing this program, students can enter the public and private arenas in compensation, employee benefits, incentive awards programs, and personnel.

Major Requirements

	<i>Credits</i>
BUS 331 Personnel Management	3
BUS 419 Managing Dynamic Organizations	3
BUS 420 Seminar in Industrial Relations	3
BUS 427 Labor and Employment Relations Law	3
BUS 433 Compensation Management	3
BUS 435 Seminar in Personnel Management	3
BUS 489 Managerial Applications and Skills Development	3
Restricted Electives*	6
Total	27

Restricted Electives (Choose two)

- BUS 302 Business Statistics
- BUS 428 Employee Benefit Planning
- ECO 431 Labor Economics

*Students planning to attend graduate school should complete BUS 302 either as a restricted elective here or as a free elective.

Management

The major in management consists of three tracks. The administrative systems management track presents students with the knowledge necessary to manage both people and resources within the modern, automated business office. Students completing this track can expect to assume entry-level management positions in various administrative systems. The general management track provides students a broad-based management education, which in turn gives students flexibility in the types of management-level positions sought upon graduation. Students completing this program can enter private or public employment in a variety of entry-level management positions. The owner-managed business track allows students to develop skills in working with small firms and eventually starting their own small firms. Upon completion of the program, students can obtain a variety of positions in the functional areas of business. Students selecting this major complete a three-course "core" and then an additional six courses in a track.

Major Requirements

	<i>Credits</i>
A. Major Core (9 credits)	
BUS 331 Personnel Management	3
BUS 419 Managing Dynamic Organizations	3
BUS 489 Managerial Applications and Skills Development	3
B. Select one of the three tracks (18 hours)	18
Total	27
1. Administrative Systems Management Track	
BUS 327 Business and Technical Report Writing	3
BUS 346 Automated Office Concepts	3
BUS 361 Systems Analysis	3
BUS 438 Seminar in Administrative Systems Management	3
BUS 442 Management of Records Systems and Technologies	3
BUS 443 Word Processing Concepts and Procedures	3
Total	18
2. General Management Track	
BUS 346 Automated Office Concepts	3
BUS 418 International Management	3
BUS 433 Compensation Management	3
Management Environment Electives	6
Management Applications Elective*	3
Total	18
3. Owner-Managed Business Track	
BUS 306 Cost Accounting	3
BUS 421 Small Business Management	3
BUS 436 Analysis of the Small Firm	3
Restricted Electives	9
Total	18

Restricted Electives (Choose three)

- BUS 316 Principles of Real Estate
- BUS 333 Risk and Insurance
- BUS 346 Automated Office Concepts
- BUS 376 Dynamics of Retail Management
- BUS 385 Production/Operations Management II
- PHI 214 Ethics and Business

Management Environment Electives (Choose two)

- BUS 324 Legal Aspects of the Management Process
- BUS 339 Management Science
- BUS 421 Small Business Management

Management Applications Electives (Choose one)

- BUS 302 Business Statistics
- BUS 316 Principles of Real Estate
- BUS 333 Risk and Insurance
- PHI 214 Ethics and Business

*Students planning to attend graduate school should complete BUS 302 either as a Management Applications elective here or as a free elective.

DOUBLE MAJORS

A double major is the fulfillment of the requirements in two majors concurrently. To earn a degree in double majors, the student must fulfill all of the requirements of the degree program(s) of which the majors are a part. Students declare a double major in the School of Business through

the change-of-major process in University Enrollment Services. The request for a double major should be approved prior to the student beginning courses in the second major. For a second major in the School of Business, the student must complete all of the courses required for each major. In the event that more than one course overlaps both majors, students must complete additional courses to reach a minimum of 24 credits in the second major. The courses for the second major must be approved by the chairman of the department in which the second major is offered at the time the student declares the double major. Students admitted to two majors are assigned an advisor in each major.

PREPARATION FOR THE STUDY OF LAW

CAROL D. RASNIC

Department of Decision Sciences and Business Law,
Advisor

HUSAIN MUSTAFA

Department of Political Science, Advisor

JAMES L. HAGUE

Department of Administration of Justice
and Public Safety, Advisor

Few law schools list specific undergraduate courses as prerequisites for admission. Thus the student who is considering law school education may major in virtually any department in the College of Humanities and Sciences, the School of Business, or the School of Community and Public Affairs. Students, however, are encouraged to obtain a broad liberal arts background with emphasis on the social sciences and English.

The advisors to prelaw students maintain continual contact with law school admissions offices and will assist any interested student with questions concerning curriculum, financial assistance, application procedure, or the law school admissions test.

GRADUATE PROGRAMS IN BUSINESS AND ECONOMICS

MICHAEL W. LITTLE

Associate Dean for Graduate Studies

The School of Business offers graduate work leading to the degrees of Master of Business Administration, Master of Science in business, Master of Arts in economics, Master of Accountancy, Master of Taxation, and the Doctor of Philosophy in business. The programs are designed to prepare candidates for responsible *participation in business*, industry, government,

and education. Details of the programs are given in a separate graduate bulletin which will be sent upon request. Write to the Associate Dean for Graduate Studies, School of Business, Virginia Commonwealth University, 1015 Floyd Avenue, Box 4000, Richmond, VA 23284-4000.

A student may not enroll in graduate courses in the School of Business without first being formally admitted to a VCU graduate program. Exceptions to this policy are made only with written permission of the associate dean for graduate studies in business.

EXTERNAL AFFAIRS

CHARLES J. GALLAGHER

Associate Dean for External Affairs

LINDA N. DALCH

Director of Development

The associate dean for external affairs has primary responsibility for coordinating all School of Business activities that reach out into the community. This office is concerned with overall direction of activities of the Virginia Council on Economic Education; the noncredit aspects of the real estate, insurance, and small business programs; and other external activities not directly related to academic degree programs. The associate dean for external affairs also assists the School of Business Alumni Association with its activities and programs and coordinates fund raising projects for the school.

Virginia Council on Economic Education

The purpose of the council is to encourage and promote a better understanding of economics and the American economy among Virginia school administrators, teachers, community members, and the public. VCU serves as one of nine Centers on Economic Education in Virginia.

Insurance Studies Program

The program is designed to educate and promote awareness in areas such as risk management, insurance, and financial services. Both academic and professional programs that work closely with area insurance professionals are offered.

Small Business Development Program

Students participating in this program become involved in consulting, counseling, and research related to a particular business problem.

Students are encouraged to provide extensive plans to implement their solutions.

Virginia Real Estate Research Center

The center provides information to educators, real estate professionals, and the public concerning current market trends. Extensive research is conducted on land developing, real estate marketing and financing, and home and business construction. Quarterly and annual reports summarizing the center's research are developed and made available to the public.

The center also searches for innovative ideas for improving future real estate markets.

Alfred L. Blake Chair of Real Estate

This chair, which has been endowed by the Virginia Realtors Foundation, ranks third in the nation in the amount of its funding. It provides financial assistance to the endowed chairholder for research and support services. The purpose of the chair is to promote an understanding of real estate operations by providing both credit and noncredit courses.

COURSES IN BUSINESS (BUS)

111/Mathematics 111 Basic Mathematics for the Behavioral, Social, and Management Sciences. Semester course; 3 lecture hours. 3 credits. Prerequisites: one year of high school algebra and a satisfactory score on the Mathematics Placement Test. Topics include sets, functions, exponents, logarithms, mathematics of finance, matrix algebra, systems of equations, and linear programming. Students may not receive degree credit for both BUS/MAT 111 and MAT 101.

112/Mathematics 112 Elements of Calculus for the Behavioral, Social, and Management Sciences. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 101 or BUS/MAT 111. Differential calculus, integral calculus.

121 The Business Environment. Semester course; 3 lecture hours. 3 credits. Concepts and issues in contemporary business. (Not open to juniors and seniors in the School of Business.)

145 Beginning Typewriting. Semester course; 3 lecture hours. 3 credits. Includes the development of skill in typing letters, manuscripts, and simple statistical work. May not be taken for credit by persons who have received credit for as much as two semesters of prior instruction in typewriting at any level, except with permission of the department chairman.

160 Computer Literacy and Microcomputer Concepts. Five-week course; 1 lecture hour. 1 credit. Familiarizes students with basic computer terminology and concepts and introduces them to a microcomputer environment. Topics include the history of computers, an introduction to hardware and software, computer applications, and hands-on experience on a microcomputer system. This course

requires no prior knowledge of computers, and it provides the necessary foundation for introductory computer programming and applications courses. Students may not receive degree credit for both CSC 150 and BUS 160.

161 Microcomputer Wordprocessing. Five-week course; 1 lecture hour. 1 credit. Prerequisite: BUS 160 or equivalent knowledge. Exposes students to word processing on the microcomputer. A specific package will be used throughout the five-week course. The course will help students prepare documents and papers that other VCU coursework may require. Students may not receive degree credit for both CSC 150 and BUS 161.

162 Application Packages for Computers. Five-week course; 1 lecture hour. 1 credit. Prerequisite: BUS 160 or equivalent. Provides hands-on experience with a popular microcomputer spreadsheet package. The course will help students prepare spreadsheets that other VCU coursework may require. Students may not receive degree credit for both CSC 150 and BUS 162.

163 BASIC Computer Programming. Five-week course; 1 lecture hour. 1 credit. Prerequisite: BUS 160 or equivalent. Introduces students to introductory level programming on microcomputers using the BASIC programming language. This course is designed for students who have not previously studied a procedure oriented programming language. Students may not receive degree credit for both CSC 150 and BUS 163.

164 Introduction to Mainframe Computing. Five-week course; 1 lecture hour. 1 credit. Introduces students to logon procedures, text editing, and program development facilities on IBM/370 mainframe systems and on systems using the UNIX operating system. Topics will include the use of the ISPF/PDF system and the WYLBUR system for text editing and program development on IBM/370 systems, the use of the vi editor under UNIX, and system utilities for file maintenance on both systems. This course is for students who have no experience on large computer systems and who will be using mainframe and minicomputers in their courses.

165 Advanced Spreadsheets for Microcomputers. Five-week course; 1 lecture hour. 1 credit. Prerequisite: BUS 162 or equivalent. Familiarizes students with the creation and use of macros, menu building, and package building. Students will be introduced to the use of database functions and the creation of tables from databases. This course is designed for those students with some prior experience with computer-based spreadsheet packages.

166 Database Applications for Microcomputers. Five-week course; 1 lecture hour. 1 credit. Prerequisite: BUS 160 or equivalent. Provides hands-on experience with a selected popular database management package in the personal computer market. The course is designed for those students not majoring in information systems.

167 Introduction to SAS. Five-week course; 1 lecture hour. 1 credit. Familiarizes students with the application of SAS computer software using a mainframe computer. Topics include an introduction to the mainframe, structure of SAS, and hands-on experience using a set of raw data for analysis in support of business decisions and research.

168 Introduction to SPSS. Five-week course; 1 lecture hour. 1 credit. Familiarizes students with the application of SPSS computer software using a mainframe computer. Topics include an introduction to the mainframe, structure of

SPSS, and hands-on experience using a set of raw data for data analysis. This course is designed for individuals who desire to use SPSS for data analysis in support of business decisions and research.

202 Accounting for Nonbusiness Majors. Semester course; 3 lecture hours. 3 credits. A nontechnical introduction to the principles of financial and managerial accounting with emphasis on the use and interpretation of financial reports, managerial planning and control. The course is for the individual who seeks a basic knowledge of accounting and its uses. It is designed for the user of accounting information rather than the preparer. The course is open only to nonbusiness students. This course cannot be substituted for BUS 203, 204, or 205.

203–204 Introduction to Accounting. Continuous course; 3 lecture hours. 3–3 credits. Theoretical and technical facets of financial and managerial accounting for business. Accumulation, analysis, interpretation, and uses of accounting information.

205 Introductory Accounting Survey. Semester course; 3 lecture hours. 3 credits. An accelerated course covering theoretical and technical facets of financial and managerial accounting for business. Accumulation, analysis, interpretation, and uses of accounting information. Restricted to students in the Post-Baccalaureate Certificate in accounting program. May not be counted toward any of the B.S. programs offered by the School of Business.

245 Intermediate Typewriting. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 145. Includes development of typewriting speed and accuracy and the application of typewriting to business papers. May not be taken for credit by persons who have received credit for as much as four semesters of prior instruction in typewriting at any level, except with permission of the department chairman.

301–302 Business Statistics. Continuous course; 3 lecture hours. 3–3 credits. Prerequisites: BUS 111–112 or MAT 111–112. Statistical methods employed in the collection and analysis of business and economic data and applications in decision making. First semester: statistical thinking, concepts of variability, process studies, data collection, descriptive measures, probability, and introduction to statistical inference. Second semester: continuation of statistical inference, regression, and correlation analysis with emphasis on problem formulation and interpretation. Students may not receive degree credit for both BUS 301 and STA 213.

303–304 Intermediate Accounting I and II. Continuous course; 3 lecture hours. 3–3 credits. Prerequisites: BUS 160, 161, 162 or equivalent competency, BUS 204, and junior standing. Theoretical standards and procedures for accumulating and reporting financial information about business. Classification, valuation, and timing involved in determination of income and asset/equity measurement.

305 Tax Planning for Individuals. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 203. Not open to accounting majors. Credit will not be given for both this course and BUS 405. A general course in tax accounting concepts and procedures for students with a minimum of previous work in accounting. Emphasis is on aspects of taxation affecting the individual: federal and state income, estate, inheritance, gift, excise, and payroll taxes; fundamentals of tax planning.

306 Cost Accounting. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 160, 161, 162 or equivalent competency, BUS 204, and junior standing. Cost accumulation for inventory pricing and income determination. Cost behavior concepts for planning and control. Job order and process cost systems, standard costs, budgets, and special topics in relevant costs for managerial decisions.

307 Accounting Systems. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 160, 161, 162 or equivalent competency, BUS 204, and junior standing. Examines design and evaluation of manual and computerized accounting information systems. Emphasis on the system of internal controls and the impact of computers on those controls.

308 Introduction to Marketing. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 211 and junior standing. An introduction to the activities involving the exchange of goods, services, and ideas for the satisfaction of human wants. Marketing is examined as it relates to the other functions of the organization, to consumers, and to society.

309 Marketing in the Changing World. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211, BUS 308, and junior standing. A study of the uncontrollable forces which shape the markets in which firms operate. Includes consideration of the social, political, legal, technological, and economic environments and emphasizes the challenges and opportunities confronting marketing managers as they adapt to change.

310 Introduction to Marketing Research. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 302 and junior standing. Corequisite: BUS 308. Students are introduced to the marketing research process. Includes methodology, data collection, sampling, and analysis. Students learn to plan basic research studies and to apply findings to marketing decisions.

311 Financial Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 204 and junior standing. Principles of optimal financial policy in the procurement and management of wealth by profit-seeking enterprises; the application of theory to financial decisions involving cash flow, capital structure, and capital budgeting.

312 Intermediate Financial Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 302, BUS 311, and junior standing. Advanced topics in financial management with emphasis on the theoretical bases for the valuation of the firm.

314 Investments. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301 and BUS 311, or permission of chair, and junior standing. An analysis of the market for long-term corporate securities. Emphasis is given to the valuation of bonds, common stocks, options, and convertible securities and portfolio concepts. Designed to provide an understanding of the functioning of an efficient market.

315 Personal Finance. Semester course; 1–3 lecture hours. 1–3 credits. Designed to assist families and individuals in making complex financial decisions. Units include income and expenditure, credit, borrowing, banking, savings, insurance, home buying, investment, and estate planning. May not be taken for degree credit by School of Business majors.

316 Principles of Real Estate. Semester course; 3 lecture hours. 3 credits. Principles and practices of real estate

development, financing, brokerage, appraisal, legal instruments, and governmental land use influences.

317 Real Property Management. Semester course; 3 lecture hours. 3 credits. Real property economics and planning, marketing, and management of leased properties.

318 Real Estate Negotiating. Semester course; 3 lecture hours. 3 credits. Introduces principles and techniques of negotiating in the marketing and financing of real estate.

319 Organizational Behavior. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Introduction to the determinants and consequences of human behavior and task performance in an organizational setting. Topics include motivation, job design, group development, organizational design, communication, leadership, and change.

320 Production/Operations Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301, BUS 319, and junior standing. Discipline of management and the management process within the operations of an organization. Planning and controlling of operations through decision analysis, forecasting, aggregate planning, inventory management, and quality management.

323 Legal Environment of Business. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Basic legal concepts applicable to business, including the legal aspects of operating a business, contracts, employment relationships, sales, bailments, and commercial paper, along with ethical considerations and social and political influences. Students may not receive degree credit for both BUS 323 and BUS 481.

324 Legal Aspects of the Management Process. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 323, or permission of instructor, and junior standing. Legal aspects of partnerships and corporations; management rights, powers, and responsibilities. Students may not receive degree credit for both BUS 324 and BUS 482.

325 Organizational Communication. Semester course; 3 lecture hours. 3 credits. Prerequisites: ENG 101–102 and junior standing. A study of writing for interpersonal, group, and organizational communication, including the preparation of standard business documents.

326 Real Estate Law. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 323, or equivalent, or permission of instructor. Legal fundamentals of real estate including contracts, concepts of title, title examination, casements, conveyances, liens, and recording statutes.

327/English 327 Business and Technical Report Writing. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Development of critical writing skills used in business, science, technology, and government, including instructions, descriptions, process explanations, reports, manuals, and proposals. The course will include such topics as communication theory, technical style, illustrations, formats for proposals, reports, and manuals.

331 Personnel Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Basic problems of employment, selection, and placement; wage levels and methods; job studies and descriptions; training methods and programs; and employee rating systems.

333 Risk and Insurance. Semester course; 3 lecture hours. 3 credits. Nature of risk; insurance and other risk handling

methods; insurance as an institution; examination of basic life, health, property, and liability principles and coverages.

339 Management Science. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301 and junior standing. Concepts and techniques of management science as they apply to solving business problems, with a focus on applications. Includes linear programming, transportation method, PERT/CPM, queuing models, and simulation.

346 Automated Office Concepts. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Application of office automation to the administrative services function performed in the modern business office. An overview of current automated office technologies with special attention to the interrelatedness and integration of word, data, voice, and image processing for managing and channeling information.

347 Computer Applications for the Automated Office. Semester course; 3 laboratory/lecture hours. 3 credits. Prerequisites: BUS 360 and junior standing. Use of microcomputers and software packages for accounting applications, text-editing, computer graphics, data bases, electronic mail, and networking.

349 Office Procedures. Semester course; 3 lecture hours. 3 credits. Designed for secretarial students to provide a knowledge of duties and current office procedures required by an efficient business organization.

350 Tort Law. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 323 and junior standing. Basic concepts of tort law with emphasis on intentional torts, negligence, causation, proximate cause, strict liability, vicarious liability, nuisance, tort and contract, misrepresentation, defamation, privacy, and domestic relations.

351 Wills and Estate Administration. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 323 and junior standing. Basic legal concepts of intestacy and of the more common form of wills, together with a study of procedures relating to probate and administration of decedents' estates.

358 Introduction to Structured Programming. Semester course; 3 lecture hours. 3 credits. Pre- or corequisite: BUS 362. Introduction to computer programming using C Language, including data types, control constructs, input/output and file operations, algorithm and program development, and program testing. Basic concepts and principles are introduced to provide a foundation for further study in information systems.

359 Advanced Program Design Techniques. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 358 and junior standing. An advanced programming course giving special attention to techniques for program design and the evaluation and selection of data structures and algorithms.

360 Business Information Systems. Semester course; 3 lecture hours. 3 credits. Provides an understanding of the importance of computer-based information in the success of the firm. Emphasis is on the role of information systems within each of the functional areas of business. Major concepts include data management, decision support, and management information systems.

361 Systems Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 360 and junior standing. Pre- or corequisite: BUS 359. Develops ability to analyze an existing information system within an organization, to identify

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information requirements, and to specify the functions of a new information system. Includes cost/benefit analysis of proposed information systems.

362 Computer Hardware and Software. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 160 and BUS 163 or permission of instructor. Principles of computer hardware and software architecture, organization, and operation. Basic concepts are introduced via assembly language programming.

363 COBOL Programming. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 358 and junior standing. Introduction to the basic concepts of computer program design using the COBOL programming language, including data structures, fundamental operations on data structures, and algorithmic structures.

365 System Design. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 361 and junior standing. Pre- or corequisite: BUS 363. Study and practice of design techniques required for the physical implementation of computer-based information systems.

366 Computerware Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 362 and junior standing. Surveys the performance characteristics of representative computer and related software systems, of communications systems, and of peripheral equipment which may be considered in systems design and for installation planning.

371 Elements in Advertising Strategy. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 308, or permission of chair, and junior standing. Overviews the various steps in the development of an advertising strategy. Special stress placed on the study of the creative philosophies and work of leading advertising agencies.

372 Product Development and Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211, BUS 308, and junior standing. Study of price theory and policy relevant to goods and services. Introduction to basic product strategy, focusing on new product development, management of existing products, and elimination of marginal offerings. Various concepts will be addressed including product differentiation, the product life cycle, product design packaging, branding, positioning, and related concepts.

373 Consumer Behavior. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 308 and junior standing; PSY 101 and SOC 101 recommended. Study of the relevant psychological, sociological, and anthropological variables that shape activity and motivation. Throughout the course, students consider the issue of why consumers behave as they do in the marketplace.

374 Marketing Research: Field Work. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 310 and junior standing. The development and evaluation of research projects. Students develop a research proposal and carry out a field project.

376 Dynamics of Retail Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 308 and junior standing. A comprehensive view of retailing and an application of marketing concepts in a practical retail managerial environment. Students learn to evaluate retail firms and to identify their strengths and weaknesses.

377 Channel Systems. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 308 and junior standing.

Concerns the development, complexities, benefits, and pitfalls of channel of distribution systems.

385 Production/Operations Management II. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 320 and junior standing. Analyzes operations in organizations through consideration of product and process design, location, layout, job design, work measurement, productivity, scheduling, and maintenance.

386 Logistics and Physical Distribution. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 339 and junior standing. Introduction to the logistics function and its analysis. Topics include the logistics environment, facility design and location, production scheduling, transportation and distribution analysis. Emphasis is on decision analysis and its management implications.

401 Governmental and Not-For-Profit Accounting. Spring semester; 3 lecture hours for 5 weeks. 1 credit. Prerequisites: BUS 203–204, BUS 303–304, and junior standing. The role of accounting in the management of resources entrusted to government and nonprofit entities, including accounting and reporting standards. Accounting in municipalities and nonprofit entities such as hospitals, charitable and health organizations, and colleges and universities.

404 Advanced Accounting. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 304 and junior standing. Financial accounting for complex business relationships, including home office-branch accounting, business combinations, consolidated financial statements, partnerships, and governmental funds.

405 Tax Accounting. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 161, 162 or equivalent competency, BUS 204, and junior standing. Income tax legislation and the concept of taxable income; federal income tax law applicable to individuals.

406 Auditing. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301, 304, 307, and junior standing. A study of the conceptual, theoretical, and practical procedures applicable to auditing—both external and internal. Primary emphasis is placed upon the theory of audit evidence; the objectives, techniques, and procedures for financial and operational audits; and the meaning and purpose of the various audit reports.

407 Advanced Auditing. Second semester; 3 lecture hours. 3 credits. Prerequisites: BUS 406 and junior standing. An in-depth analysis of advanced topics in auditing. Topics include statements on auditing standards, unaudited statements, advanced statistical sampling applications, and auditing in computer environments. Emphasis is given to preparing students for the auditing section of the CPA examination.

410 Advanced Tax Accounting. Second semester; 3 lecture hours. 3 credits. Prerequisites: BUS 405 and junior standing. Complex tax problems of the trust, partnership, and corporation. Particular emphasis is given to tax planning.

411 Accounting Opinions and Standards. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 304 and junior standing. A technical course concerned with pronouncements of the public accounting profession. The course objective is to familiarize students with present and proposed accounting opinions and standards.

414 Security Analysis and Portfolio Management. Semester course; 3 lecture hours. 3 credits. Prerequisites:

BUS 302, BUS 314, and junior standing. A detailed analysis of stocks and bonds as well as options and futures. Emphasis is on models for portfolio selection, revision, and performance evaluation.

416 International Financial Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 311 and junior standing. Financial management of business in an international environment. Emphasis on tools and techniques to prepare financial managers of multinational firms to effectively respond to the challenges of the international environment.

417 Cases in Financial Management. Second semester; 3 lecture hours. 3 credits. Prerequisites: BUS 311 and junior standing. Cases involving financial decisions for various forms of business enterprises.

418 International Management. Second semester; 3 lecture hours. 3 credits. Prerequisite: junior standing. Management attitudes and concepts of other nations, cultures, or geographic regions compared with the United States.

419 Managing Dynamic Organizations. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 320 and junior standing. The application of macro organization theory to organization design. The design of structure and process to improve effectiveness. Relationships between technology and structure; strategy and environment; power and politics; culture and organization; and growth, decline, and revival.

420 Seminar in Industrial Relations. Second semester; 3 lecture hours. 3 credits. Prerequisites: BUS 331, or permission of instructor, and junior standing. Managerial decision-making in labor management relationships; the collective bargaining process and the administration of labor agreements; the impact of public policy and labor legislation.

421 Small Business Management. Semester course; 3 lecture hours. 3 credits. The importance, problems, and requirements of small businesses; establishing policies for prices, promotion, control, and credit; regulations, taxes, records, and record keeping.

423 Real Estate Brokerage. Semester course; 3 lecture hours. 3 credits. Considers administrative principles and practices of real estate brokerage, financial control and marketing of real property.

424 Property and Liability Insurance. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 333, or permission of instructor, and junior standing. Property and liability risk identification and measurement. Major commercial lines coverages including fire, marine, automobile, general liability, worker's compensation, fidelity, and surety bonds.

425 Real Estate Appraisal. Semester course; 3 lecture hours. 3 credits. Designed for persons who have completed a course in principles of real estate or its equivalent, or have experience in the real estate field. Topics include neighborhood and site analysis using cost, market, and income approaches. Students may apply to write AIREA examinations upon completion of this course.

426 Life and Health Insurance. Second semester; 3 lecture hours. 3 credits. Prerequisite: junior standing. The function, nature, and uses of life and health insurance and annuities; operational aspects of life insurance companies.

427 Labor and Employment Relations Law. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 323, or permission of instructor, and junior standing. A survey of legislation and court and administrative body decisions affecting the employer/employee relationship.

428 Employee Benefit Planning. Semester course; 3 lecture hours. 3 credits. Management of group life, health, disability, and retirement plans. New developments in employee benefits, plan design, administration, cost, funding, regulation, and tax considerations.

429 Real Estate Finance. Semester course; 3 lecture hours. 3 credits. Instruments, techniques, and institutions of real estate finance; the mortgage market; financing process; mortgage risk analysis; creative financing; emphasis on policies and procedures used in financing residential and commercial properties.

430 Social Insurance. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Societal and individual financial problems encountered as the result of disability, unemployment, aging, and death. Insurance solutions through governmental and private techniques.

431 Advanced Real Estate Appraisal. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 425 or permission of instructor. Provides a comprehensive study of the principles and concepts underlying the income approach to investment property appraisal and the mathematics of yield capitalization. Students may apply to write AIREA examinations upon completing this course.

432 Insurance Law. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. The legal concepts and doctrines applicable to insurance. Fundamental legal aspects of life, health, property, and liability insurance.

433 Compensation Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 331 and junior standing. The methods and techniques of obtaining job descriptions, job characteristics and measuring scales, job rating, and the awarding of wage increments.

434 Strategic Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: senior standing in a School of Business major and completion of all 300-level School of Business core courses. Integrative course to analyze policy issues at the overall management level, involving functional areas such as production, finance, and marketing, in context with the economic, political, and social environment.

435 Seminar in Personnel Management. First semester; 3 lecture hours. 3 credits. Prerequisites: BUS 331, or permission of instructor, and junior standing. A critical study of selected problems in personnel management.

436 Analysis of the Small Firm. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 421, or permission of instructor, and junior standing. Analysis of an on-going business. Students engage in the development of a comprehensive business plan. Various strategies for success are explored and factors in entrepreneurial competency are discussed.

437 Funds Management in Financial Institutions. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 311 and junior standing. Funds management techniques for selected financial institutions including investment companies (mutual funds), life and casualty insurers, savings and loans, mutual savings banks, commercial banks, pension funds.

438 Seminar in Administrative Systems Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 346, BUS 442, BUS 443, and senior standing. An examination of current and developing trends and technologies that will affect the management of administrative systems within organizations.

439/Statistics 439 Statistical Quality Control. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301 or STA 212, or consent of instructor, and junior standing. Methodology for improving and maintaining the quality of products and services, including attribute and variable sampling, control charts, cusum charts, sampling plans, and process modeling.

440 Forecasting Methods and Process. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 302, or equivalent, and junior standing. An application-oriented presentation of forecasting process and forecasting methods to support planning and decision making. Statistical forecasting methods are emphasized, including exponential smoothing, decomposition, and regression. Also includes experience with computer software.

441 Production Planning and Control Systems. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 320, BUS 339, and junior standing. Production planning and control systems, focusing on manufacturing firms. Topics to be covered include forecasting, statistical inventory control, material requirements planning, and aggregate production planning.

442 Management of Records Systems and Technology. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 438, or permission of department chair, and junior standing. Principles of records control from creation to disposition. Emphasis on forms management, classification systems, legal retention policies, development of organization-wide policies and procedures, and equipment and supplies selection. Also includes micrographic applications in records management.

443-444 Word Processing Concepts and Procedures I and II. Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: BUS 245 or the equivalent. This course is designed to introduce the student to word processing concepts, equipment, and procedures. Simulated exercises provide experience in using modern word processing equipment and techniques.

448, 449 Professional Secretarial Training. Semester courses; 3 lecture hours. 3, 3 credits. Designed for secretaries who desire to broaden their educational background. Special emphasis is placed on accounting, business administration, human relations, personal adjustment, general secretarial and office procedures, and letter composition. The year course will serve as partial preparation for the Certified Professional Secretary examination given each May by Professional Secretaries International.

450 Legal Research and Procedure. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 323, or permission of instructor, and junior standing. Examines in depth the law library, explains the basic tools of legal research, and demonstrates the methodology of presenting the results of legal research.

453 Teaching Business Subjects. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Designed for prospective teachers of keyboarding, office procedures,

accounting, general business, data processing, and other basic business subjects. Methods of teaching these subjects and survey of currently used textbooks and available resource material.

455 Options, Futures, and Swaps. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 312, or 314, and junior standing. Analysis and valuation of speculative securities and markets, including options, futures, and swaps with emphasis on their use for hedging and speculative purposes. Major valuation models and term structure models are discussed with applications to problems in finance considered.

460 Assembler Programming. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 358 and junior standing. Develops ability to code, test, and debug assembler language programs.

461 Systems Project Planning. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 365 and junior standing. Concentrated study of planning methods and techniques required for information systems projects. On completion, students should be able to apply knowledge of systems analysis and programming to plan and carry out a complete systems project.

463 Selected Programming Languages. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 358 and junior standing. Consists of programming languages in which the student will perform programming exercises and problems under supervision. Selection of languages is determined each semester.

464 Database Systems. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 359, BUS 365, and junior standing. Designed to prepare students for development of systems involving databases and database management.

466 Applications Programming. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 363 and junior standing. Covers development of typical data processing programs in COBOL. Includes job control language, debugging, random access files, and other subjects necessary for the implementation of applications programs.

467 Distributed Data Processing and Telecommunications. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301, 358, 361, and 362, or equivalent; junior standing. Technology and concepts of telecommunications and distributed processing, including managerial concerns and interests, hardware, systems design, and operation factors.

468 Direction and Coordination of Information Systems Organizations. Semester course; 3 lecture hours. 3 credits. Pre- or corequisites: BUS 461, or permission of instructor, and junior standing. A study of management techniques as applied to direction and coordination of information systems personnel and organizations. Involves readings, group discussion, and case study/assignments.

469 Information and Decision Systems in Organizations. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 361, BUS 362, BUS 365, or permission of the department chairman and junior standing. The ways in which information and decision system technologies affect the management of complex organizations. Emphasis on the impact of computer-aided decision and control processes on planning, financial, production, marketing, and other subsystems.

470 Data Communication Networks. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301, 365, and 467, or permission of the instructor, and junior standing. Provides an introduction into the major issues, concepts, components, and parameters involved in the process of computer-communication network design and optimization in support of business-type information systems. Wide-area, local-area, and distributed networks are studied. A case-study orientation is used throughout to emphasize the design options in practical operational situations.

471 International Marketing. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 308, or permission of chair, and junior standing. This course is designed to orient students toward marketing on an international scope and to develop an understanding of the differences among various types of foreign marketing environments. Subject areas emphasized are the differences between domestic and international marketing, the international marketing environment, and international marketing strategies.

472 Trends in Retailing. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 308 and junior standing. BUS 376 recommended. An examination of current and developing trends that will affect the future posture of retailing.

474 Personal Selling and Sales Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 308. Restricted to senior-level business majors or to students having permission of chairman. Examines the fundamental nature of personal selling in the promotion mix, including the sales process and the techniques used in performing the selling function. Explains the diverse decisions and the activities necessary to manage the outside sales force efficiently and effectively to achieve the organization's overall goals.

476 Marketing Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: restricted to senior-level marketing majors who have completed a minimum of 15 credits of marketing courses (in addition to BUS 308). A case course requiring the senior marketing student to apply his knowledge to the solving of marketing managerial problems.

481–482 Law for Accountants I and II. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: senior accounting major or permission of instructor. Provides detailed examination of laws which are of particular importance to accountants, along with ethical considerations and social and political influences. First semester: contracts, sales, agency, commercial paper, secured transactions, and bankruptcy. Second semester: security regulations, anti-trust, partnerships, corporations, suretyship, insurance, wills, and trusts. Students may not receive degree credit for BUS 481–482 and for BUS 323–324.

489 Managerial Applications and Skills Development. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 319–320 and senior standing or permission of instructor. Application, testing, and critical analysis of management theories, concepts, and skills. Team building and organizational culture assessment.

491 Topics In Business. Semester course; variable credit, maximum three credits per topics course; maximum six credits for all topic courses. Prerequisite: junior standing. An in-depth study of a selected business topic, to be announced in advance.

492 Independent Study. Semester course; 1–3 credits. Maximum total of three credits. Prerequisites: junior or senior standing as a major in a business curriculum, approval of advisor and department chairman prior to registration. Intensive study under supervision of a faculty member in an area not covered in depth or contained in the regular curriculum.

493 Internship. Semester course; 3 credits. Prerequisites: senior standing in the major offering the internship and permission of the department chairman. Internships currently offered in marketing and information systems. Intention to enroll must be indicated to the instructor prior to or during advance registration for semester of credit. Involves students in a meaningful experience in a setting appropriate to the major.

For the listing of graduate courses in the School of Business, see the *VCU Graduate Bulletin*.

COURSES IN ECONOMICS (ECO)

203 Introduction to Economics. Semester course; 3 lecture hours. 3 credits. A survey of economic principles, institutions, and problems. The course is designed to provide basic economic understanding for students who do not expect to take additional economics courses. (Not open to School of Business students.)

210–211 Principles of Economics. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: MAT 001 or satisfactory score on the Mathematics Placement Test. A course designed to acquaint the student with a theoretical and practical understanding of the economic institutions and problems of the American economy. First semester: Microeconomics. Second semester: Macroeconomics.

301 Microeconomic Theory. First semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. Analysis of the principles that govern production, exchange, and consumption of goods and services. Topics include demand analysis, production and cost theory, price and output determination, theory of markets, and distribution theory.

302 Macroeconomic Theory. Second semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. A general survey of national income analysis and macroeconomic theory. Detailed study of public policies affecting price levels, employment, economic growth, and the balance of payments.

303 Managerial Economics. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211, BUS 111–112, and junior standing. Application of tools of economic analysis to allocation problems in profit and nonprofit organizations. Models for evaluating revenue, production, cost, and pricing will be presented. Emphasis on developing decision rules for turning data into information for solving problems.

305 Public Finance—State and Local. First semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. An economic analysis of state and local government budgeting, revenue sources, and expenditures.

306 Public Finance—Federal. Second semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. An economic analysis of the fiscal decision

process, revenue sources, and expenditures at the federal level.

307 Money and Banking. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. A study of money, financial markets, and the financial structure with emphasis on commercial banks and the Federal Reserve System. Relationships between economic activity and money supply are introduced.

308 Economic Geography. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. A study is made of the earth's natural and physical resources with emphasis placed on the relationship of these resources to actual and potential economic development of various nations.

310/Afro-American Studies 310 Economics and Poverty. Second semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211, or ECO 203, and junior standing. An analysis of the causes of income inequality, the incidence and characteristics of poverty, and the economics of public policies designed to counteract poverty.

313 Economics of Transportation. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. An economic analysis of the transportation industry with special emphasis on regulation, public policy, and urban transportation.

315/Afro-American Studies 315 Economic Development. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. Introduction to the process of economic development. Surveys development theory and experiences of underdeveloped countries of Africa, Asia, Latin America and the Caribbean, and of developed countries. Explores obstacles to development and policies and tools for stimulating economic development.

319/History 377 Economic History of the United States. Second semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. An analysis of the developmental factors from the American colonial period to the present. Includes quantitative research topics in American economic history.

320/History 335 Economic History of Europe. First semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211, or ECO 203, and junior standing. Studies of the origins and development of western capitalistic economies with emphasis on transitional factors and institutional changes.

321/Urban Studies 321 Urban Economics. First semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211, or ECO 203, and junior standing, or permission of instructor. An introduction to urban economics, with an emphasis on the economics of agglomeration and the role of externalities in the urban economy. Economic analysis of the provision of urban public services and urban public financing, especially in politically fragmented areas.

329 International Economics. Second semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. An analysis of economic and political influences on exports and imports, balance of payments, foreign investment, exchange rates, and international monetary systems.

401 Introduction to Econometrics. First semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211, BUS 301 or

STA 213, and junior standing. Sources and uses of economic data; includes the application of statistical methods and regression analysis to time series and cross section data to test hypotheses of micro and macro economics.

402 Business Cycles and Forecasting. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. An examination of repetitive variations in business activity. The measurement and analysis of economic fluctuations and how they affect the business environment. Stresses modern forecasting techniques.

403 Introduction to Mathematical Economics. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 112 or MAT 200, ECO 210–211, and junior standing. The application of mathematical techniques to economic theory and economic models.

412 Regional Economics. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. A course to familiarize students with sources and uses of standard data on employment, income, and population and to provide an introduction to economic base theory as used in regional economics. Application of theory. To make and analyze economic and demographic projections for regions in Virginia. Analysis of operation and impact of area economic development programs.

419/History 333 History of Economic Thought. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. A survey of the ideas of major economic contributors to modern economic thought. Theories of value, growth, and distribution from the eighteenth through the twentieth centuries will be presented.

421 Government and Business. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. The application of economic analysis to the behavior of business, industry, and government regulation. Topics include the causes and exercise of monopoly power, antitrust enforcement, public utilities, and industry studies.

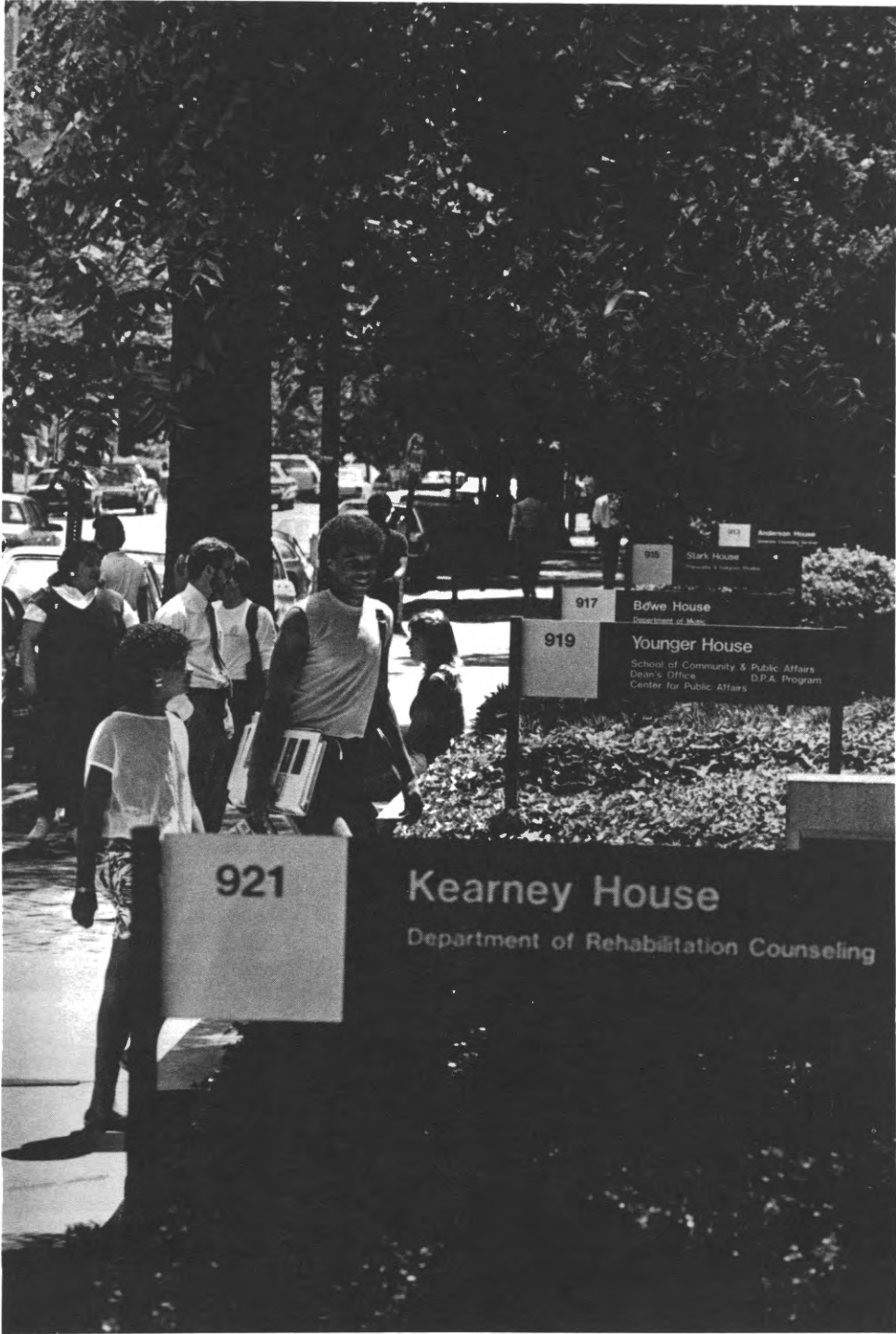
431 Labor Economics. Second semester; 3 lecture hours. 3 credits. Prerequisites: ECO 210–211 and junior standing. Analysis of labor markets and institutions to gain an understanding of the process of wage and employment determination. Both historic and current topics are included.

489 Senior Seminar in Economics. Second semester; 3 lecture hours. 3 credits. Prerequisites: ECO 301 and 302 or permission of instructor. Papers on current research of enrolled students, faculty, and guests. Analysis of economic theory and problems on advanced level.

491 Topics in Economics. Semester course; variable credit, maximum three credits per topics course; maximum six credits for all topics courses. Prerequisite: junior standing. An in-depth study of a selected economic topic, to be announced in advance.

492 Independent Study. Semester course; 1–3 credits. Maximum total of three credits. Prerequisites: junior or senior standing as an economics major, approval of advisor and department chair prior to registration. Intensive study under supervision of a faculty member in an area not covered in depth or contained in the regular curriculum.

For the listing of graduate courses offered by the Department of Economics, see the *VCU Graduate Bulletin*.



921

Kearney House

Department of Rehabilitation Counseling

919

Younger House

School of Community & Public Affairs
Dean's Office D.P.A. Program
Center for Public Affairs

917

Bowe House

Department of Music

915

Stark House

Faculty & Staff Office

Anderson House
Faculty & Staff Office

PART XI — School of Community and Public Affairs

CAROL ANN PETERSON
Interim Dean
CHRISTOPHER SILVER
Associate Dean
GILL ROBINSON HICKMAN
Interim Associate Dean

The School of Community and Public Affairs strives to produce broadly educated citizens, imbued with a keen sense of social responsibility and prepared, through study, research, and field experience, to make significant contributions as professionals who address the problems and potentials of today's complex urban environment.

UNDERGRADUATE PROGRAMS

The school offers Bachelor of Science degrees in the fields of

Administration of Justice
Recreation, Parks, and Tourism
Rehabilitation Services
Safety and Risk Administration
Urban Studies

GRADUATE PROGRAMS

The School of Community and Public Affairs offers graduate programs leading to the Doctor of Public Administration (D.P.A.), Master of Science in rehabilitation counseling (M.S.), Master of Science in recreation, parks, and tourism (M.S.), Master of Science in administration of justice (M.S.), Master of Urban and Regional Planning (M.U.R.P.), and Master of Public Administration (M.P.A.). Detailed in-

formation is available in the *VCU Graduate Bulletin* available in the dean's office.

GENERAL GRADUATION REQUIREMENTS

All students in the School of Community and Public Affairs must fulfill these requirements:

1. **Grade-Point Average.** A grade-point average (GPA) of at least 2.0 (a "C" average) is required for all credits presented for graduation for the bachelor's degree. (Only credits taken at VCU are computed in the GPA.)
2. **Total Credits.** A minimum of 123 semester credits is required for completion of the Bachelor of Science degree in the School of Community and Public Affairs.
3. **Major Concentration.** A grade-point average (GPA) of at least 2.0 ("C" average) is required for all credits in the student's major presented for graduation. Students may not present more than 45 semester hours in the major, except by permission of the department chairperson.
4. **Upper-Level Courses.** A minimum of 45 credits is required in 300- and 400-level courses for a bachelor's degree. Credits transferred from two-year institutions may not be used to fulfill this requirement.
5. **Last 30 Credits.** Degree candidates are required to complete the last 30 credits for the bachelor's degree at this institution.

GENERAL CURRICULUM REQUIREMENTS

All students seeking a baccalaureate degree within the School of Community and Public Affairs are required to fulfill the general education requirements in addition to the professional curriculum requirements existing for each academic degree program. Students entering as freshmen are expected to fulfill most of the general education requirements in their first two years. Transfer students are expected to have a 2.0 grade point average to be eligible to transfer into an academic program within the School. After admission, the transfer student must fulfill all the general education requirements as soon as possible. No one course can be used to fulfill two general education requirements.

General Education Requirements

1. **English** (9 credits). English 101–102 Composition and rhetoric and one additional writing course from the list below. All students who have not received credit for first semester freshman composition and rhetoric must take the English Placement Test. On the basis of the scores, students will be placed in the appropriate level of English or exempted and given credit for the course. A grade of “C” or better is required in each of the composition and rhetoric courses prior to enrollment in upper division courses.
ENG 302—Legal Writing
ENG 304—Advanced Composition
ENG 327—Business and Technical Report Writing or any other course designated as “Writing Intensive” in any discipline as listed by the College of Humanities and Sciences in the schedule of classes each semester.
2. **Mathematics** (3 credits). Students will complete either MAT 101 or MAT 111. If a student places beyond the 101 (111) level on the Mathematics Placement Test, the mathematics requirement has been met. A grade of “C” or better is required in the mathematics course prior to enrollment in upper division courses.
3. **Applied Statistics** (6 credits). Upon completion of the mathematics requirement, one of the four tracks below must be completed by all majors.
Track 1—STA 213 and BUS 161, 162, 163
Track 2—CSE 241 and CSE 242
Track 3—CSE 243 (plus one additional elective)
Track 4—STA 213 and CSE 242
4. **Natural Sciences** (6 credits). Two semesters of introductory science, as suggested by the major department, are required. The science courses do not have to equal one year of one science. Courses which meet the School requirements are: BIO 109–110, General Biology; BIO 151–152, L151–L152, Introduction to Biological Sciences (generally selected by those desiring health services); BIO 205, Human Anatomy; BIO 206, Human Physiology; CHE 103–104, Introduction to Modern Chemistry; CHE 101–102, General Chemistry; EAS 401, Meteorology and Climatology; EAS 411 Oceanography; GEO 203–204, Physical Geography; PHY 101–102, Foundation and Frontiers of Physics; PHY 105, Physical Geology; PHY 103, Elementary Astronomy. If a laboratory is a requirement for successful completion of any of the listed courses, students are expected to satisfactorily complete the appropriate laboratory course.
5. **Social Science Electives** (9 credits). Courses from the following suggested areas may be taken to satisfy this requirements.
 - A. Anthropology
 - B. Economics
 - C. Political Science
 - D. Psychology
 - E. Social Science
 - F. Sociology
 - G. Afro-American Studies AAS 103, 105, 200, 205, 302, 305, 310, 322, 333, 343
 - H. Community and Public Affairs CSE 316
 - I. Geography GEO 311, 322, 333
 - J. Women’s Studies WST 201, 304, 305, 333, 334, 335
6. **Humanities and/or History** (6 credits). Any combination of humanities and history courses may be used to satisfy this requirement. Humanities are defined as courses in the areas of literature, philosophy, religion, music appreciation, and art appreciation. CSE 315 is accepted as a history course to meet this requirement.
7. **Oral Communication or Interpersonal Skills** (3 credits). Any of the following courses may be taken to fulfill this require-

ment.

SPE 121 Effective Speech

SPE 321 Speech for Business and the Professions

PSY 323 Interpersonal Relations

PSY 340 Introduction to the Helping Relationship

PSY 341/Group Dynamics

SOC 341

REC 195 Recreation Leadership

REH 350 Applied Rehabilitation Methods

SLW 230 Communication in the Helping Profession and

SLW 230L Laboratory

8. **Cultural Diversity** (3 credits). Any of the following courses may be taken to fulfill this requirement. In addition to these offerings, completion of either a semester's course of foreign or sign language will meet the requirements in this category.

Afro-American Studies courses

AMS 301 Introduction to Native American Studies

AMS 323 Social Attitudes in the Humanities

CSE 316 Urban Life in Modern America

EUC 307 Aspects of German Culture

EUC/USP 350 Culture and Urbanism in Great European Cities

GEO 207-208 World Regions

INT/USP 340 The Urban Habitat

INT/ANT 350 Peoples and Cultures of the World

REH 201 Introduction to Rehabilitation Services

REH 202 General Alcohol and Drug Studies

REL 211 Christian Ethics

REL 304 Introduction to Judaism

REL/AAS 307 Black Religion

REL 311-312 Religions of the World

REL 317 The Formative Period of Islam

REL 320 Taoism

REL 331 Christianity and Culture

SLW 311 Social Discrimination

Women's Studies Courses

STUDENT ADVISING

Students entering the School of Community and Public Affairs will be assigned faculty advisors in the departments of their majors. Students who have not made decisions concerning *their majors* will be assigned faculty advisors

by the acting associate dean, third floor, 919 West Franklin Street.

ATTENDANCE POLICY

Students who have more than six hours of absences from any course in one semester will face either automatic withdrawal or failure in that course. When more than six hours of absences accumulate prior to the eighth week of classes, the student will be automatically withdrawn. After the eighth week, absences which total more than six hours (inclusive of the preceding eight weeks) will result in failure for the student.

This policy may be modified in cases of documented family/personal crises or illness.

FEES FOR 500-LEVEL COURSES

Full-time undergraduate students who take 500-level courses as part of their elective credit or as part of their degree requirement will be charged at the undergraduate tuition rate.

Part-time, degree-seeking, undergraduate students who take 500-level courses as part of their required credit hours will be charged at the undergraduate rate.

Part-time undergraduate students who take 500-level courses as part of their elective credit hours will be charged at the graduate tuition rate.

PREPARATION FOR PROFESSIONAL STUDIES IN LAW

JAMES L. HAGUE

Department of Justice and Risk Administration

CAROL D. RASNIC

Department of Decision Sciences and Business Law, Advisor

HUSAIN M. MUSTAFA

Department of Political Science, Advisor

Few law schools list specific undergraduate courses as prerequisites for admission. Thus the student who is considering law school education may major in virtually any department in the College of Humanities and Sciences, the School of Business, or the School of Community and Public Affairs. Students, however, are encouraged to obtain a broad liberal arts background with emphasis on the social sciences and English.

The prelaw school advisors maintain continual contact with law school admissions offices and will assist any interested student with questions concerning curriculum, financial assistance, application procedures, or the law school admissions test.

COOPERATIVE EDUCATION PROGRAM

The Cooperative Education Program is available to qualifying students who are pursuing any undergraduate degree in the School of Community and Public Affairs.

A full description of the program appears in Part XIX of the *Bulletin*.

HONORS PROGRAM

The Virginia Commonwealth University Honors Program was established to attract gifted students and to provide them with a challenging opportunity to achieve their highest academic potential. The program is open to all qualified undergraduate students. For a detailed description of qualifications and requirements see Part II of the *Bulletin*.

JUSTICE AND RISK ADMINISTRATION

JAMES L. HAGUE

Acting Chairman of the Department

Robert J. Brietenbach	Janet Buckner
Joel Carroll	Mary J. Clement
David P. Geary	John T. Hanna
James E. Hooker	Paul W. Keve
R. Michael McDonald	(Professor Emeritus)
Barbara Pritchard	Janice Thomas
Donna Towberman	

Adjunct Faculty—

Cynthia Bailey	Brenda Baker
Mason Chalkley	Robert Colvin
V. Stuart Cook	James Fox
Dan Grinnan	Jean Hamilton
Greg Hodge	Anna Jolly
Richard Kern	Gunnar Kohlbeck
James Kulp	Jay Malcan
Frank Mardavich	Pete Marone
Robin McLaughlin	E. C. Morris
Thomas Myers	David O'Neil
Walter M. Pulliam, Jr.	Robert Scanlon
Robert Steiner	Thomas Varner
James B. Wilkinson	

The major objective of these degree programs is to prepare men and women for highly effective professional careers within administration of justice or safety and risk-control administration. Career opportunities are available in federal, state, local, and private justice-related endeavors and occupational safety, security, and health-related enterprises. In the administration of justice area, these careers include those open in law enforcement, juvenile justice, corrections, and the courts. In the safety and risk-control administration area, careers include those in

occupational safety and health, fire administration, security administration, and transportation safety administration, among others. Furthermore, this department prepares students wishing to enter law school and those wishing to pursue graduate studies in higher education or several of the human services closely related to justice and safety. This department offers and encourages in-service justice or safety/risk-control administration employees, as well as others, to enhance their professional career development through higher education.

Students majoring in administration of justice or safety and risk-control administration receive a broad educational background, professionally oriented courses in their special area of interest and concentration, and various skill courses designed to enhance the student's career opportunities. Upon completion of a minimum of 123 semester hours, the student is awarded the Bachelor of Science in administration of justice or the Bachelor of Science in safety and risk-control administration. Options available under the administration of justice degree program include law enforcement, juvenile justice, corrections, and legal studies. The primary purpose of the legal studies option is to prepare students for law school. Students pursuing a degree in safety and risk-control administration design their own option with the assistance of a program faculty advisor. Specialization courses, internship (field work) experience, and electives are selected based upon the student's career plans and prior course work and experience. Study options emphasizing occupational safety and health, fire administration, security administration, or transportation safety specializations are among those most frequently developed.

Administration of justice majors are required to complete certain departmental core courses, courses in one of the selected options, and certain skills courses. Required core courses are AJP 181, 260, 324, 352, 355, 380, 432, 463, 480, and, depending on a student's status, either 492, 493, or 394. The courses most likely to be waived for eligible transfer students are 181, 260, 324, 352, 463, and introduction courses.

Administration of justice majors select one of four career options—law enforcement, juvenile justice, corrections, or legal studies. Four courses are required in the option selected. In the law enforcement option, students take AJP 254 and 305 and any two of the following—375, 370, 434, 462, 468, 475, or 491. In the juvenile justice

option, students take AJP 252, 350, and any two of the following—351, 378, 433, 462, or 491. In the corrections option, students take AJP 253, 350, and any two of the following—351, 363, 433, or 491. In the legal studies option, students take AJP 255, 358, and any two of the following—363, 378, 475, and 491. Seniors with a 3.0 GPA or with permission of the department chairman may substitute an approved 500-level course for one of the elective courses in their respective option.

Administration of justice majors then choose four skills cognate courses in one or more of the following areas—counseling related, legal analysis, information systems competency, accounting/auditing, policy analysis and planning, research and evaluation, or communications competency. In choosing electives and skills cognates, students should consider the following minors closely related to criminal justice: recreation, rehabilitation counseling, sociology, urban studies and planning, psychology, and political science.

Safety and risk-control administration majors are required to complete 36 hours of core risk administration course work. Required core courses are SRA 145, 300, 320, 340, 360, 380, 390, 420, 430, 440, 460, 480, and either 492 or 493. Majors must also select and complete a professional specialization study concentration consisting of nine semester hours. A student wishing to specialize in occupational safety and health, for example, might choose to complete SRA 450, USP 332, and BUS 333 or SRA 470. Up to 22 hours of the SRA core and specialization requirement may be waived for transfer students. Students are also required to complete twelve semester hours of electives which are approved by a faculty advisor.

Bachelor of Science in Administration of Justice—Administration of Justice Core

Required courses for all Administration of Justice majors (30 semester hours)

¹ AJP 181	Justice System Survey
¹ AJP 260	Criminal Law
¹ AJP 324	Courts and the Judicial Process
¹ AJP 352	Crime and Delinquency Prevention
*AJP 355	Foundations of Criminal Justice
*AJP 380	Criminal Justice Research
AJP 394	Field Service in Criminal Justice
*AJP 432	Criminal Justice Organizations
¹ AJP 463	Comparative Criminal Justice Systems
*AJP 480	Seminar: Critical and Career Issues in Criminal Justice

AJP 492	Directed Individual Study
*AJP 493	Internship (unless student's status allows for substitution of AJP 492 or 394)

Career Options Requirement—Select four courses from desired career option, including both the introductory and program courses (underlined below).

Law Enforcement Option

¹ AJP 254	Introduction to Law Enforcement
*AJP 305	Enforcement Theories and Practice
AJP 375	Industrial and Retail Security
AJP 370	Criminalistics and Crime Analysis
AJP 434	Enforcement Administration
AJP 462	Strategies for Delinquency and Crime Prevention
AJP 468	Economic Offenses and Organized Crime
AJP 475	Case Studies in Criminal Procedure
AJP 491	Topics Seminar
² AJP 500-	level course

Juvenile Justice Option

¹ AJP 252	Introduction to Juvenile Justice
AJP 350	Evaluation and Treatment of the Offender
AJP 351	Community-Based Correctional Programs
AJP 378	Juvenile Justice Law and Process
AJP 433	Adult/Juvenile Correctional Administration
AJP 462	Strategies for Delinquency and Crime Prevention
AJP 491	Topics Seminar
² AJP 500-	level course

Corrections Option

¹ AJP 253	Introduction to Corrections
AJP 350	Evaluation and Treatment of the Offender
AJP 351	Community-Based Correctional Programs
AJP 363	Correctional Law
AJP 433	Adult/Juvenile Correctional Administration
AJP 491	Topics Seminar
² AJP 500-	level course (e.g., AJP 501 Criminal Justice Assessment, AJP 591 Topics Seminar)

Legal Studies Option

¹ AJP 255	Introduction to Legal Studies
AJP 358	Lawyer's Role in the Justice System
AJP 363	Correctional Law
AJP 378	Juvenile Justice Law and Process
AJP 475	Case Studies in Criminal Procedure
AJP 491	Topics Seminar
² AJP 500-	level course

Skill Cognates

Students are required to take *any four skills* courses in one of the following skills cognate areas. Departmental advisors maintain current lists of suitable courses and additional and/or substitute courses permitted with the approval of the student's advisor.

¹Denotes courses most likely to be waived for community college transfers.

²Seniors with a 3.0 GPA or with permission of the department chairman may take a 500-level course.

*Not waived for community college transfer.

The skill cognate areas are

- Counseling-related
- Legal analysis
- Information systems competency
- Accounting/auditing
- Policy analysis and planning
- Research and evaluation
- Communications competency
- Other

Bachelor of Science in Safety and Risk-Control Administration—Safety and Risk-Control Administration Core

Required courses for all Safety and Risk-Control Administration Majors (36 semester hours);

- ³SRA 145 Introduction to Safety, Security, and Health
- SRA 300 Regulatory Aspects of Safety and Risk Control
- SRA 320 Controlling Workers' Compensation and Product Liability Losses
- SRA 340 Emergency Planning
- SRA 360 Administration of the Safety and Risk-Control Function
- SRA 380 Research Methods in Justice and Risk Administration (or equivalent)
- SRA 390 Industrial Hygiene
- SRA 420 Hazardous Materials Management
- SRA 430 System Safety
- SRA 440 Incident Investigation and Analysis
- SRA 460 Information Management and Data Analysis
- SRA 480 Seminar in Safety and Risk-Control Administration
- SRA 492 Directed Individual Study or Field or 493 Internship

Safety and Risk-Control Administration Specialization

Safety and Risk-Control Administration majors must select three courses (9 Semester hours) from the following list:

- USP 331 Environmental Systems
- USP 332 Environmental Management
- BUS 333 Risk and Insurance
- SRA 350 Traffic and Transportation Planning and Management
- SRA 450 Human Factors and Ergonomics
- SRA 470 Comparative Risk Administration Systems
- SRA 491 Topics Seminar

Approved Electives (12 semester hours)

Safety and risk-control administration majors must complete 12 semester hours of approved electives. Courses are to be selected, in consultation with a faculty advisor, from such areas as biology, business, chemistry, information systems, environmental studies, and psychology, among others.

Minor in Administration of Justice or Safety and Risk-Control Administration

Students desiring a minor in administration of justice must select one course from each of the following groups: Group I—AJP 181, 252, 253, 254, or 255. Group II—AJP 260 or 324. The additional 12 hours are to be upper-division AJP courses agreed upon by the student and a faculty advisor in this department. In addition, a criminalistics (forensic science) minor is available to those students majoring in chemistry or certain other physical sciences. The forensic science minor requires the satisfactory completion of 18 credit hours of AJP courses and includes the following courses: AJP 260, 370, 380, 475, 571, and 492 or 493.

Students interested in a minor in safety and risk-control administration must take SRA 300. The remaining 15 hours are to be selected, and approved by an SRA faculty advisor, from SRA courses.

Master of Science in Administration of Justice

The graduate degree program in administration of justice is designed to provide advanced educational preparation for practitioners and students pursuing careers in the fields of criminal justice, juvenile justice, public safety, or forensic science. Such preparation includes understanding appropriate theoretical positions and concepts, and developing necessary professional skills. The master's degree includes 36 or 39 semester hours. See the *VCU Graduate Bulletin* for a more detailed description of this program.

RECREATION, PARKS, AND TOURISM

MICHAEL S. WISE

Interim Chairman of the Department

Charles E. Hartsoe	Allan S. Mills
Carol A. Peterson	Keith Ready
Ronald Reynolds	Michael Wise

Adjunct Faculty—

Kathy Hamilton Brown	Patricia Brown
Cynthia Herndon	Kurt J. Keppler
Robert Ramsey	Elizabeth P. Sales
Michael Golden	

The objective of the Department of Recreation, Parks, and Tourism is to prepare the student for middle management, planning, and program positions in one of three areas of concentration: recreation and park management, therapeutic recreation, and travel and tourism.

The department offers a Bachelor of Science

³Advanced students may replace with an upper-level SRA course.

degree in recreation, parks, and tourism. Graduates may find career opportunities in a variety of municipal, state, and federal park, recreation, and tourism programs and in private and commercial recreation developments and enterprises. The student is prepared to pursue graduate study in the field of recreation at a number of major universities.

Students take the community and public affairs general education requirements in the first two years. Those who expect to major in recreation should take REC 195 Recreation Leadership, REC 261 Recreation, Parks, and Tourism in Modern Society, and REC 303 Leisure Delivery Systems, as electives in their first two years. If they have not done so, they will have to include them in their third year.

For the Bachelor of Science degree in recreation, parks and tourism a minimum of 123 semester hours, including the internship, is required. While a maximum of 53 credits in recreation may be presented for the baccalaureate degree, courses beyond 48 credits must be approved by the advisor. This will permit students to develop specialization in areas beyond their selected option.

In addition to the school and department core, students select one of three areas of concentration and enroll in the specified courses related to the concentration. Upper division electives are selected with approval from the student's advisor to complement the concentration. These courses may come from more than one department. Departments with courses acceptable as directed electives for recreation majors include art, business administration and management, biology, crafts, administration of justice, education, rehabilitation services, special education, psychology, sociology, social work, and urban studies.

An 8-credit internship, REC 493, is required of all majors. The internship is available for students who have completed their junior year. To be eligible, students must have completed a total of 85 semester hours, of which 21 hours must be in their major courses. A grade-point average of 2.0 or better is required both overall and in the major the semester prior to the internship. Within each option, specific course work must be completed prior to being eligible for the internship experience. The department's intern coordinator will review the requirements with students during the fall academic semester each year.

Major in Recreation, Parks, and Tourism

All students seeking a baccalaureate degree within the Department of Recreation, Parks and Tourism are required to fulfill the following course requirements in addition to general curriculum requirements.

Requirements for all majors (35 hours)

REC 195	Recreation Leadership
REC 261	Recreation, Parks, and Tourism in Modern Society
REC 303	Leisure Delivery Systems
REC 320	Recreation Analysis
REC 331	Recreation Site Selection and Analysis
REC 395	Recreation Program Development
REC 403	Management of Recreation, Parks, and Tourism Agencies
REC 404	Revenue Sources for Parks and Recreation
REC 490	Seminar: Recreation
REC 493	Internship

Requirements by program options:

Recreation and Park Management (13 hours)

REC 332	Recreation Site Design and Development (2)
REC 332L	Recreation Site Design and Development Laboratory (2)
REC 465	Park Operations and Maintenance (3)
REC Electives	—6 hours

Therapeutic Recreation (12 hours)

REC 371	Introduction to Therapeutic Recreation (3)
REC 472	Therapeutic Recreation Program Design (3)
REC 476	Leisure Counseling (3)
REC 506	Contemporary Issues in Therapeutic Recreation (3)

Required nonrecreation courses

BIO 205	Basic Human Anatomy (4)
BIO 206	Human Physiology (4)

Travel and Tourism (12 hours)

REC 341	Introduction to Travel and Tourism (3)
REC 442	Management of Group Travel (3)
REC 445	Conference and Convention Planning (3)
REC electives	—3 hours

Directed electives (12 hours) from supporting disciplines that complement the selected concentration are to be scheduled during the junior and senior years.

Minor in Recreation, Parks, and Tourism

Students desiring a minor in recreation, parks, and tourism will be required to complete REC 195, 261, 303, 395, and an additional six hours of recreation courses. A total of 18 hours are required for a minor.

Second Undergraduate Degree— Therapeutic Recreation Specialization

For individuals who are seeking certification in therapeutic recreation, the second undergraduate degree program may be preferable to obtaining a masters degree in this field. VCU requires a minimum of 30 credits for the second undergraduate degree. An individualized program is developed around the eligibility requirements as established by the National Council on Therapeutic Recreation Certification. The program will include appropriate department and support course offerings.

Master of Science in Recreation, Parks, and Tourism

The purpose of the graduate program in recreation, parks, and tourism is to prepare administrators, supervisors, and other personnel for specialized or advanced responsibilities in diverse agencies and enterprises engaged in the delivery of leisure services. The master's degree in recreation requires a minimum of 36 semester hours of graduate study, including either a thesis, research project, or professional paper. The areas of concentration include leisure service management, travel and tourism, and therapeutic recreation. See the *VCU Graduate Bulletin* for a more detailed description of this program.

REHABILITATION SERVICES

RICHARD E. HARDY

Chairman of the Department of Rehabilitation Counseling

GERALD L. GANDY

Director of the Undergraduate Program in Rehabilitation Services

Anne L. Chandler
George R. Jarrell
Marcia J. Lawton
Richard S. Luck
Warren R. Rule

Jennings G. Cox
Robert A. Lassiter
(Professor Emeritus)
E. Davis Martin, Jr.
Keith C. Wright
(Professor Emeritus)

Adjunct Faculty—

Cynthia Barnes
JoAnn P. Chabot
Carl Collier
Lenore Gay
William McAllister

Paige E. Berry
Carolyn Chapman
Patricia Franco
Jay A. Maynard
Elizabeth R. Miller

Mary Moyer
Joanna Newman
Bonita Pennino
James Rothrock
Richard H. Welles

M. Teresa Mullin
Joan Pazera
Dorothy Petraitis
J. I. Wainwright
Mary J. Winfree

The Department of Rehabilitation Counseling was established in 1955 to provide graduate education in the professional field of rehabilitation counseling. The department offers a Master of Science in rehabilitation counseling for both full- and part-time students. It also provides advanced education for persons presently employed in agencies and facilities offering services to persons with disabilities. In 1974 the undergraduate program in rehabilitation services was established to provide a broad general rehabilitation education background for students at the undergraduate level. Undergraduate study in this department leads to a Bachelor of Science degree in rehabilitation services.

Bachelor of Science in Rehabilitation Services

The Bachelor of Science program in rehabilitation services is designed to provide a background appropriate for dealing effectively with the problems of people with physical, mental, and emotional disabilities. It is possible to obtain a combination of the following skills and knowledge: (1) an understanding of disability and its attendant disadvantages; (2) interviewing and interpersonal helping relationships; (3) rehabilitation case study methods; (4) community organization and dynamics; (5) work evaluation and adjustment; (6) job development and placement; (7) manpower services; and (8) alcoholism and drug services.

Although opportunities for specialization exist, the emphasis of the curriculum is toward a broad interdisciplinary education relevant to positions involved with the effective development of human potential and ability. Possible employment opportunities could include intake interviewing and screening, community outreach and case development activity, work evaluation and adjustment, counseling under supervision, job development and placement, case management and coordination of services, client advocate promotion and public relations work, human resources planning, and program development.

Institutional employment possibilities include organizations or agencies, private or public, concerned with physical disability, developmental disabilities, crisis intervention, mental illness,

geriatrics, corrections, drug addiction, alcoholism, employment, manpower development, manpower planning, community-based youth employment, recreation, etc. Such organizations might include the Virginia Department of Rehabilitation Services, the Veterans Administration, the Commission for the Visually Handicapped, the Employment Security Commission, Goodwill Industries, Community Action programs, Comprehensive Employment Training programs, United Way agencies, hospitals, clinics, sheltered workshops, recreation programs, etc.

The Bachelor of Science in rehabilitation services includes the choice of two options: General Client Services Option and Alcoholism and Drug Services Option. A total of 123 credit hours of study is required for the completion of the degree. 45 credit hours in general curriculum courses, 30 credit hours in rehabilitation services courses, 12 credit hours in upper-level cognate courses, and 36 credit hours of approved elective courses are required. 45 credit hours must be in upper-level courses. No more than 45 credit hours can be taken in rehabilitation services courses.

The General Client Services Option involves a broad rehabilitation educational background emphasizing direct therapeutic contact with clients with various disabilities. A total of 30 credit hours in rehabilitation services courses is required. An additional 12 credit hours is required in rehabilitation services elective courses and/or other social and behavioral science cognate courses of either a basic or applied nature. Students may want to consider a concentration in vocational evaluation and work adjustment and/or supported employment to meet their cognate requirement. It is recommended that students take Psychology 101 and Sociology 101 in their first two years.

The Alcoholism and Drug Client Services Option involves a specialization in alcoholism and drug rehabilitation. A total of 30 credit hours in rehabilitation services courses is required. An additional 12 credit hours is required in rehabilitation services elective courses and/or social and behavioral science cognate courses of either a basic or applied nature (Rehabilitation Services 465 Basic Alcoholism and Drug Case Management, Psychology 304 Developmental Psychology, and Pharmacology 400 Drugs and Actions should be included in this 12-credit-hour requirement). Additional credit hours in practicum study may be required depending on indi-

vidual needs and faculty evaluation. It is recommended that students take Psychology 101 and Sociology 101 in their first two years.

Students are allowed a total of 36 hours of approved electives during the four academic-year degree program. However, in addition to the liberal arts courses in the general curriculum requirements and elsewhere in the degree program, they should take sufficient elective courses in the liberal arts (arts and humanities, natural sciences, and social sciences) to insure they have at least two academic years of liberal arts.

Other social and behavioral science courses of either a basic or applied nature could include courses in administration of justice and public safety, business administration, economics, education, political science, psychology, public administration, recreation, social work, sociology, urban studies, etc. It is possible to obtain a minor in most of these areas. Rehabilitation Services elective courses are those REH courses which are not part of a student's required program. Students should consult their advisors regarding specific courses more appropriate to their goals and interests.

Major in Rehabilitation Services

General Client Services Option (30 credits)

- REH 201 Introduction to Rehabilitation Services
- REH 202 General Alcohol and Drug Studies
- REH 312 Contemporary Rehabilitation Services
- REH 350 Applied Rehabilitation Methods
- REH 360 Work Evaluation and Adjustment in Rehabilitation
- REH 470 Seminar in Manpower Services
- REH 495 Practicum in Rehabilitation (12 credits)
- REH and/or Cognate (Social and Behavioral Sciences) Elective (12 credits)

General Curriculum Requirements (45 credits)

Approved Electives (36 credits)

Alcoholism and Drug Client Services Option (30 credits)

- REH 201 Introduction to Rehabilitation Services
- REH 202 General Alcohol and Drug Studies
- REH 312 Contemporary Rehabilitation Services
- REH 321 Introduction to Alcoholism and Drug Abuse
- REH 322 The Growth Process of the Alcoholic and Drug Addict
- REH 452 Crisis Intervention with the Alcoholic
- REH 494 Practicum in the Rehabilitation of the Alcoholic (6 credits)
- REH 523 Principles, Methods, and Techniques in Treatment of the Alcoholic
- REH 551 Treatment of the Alcoholic with Significant Others
- REH and/or Cognate (Social and Behavioral Sciences) Electives (12 credits)
- General Curriculum Requirements (45 credits)
- Approved Electives (36 credits)

Minor in Rehabilitation Services

A minor in rehabilitation services will require the completion of 18 hours of study. Six of these credit hours should be in REH 201 and REH 312. The remaining 12 credit hours can be taken in any rehabilitation services courses. Students should consult an advisor in the department regarding courses which would be appropriate to their needs and interests.

Master of Science in Rehabilitation Counseling

The Master of Science program in rehabilitation counseling is a graduate-level specialization designed to prepare an individual to meet the requirements necessary to become recognized as a professional rehabilitation counselor. In addition to the development of a broad understanding of human behavior, techniques of individual and group counseling, vocational appraisal and adjustment, caseload management, and use of community resources in facilitating the rehabilitation of mentally, emotionally, socially, and physically handicapped persons are stressed. Employment opportunities include state/federal rehabilitation programs and public and private agencies. See the *VCU Graduate Bulletin* for a more detailed description of this program.

URBAN STUDIES AND PLANNING

JOHN V. MOESER

Chair of the Department

John Accordino	Michael Brooks
Allen Fonoroff	Margot W. Garcia
Morton B. Gulak	Carroll Hormachea
Gary T. Johnson	Robert D. Rugg
Peter Schulz	Christopher Silver

Adjunct Faculty—

Jean Gregory	Ralph Higgins
Julie L. Vosmik	

The City

Today, nearly 80 percent of the American people live and work in metropolitan areas. The city has become a center for commerce, industry, the arts, and social interaction. It is a place where many people are involved in a great variety of activities. The city is a crowning achievement of civilization and urbanization and has been the means for the development and maintenance of our present society.

Such an intense concentration of human activity is not without its problems: racial discrimination, poverty, substandard housing,

traffic congestion, crime, and pollution. Urban governments are ill-equipped to handle these problems because, among other reasons, the available financial resources are decreasing at a time when the needs for municipal services are increasing.

In response to these unpleasant aspects of modern city life, too many city dwellers are moving to the suburban periphery where they have access to the city's resources and shelter from its problems. More than half of the urban population now resides outside the central city. Much commercial, industrial, and recreational activity has also decentralized. The urbanizing suburbs are now beginning to experience the problems of the central city. There is a growing realization that urban problems do not respect boundary lines. The issues are metropolitan in scope and cannot be avoided.

Career Opportunities

Opportunities exist in a wide variety of fields for urban studies graduates. Our recent graduates, those who chose work over graduate or professional school, have found useful and meaningful employment in a number of public agencies and organizations, including planning commissions, housing authorities, community development departments, transportation firms, social welfare agencies, and a variety of private organizations. Most students who chose graduate school have been accepted to leading institutions, enrolling in programs in architecture, planning, law, public administration, business administration, and other majors in the social and behavioral sciences.

The student with a Bachelor of Science degree in urban studies has acquired those skills needed for graduate school or for satisfying employment.

The Urban Studies Program

The program in urban studies is designed to familiarize the undergraduate with the metropolis (and the benefits achieved through its growth and development); the social science perspective applied to urban problems; and the development of plans and administration to produce a more livable environment.

The major is designed to provide students with an intellectual understanding of urban phenomenon and with sufficient methodological skills to undertake entry-level responsibilities in public

and private organizations dealing with the issues of urbanization. The program is not pre-professional in nature, but is broad in scope and draws heavily from the liberal arts.

To accomplish these objectives, twelve courses are required of all majors. These courses address basic knowledge across the field of urban studies, including political, economic, and social functions and interactions, the process of planning, research, urbanization, and policymaking.

The student is able to choose a concentration in planning, public policy and social change, environment, information systems, or public management. The Richmond metropolitan area is the primary laboratory for the program, and students are constantly challenged by the opportunities for research and community involvement. These concentrations provide students with greater choices for more detailed study. The student may also decide upon a generalized course of study.

The urban studies program is distinctly interdisciplinary in nature. Faculty members represent the following disciplines and professions: planning, geography, political science, law, urban studies, history, economics, architecture, and environmental studies. In addition, supporting urban studies courses are taught by faculty members from other departments within the School of Community and Public Affairs and the university. Students can structure their program of studies to fit individual goals. Intensive participation in curriculum and program planning by urban studies majors is not only encouraged but solicited.

The most significant distinctions of the urban program are

1. A subject that deals with the contemporary world and
2. An opportunity to become directly involved in the community through field work. The fieldwork provides further opportunity to develop skills as well as a transition between academic life and post-baccalaureate work life.

The curriculum is divided into various concentrations of study and a general area of urban studies.

Environmental Concentration

The concentration in environmental studies will expose students to natural science fields that are significant for understanding the physical environment of cities, presenting the effects of

urban population and land uses on the physical environment, introducing human response to environmental hazards and conditions in a behavioral context, and identifying alternatives for public management of interactions between human beings and environment. The overall objective of the concentration is to introduce the field of environmental management to those urban studies majors who may wish to orient their future experience in this direction.

Information Systems Concentration

A concentration in information systems within the urban studies major is designed for students interested in urban services and planning careers. This curriculum will provide additional training in computerized information systems.

Courses in this concentration can also be counted toward a Certificate in Planning Information. See *Graduate Bulletin* for additional details.

Planning Concentration

Planning can be defined as a rational approach to decision-making. Urban and regional planning is intended to make it possible to evaluate proposals for physical, social, and economic development against a backdrop of a comprehensive view of the future. To be useful, such a comprehensive view must be realistic—politically, financially, and administratively.

Thus, the planning concentration is designed to provide general information about the profession, the subject matter of planning, the theory of planning, and its application to urban problems.

Public Policy and Social Change Concentration

The growth of American urban communities is to a large extent the result of public policy. Laws made at all three levels of government influence the physical, social, and economic character of the metropolis. For this reason, a concentration devoted to the study of public policy (how it is made, its implementation, its impact) is central to an undergraduate urban studies curriculum. Moreover, since the study of urban areas includes a focus on social inequality, a knowledge of public intervention aimed at improving social conditions is essential.

Most students, upon graduation, will either work in government or for a private agency

whose budget and programming are largely shaped by government. Consequently, packaging courses in a fashion that provides students with an understanding of the political environment and community ethos in which they will work, the administrative machinery (including government budgeting procedures), and government policy as it affects such matters as social interaction, housing, and transportation, provides an integrated education that is both broad and focused.

Public Management Concentration

The activities carried out by a public manager are pivotal to a city's administration. Unless they are performed effectively, other activities are jeopardized. In crises, people look to urban managers and expect a quick and sure response.

In preparation for this career, the public management concentration achieves an understanding of management tools and relates these tools to fiscal areas and political boundaries of government. Emphasis is placed upon the manager as a public decision maker. Special attention is placed upon the concepts and practices of management, evaluation, policy analysis, governmental fragmentation, and budgeting. The concentration will prepare the student for entry-level positions in government or graduate study in the public management area.

Requirements for the Urban Studies Major

The Bachelor of Science in urban studies requires the completion of a minimum of 123 credit hours of study. The program is designed so that students may enter as late as their junior year.

Students are allowed to enroll in most 500-level courses but should consult their advisor before registering to secure permission of the instructor.

Students with a minimum 2.5 GPA may apply for participation in the Urban Government Internship Program which provides an opportunity to work within the Richmond area on urban and regional problems. In general, students may not exceed 48 credit hours of urban studies courses. However, those students who choose a specific concentration and wish to participate in the internship may exceed this maximum by six credit hours.

All students must successfully complete the following courses:

USP 245	Housing and Community Revitalization
USP 302	Land Use Capability
USP 304	Urban Social Systems
USP 306	Urban Economic Base
USP 310	Introduction to Public Planning
USP 313	Urban Research
USP 322	Urban Finance
USP 413	Policy Implementation
USP 440	Senior Seminar: The Good City
USP 541	Urban Public Policy-Making Processes

All students must also successfully complete one course from the concentration in environment, and one course from the concentration in planning. These courses are

Environment (choose one)

USP 331	Environmental Systems
USP 332	Environmental Management

Planning (choose one)

USP 261	Design of the City
USP 340	Urban Habitat

To complete a concentration, all students must complete successfully three additional courses within each concentration. The concentration in information systems requires four courses. All courses marked with an (*) are required for that concentration. For those students pursuing a generalized course of study, as well as those within specific concentrations, electives must be selected with the assistance of a faculty advisor so that individual programs will form a coherent body of knowledge in urban studies.

Environment

USP 240	Introduction to Historic Preservation
USP 261	Design of the City
*USP 331	Environmental Systems
*USP 332	Environmental Management
USP 333	Energy and Conservation Planning
USP 493	Urban Government Internship
USP 521	Cartography and Air Photo Interpretation
USP 525	Site Planning

Information Systems

*BUS 358	Introduction to Structured Programming
*BUS 360	Business Information Systems
*BUS 362	Computer Hardware and Software
*USP 521	Cartography and Air Photo Interpretation

Planning

USP 240	Introduction to Historic Preservation
USP 245	Housing and Community Revitalization
*USP 261	Design of the City
USP 340	Urban Habitat
USP 493	Urban Government Internship
USP 525	Site Planning
USP 552	Urban Transportation Systems

Public Policy and Social Change

- *USP 245 Housing and Community Revitalization
- USP 261 Design of the City
- USP 337 Urbanization and Blacks: A Cross-Cultural Comparison
- *USP 413 Policy Implementation
- USP 493 Urban Government Internship
- USP 552 Urban Transportation Systems

Public Management

- *POS 331 Public Administration
- POS 421 Urban Government and Politics
- *POS 432 Public Bureaucracy

Open Electives

- USP 340 Urban Habitat
- USP 350 Culture and Urbanism in Great European Cities
- USP 391 Special Topics in Urban Studies
- USP 392 Independent Study
- USP 493 Urban Government Internship
- USP 513 Planning Graphics
- USP 521 Cartography and Air Photo Interpretation
- USP 552 Urban Transportation Systems

*Required for option.

Minor in Public Management

The minor in Public Management has been created for students in political science and urban studies as well as for any other major. It is designed to develop up-to-date administrative skills and systematic analytical capabilities that will qualify graduates for professional staff positions with local, state or federal agencies and an ultimate career in management and personnel administration.

The minor provides an overview of the field of public management. It acquaints students with the political realities of public management, expands their appreciation of subjective factors in planning and decision-making and familiarizes them with psychological and sociological perspectives in management. As a result, the minor is a solid preparation for graduate study in law, public administration, urban planning, public policy, and political science.

The public management minor consists of 18 upper-level credits. All students must take the following courses:

- POS 331 Public Administration
- POS 432 Public Bureaucracy
- USP 322 Urban Finance
- USP 413 Policy Implementation

In addition, two of the following electives are required:

- POS 329 Intergovernmental Relations
- POS 334 Public Personnel Administration
- POS 421 Urban Government and Politics

- USP 541 Urban Public Policy Processes (for POS students) OR
- POS 321 Municipal Government and Administration (for USP students)

Substitutions may be arranged with the assistance of the student's advisor.

Minor in Urban Studies

For a minor in urban studies for a student outside the School of Community and Public Affairs, the following nine credit hours are required: CSE 315, 316, and USP 310. An additional nine hours of USP electives are to be taken with the advice and consent of an advisor in this department.

Master in Urban and Regional Planning

The Master in Urban and Regional Planning (M.U.R.P.) was established in 1973 to prepare professional planners for employment in state and local government and private firms. The M.U.R.P. is a 2-year program that requires 54 semester hours of coursework and internship. Accredited by the Planning Accreditation Board, the curriculum provides a grounding in the theory and methods of planning that is balanced between classroom and field experience. Students may choose a broad program in comprehensive planning or elect one of four concentrations:

- Urban Revitalization
- Housing and Community Planning
- Economic Development
- Physical Land Use Planning
- Environmental Planning
- Planning Management

There is also the opportunity for a joint degree program within the T.C. Williams Law School at the University of Richmond.

See the *VCU Graduate Bulletin* for a more detailed description of this program.

MINOR AND CERTIFICATE IN ENVIRONMENTAL STUDIES (ENS)

ELSKE V.P. SMITH
Coordinator

Faculty affiliated with the Environmental Studies Program are

- | | |
|--------------------------------------------------|---------------------------------------------------|
| Margot W. Garcia
(Urban Studies and Planning) | Greg Garmon
(Biology) |
| Marijean Hawthorne
(History and Geography) | David Hartman
(Sociology and Anthropology) |
| Husain Mutsafa
(Political Science) | Brad Hooker
(Philosophy and Religious Studies) |

Peter Schulz
(Urban Studies and
Planning)
Leonard Smock
(Biology)

Jan Thomas
(Justice and Risk
Administration)

Environmental crises and discussion of environmental issues are central features of modern industrial societies. Continuing technological development and economic growth demand increased public understanding of environmental constraints and the effects of human activity on the environment. When environmental questions are explored in depth, scientific knowledge, policy considerations, and ethical issues are necessarily joined. The curriculum in environmental studies is structured to provide a multi-disciplinary introduction to biophysical and social factors which affect the quality of life on earth.

The minor and the certificate programs seek to furnish both broad and specific educational benefits. The minor in environmental studies provides an overview of the field which offers an intrinsically interesting way for many students to organize elective course work while gaining knowledge important to life in the contemporary world. When combined with an appropriate major, an environmental studies minor can be useful to students planning careers in any area concerned with environmental process and problems. The environmental studies certificate can help prepare students for work in such fields as industrial pollution control, municipal water treatment, environmental planning and analysis, biological monitoring, and science writing and reporting. The minor and the certificate programs should also be valuable to those who expect to study at the graduate level in such concentrations as ecology and environmental systems.

The minor in environmental studies shall consist of 21 credits, 18 of which must be outside the student's major department. A minimum of 12 credits must be taken at the upper level (300-400). Students minoring in environmental studies must also complete STA 213 Introduction to Statistics or CSE 242 Methods of Community Analysis. Required and approved courses for the minor are as follows:

Required Courses

BIO 315 Man and the Environment
or
USP 331 Environmental Systems
POS 311 Politics of the Environment

or
SRA 300 Regulatory Aspects of Safety, Security and Health
STA 213 Introduction to Statistics
or
CSE 242 Methods of Community Analysis
or
BUS 301 Business Statistics
ENS 490 Seminar in Environmental Studies

All biology courses except BIO 315 and 332 have BIO 151-152, L151-L152 as prerequisites. Students are advised to take these two introductory courses rather than BIO 109-110, L109-110.

Additional Approved Courses

At least one natural science course and at least one social science course must be taken from the following list:

BIO 307 Aquatic Ecology
BIO 315 Man and the Environment
BIO 317 Ecology
BIO L317 Ecology Lab
BIO 332 Environmental Pollution
BIO 431 Introduction to Marine Biology
BIO 432 Biology of Polluted Waters
BIO 501 Advanced Ecology
BIO 503 Fish Biology
BIO 514 Stream Ecology
BIO 518 Plant Ecology
EAS 401 Meteorology
EAS 411 Oceanography
GEO 102 Introduction to Cultural Geography
GEO 203/204 Physical Geography
GEO L203/L204 Physical Geography Lab
GEO 311/312/ANT/311/312 History of Human Settlement
PHY 105 Physical Geology
PHY 315 Energy and the Environment
POS 311 Politics of the Environment
USP 302 Land Use Capability
USP 331 Environmental Systems
USP 332 Environmental Management
USP 333 Energy and Conservation Planning
ECO 308 Economic Geography
SOC 355 Natural Resources and Society
SOC 426 Population Dynamics
SRA 300 Regulatory Aspects of Safety, Security, and Health
SRA 420 Hazardous Materials Management
SRA 430 System Safety
SRA 440 Incident Investigation and Analysis
ENS 490 Research Seminar in Environmental Studies
ENS 491 Topics in Environmental Studies
ENS 492 Independent Study
ENS 493 Environmental Studies Internship

Certificate in Environmental Studies

A certificate in environmental studies will be awarded to students who complete the requirements for a minor in environmental studies, an additional nine credits of approved upper-level environmental studies course work, and one of the following four courses in applications of

statistics: PSY 214, SOC 214, STA 214, or STA 543. Courses may be counted toward both a student's major and the environmental studies certificate. A minimum grade-point average of 2.0 must be achieved in environmental studies course work for the certificate.

COURSES IN ADMINISTRATION OF JUSTICE (AJP)

181 Justice System Survey. Semester course; 3 lecture hours. 3 credits. Comprehensive overview of the administration of justice; assesses the extent of crime; reviews law enforcement, judicial, and correctional processes at all levels of government; discusses history and philosophy of public safety; evaluates career opportunities.

252 Introduction to the Juvenile Justice System. Semester course; 3 lecture hours. 3 credits. This survey course studies all segments of juvenile justice and special procedures designed for young persons; recognizes the importance of proper handling of the juvenile by the police and the courts; reviews recent developments in juvenile rehabilitation. Required of all students in juvenile justice.

253 Introduction to Corrections. Semester course; 3 lecture hours. 3 credits. A survey of societal responses to the offender; traces the evolution of practices based on philosophies of retribution, punishment, and rehabilitation; reviews contemporary correctional activities and their relationships to other aspects of the criminal justice system; introduces the emerging area of correctional programming within the community. Required of all students in corrections.

254 Introduction to Law Enforcement. Semester course; 3 lecture hours. 3 credits. A survey of different facets of law enforcement including the activities of public police agencies and private security organizations. Assesses changes in law enforcement philosophy and practices, police relationships with the public and the political arena, and anticipated future trends in policing. Required of all students in law enforcement.

255 Introduction to Legal Studies. Semester course; 3 lecture hours. 3 credits. Overview of the American legal system, processes, terminology; analysis of historical and philosophical bases of law. Examines the systems that adjudicate criminal and civil law; considers the role of law in the functioning of the justice system. Required of all students in legal studies.

260 Criminal Law. Semester course; 3 lecture hours. 3 credits. Deals with the definitions and processing of substantive offenses along with the bases of criminal liability, defenses, and complicity. Covers the scope of individual rights under due process, emphasizing arrest, interrogations, search, and seizure.

305 Enforcement Theories and Practice. Semester course; 3 lecture hours. 3 credits. An overview of the nature and application of law enforcement theory. Examines the theoretical underpinnings of a variety of law enforcement practices, with emphasis on evolving trends.

324 Courts and the Judicial Process. Semester course; 3 lecture hours. 3 credits. Examines the systems that adjudicate criminal and civil law; includes constitutional authority, jurisdictions, and trial processes, with particular emphasis

on reform in court administration, disposition without trial, and sentencing.

350 Evaluation and Treatment of the Offender. Semester course; 3 lecture hours. 3 credits. An analysis of the issues and procedures involved in evaluating individual differences in offenders and among classes of offenders; current diagnostic and treatment methods are discussed; introduces the student to case analysis and correctional counseling techniques. Includes analysis of evaluation and treatment resources external to corrections.

351 Community-Based Correctional Programs. Semester course; 3 lecture hours. 3 credits. A comprehensive review of various community-based rehabilitation and treatment efforts; includes analysis of probation, parole, work release, halfway houses, and other methods of reintegrating the offender into society.

352 Crime and Delinquency Prevention. Semester course; 3 lecture hours. 3 credits. Review and analysis of the problems associated with prevention of crime and delinquency, viewed in a total systems context. Programs and activities involving citizen, community, and agency interrelationships will be developed and examined. Students are responsible for preparing and evaluating projects with crime preventive goals.

355 Foundations of Criminal Justice Practice. Semester course; 3 lecture hours. 3 credits. An examination of the intellectual and historical underpinnings of the criminal justice system. This will include analysis of evolving values and ideas regarding social control, individual and collective responsibilities and rights, the role of punishment, politics and the law, practitioners as public servants, and criminological and other foundations of the criminal justice system.

358 Lawyer's Role in the Justice System. Semester course; 3 lecture hours. 3 credits. Examines the multiple responsibilities of lawyers from an historical and contemporary perspective. The basic techniques of the lawyer's craft will be studied with emphasis placed on case advocacy, negotiation skills and legal reasoning, and problem solving.

363 Correctional Law. Semester course; 3 lecture hours. 3 credits. Examines the legal rights of both the offender and the correctional worker. Attention is given to case law and legal decisions affecting policies and procedures in probation, correctional settings, and parole. Trends influencing correctional programming and management activities will be projected.

370 Scientific Research and Crime Analysis. Semester course; 3 lecture hours. 3 credits. A comprehensive evaluation of current developments in research, instrumentation, and laboratory technology utilized to detect, identify, analyze, and compare demonstrative evidence.

378 Juvenile Justice Law and Process. Semester course; 3 lecture hours. 3 credits. Examines the juvenile court as an institution: its jurisdiction and procedures. Considers intake, pretrial diversion, and hearings, as well as rights and liabilities of the delinquent, dependent, and neglected child. Contrasts juvenile and adult law; projects future impact of the court.

380 Research Methods in Justice and Risk Administration. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSE 241 and 242 or permission of instructor. Designed to familiarize the student with current and applied research

methods in justice and risk administration, including the application of data and information processing techniques and procedures; analyzes research in justice and risk administration journals and government reports, enhances the capability to evaluate contemporary research; students apply research techniques to specific prob-topics and use research methods from professional fields.

394 Field Service in Criminal Justice. Semester course; 1 credit. Designed to provide the student with an opportunity to participate as a volunteer worker in a criminal justice agency. Offers actual experience as an agency volunteer while under supervision of a faculty advisor. May be taken three times for a total of three credits to substitute for internship requirements.

420 Hazardous Materials Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: CHE 103-104; CHE L103-104. A survey of the nature and characteristics of hazardous materials; covers control technologies, transportation and storage methods, compatibility of multiple materials, waste disposal, and the protection of personnel; emphasis given to federal and state hazard communication and right-to-know legislation and trends.

430 System Safety. Semester course; 3 lecture hours. 3 credits. Addresses the concepts and practices of system safety; included are basic system concepts, application of system safety techniques, qualitative and quantitative applications such as fault-free, failure-mode-and-effects, MORT, and cost-benefit analyses.

432 Criminal Justice: Organizations. Semester course; 3 lecture hours. 3 credits. Considers the behavioral dimensions of administrations in criminal justice and public safety agencies. Examines the concepts of leadership and decision making and the effect of environmental dynamics in the management of the criminal justice system.

433 Adult/Juvenile Correctional Administration. Semester course; 3 lecture hours. 3 credits. Reviews the development of theories and practices prevalent in contemporary correctional administration and management; encompasses the community safety, treatment, and custodial functions of all juvenile and adult correctional settings. Emphasizes the administrative, organizational, and legal factors which impact on program design, implementation, and operation.

434 Enforcement Administration. Semester course; 3 lecture hours. 3 credits. Examines major management concepts and principles with special emphasis on considerations of law enforcement. Policies and procedures formulated and followed by managers in law enforcement settings will be evaluated from a structural as well as a functional perspective. Contemporary and anticipated future problems, challenges and trends facing police managers will be addressed.

460 Information Management and Data Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisite: SRA/AJP 380 or permission of instructor. Demonstrates various approaches to collecting, storing, retrieving, and analyzing loss data for management use; topics include report formats, manual and computerized storage systems, BLS data pools, and report generation; emphasis will be given to statistical analysis techniques, hazard/threat identification, risk assessment procedures, and micro-computer data base applications.

462 Strategies for Delinquency and Crime Prevention. Semester course; 3 lecture hours. 3 credits. Course will

examine current developments in crime and delinquency control and the challenges proposed by such developments. Assesses a variety of crime and delinquency prevention strategies and procedures for implementing them. Students will develop prevention objectives and work-action plans to reduce and prevent delinquency and crime.

463 Comparative Criminal Justice Systems. Semester course; 3 lecture hours. 3 credits. Study of national and international criminal justice systems with an emphasis on historical, cultural, and operational comparisons. Contemporary research relating to law enforcement, adjudicative, and correctional systems will be considered.

468 Economic Offenses and Organized Crime. Semester course; 3 lecture hours. 3 credits. Analysis of the types of offenses which occur in the business and governmental world, and the consequences of illegal practices. Primary attention will address the public sector through the methods utilized to detect and investigate criminal activities affecting governmental units. Relationships to organized crime will be described for each of the specific topics and techniques.

475 Case Studies in Criminal Procedure. Semester course; 3 lecture hours. 3 credits. Analyzes case studies reflecting the supervisory role of the courts over the prosecutorial use of testimonial and nontestimonial evidence; examines by actual cases the judicial interpretive processes by which the public safety is balanced with individual rights.

480 Seminar: Critical and Career Issues in Criminal Justice. Semester course; 3 lecture hours. 3 credits. Analyzes contemporary questions relating to policies, goals, and developments throughout criminal justice; includes detailed examinations of vital issues and emerging trends which promise to affect the future. Research papers are to be prepared on selected issues. Students will assess their own career capabilities, with special emphasis on available opportunities for holders of the degree.

491 Topics Seminar in Criminal Justice. Semester course; 3 credits. In-depth examination of selected administration of justice topics. Seniors with a GPA of 3.0 or above may substitute AJP 589 Seminar: Innovations in Administration of Justice.

492 Directed Individual Study. Semester course; 3 credits. Provides an independent study opportunity for the adult student who is (or was) employed in the criminal justice, safety, or risk administration position and who does not require internship or volunteer experience. This course is also available to seniors with a 3.0 GPA (with permission of the department chairman) as a substitute for an elective option course.

493 Internship. Semester course; 3 or 6 credits. Field internship allows the student to relate theory to practice through observation and experience; must be performed in an approved agency or organizational setting under the supervision of the instructor.

COURSES IN SAFETY AND RISK ADMINISTRATION (SRA)

145 Introduction to Safety, Security, and Health. Semester course; 3 lecture hours. 3 credits. Provides an introduction to the professional fields of occupational safety, security, and health; includes a comprehensive overview of the safety/loss-control enterprise; assesses the extent and impact of

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accident, injury, and loss problems; reviews transportation systems and hazards and considers fire protection and occupational safety and health programs in both private and public sectors; discusses history, philosophy, and practice of safety measures; and evaluates career opportunities in safety and risk administration professions.

255 Introduction to Legal Studies. Semester course; 3 lecture hours. 3 credits. Overview of the American legal system, processes, terminology; analysis of historical and philosophical bases of law. Examines the systems that adjudicate the criminal and civil; considers the role of law in the functioning of the justice system.

300 Regulatory Aspects of Safety and Risk Control. Semester course; 3 lecture hours. 3 credits. Examines political, scientific and social concepts of risk which influence the regulation of certain societal hazards and threats. Includes a survey of federal and state laws, regulations and standards which impact upon employment, the environment, industrial security, consumer protection, and occupational safety and health.

320 Controlling Workers' Compensation and Product Liability Losses. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 430 or permission of instructor. Analyzes and evaluates the roles and responsibilities of the safety and risk-control professional in planning, implementing, and administering workers' compensation and product liability loss control programs. Emphasis is placed on the philosophy, principles, and techniques used by private and public sector organizations.

340 Emergency Planning. Semester course; 3 lecture hours. 3 credits. Emphasizes theory and principles of emergency planning and response to natural and technology based disasters. Responsibilities and legal requirements found at the federal, state and local levels will be studied as will be functions and strategies of emergency planning within private and public sector organizations.

350 Transportation Planning and Management. Semester course; 3 lecture hours. 3 credits. Contemporary and future problems of traffic and transportation planning and management are addressed; critical issues affecting the motor-vehicle, rail, air, water, and pipeline modes of transportation are evaluated; emphasis given to strategies for managing transportation system hazards and threats.

360 Safety and Health Technology. Semester course; 3 lecture hours. 3 credits. Principles and methods for identification, evaluation, control, and monitoring of physical hazards in the work environment; includes the study and application of engineering principles to physical layout and design of work environments, equipment, and tools; addresses mechanical and electrical systems, materials handling and storage, personal protective equipment, transportation systems, and special work environments.

380 Research Methods in Justice and Risk Administration. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSE 241 and 242 or permission of instructor. Designed to familiarize the student with current and applied research methods in justice and risk administration, including the application of data and information processing techniques and procedures; analyzes research in justice and risk *administration journals* and government reports, enhances

the capability to evaluate contemporary research; students apply research techniques to specific prob-topics and use research methods from professional fields.

390 Industrial Hygiene. Semester course; 3 lecture hours. 3 credits Prerequisite: BIO 109; BIO L109 or permission of instructor. An introduction to the principles of industrial hygiene, including the recognition, evaluation, and control of chemical and physical agents; topics include elements of toxicology and occupational disease, airborne contaminants, radiation, noise and vibration, and heat stress; relevant standards will be surveyed; laboratory and field industrial hygiene and toxicology exercises will stress industrial, transportation, and environmental situations.

411 Fire Administration. Semester course; 3 lecture hours. 3 credits. Analyzes the risk management factors of fire hazards as determined through current administrative practices, procedures, and controls. Enables the student to understand how to minimize the loss of human, natural, and physical resources through prudent program assessment and direction.

420 Hazardous Materials Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: CHE 103-104; CHE L103-104. A survey of the nature and characteristics of hazardous materials; covers control technologies, transportation and storage methods, compatibility of multiple materials, waste disposal, and the protection of personnel; emphasis given to federal and state hazard communication and right-to-know legislation and trends.

430 System Safety. Semester course; 3 lecture hours. 3 credits. Addresses the concepts and practices of system safety; included are basic system concepts, application of system safety techniques, qualitative and quantitative applications such as fault-free, failure-mode-and-effects, MORT, and cost-benefits analyses.

440 Incident Investigation and Analysis. Semester course; 3 lecture hours. 3 credits. Reviews various conceptual and analytical models used in accident/incident investigation strategies and reporting systems, report formats, data collection methods, causal inferences, problem identification, and data analysis; in-depth case studies and epidemiological reviews of recent events will be emphasized.

450 Human Factors/Ergonomics. Semester course; 3 lecture hours. 3 credits. Study of the human factors and ergonomic principles which promote the safe interaction within and between the 4 major components of occupational and consumer systems. The principal risk factors and common interventions associated with humans, their tools and machines, environment and management subsystems are emphasized. Current critical issues and recent research are explored.

460 Information Management and Data Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisite: SRA/AJP 380 or permission of instructor. Demonstrates various approaches to collecting, storing, retrieving, and analyzing loss data for management use; topics include report formats, manual and computerized storage systems, BLS data pools, and report generation; emphasis will be given to statistical analysis techniques, hazard/threat identification, risk assessment procedures, and microcomputer data base applications.

468 Economic Offenses and Organized Crime. Semester course; 3 lecture hours. 3 credits. Analysis of the types of offenses which occur in the business and governmental world and the consequences of illegal practices; primary attention will address the public sector through the methods used to detect and investigate criminal activities affecting governmental units; relationships to organized crime will be described for each of the specific topics and techniques.

470 Comparative Safety and Risk Control. Semester course; 3 lecture hours. 3 credits. Study of national and international safety and risk-control systems with emphasis on historic, cultural, and operational comparisons. Examines public, private and international sector policies and management practices for the control of safety and health threats and risks associated with environmental, occupational, consumer, transportation and emergency or disaster issues.

480 Seminar in Safety and Risk Administration. Semester course; 3 lecture hours. 3 credits. Addresses contemporary issues in safety/risk administration and management; evaluates issues and emerging trends which promise to affect the future. Research papers are to be prepared on selected administration/management issues; students will assess their own career capabilities and develop a career plan.

491 Topics Seminar. Semester course; 3 lecture hours. 3 credits. In-depth examination of a selected risk administration topic related to occupational safety and health, security and loss control management, fire services management, or transportation safety.

492 Directed Individual Study. Semester course; 3 credits. Provides an independent study opportunity for the adult student who is (or was) employed in criminal justice, safety, or risk administration position and who does not require internship or volunteer experience. This course is also available to seniors with a 3.0 GPA (with permission of the department chairman) as a substitute for an elective option course.

493 Internship. Semester course; 3 or 6 credits. Field internship allows the student to relate theory to practice through observation and experience; must be performed in an approved agency or organizational setting under the supervision of the instructor.

COURSES IN RECREATION, PARKS, AND TOURISM (REC)

195 Recreation Leadership. Semester course; 3 lecture hours. 3 credits. Course provides a study of the theories of leadership, group dynamics, and human relationships used in recreation delivery systems. Students acquire and demonstrate practical skills in planning, organizing, leading, participating, and evaluating a wide variety of recreation activities selected from the basic areas of programming such as social recreation, music, dance, drama, arts and crafts, environmental-outdoor recreation, special events, sports and games, linguistics, and hobby clubs.

200 Introduction to Outdoor Recreation Activities. Semester course; 3 lecture hours. 3 credits. A basic introduction to the theory and practice of outdoor adventure recreation. Emphasis is given to knowledge and understand-

ing of the theoretical and philosophical foundations of participation in outdoor adventure recreation programs. Students will be exposed to an experiential approach to learning. Through involvement with activities, students will develop skills in planning, administering, and evaluating outdoor adventure recreation programs.

201L Backpacking. Semester course; 2 laboratory hours. 1 credit. Prerequisite: REC 200 or permission of instructor. An introduction to backpacking. Utilizing lectures, readings, and hands-on-experience, emphasis will be given to the skills and knowledge necessary for safe, low-impact, short-to-moderate-duration travel through backcountry areas.

202L Flatwater Canoeing. Semester course; 28 laboratory hours. 1 credit. Prerequisites: REC 200 and ability to swim, or permission of instructor. Introduction to flatwater canoeing. Utilizing lectures, readings, and on-the-water experience, emphasis will be given to the skills and knowledge necessary for planning and implementing flatwater canoe trips. Topics include safety, locations for trips, equipment, and portaging, as well as the issues of conservation and impact.

203L Whitewater Canoeing. Semester course; 2 laboratory hours. 1 credit. Prerequisites: REC 202L and ability to swim or permission of instructor. A basic introduction to whitewater paddling, utilizing lectures, readings, and on-the-water experience. Emphasis will be given to the skills and knowledge necessary for planning and implementing whitewater canoe trips, including communication and the structure for leading group trips. Course is taught evenings and weekends as found in *Schedule of Classes*.

204L Rock Climbing. Semester course; 2 laboratory hours. 1 credit. A basic introduction to rock climbing, utilizing lectures, readings, and rock climbing experiences. Emphasis will be placed on safety, equipment, and conservation, as well as techniques of belaying, climbing, and rappelling. Attention is given to the importance of communication and personal feelings of mastery and success in outdoor adventure recreation. Course is taught evenings and weekends as found in *Schedule of Classes*.

261 Recreation, Parks, and Tourism in Modern Society. Semester course; 3 lecture hours. 3 credits. Introduction to the historical and philosophical foundations of leisure and recreation; implications of continued growth of the leisure phenomenon in contemporary society.

303 Leisure Delivery Systems. Semester course; 3 lecture hours. 3 credits. Evaluation of public, private, and commercial agencies that provide recreation services. Particular emphasis is given the types of leisure activities offered in relationship to the recreation market.

320 Recreation Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSE 241–242. Examines various approaches to the study of leisure. Assesses the use of free time and the expenditure of time and money to fulfill leisure needs.

331 Recreation Site Selection and Analysis. Semester course; 3 lecture hours. 3 credits. An overview of the site selection and development processes will be analyzed as individual elements and the interrelationships among all the elements will be reviewed. Consideration will be given to the social, political, physical, and legal aspects of the park planning process.

332 Recreation Site Design and Development. Semester course; 2 lecture hours. 2 credits. Prerequisite: REC 331. General principles of planning and development of basic recreation areas and facilities; specific principles of design relating to outdoor recreation facilities; standards relative to space requirements, location, and programs; trends in site design and development.

332L Recreation Site Design and Development Laboratory. Semester course; 4 laboratory hours. 2 credits. Prerequisite: REC 331. Laboratory work correlated with REC 332. Can be taken only concurrently or subsequent to REC 332. (Laboratory fee required.)

341 Introduction to Travel and Tourism. Semester course; 3 lecture hours. 3 credits. Examination of historical perspective, basic policy issues, and social and economic impact of the travel and tourism field. Functions, programs, and objectives of various types of travel and tourism organizations will be studied.

371 Introduction to Therapeutic Recreation. Semester course; 3 lecture hours. 3 credits. An introduction to services for special populations. Examines the various agencies and institutions which provide such services as well as the professional competency necessary for the delivery of leisure services to the handicapped; the physically, socially, and mentally disabled; and the aged. Introduces the student to client assessment and programming.

395 Recreation Program Development. Semester course; 3 lecture hours. 3 credits. Prerequisite: REC 195. Principles of recreation program development; intensive study of the recreation program areas available to participants; analysis of the methods and techniques of program implementation and program evaluation.

403 Management of Recreation, Park, and Tourism Agencies. Semester course; 3 lecture hours. 3 credits. Principles of the administrative process. Deals with basic procedures of recreation administration, with particular emphasis on legal foundations, organizational structure, management theory, personnel practices and policies, legal liability, activity and liability insurance.

404 Revenue Sources for Parks and Recreation. Semester course; 3 lecture hours. 3 credits. Examination of the financing, budgeting, and marketing techniques used to develop and operate leisure service opportunities.

431 Advanced Recreation Facilitation Techniques. Semester course; 3 lecture hours. 3 credits. The course provides a study of advanced leadership, group dynamics, and human relationships used in leisure delivery systems. Students acquire skills in facilitation techniques including decision-making, problem-solving, conflict management, and evaluation strategies.

442 Group Travel Management. Semester course; 3 lecture hours. 3 credits. A study of the processes and procedures involved in the planning and organization of group travel. Emphasis will be given to the economic and political dimensions of travel, deregulation, how travel agencies function, professional liability, and future trends in the field.

445 Conference and Convention Planning. Semester course; 3 lecture hours. 3 credits. The planning, organizing,

promoting, and implementing of conferences and conventions. Included will be the development of conference programming, financing, and public relations as well as negotiations with meeting facilities, hotels, and food services agencies.

461 Recreation Resource Management. Semester course; 3 lecture hours. 3 credits. A comprehensive overview of recreation resource management institutions, both public and private. Emphasis is given to the public sector at the federal, state, and local levels. Professional, service, and educational organizations contributing to outdoor recreation are examined. The legal framework operating within recreation resource management also is covered.

465 Park Operations and Maintenance. Semester course; 3 lecture hours. 3 credits. The purpose of this course is to gain an understanding of the concepts, principles, and practices of park operations and maintenance. Quantitative and qualitative resource evaluation will be emphasized. Special consideration is given to methods and techniques for determining management and operations policies.

472 Therapeutic Recreation Program Design. Semester course; 3 lecture hours. 3 credits. Prerequisite: REC 371; open to therapeutic recreation option majors only. Instructs students in the techniques of assessment, planning, implementation, and evaluation of therapeutic recreation programs for a variety of clients with special needs.

473 Leisure and the Aged. Semester course; 3 lecture hours. 3 credits. An analysis of the leisure needs of the aged. The need for specialized leisure programs for the aged in a variety of community and institutional settings will be explored. Pre-retirement counseling will be emphasized.

475 Recreation In Correctional Settings. Semester course; 3 lecture hours. 3 credits. A survey of recreational needs of inmates in adult and juvenile correctional institutions, short-term institutions, and community-based correctional institutions. The development of specialized programming and the role of recreation in the rehabilitative process will be examined.

476 Leisure Counseling. Semester course; 3 lecture hours. 3 credits. An introduction to the theory and application of leisure counseling for the general public and those with special needs. The use of leisure counseling as a means of client evaluation and assessment also will be examined.

480 Specialized Recreation Programs for Handicapped Children. Semester course; 3 lecture hours. 3 credits. Development of recreation programs for handicapped children in schools, other institutions, and community settings. Consideration will be given to the development of leisure skills and goal accomplishments.

490 Seminar. Semester course; 3 seminar hours. 3 credits. Advanced seminar in recreation, parks, and tourism which analyzes in-depth special problem areas and current issues. Independent research on special projects.

491 Topics in Recreation. Semester course; 3 lecture hours. 3 credits, maximum 6 credits per semester; maximum total of 9 credits in all departmental topics courses which may be applied to the major. An in-depth study of specific content areas in recreation, park, and tourism operations. See

Schedule of Classes for specific topics to be offered each semester.

492 Independent Study in Recreation. Semester course; 1–6 credits. Prerequisite: permission of departmental chairman. Under the supervision of a faculty member, the student selects a topic of concern to investigate. Each student must present his/her findings in writing and pass an oral examination before a faculty committee.

493 Internship. Semester course; 8 credits. Prerequisite: senior standing. Opportunities are offered for the student to gain practical experience in a variety of public, private, and commercial agencies. The student will complete an individualized course of study during a 10-week program consisting of 400 clock hours.

506 Contemporary Issues in Therapeutic Recreation. Semester course; 3 lecture hours. 3 credits. Prerequisite: REC 371 and REC 472. An examination of contemporary issues affecting the delivery of leisure services and programs to disabled persons.

510 Tourism Policy. Semester course; 3 lecture hours. 3 credits. The examination of tourism policy with emphasis upon components of the industry involved in the formulation and implementation of public policy. The course will include an analysis of the legislative programs of regional and national tourism organizations.

COURSES IN REHABILITATION SERVICES (REH)

201 Introduction to Rehabilitation Services. Semester course; 3 lecture hours. 3 credits. This course has been designed to expose the student to the history and development of the rehabilitation movement. Topics explored include basic concepts and philosophies of rehabilitation, psychological and vocational adjustment of the disabled, and an examination of selected rehabilitation methods.

202 General Alcohol and Drug Studies. Semester course; 3 lecture hours. 3 credits. This course is designed to help the student develop an appreciation of society's attitude about the use of drugs, particularly alcohol, and each individual's responsibility in decisions about the use of drugs. Discussion is offered on specific characteristics of drugs, how addiction occurs, and role of rehabilitation after addiction.

301 Development of Rehabilitation Potential. Semester course; 3 lecture hours. 3 credits. Provides an understanding of the problems confronting the unemployed and underemployed in achieving maximum employment potential. The particular nature of various problems encountered by such populations is analyzed, in relation to the nature of the requirements of employment.

312 Contemporary Rehabilitation Services. Semester course; 3 lecture hours. 3 credits. Role of the rehabilitation worker in the development of human resources. Organization of service delivery systems and community resources. The relationship of rehabilitation services to societal needs and identification of potential recipients of service.

314 Manpower and Labor Markets. Semester course; 3 lecture hours. 3 credits. A study of the condition of econom-

ically underproductive segments of the labor force and the impact of lost human resources in local labor markets.

321 Introduction to Alcoholism and Drug Abuse. Semester course; 3 lecture hours. 3 credits. Prerequisite: REH 202. Introduction to alcoholism/drug abuse as a progressive, family disease with consideration of basic contributing factors (physiological, psychological, and sociocultural builds on foundation established in REH 202); exposure to multidisciplinary rehabilitative approaches to arresting the disease, as well as some knowledge of intervention; brief mention of the highlights of the continuum of care available in the recovery process.

322 The Growth Process of the Alcoholic and Drug Addict. Semester course; 3 lecture hours. 3 credits. Prerequisite: REH 321. This course traces the progression of recovery from the isolation associated with the addiction process to a variety of modalities utilized in interrupting it as well as approaches designed to provide involvement and to maintain integration leading to an ongoing growth process.

350 Applied Rehabilitation Methods. Semester course; 3 lecture hours. 3 credits. Methods of intervention in rehabilitation, emphasizing the development of interpersonal skills, e.g., communication skills, interviewing techniques.

360 Work Evaluation and Adjustment in Rehabilitation. Semester course; 3 lecture hours. 3 credits. Provides an overview of principles of determining work potential and overcoming maladjustment to work. Characteristics of work environments, assessment of work potential, and contemporary problems of work evaluation and work adjustment in rehabilitation services.

365 Manpower Community Resources. Semester course; 3 lecture hours. 3 credits. An examination of various community resources designed to prepare, upgrade, and provide services to the unemployed. Emphasis will be upon the mobilization of these resources to facilitate employability.

370 Job Development and Placement. Semester course; 3 lecture hours. 3 credits. An examination of the characteristics of the local labor market, the work barriers confronting special populations, and the methods and techniques involved in putting people to work. Special emphasis will be placed upon understanding employer demands, task and skill analysis, identifying attributes of clients, client/job matching skills, and follow-up techniques.

435 Human Resource Program Design. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. The utilization of planning data in the design of human resource programs. Objective setting, client group selection processes, work programs, mix of services, selection of service deliverers, staffing, budgeting, fiscal systems, monitoring, internal evaluation, information systems, and inter-agency cooperation as parts of the manpower program will be examined.

452 Crisis Intervention with the Alcoholic. Semester course; 3 lecture hours. 3 credits. Prerequisites: REH 321, 322, 523, or permission of instructor. Focus on the application of concepts discussed in theory in the recovery process course; sharing of difficulties and successes with crisis intervention by individuals already in the field; provision of new and more refined techniques under the direction of experts demonstrating their applicability.

456 Interpretative Processes in Rehabilitation. Semester course; 3 lecture hours. 3 credits. This course is concerned with methodology of collection, analysis, synthesis, and effective utilization of education, social, psychological, vocational, and medical information in the rehabilitation process.

465 Basic Alcoholism and Drug Case Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: REH 321, 322, and permission of instructor. This course is an overview of the components involved in case management of the alcoholic, drug abuser, and his/her family. It will explore the interrelationship of the basic skills utilized by an alcoholism and drug abuse counselor and attempt to coordinate these functions into a total procedure.

470 Seminar in Manpower Services. Semester course; 3 seminar hours. 3 credits. Prerequisite: permission of instructor. A senior seminar designed to examine the role of a new manpower professional in a manpower agency. Topics include agency and unit goal analysis, role and job identification, authority structures, decision making, accountability, subordination, communications patterns, report writing, and survival skills.

491 Topics in Rehabilitation. Semester course; 3 lecture hours. 3 credits, maximum 6 credits per semester, maximum total of 9 credits in all departmental topics courses which may be applied to the major. An in-depth study of specific content areas in rehabilitation services. See *Schedule of Classes* for specific topics to be offered each semester.

494 Practicum in the Rehabilitation of the Alcoholic. Semester course; 3, 6, 9 or 12 credits. Prerequisite: permission of instructor. Opportunity to observe and participate in the 22 tasks of the alcoholism worker as outlined in the Littlejohn Report and required for certification; provision for general direction and supervision by the alcoholism personnel with the department and the direct supervision by a qualified person with the agency or facility.

495 Practicum in Rehabilitation. Semester course; 3, 6, 9, or 12 credits. Prerequisite: permission of instructor. Designed to provide opportunities for observation and participation in rehabilitation and related settings. Experiences are systematically related to theoretical concepts.

Note: The following graduate level courses are appropriate for undergraduate credit for advanced undergraduate students with permission of instructor.

502 History and Techniques of Manual Communication I. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Background and theory of manual communication will be covered in detail. A study of the basic principles of manual communication through nonverbal techniques, eye-contact training, finger-spelling, and basic patterns of American Sign Language Systems. Also a focus on history and development of sign language and various methods of communication with deaf persons.

503 History and Techniques of Manual Communication II. Semester course; 3 lecture hours. 3 credits. Prerequisite: REH 502 and/or permission of instructor. A review and continued study of the theoretical 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. Semester course; 3 lecture hours. 3 credits. Prerequisite: REH 503 or equivalent or permission of instructor. 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 communications.

505 Attitudinal Access and Architectural Barriers in Rehabilitation. Semester course; 3 lecture hours. 3 credits. Will emphasize legislation concerning nondiscrimination, 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. Semester course; 6 hours. 6 credits. This course provides an intensive five-week exposure to the broad field of vocational rehabilitation. 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.

523 Principles, Methods, and Techniques in Treatment of the Alcoholic. Semester course; 3 lecture hours. 3 credits. Prerequisites: REH 321 and 322 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, cofacilitation, and practice counseling sessions.

525 Introduction to Rehabilitation. Semester course; 3 lecture hours. 3 credits. This course is designed to give the student a comprehensive overview of the rehabilitation process. It emphasizes the historical, philosophical, social, and legal aspects of rehabilitation. Special attention is devoted to the professional aspects of rehabilitation counseling. The need for the rehabilitation counseling, and skills and functions of the rehabilitation counselor are also covered.

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 geared toward complete rehabilitation of

mentally retarded persons as well as utilization of community resources.

533 Directed Readings in Rehabilitation. Semester course; 3–6 credits. 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 written or oral examination before a faculty committee must be passed.

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-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 will 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. Semester course; 3 lecture hours. 3 credits. A study of developments 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 321, 322, 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. Semester course; 3 lecture hours. 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. Semester course; 3 lecture hours. 3 credits. An in-depth examination of the methods and techniques utilized in determining employment potential. 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. Semester course; 3 lecture hours. 3 credits. An in-depth analysis of methods utilized in overcoming maladaptive

worker behavior in rehabilitation services including group process, sheltered workshops, and nonverbal 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. Semester course; 3 lecture hours. 3 credits. This course will offer students an opportunity to acquire the knowledge and skills necessary for providing services 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. Semester course; 3 hours. 3 credits. An eight-week on-the-job experience jointly supervised by a university faculty member and by the student's training supervisor in the public or private rehabilitation agency or facility in which the student is employed. A choice of exercises is programed to encourage the further integration of concepts, practices, and skills with actual agency policy and service delivery.

COURSES IN COMMUNITY AND PUBLIC AFFAIRS (CSE)

241-242 Methods of Community Analysis. Continuous course. CSE 241, 3 lecture hours; CSE 242, 2 lecture and 2 laboratory hours. 3–3 credits. Prerequisites: MAT 101 or MAT/BUS 111. First semester considers descriptive cartographic and statistical techniques employed in community analysis; second semester advances to techniques which imply a relationship between variables in a community. While addressing sampling, hypothesis testing, correlation, and regression analysis, the student is introduced to computer processing.

243 Decision Making and Quantitative Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisite: Student must qualify for entrance into Statistics 213 on the Mathematics Placement Test. A study of quantitative methods and their application is used to analyze and evaluate activities in the public sector. Utilizing the computer, a variety of research tools are studied, including survey research, cartographic and statistical techniques, research design, and proposal writing. The course is intended for those with a strong mathematics or computer background or those who have demonstrated an ability to work with the application of data in the public sector area. Students who have credit for CSE 241 and 242 may not take this course for credit. Likewise, students successfully completing CSE 243 may not take CSE 241 and 242 for additional credit. This course will be an accelerated version of CSE 241–242 for students who have demonstrated a high level of achievement in mathematics and/or a high aptitude for mathematics and statistics.

315 The Evolution of American Cities. Semester course; 3 lecture hours. 3 credits. A general survey of how cities developed in the United States and the factors which contributed to the process of urbanization. Emphasis is placed on the public attitudes and values that have dominated particular periods of history and how these values affected the efforts to urbanize. The American city is examined as a vital force in the economic, social, and

258 School of Community and Public Affairs

political development of modern America, as the major location for conflict between people of all persuasions, and as the home of much of what is meant by American "civilization."

316 Urban Life in Modern America. Semester course; 3 lecture hours. 3 credits. Examines how a modern city functions, the public services rendered within the city, and the impact of public policy on the city. The city is treated as a system consisting of economic, social, and political activities which influence and are influenced by the physical/demographic environment. Each activity is studied separately with the cause-effect relationships among the activities highlighted by an analysis of public service delivery and, more generally, urban public policy.

COURSES IN URBAN STUDIES (USP)

116 Introduction to Urban Studies. Semester course; 3 lecture hours. 3 credits. Introduction to the various theories of urbanism and attempts to offer solutions to the problems of urban life in modern civilization. The course will survey the major works of those who have studied cities during the past century and who have either attempted to explain the problems and potential of cities or offered solutions and alternatives to existing urban structures. The works of noted social reformers, political analysts, economists, and architects as well as urban planners will be examined through lectures, readings, films, slides, discussions, and field trips (when feasible).

240 Introduction to Historic Preservation. Semester course; 3 lecture hours. 3 credits. This course provides a broad overview of the field of historic preservation and the principal issues facing the historic preservation movement today. Students examine the goals, values, and techniques of preservationists; federal, state, and local preservation policies and programs; and the sometimes conflicting roles of architects, historians, archaeologists, planners, bureaucrats, minorities, and developers in the preservation movement. Field trips and guest lectures by professionals engaged in public and private preservation efforts highlight major concepts and topics presented in course readings and class discussion.

245 Housing and Community Revitalization. Semester course; 3 lecture hours. 3 credits. The purpose of this course is to examine housing issues as a major determinant of the make-up and the quality of community life in modern American society. Attention is given to the public and private forces that influence various components of the housing issue, such as: demand for housing; housing availability to various economic and social groups; housing design and quality (including new construction, rehabilitation, historic preservation, and adaptive re-use), housing finance, and the relationship of housing to planning in metropolitan areas.

261 Design of the City. Semester course; 3 lecture hours. 3 credits. Architecture, space, and activities play a special role in the overall design of the city. These elements are analyzed to understand their interrelationships and importance to a city's visual character. Architectural styles, civic art, effects of space on the individual, and methods for designing cities will be discussed. The class is for those who want to understand urban design elements and for those who will be involved in city design.

302 Land Use Capability. Semester course; 3 lecture hours. 3 credits. An introduction to the principles, concepts, and knowledge involved in determining the capacity of land under various conditions to support a variety of uses.

304 Urban Social Systems. Semester course; 3 lecture hours. 3 credits. A study of the growth and development of neighborhoods, cities, and metropolitan systems. Analyzes origins of community interests and factors which affect the ability of communities to further their interests. Particular attention is given to how patterns of service delivery and the placement of public facilities affect community interest and whether federal or municipal departments are able to set adequate community service standards.

306 The Urban Economic Base. Semester course; 3 lecture hours. 3 credits. Prerequisite: Either STA 213 and BUS 161, 162, 163; or CSE 242 or CSE 243. Explores the nature of work as it is organized in urban businesses, the interdependence of industries, and the reasons why different cities develop different types of economies. Policies and strategies for developing and maintaining healthy urban economies will be discussed in detail. This course is a prerequisite for USP 322 Urban Finance.

310 Introduction to Public Planning. Semester course; 3 lecture hours. 3 credits. Introduction to theory and practice of governmental planning in the U.S. with emphasis on urban and regional planning. Survey of the history of urban planning, the current planning practice at the local level, and the ethical responsibilities of planners. This course is designed to give students an understanding of the meaning and form of governmental intervention into social and economic systems.

313 Urban Research and Field Methods. Semester course; 1 lecture and 4 laboratory hours. 3 credits. Prerequisites: CSE 241 and CSE 242, or CSE 243 or STA 213 and BUS 161, 162, 163; or consent of the instructor. Methods of data collection, organization, and updating; the use of secondary information; applications of elementary statistical analysis and of graphic and cartographic analysis.

322 Urban Finance. Semester course; 3 lecture hours. 3 credits. Prerequisite: completion of USP 306 The Urban Economic Base. Treats the local government from a practical management perspective as an organization in a political-economic environment. The nature of city expenditures and sources of revenues are explored. Budgeting and taxing decision-making processes are explored in depth. Economic impacts of these decisions on citizens are analyzed and implications for practice drawn.

331 Environmental Systems. Semester course; 3 lecture hours. 3 credits. Consists of a broad overview of relevant physical science subjects: climatology, soils science, plant ecology, hydrology, geology, and geomorphology. These subjects are viewed together in a systems framework taking into account the many interactions among environmental systems and between these systems and man.

332 Environmental Management. Semester course; 3 lecture hours. 3 credits. Provides a framework for developing environmental management objectives and techniques. The focus of the course is on a study of natural hazards in Virginia and a variety of approaches to reducing losses from these hazards.

333 Energy and Conservation Planning. Semester course; 3 lecture hours. 3 credits. An inquiry into the future implications of policy and planning issues arising from alternative strategies for energy conservation and development. The long-term effects of various energy practices on American urban areas, in the social, economic, and environmental context of land use systems.

340 Urban Habitat. Semester course; 3 lecture hours. 3 credits. An examination of urban habitats in a variety of geographical regions, with emphasis on their differences and their common experiences.

350 Culture and Urbanism in Great European Cities. Semester course; 3 lecture hours. 3 credits. Prerequisite: sophomore standing or permission of instructor. Course may be repeated under different topics for a total of six credits. An interdisciplinary course with a dual focus on the origin, expansion, and significance of an important European city and on reflections of urbanism in its culture. Particular emphasis will be placed on relating the physical, social, and economic aspects of the city's growth and development to the cultural dimensions of urbanism, especially as the latter are manifested in major works of literature.

391 Special Topics in Urban Studies. Semester course; 1, 2, or 3 credits. Students will have an opportunity to examine in detail some questions of significance. 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.

392 Independent Study. Semester course; 1 to 3 lecture hours. 1 to 3 credits. Under supervision of a faculty advisor, who must approve the student taking the course, a student studies a topic of interest. Junior or senior standing is required.

397-398 Independent Study. Semester course; 2 or 3 lecture hours. 2 or 3 credits. Under supervision of a faculty advisor, whose consent is required to register, study a topic of concern to the student. Junior or senior standing is required.

413 Policy Implementation. Semester course; 3 lecture hours. 3 credits. An examination of the administrative setting of government and its policy impacts on public programs, policy design and redesign, and evaluation and monitoring.

433 Comparative Urban Experiences in the United States. Semester course; 3 lecture hours. 3 credits. An examination and comparison of selected American cities and metropolitan areas with special focus on those issues relevant to regional variations affecting growth and issues of national patterns of urbanization. The course explores the myth and reality of the Sunbelt versus the Frostbelt, national fiscal and investment flow, and migration patterns.

440 Senior Seminar: The Good City. Semester course; 3 lecture hours. 3 credits. Prerequisite: senior standing. Readings, discussion, and individual research into "the good city" as it is expressed theoretically and practically. Perspectives from the arts and humanities, as well as the social sciences, are brought to bear on the normative question, "What is the good city?" A research project is a requirement.

493 Urban Government Internship. Semester course; 150 clock hours in a local legislative body or administrative agency. 3 credits, may be repeated once for a maximum total of 6 credits; or 300 clock hours, 6 credits. Approval of selection committee required. Under supervision of a faculty committee and a field supervisor, the internship is designed to present opportunities for qualified students to acquire exposure to aspects of public decision-making processes by participation in (1) local legislative bodies of the Richmond metropolitan area; (2) local and regional administrative agencies, commissions, and boards; and (3) private organizations that have demonstrated interest in local government and politics.

Note: The following graduate level courses are appropriate for undergraduate credit for advanced undergraduate students with permission of instructor.

513 Planning Graphics. Semester course; 1 lecture and 2 laboratory hours. 2 credits. Introduction to the use of graphics as an aid in presenting and analyzing planning ideas, data, reports, maps, and plans. Laboratory fee required—\$25.

521 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.

525 Site Planning. Semester course; 1 lecture and 2 laboratory hours. 2 credits. Addresses the environmental impacts and capacity of environmental systems in relation to the site requirements of various urban and rural situations. Describes graphic techniques necessary for applying the principles of site analysis and design. Uses actual site planning exercises so students can develop and evaluate site plans at different scales.

541 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.

552 Urban Transportation Systems. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. An examination of urban requirements for mobility, transportation systems, problems of traffic, mass transit, and new concepts for moving people and goods.

COURSES IN ENVIRONMENTAL STUDIES (ENS)

490 Research Seminar in Environmental Studies. Semester course; 3 lecture hours. 3 credits. Prerequisites: senior standing and at least 12 hours of approved environmental studies course work. An interdisciplinary examination of problems and issues central to environmental studies. Environmental research of VCU faculty will be reviewed, and selected local environmental problems will be studied. A

research project focusing on a specific environmental question will be completed by each student.

491 Topics in Environmental Studies. Semester course; variable credit. 1–3 credits per semester; may be repeated with different topics for a maximum of 6 credits. Prerequisites vary by topic; see *Schedule of Classes* for specific prerequisites. An in-depth study of a selected environmental topic.

492 Independent Study. Semester course; variable credit, maximum 3 credits per semester; maximum total credits for

all topics courses 6 credits. Open generally to juniors or seniors who have declared environmental studies as a minor. Determination of the amount of credit and permission of instructor must be procured prior to registration for the course.

493 Environmental Studies Internship. Semester course; variable credit. 1–3 credits per semester; maximum total of 6 credits. Open generally to students of senior standing. Students receive credit for work on environmental projects with approved agencies. Participation requires the approval of both a faculty member and an agency.



PART XII — School of Dentistry

LINDSAY M. HUNT, JR.

Dean

JAMES H. REVERE, JR.

Executive Associate Dean

MARSHALL P. BROWNSTEIN

Assistant Dean for Student Affairs and Admissions

THOMAS C. BURKE

Assistant Dean for Development and Continuing Education

BETSY A. HAGAN

Assistant Dean for Clinical Affairs

JAMES E. HARDIGAN

Assistant Dean for Administrative Affairs

HARVEY A. SCHENKEIN

Assistant Dean for Research

The School of Dentistry offers the first professional degree program leading to the Doctor of Dental Surgery degree and an undergraduate program leading to the Bachelor of Science in dental hygiene. Additional information on these programs may be found in the University's *Medical College of Virginia Bulletin*.

DENTAL HYGIENE PROGRAM

JANET L. SCHARER

Director, Division of Dental Hygiene

The Dental Hygiene Program, instituted in 1969, offers courses in the School of Dentistry leading to a Bachelor of Sciences degree in dental hygiene. The program requires two years of liberal arts study, with a minimum of 60 semester hours, followed by two years of study in dental hygiene. The Dental Hygiene Program is accredited by the Commission on Accreditation of the American Dental Association. Upon

successful completion of the program, graduates will be eligible for national, regional, and state licensure examinations.

The Dental Hygiene Program believes that the modern practicing hygienist needs a broad range of skills to function effectively. Training in particular clinical-technical skills, while essential, will not be sufficient to meet increasing social demands for comprehensive oral health care at all societal levels. The program sees the baccalaureate degree dental hygienist as a key agent, not only in helping the dental profession respond to changing demands, but also in helping to facilitate change itself.

ACADEMIC ADMISSION REQUIREMENTS

Two years of liberal arts study in an accredited two- or four-year institution with a minimum of 60 semester credits are required.

A. Courses

1. Specific

- a. English—2 semesters
- b. Biology—1 semester
- c. Chemistry—1 semester
- d. Anatomy and Physiology—2 semesters
- e. Microbiology—1 semester
- f. Introductory Sociology
- g. Introductory Psychology
- h. Introductory Speech
- i. Basic Statistics

2. Approved electives fulfilling the distribution requirements of the liberal arts

- college or university currently attending.
- B. At least a "C" average must be earned for all work undertaken.
- C. A personal interview by a previously arranged appointment may be requested prior to admission.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632.

JUNIOR AND SENIOR YEAR CURRICULUM

The Dental Hygiene Program includes study of the basic biomedical, dental, and clinical sciences through lecture, laboratory, clinical, and community experiences. It runs approximately 64 weeks over two academic years with considerable emphasis placed on skills relative to patient health delivery.

Credits

Junior Year, First Semester

ANA 301 Head and Neck Anatomy (Lecture and Lab).....	5
ANA 302 Microscopic Anatomy	3
MIC 365 Infection and Immunity (Lecture and Lab).....	4
ORP 301 Dental Radiology.....	0.5
RED 311 Dental Anatomy (Lecture and Lab).....	3
DEH 301 Dental Hygiene I (Lecture and Lab)	4
	19.5

Junior Year, Second Semester

DEH 342 Nutrition	3
ORP 524 Oral Pathology	3.5
RED 302 Dental Materials ... (Lecture and Lab) ...	2
DEH 302 Dental Hygiene II (Lecture and Clinic).....	4
DEH 312 Community Dental Health I	3
DEH 322 Dental Radiology Seminar and Rotation	2
	17.5

Senior Year, First Semester

PMC 441 Pharmacology	5
PER 411 Periodontics	2
DEH 401 Dental Hygiene III (Lecture, Lab and Clinic).....	5
DEH 411 Community Dental Health II	3
	15

Senior Year, Second Semester

DEH 402 Dental Hygiene IV (Clinic)	7
DEH 412 Community Dental Health III (Extramural Program)	4
DEH 422 Dental Hygiene Seminar I (Current Practice Issues)	2
DEH 442 Dental Hygiene Seminar III (Clinical Teaching)	2
	15

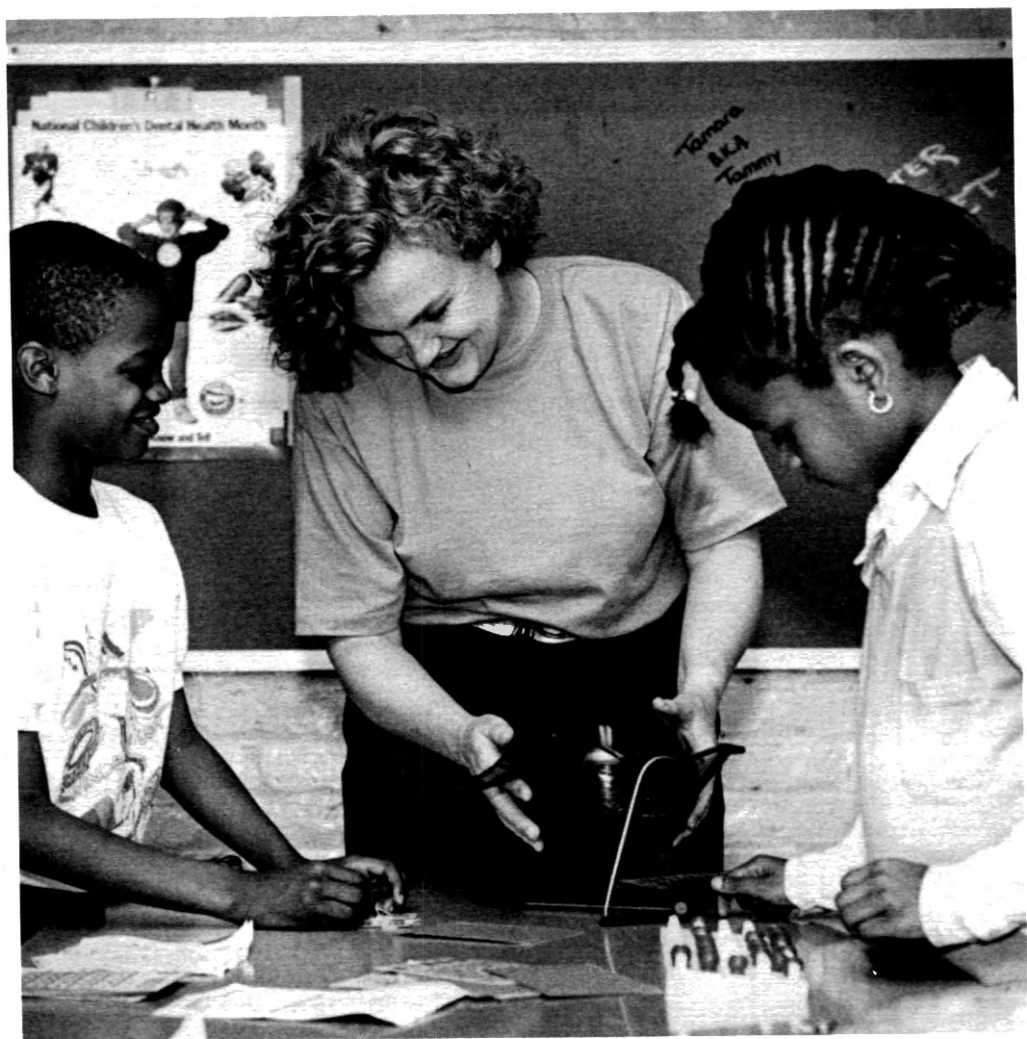
The following course is open to undergraduate students interested in dentistry.

DEN 101 Introduction to Dentistry Semester course; 1 lecture hour. 1 credit (pass-fail). Presentation and discussion of dentistry, including an introduction to each of the dental specialties. Description of the different types of dental practices with information on the business aspects of a practice. Field trips with hands on experiences at both local dental offices and at the School of Dentistry. Information on the admissions process for dental school, including application procedure, dental aptitude testing, prerequisites and recommended courses, financial aid and scholarships. (Lectures will be given on the Academic Campus.)

ADDITIONAL INFORMATION

For further details regarding the requirements for promotion and graduation in the Dental Hygiene Program, contact Admissions, Division of Dental Hygiene, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0566, (804) 786-9096.

For application information contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632, (804) 786-0488.



PART XIII — School of Education

JOHN S. OEHLER, JR.

Dean

DIANE J. SIMON

Assistant Dean

THOMAS A. HEPHNER

Director, Continuing Education

The School of Education provides professional preparation for students planning to teach in schools and other educational settings. Programs of teacher education combine comprehensive studies in the liberal arts and sciences with professional preparation and concentration in specific fields of study. Practical applications and experiences in the education field are an integral part of all programs in teacher preparation. Each program is designed to contribute to both the personal and professional development of the prospective teacher.

TEACHER PREPARATION PROGRAMS

The preparation of teachers is a joint responsibility of faculty in both the subject fields and professional education, with curricula planned cooperatively by the various University departments and the School of Education.

Bachelor's Degree Programs in Education

The School of Education awards Bachelor of Science degrees in health and physical education. The School of the Arts offers Bachelor of Fine Arts degrees in art and theatre education, as well as a Bachelor of Music Education degree.

Extended Teacher Preparation Programs

Extended teacher preparation programs are offered in the areas of early, middle, secondary, and special education. The extended teacher preparation program is a five-year course of study that leads to the awarding of both a bachelor's degree from the College of Humanities and Sciences and a master's degree from the School of Education. Students who enter the extended preparation programs select an undergraduate major in the College of Humanities and Sciences. The undergraduate program of study will include professional education course work. The extended teacher preparation programs are described in greater detail in the Division of Teacher Education section of the bulletin.

GOALS

To carry out its purposes, the School of Education has established the following goals:

1. To provide quality programs of pre-service and continuing professional education at undergraduate and graduate levels,
2. To provide programs of professional support, leadership, and service to schools and agencies of the Commonwealth,
3. To conduct programs of educational research and scholarly activities which seek to improve instructional procedures and outcomes; to assist in identifying and solving educational problems; and to enhance and extend the knowledge base of the field of education.

DEGREE PROGRAMS IN THE SCHOOL OF EDUCATION

Responsibility for the programs of study lies with the three divisions in the School of Education as follows:

- I. Division of Educational Studies
 - Educational Foundations
- II. Division of Health and Physical Education
 - B.S. Program in Health Education
 - Middle/Secondary, 6–12
 - Exercise Science
 - B.S. Program in Physical Education
 - Elementary/Middle, K–8
 - Middle/Secondary, 6–12
 - Elementary/Middle/Secondary, K–12
 - Exercise Science
- III. Division of Teacher Education
 - Extended Programs:
 - Early Education, NK–4
 - Middle Education, 4–8
 - Secondary Education, 8–12
 - Special Education, K–12
 - Post-Baccalaureate Certificate in Teaching

GENERAL DEGREE REQUIREMENTS

Students in *four-year teacher preparation programs* are expected to complete a minimum of 129 credits and maintain a minimum cumulative grade-point average of 2.5.

Students in *extended teacher preparation programs* are expected to complete a minimum of 160 credits. While they must maintain a minimum cumulative grade-point average of 2.5, they must earn a 2.8 grade-point average to be admitted to graduate studies.

Students in the post-baccalaureate certificate in teaching are expected to complete at VCU a minimum of 24 hours beyond the bachelor’s level. A minimum cumulative grade-point average of 2.75 is required for admission.

Individual degree programs, as delineated on the following pages, specify the particular courses necessary to meet program and certification requirements. In addition to a strong foundation in liberal arts and sciences, all programs require professional education and clinical experiences.

Faculty Advisement

Degree-seeking students enrolled in four-year teacher preparation programs are assigned a *faculty advisor* in the School of Education.

Students enrolled in extended teacher preparation programs are assigned a professional studies advisor in the School of Education as well as an academic advisor in the College of Humanities and Sciences.

While advisors will attempt to provide timely and accurate assistance, students have the responsibility to know and to satisfy the degree requirements of the academic program being pursued.

Cooperative Education

The Cooperative Education Program is available to qualifying students in the School of Education who are pursuing degrees in teacher preparation. A full description of the program appears in Part XIX of the *Bulletin*.

CHANGE OF MAJOR AND TRANSFER STUDENTS

Students not originally intending to major in an education degree program may transfer to the School of Education from another school in the University providing they hold a minimum GPA of 2.0. Change of major forms are available at University Enrollment Services/Records and Registration.

Transfer students to the University who carry a minimum grade-point average of 2.0 are likewise eligible to become degree-seeking students in the School of Education. Transfer and change-of-major students must meet the criteria for admission to Teacher Preparation.

Transcript Evaluation

Transcripts for change of major and transfer students who are pursuing Health and Physical Education majors are evaluated by the School of Education. For all other students who are pursuing extended teacher preparation programs, transcripts are evaluated by the College of Humanities and Sciences. Acceptance of credit is determined on the basis of congruence with specific program guidelines. Course equivalents from accredited colleges and universities are accepted if the grade earned is “C” or better. To meet eligibility requirements for Admission to Teacher Preparation, students must present at least 60 semester hours of acceptable undergraduate course work. See the specific criteria under “Admission to Professional Preparation.”

Credits accepted from two-year institutions can meet liberal arts and sciences requirements,

but are not acceptable for professional requirements which are considered to be "upper division." The *Virginia Commonwealth University Transfer Guide for Virginia Community Colleges* serves as the official guide. After the initial evaluation of a student's transcript, an advisor reviews the accepted transfer credits with a student to determine course work needed at VCU. An advisor is not required to use all of the accepted transfer credits in a program of study; however, only those credits approved for transfer may be applied toward the degree.

TEACHER CERTIFICATION

Students fulfilling degree requirements in any one of Virginia Commonwealth University's teacher preparation programs are eligible when recommended by the School of Education to receive initial certification from the Virginia State Department of Education. For information relating to initial certification, add-on endorsement, or certification renewal, inquiries should go to the Office of Academic Services, School of Education.

Scores on the National Teacher Examinations (NTE) are required for initial certification in Virginia. An applicant for this initial certification must take the NTE Core Battery and, in addition, a Specialty Area Examination in any field in which certification is sought. In those few fields where a Specialty Area Examination is not available, only the NTE Core Battery is required of candidates. The NTE requirements are in addition to all other requirements for certification. Students should consult with their advisors concerning the most advantageous times for taking these examinations.

Students should request that their scores from the NTE be reported to Virginia Commonwealth University and the Virginia Department of Education. These scores must be on file with the Office of Academic Services, School of Education before a recommendation for certification can be sent to the Teacher Certification Division of the Virginia Department of Education. Further information may be obtained from the Office of Academic Services, School of Education.

Individuals holding an undergraduate degree in another field who wish to obtain teacher certification are advised to contact the Office of Academic Services located in the School of Education.

APPROVED PROGRAMS AND CERTIFICATION RECIPROcity

All of Virginia Commonwealth University's initial teacher preparation programs are approved by the Virginia Department of Education and accredited by the Southern Association of Colleges and Schools and the National Council for Accreditation of Teacher Education (NCATE). The School of Education also holds membership in the American and Virginia Associations of Colleges of Teacher Education and in the Holmes' Group.

Teacher certification reciprocity with other states is available to graduates based on the National Association of State Directors and Teacher Education and Certification (NASD-TEC) agreement. Interested students should consult with the School of Education's Office of Academic Services.

FACILITIES

Facilities for the School of Education are housed in Oliver Hall and the Franklin Street Gym. Instructional areas include traditional classrooms, as well as laboratory and activity centers.

RESOURCES

Various resources have been developed in the School of Education to provide support services for students, faculty and programs. These support units include the Office of Academic Services, the Office of Continuing Education and Field Services, the Teachers' Resource Workshop, a Computer Laboratory and the Word Processing Center.

Office of Academic Services

The Office of Academic Services provides basic information regarding the School of Education's degree programs. It also makes available all forms needed by students as they progress through the programs. Various School of Education application forms are returned to this office where they are processed. Information regarding the National Teacher's Examination, Graduate Record Examination and the Miller Analogies Test can also be obtained in this office.

Clinical placements for students in practica, internships and externships are coordinated through this office. These placements are primarily in school systems and other educational

facilities located in the city of Richmond, and the counties of Chesterfield, Hanover and Henrico.

Scholarships. Information and applications for certain scholarships that are available to School of Education students can be obtained in the Office of Academic Services. Information on financial aid administered by the university may be found in Part III of this *Bulletin*.

Certification and Endorsement. The Office of Academic Services serves as the center for information, materials and applications for certification and endorsement for educational personnel in Virginia. Certification and endorsement are based in part on the successful completion of an approved program developed in response to national recognized standards.

Teachers' Resource Workshop

The Teachers' Resource Workshop is a multimedia materials development center utilized by faculty and students in the School of Education. The facility provides audio-visual equipment, micro-computers with sophisticated graphics capability, educational software and many related resources for the development of instructional materials.

Computer Laboratory

The computer laboratory is operated and maintained jointly by the School of Education and the Department of Mathematical Sciences, College of Humanities and Sciences. The laboratory serves to augment the resources in the smaller micro-computer laboratory housed in the Teachers' Resource Workshop (TRW). The computer laboratory offers many opportunities for School of Education students to learn about computer-assisted instruction in the classroom setting. Also, the laboratory offers support to students enrolled in the computer science basic literacy course. Equipment in the laboratory includes Apple GS and IIe computers with printers and color monitors.

ORGANIZATION

The chief administrative office for the school is the Office of the Dean. The school is organized for the management of instruction and degree programs into three divisions. The divisions are headed by chairpersons with faculty assuming responsibility for curriculum and advisement by program cores.

Requirements for the various degree programs offered by the School of Education are

specified on the following pages. First the professional education sequence for the two bachelor's degree programs, health and physical education, is outlined. This is followed by information about the Division of Health and Physical Education and specific program requirements for each major.

Next is the professional education sequence for the extended teacher preparation programs in early, middle, secondary and special education. Following this outline is information about the Division of Teacher Education that collaborates with the College of Humanities and Sciences in providing degree programs in extended teacher preparation.

Lastly is information about the third division, Educational Studies. Faculty in this division assume responsibility for offering foundational studies for all degree programs in education.

DIVISION OF HEALTH AND PHYSICAL EDUCATION

JACK SCHILTZ

Division Chair

George Borden
George Dintiman
Deborah Getty
David Magill
LeEtta Pratt
Ronald Tsuchiya

Robert Davis
Richard Gayle
Barney Groves
Jude Pennington
Elizabeth Royster
John Wajciechowski

The Division of Health and Physical Education offers a Bachelor of Science degree with majors in health education and physical education. Students majoring in either area may choose to prepare for careers in teaching or in community service.

The teaching option prepares students for positions in school settings where state teacher certification is required. Students who major in health or physical education at VCU are qualified to be certified by the state in both health and physical education.

The community wellness management and rehabilitative exercise science option prepares students for health and physical education-related positions in the private, community, medical and corporate sectors.

All students are required to have supervised clinical experiences. Clinical placements for both health and physical education are arranged in schools or other settings, depending on the students' career objectives.

Minors can be obtained in driver education, athletic care and training, health education and physical education.

**PROGRAM REQUIREMENTS IN
PHYSICAL EDUCATION: TEACHING**
(129 credit minimum)

I. General Education48

A. Humanities (12 credits)

ENG 101–102 Composition and Rhetoric 6

Literature selective 3

Humanities selective 3

Art, Foreign Language, Music,
Philosophy, Religious Studies

B. Social Sciences (12 credits)

HIS 103 or 104 American History 3

Social Sciences electives 9

Anthropology, Contemporary World Studies,
Economics, Geography, History, Political
Science, Psychology, Sociology, Social
Science, World Studies

C. Science/Mathematics (22 credits)

MAT 111 Mathematics for the Behavioral
Sciences (or equivalent or higher) 3

CSC 150 Basic Computer Concepts 3

BIO 109 General Biology (with laboratory) 4

BIO 200 Biological Terminology 1

BIO 205 Human Anatomy 4

BIO 206 Human Physiology 4

CHE 103 Introduction to Modern Chemistry
or
PHY 101 Foundations of Physics 3

D. Humanities/Social Sciences selective
(3 credits) 3

(See above listings under A and B)

II. Professional Education12

A. Growth and Development (3 credits)

EDU 301 Human Development and
Learning 3

B. Curriculum and Instruction (6 credits)

HED/PHE 397 Methods in Health and
Physical Education 3

HED/PHE 398 Curriculum in Health
and Physical Education 3

C. Foundations of Education (3 credits)

EDU 300 Foundations of Education 3

III. Physical Education 36

A. Scientific Background (6 credits)

PHE 392 Kinesiology 3

PHE 492 Physiology of Exercise 3

B. Physical Education Theory (12 credits)

HED/PHE 190 Introduction to Health
and Physical Education Professions 3

PHE 390 Physical Education for the
Elementary Teacher 3

PHE 391 Elementary Physical Education
for Majors 3

PHE 432 Movement Education 3

HED/PHE 493 Tests and Measurements
in Health and Physical Education 3

HED/PHE 495 Adaptive Physical Education.. 3

C. Activity (8 credits)

PHE 200 Strength and Speed Training 1

PHE 201 Endurance and Flexibility
Training 1

PHE 230 Gymnastics 1

PHE 234 Elementary Rhythmics 1

PHE 235 Social Rhythmics 1

Team Sports (Select 3 credits.) 3

PHE 202 Basketball (1)

PHE 204 Softball (1)

PHE 208 Volleyball (1)

PHE 210 Field Hockey (1)

PHE 212 Soccer (1)

Individual, Dual, and Recreational Sports
(Select 3 credits.) 3

PHE 214 Wrestling/Flag Football (1)

PHE 216 Tennis (1)

PHE 226 Recreational Sports/Indoor
Racquet Sports (1)

PHE 227 Archery/Badminton/Bowling (1)

PHE 233 Track and Field (1)

REC 200 Outdoor Recreation (3) Only
1 of these 3 credits can be used to
meet the expectation of this section.

IV. Health and Safety Education18

Required:

HED 480 Safety, First Aid and CPR (3)

Selectives, five of the following courses:

HED 386 School and Community Health
Resources (3)

HED 400 Nutrition (3)

HED 410 Issues in Sexuality (3)

HED 420 Substance Abuse (3)

HED 430 Trends in Modern Diseases (3)

HED 487 Coping and Adaptation (3)

V. Clinical Experiences16

PHE 310 Early Professional Experience 1

EDU 310 Practicum 3

(Select 2 of 3 student teaching experiences.)12

EDU 485 Supervised Teaching I—Elementary (6)

EDU 485 Supervised Teaching I—Middle (6)

EDU 486 Supervised Teaching II—Senior (6)

Includes on-campus seminars

Total 129

**PROGRAM REQUIREMENTS IN
HEALTH EDUCATION: TEACHING**
(129 credit minimum)

I. General Education50

A. Humanities (12 credits)

ENG 101–102 Composition and Rhetoric 6

Literature Selective 3

Humanities Selective 3

Art, Foreign Language, Music, Philosophy,
Religious Studies

B. Social Sciences (12 credits)

HIS 103 or 104 American History 3

PSY 101 General Psychology 3

SOC 101 General Sociology 3

PSY 301 Child Psychology
or
PSY 302 Adolescent Psychology 3

C. Science/Mathematics (25 credits)

MAT 111 Mathematics for the Behavioral
Sciences (or equivalent or higher) 3

CSC 150 Basic Computer Concepts 3

BIO 109 General Biology (with laboratory) 4

CHE 103 Introduction to Modern Chemistry . . .	3
BIO 205 Human Anatomy	4
BIO 206 Human Physiology	4
BIO 209 Medical Bacteriology	4
D. Health and Physical Education (1 credit)	
PHE 102 Fitness and Weight Control	1
II. Professional Education	12
A. Growth and Development (3 credits)	
EDU 301 Human Development and Learning . . .	3
B. Curriculum and Instruction (6 credits)	
HED/PHE 397 Methods in Health and Physical Education	3
HED/PHE 398 Curriculum in Health and Physical Education	3
C. Foundations of Education (3 credits)	
EDU 300 Foundations of Education	3
III. Health Education	30
HED/PHE 190 Introduction to Health and Physical Education Professions	3
HED 300 Introduction to Health	3
HED 386 School and Community Health Resources	3
HED 400 Nutrition	3
HED 410 Issues in Sexuality	3
HED 420 Substance Abuse	3
HED 430 Trends in Modern Diseases	3
HED 480 Safety, First Aid, and CPR	3
HED 487 Coping and Adaptation	3
EDU 330 Survey of Special Education	3
IV. Physical Education	16
PHE 392 Kinesiology	3
PHE 492 Physiology of Exercise	3
HED/PHE 493 Tests and Measurements in Health and Physical Education	3
Activity Courses	7
PHE 226 Recreational Sports/Indoor Racquet Sports (1) or PHE 227 Archery, Badminton, and Bowling (1) PHE 230 Gymnastics (1) PHE 235 Social Rhythmics (1) (Select 2 from each of the following.) Individual and Dual Sports (2) Team Sports (2)	
V. Clinical Experiences	15
EDU 310 Practicum	3
EDU 485 Supervised Teaching I—Senior	6
EDU 486 Supervised Teaching II—Middle	6
Includes on-campus seminars	
VI. General Electives	6
	Total 129

STEPS TO COMPLETING FOUR-YEAR TEACHER PREPARATION PROGRAMS IN HEALTH OR PHYSICAL EDUCATION

Step 1.

Application for University Admission

Requirements:

- Scores from Scholastic Aptitude Test (SAT) or American College Test (ACT)
- Minimum 2.0 GPA from high school or previous college

Procedures

- Complete University application form (available from VCU Admissions Office)
- Declare a major in Health & Physical Education
- Upon admission, schedule an appointment with a Health & Physical Education advisor to discuss the program

Step 2:

Application for Professional Studies

(Upon completion of 60 hours of primarily liberal arts coursework)

Requirements:

- 2.5 GPA or better
- Completion of:
 - 6 hours of English
 - 3 hours of Math
 - 4 hours of Laboratory Science
 - 6 hours of Social Science and/or History
- Successful completion of National Teachers Examination (NTE) General Knowledge and Communication Skills Sub. Tests (Obtain information from Office of Academic Services in Oliver Hall, Rm. 2087, 1015 W. Main Street)
- Provide a brief résumé which includes professionally-related experiences

Procedures

- Complete Admission to Professional Studies Form (available from Office of Academic Services)
- Obtain Virginia Commonwealth University transcript (available from VCU Records and Registration)
- Return completed form with Virginia Commonwealth University transcript to Office of Academic Services

Note: Students must be admitted to Professional Studies in order to be eligible for Practicum placement. Applications for Practicum can be obtained from the Office of Academic Services.

Step 3: Application for Practicum

Requirements:

- a) Be accepted in Professional Studies (Step 2)
- b) 2.5 GPA or better
- c) Completion of or concurrent enrollment in EDU 300 and EDU 301

Procedures:

- Complete Application for Practicum Form (available from Office of Academic Services) no later than first week of the semester. Students are encouraged to submit forms previous to the semester. Failure to submit applications by the deadline may result in no placement.
- Obtain Virginia Commonwealth University Transcript (available from VCU Records and Registration)
- Review application with Health & Physical Education Practicum Instructor and obtain Instructor's recommendation and signature
- Practicum Instructor submits completed application packet to Office of Academic Services at the end of the first week

Step 4: Application for Student Teaching

Requirements:

- a) 2.5 GPA or better
- b) Already admitted to Professional Studies
- c) Completed or currently enrolled in Practicum
- d) Completed or currently enrolled in those courses meeting approved professional requirements
- e) Have a grade of C or better in Practicum (EDU 310). The student may be taking practicum at the time of application, which is acceptable. However, if the student does not receive a grade of C or better at the end of the semester, his/her application will be withdrawn.

Procedures:

- Complete the Application for Student Teaching (form available from Office of Academic Services)
- Obtain Virginia Commonwealth University Transcript (available from VCU Records and Registration)

- Review application with Health & Physical Education student teaching instructor and obtain the instructor's recommendation and signature
- Student teaching instructor submits completed application packet to the Office of Academic Services

Note: Deadline for making application for student teaching for the Fall semester is March 1, and for Spring semester October 1

Step 5: Application for Graduation (During the final semester of enrollment)

Requirements:

- a) Completion of all degree requirements
- b) Successful completion of the National Teachers Examination (NTE) which includes the General Knowledge, Professional, Communication Skills, and Appropriate Specialty Area sub-tests. (See Step 6: Application for Certification)

Procedures:

- Complete applications for undergraduate degree in Health & Physical Education
- Obtain graduation application and a Virginia Commonwealth University Transcript (available from VCU Records and Registration)
- Review application with advisor and obtain signature

Step 6: Application for Certification (During the final semester of enrollment)

Requirements:

- a) Completion of all degree requirements
- b) Successful completion of National Teachers Examination (NTE) which includes the General Knowledge, Professional, Communication Skills, and appropriate Specialty Area sub-tests. Required minimum scores as of January 1, 1992 are:

General Knowledge	639
Professional Knowledge	639
Communication Skills	649
Physical Education	560

Procedures:

- Complete application for initial teacher certifi-

cation (available from Office of Academic Services)

- Return completed application, along with registration fee, to Office of Academic Services

PROGRAM REQUIREMENTS IN HEALTH AND PHYSICAL EDUCATION: COMMUNITY WELLNESS MANAGEMENT AND REHABILITATIVE EXERCISE SCIENCE
(129 credit minimum)

I. General Education52

A. Humanities (12 credits)

ENG 101–102 Composition and Rhetoric 6

Literature Elective 3

Humanities Elective 3

Art, Foreign Language, Music, Philosophy, Religious Studies

B. Social Sciences (12 credits)

HIS 103 or 104 American History 3

Social Science Selectives 9

Anthropology, Contemporary World Studies, Economics, Geography, History, Political Science, Psychology, Sociology, World Studies

C. Science/Mathematics (22 credits)

MAT 111 Mathematics for the Behavioral Sciences (or equivalent or higher) 3

CSC 150 Basic Computer Concepts 3

BIO 109 General Biology (with laboratory) 4

CHE 103 Introduction to Modern Chemistry or

PHY 101 Foundations of Physics 3

BIO 205 Human Anatomy 4

BIO 206 Human Physiology 4

D. Health and Physical Education (4 credits)

HED 300 Introduction to Health 3

PHE 102 Fitness and Weight Control 1

E. Humanities/Social Science Electives (3 credits) 3
(See above.)

II. Health and Physical Education48

A. General Requirements (3 credits)

HED/PHE 190 Introduction to Health and Physical Education Professions 3

B. Health Education (18 credits)

HED 386 School and Community Health Resources 3

HED 400 Nutrition 3

HED 480 Safety, First Aid, and CPR 3

Select three courses from the following: 9

HED 325 Treatment of Athletic Injuries (3)

HED 410 Issues in Sexuality (3)

HED 420 Substance Abuse (3)

HED 430 Trends in Modern Diseases (3)

HED 487 Coping and Adaptation (3)

PHE 496 Adaptive Physical Education (3)

PHE 431 Seminar in Applied Fitness (3)

(Note: Adviser Approval required)

C. Physical Education (12 credits)

PHE 101 Foundations in Physical Conditioning: Aerobics 1

PHE 200 Strength and Speed Training 1

PHE 201 Endurance and Flexibility Training .. 1

PHE 392 Kinesiology 3

PHE 492 Exercise Physiology 3

HED/PHE 493 Tests and Measurements in Health and Physical Education 3

D. Related Component (15 credits)

Course work selected with advisor and approved by division faculty. Course work may come from any university offering to meet the professional needs and requirements of a given concentration area, such as corporate fitness, athletic training, coaching, sports management, recreation, etc.

III. Clinical Experience16

HED/PHE 310 Early Professional Experience 1

EDU 310 Practicum 3

EDU 487 Field Work I 6

EDU 488 Field Work II..... 6

IV. General Electives13
Total 129

STEPS TO COMPLETING FOUR-YEAR PROGRAMS IN COMMUNITY WELLNESS MANAGEMENT AND REHABILITATIVE EXERCISE SCIENCE

Step 1. Application for University Admission Requirements:

- Scores from Scholastic Aptitude Test (SAT) or American College Test (ACT)
- Minimum 2.0 GPA from high school or previous college

Procedures

- Complete University application form (available from VCU Admissions Office)
- Declare a major in Health & Physical Education
- Upon admission, schedule an appointment with a Health & Physical Education advisor to discuss the program

Step 2: Application for Professional Studies

(Upon completion of 60 hours of primarily liberal arts coursework)

Requirements:

- 2.5 GPA or better
- Completion of: 6 hours of English

- 3 hours of Math
- 4 hours of Laboratory Science
- 6 hours of Social Science
and/or History

- c) Completion of National Teachers Examination (NTE) which includes the General Knowledge and Communication Skills sub-tests (Obtain information from the Office of Academic Services in Oliver Hall, Room 2087, 1015 W. Main Street)

Procedures:

- Complete Admission to Professional Studies Form (available from Office of Academic Services)
- Obtain Virginia Commonwealth University transcript (available from VCU Records and Registration in Founders Hall, Room 101, 827 W. Franklin Street)
- Return completed form with Virginia Commonwealth University transcript to Office of Academic Services

Note: Students must be admitted to Professional Studies in order to be eligible for Practicum placement. Applications for Practicum can be obtained from the Office of Academic Services.

Step 3:

Application for Practicum

Requirements:

- a) Be admitted into Professional Studies (Step 2)
- b) 2.5 GPA or better
- c) Completion of or concurrent enrollment in EDU 300 and EDU 301 or Psychology 302, 303, 304, 306, 310, PHE 311

Procedures:

- Complete Application for Practicum Form (available from Office of Academic Services) *no later than the first week of the semester.* Students are encouraged to submit forms prior to the semester. Failure to submit application by the deadline may result in no placement.
- Obtain Virginia Commonwealth University Transcript (available from VCU Records and Registration)
- Review application with Health & Physical Education Practicum Instructor and obtain Practicum Instructor's recommendation and signature
- Practicum Instructor submits completed application packet to Office of Academic Services at the end of the first week of the semester

Step 4:

Application for Supervised Field Work Experiences

Requirements:

- a) 2.5 GPA or better
- b) Already admitted to the Professional Studies Program
- c) Completed or currently enrolled in a Practicum
- d) Completed or currently enrolled in those courses meeting approved professional requirements
- e) Have a grade of C or better in Practicum (EDU 310). The student may be taking practicum at the time of application, which is acceptable. However, if the student does not receive a grade of C or better at the end of the semester, his/her application will be withdrawn.

Procedures:

- Complete the Application for Supervised Field Experiences (form available from Office of Academic Services)
- Obtain Virginia Commonwealth University Transcript (available from VCU Records and Registration)
- Review application with Health & Physical Education Field Experience Instructor and obtain Instructor's approval
- The Field Experience Instructor submits completed application packet to Office of Academic Services

Note: Deadline for making application for field work experiences for the Fall semester is March 1, and for the Spring semester is October 1

Step 5:

Application for Graduation

(During the final semester of enrollment—see University calendar for deadline date)

Requirements:

- a) Completion of all degree requirements
- b) Completion of National Teachers Examination (NTE), which includes the General Knowledge and Communication Skills sub-tests.

Procedures:

- Complete applications for undergraduate degree in Health or Physical Education

- Obtain graduation application and a Virginia Commonwealth University Transcript (available from VCU Records and Registration)
- Review application with academic advisor and obtain signature

MINORS IN HEALTH OR PHYSICAL EDUCATION

Health Education (18 credits)

HED/PHE 190 Introduction to Health and Physical Education Professions	3
HED 480 Safety, First Aid, and CPR	3
Select 4 of the following courses:	12
*HED/PHE 397 Methods in Health and Physical Education (3)	
**HED 400 Nutrition (3)	
HED 410 Issues in Sexuality (3)	
**HED 420 Substance Abuse (3)	
**HED 430 Trends in Modern Diseases (3)	
**HED 487 Coping and Adaptations (3)	
PHE 492 Physiology of Exercise (3)	

*Required if student has taken no other pedagogy courses.

**Highly recommended for education majors. Anatomy and physiology courses are recommended also.

Physical Education (18 credits)

HED/PHE 190 Introduction to Health and Physical Education Professions	3
HED 480 Safety, First Aid, and CPR	3
Selectives	12
Select course work in Health and Physical Education Division with approval of division coordinator of advisement.	
Anatomy and physiology courses are recommended also.	

Driver Education (18 credits)

HED 380 Principles of Accident Prevention* ..	3
HED 480 Safety, First Aid, and CPR	3
HED 382 Introduction to Driver Education* ..	3
HED 482 Methods in Driver Education*	3
SRA 440 Incident Investigation and Analysis ..	3
SRA 450 Human Factors and Ergonomics	
or	
SRA 350 Traffic and Transportation Planning and Management	3

*Required for state certification.

Athletic Care and Training (22 credit minimum)

PHE 480 Safety, First Aid, and CPR	3
HED 325 Treatment of Athletic Injuries	3
HED L325 Taping Techniques Laboratory	1
HED 425 Advanced Treatment of Athletic Injuries	3
HED 426 Therapeutic Modalities and Rehabilitation Techniques	3
EDU 400 Independent Study: Clinical Experience	3
PHE 392 Kinesiology	3
PHE 492 Physiology of Exercise	3

- Prerequisites
- BIO 205 Human Anatomy (4)
 - BIO 206 Human Physiology (4)
- Recommended
- PSY 101 General Psychology (3)
 - PHE 495 Adaptive Physical Education (3)
 - HED 420 Substance Abuse (3)
 - HED 400 Nutrition (3)

EXTENDED TEACHER PREPARATION PROGRAMS

Extended Teacher Preparation Programs in early education (nursery school/kindergarten through fourth grade), middle education (grades 4–8), secondary education (grades 8–12) and special education (kindergarten through grade 12) are offered. Such programs lead to both a baccalaureate and a masters degree upon completion.

Admission to the Extended Program

Any undergraduate student admitted to the University who declares a major in the College of Humanities and Sciences is eligible also to designate an education major in early, middle, secondary or special education. Transfer students and students in the university who wish to change their major to the Extended Teacher Preparation Program must have a minimum grade point average (GPA) of 2.0 in order to designate an education major. All students, upon completion of the 60 hours of undergraduate course work and prior the completion of 90 hours, must apply for admission to teacher preparation. At this time students must have a minimum GPA of 2.5.

General Requirements and Procedures

Students who pursue one of the extended teacher preparation programs follow a series of steps as noted below in order to meet all requirements.

Step 1. Admission to the University

Requirements:

- scores from Scholastic Aptitude Test (SAT) or American College Test (ACT)
- minimum 2.0 GPA from high school or previous college

Procedures

- Declare an undergraduate major in Human-

ties and Sciences

- Declare an Education graduate major
 - Early Childhood
 - Middle Education
 - Secondary Education (see specialties)
 - Special Education (see dual specialty)

Step 2.

Admission to Teacher Preparation

(Upon completion of 60 hours of liberal arts course work and prior to the completion of 90 hours)

Requirements:

- a) 2.5 GPA or better
- b) Completion of:
 - 6 hours of English
 - 3 hours of Math
 - 4 hours of Laboratory Science
 - 6 hours of Social Studies
- c) Completion of National Teachers Examination (NTE) General Knowledge and Communications Skills. Tests
- d) Confirmation of education major (undecided majors must decide)

Procedures

- Complete Admission to Teacher Preparation form
- Completed required interview with education program faculty (Special education requires interview with program faculty)

Note: Student must be admitted to Teacher Preparation in order to be eligible for Practicum placement. Applications for Practicum can be obtained in the Office of Academic Services.

Step 3:

Advancing to Graduate Study

Upon completion of at least 90 credits

Requirements:

- a) 2.8 GPA or better (students with GPAs of 2.6–2.75 may be considered for provisional admission)
- b) Completion of EDU 300
- c) Acceptable scores on the Graduate Record Examination (GRE) or Miller Analogy Test (MAT).
- d) Personal Statement addressing reasons for seeking graduate education, including career goals; experience working with age group to be taught; reasons for entering

teaching; successes in organizing, planning, and implementing work with other individuals.

- e) Three references; suggested: instructors or advisors in Humanities & Sciences and Education (Use Graduate Studies Reference Forms)

Procedures

- Obtain Graduate School Admissions packet from the Office of Academic Services, 2087 Oliver Hall
- Return complete application packet to VCU Office of Graduate Studies along with up-to-date transcripts

Note: Students must be admitted to Graduate Studies in order to be eligible to enroll in 600 and 700 level courses.

Step 4.

Internship

All programs require during the fifth year a graduate-level internship (EDU 672). Applications for internships can be obtained in the Office of Academic Services, 2087 Oliver Hall.

Requirements:

- a) 2.8 or better GPA
- b) Admission to Teacher Preparation and Advancing to Graduate Study
- c) Completed application and transcripts submitted by established deadline

Procedures

- Obtain approval form from Office of Academic Services, Oliver Hall 2087
- Obtain approval signature of professional studies advisor and copies of transcripts
- Submit completed application to Office of Academic Services by:
 - October 1 for the ensuing Spring semester
 - March 1 for the ensuing Fall semester

Step 5.

Admission to the Profession

(During the final semester of enrollment)

Requirements:

- a) Completion of all degree requirements
- b) Acceptable scores on Graduate National Teachers Examination (NTE): Communication Skills, General Knowledge, Professional Knowledge and Specialty Area Tests.

Procedures

- Complete applications for undergraduate degree in Humanities and Sciences and graduate degree in Education
- Submit application for initial teacher certification

DIVISION OF TEACHER EDUCATION

ALAN McLEOD
Chairman

Stanley Baker	Elise Blankenship
Nancy Boraks	Mary Brittain
Deborah Carlotti	Leila Christenbury
Michael Davis	Patricia Duncan
Michael Gamel-McCormick	Howard Garner
George Giacobbe	William Goggin
Ena Gross	James Hodges
Courtney Hunter	Sheary Johnson
William Judd	Jennifer Kilgo
John Kregel	Rosemary Lambie
Michael Lohr	Jean Lokerson
John Oehler	Fred Orelove
Alice Pieper	Daisy Reed
Richard Rezba	Judy Richardson
Paul Sale	Diane Simon
Martin Tarter	John Van de Walle
Paul Wehman	Rizpah Welch
Doris White	Judy Wood

Professors Emeriti
Nancy Fallen
Arnold Fleshold
Alice McCartha
William Swyers
Esther Zaret

Gladys Fleming
Ada Hill
Howard Sparks
Rizpah Welch

The Division of Teacher Education, in cooperation with the College of Humanities and Sciences, provides extended teacher preparation programs in early, middle, secondary, and special education. These programs include Virginia Provisional Teaching Endorsements at distinct levels: early education (grades NK–4), middle education (grades 4–8), secondary education (grades 8–12 in ten academic disciplines) and special education (grades K–12 in emotional disturbance and mental retardation). After completing one of these extended teacher preparation programs, students will qualify for both a bachelor's degree and a master's degree. The baccalaureate is earned for prospective secondary teachers in the content they will teach (English, one of the foreign languages, a science, mathematics, history or one of the social sciences); for prospective middle grades teachers, most often in English, history or the social sciences, mathematics or one of the sciences; for prospective early or special education teachers,

any humanities and sciences major is appropriate, for it will introduce them to a particular way of viewing the world, of solving problems.

Extended programs are integrated. That is, students begin working on the professional studies component most frequently in the third year of the baccalaureate. Courses numbered 500 and above generally apply to the masters component of the program.

Advising sheets specifying the requirements for each academic major are available in the Division of Teacher Education and in the associate dean's office in the College of Humanities and Sciences or the department of the chosen major. Students in the extended program are expected to maintain a minimum cumulative grade-point average of 2.5 for admission to teacher preparation and clinical experiences and a minimum cumulative grade-point average of 2.8 to be admitted to graduate study prior to the fifth year.

FACULTY ADVISEMENT

A student is assigned an academic advisor by the department of his or her major in the College of Humanities and Sciences and a professional studies advisor by the Division of Teacher Education. This advisor-advisee relationship is maintained throughout the period of study at the University. A student and his/her advisor are expected to play major roles in the development of the student's individual program. As part of the program-planning process students have an opportunity to explore, identify, and clarify their personal and professional goals.

CLINICAL EXPERIENCES

The programs in elementary, middle, secondary and special education incorporate planned experiences in field or clinical settings. These experiences include guided practica experiences and culminate with an internship. The intern assumes more independence as a teacher with the support of a mentor in the *field setting*. Satisfactory completion of these experiences is documented by evaluations from the University supervisor, colleague teacher, and school administrator.

HONORS STUDY

Students who qualify may participate in the University Honors Program and are eligible for "honors" course sections and special seminars.

Honors sections of the courses *Foundations of Education and Human Development and Learning* will be offered for qualified students and will provide opportunities for critical investigation in areas of special professional interest.

PROGRAM IN EARLY CHILDHOOD EDUCATION

The Early Childhood program focuses on the preparation of teachers to work with children from infancy through age nine including nursery school, kindergarten, and through grade four. Upon completion of this program, students are eligible to be certified for teaching preschool and lower elementary grades.

Professional Studies Requirements

EARLY EDUCATION, NK-4

	<i>Credits</i>
EDU 300 Foundations of Education	3
EDU 301 Human Development & Learning	3
EDU 310 Practicum	1+1+1
EDU 351 Children's Literature	3
PHE 390 Physical Education for El. Teachers....	3
EDU 414 Curriculum & Methods for Young Children	3
EDU 422 Teaching Elementary School Mathematics	3
EDU 426 Teaching Reading & Other Language Arts	3
EDU 517 Science Education in the El. School ...	3
EDU 566 Diagnosis & Remediation in Reading ..	3
EDU 591 Social Studies Education in the Elementary School	3
EDU 607 Advanced Educational Psychology	3
EDU 624 Early Childhood Educ. Programs & Policies	3
EDU 626 Home-School Communication & Collaboration	3
EDU 672 Internship	9
EDU 673 Seminar on Educational Issues, Ethics and Policy	3
Electives	3-6
Graduate electives in education and academic areas.	
EDU 660, Methods of Research, encouraged.	

PROGRAM IN MIDDLE EDUCATION

The Middle Education Program is directed toward preparing teachers to instruct children in the transition years between the ages of nine and 14 (grades four through eight). Students completing this program can be certified to teach in the upper elementary and middle school grades.

Professional Studies Requirements

MIDDLE EDUCATION, 4-8

	<i>Credits</i>
EDU 300 Foundations of Education	3

EDU 301 Human Development & Learning	3
EDU 310 Practicum	1+1+1
EDU 351 Children's Literature or Literature for or 433 Adolescents	3
PHE 390 Physical Education for Elementary Teachers	3
EDU 423 Teaching Math for Middle Education ..	3
EDU 426 Teaching Reading and other Language Arts	3
EDU 517 Science Education in the Elementary School	3
EDU 544 Curriculum & Instruction for Middle Grades	3
EDU 566 Diagnosis and Remediation in Reading	3
EDU 591 Social Studies Education in the Elementary School	3
PSY 607 Advanced Educational Psychology	3
EDU 672 Internship	9
EDU 673 Seminar on Educational Issues, Ethics and Policy	3
Electives	6-9
Graduate electives in education and academic areas.	
EDU 660, Methods of Research, encouraged.	

PROGRAMS IN SECONDARY EDUCATION

The programs in secondary education provide preservice preparation for prospective secondary school teachers. Endorsements for teaching grades 8–12 are available in biology, business, chemistry, drama, English, French, German, history and social studies, mathematics, physics, science, and Spanish. Added endorsements are available in earth science, English as a second language, journalism, and speech.

Professional Studies Requirements

SECONDARY EDUCATION, 8-12

	<i>Credits</i>
EDU 300 Foundations of Education	3
EDU 301 Human Development & Learning	3
EDU 310 Practicum	3
EDU 537 Secondary School Curriculum	3
*EDU 5XX Teaching Secondary School	3
EDU 607 Advanced Educational Psychology	3
EDU 672 Internship	9
EDU 673 Seminar on Educational Issues, Ethics and Policy	3
**EDU 681 Investigation and Trends in Teaching ..	3
Electives	9-12
Graduate electives in education and academic areas.	
EDU 660, Methods of Research, encouraged.	

- *EDU 540 Science
- EDU 543 Foreign Language
- EDU 545 Mathematics
- EDU 547 History/Social Studies
- EDU 548 English

**Science, English, Foreign Languages, Mathematics, or History/Social Studies

PROGRAM IN SPECIAL EDUCATION

The Special Education curriculum is designed to develop competencies needed to teach children and youth (K–12) in the areas of emotional disturbance and mental retardation. The program results in dual endorsement (endorsement in both areas). Program sheets specifying the professional sequence are available in the office of the Division of Teacher Education.

Emotional Disturbance

This sequence prepares students to teach emotionally disturbed individuals in school and residential settings. Integration of didactic course work and clinical experiences allows students to apply a variety of interventions throughout training. Emphasis is placed upon developing a broad range of teaching competencies, derived from various theoretical models, to engender social/behavioral and academic growth in behavior disordered/emotionally disturbed pupils.

Mental Retardation

This sequence prepares students to teach mentally retarded individuals in public, private, and community settings. The program emphasizes assessment, curriculum, service delivery, and adaptation techniques for general educators. Students in the mental retardation specialization acquire many of the competencies of teachers in general education and develop a broad knowledge of other exceptionalities.

Professional Studies Requirements

SPECIAL EDUCATION, K–12

(Emotional Disturbance/Mental Retardation)

	<i>Credits</i>
EDU 300 Foundations of Education	3
EDU 301 Human Development and Learning	
or	
PSY 305 Educational Psychology	3
EDU 310 Practicum: Emotional Disturbance	2
EDU 310 Practicum: Mental Retardation	2
EDU 330 Survey of Special Education	3
EDU 331 Human Interaction in Teaching	3
EDU 422 Teaching Elementary School	
Mathematics	3
or	
EDU 423 Teaching Mathematics for Middle	
Education	
EDU 426 Teaching Reading and Other Language	
Arts	3
EDU 468 Educational Diagnosis of Exceptional	
Individuals	3
EMO 500 Characteristics of Students with Emo-	
tional Disturbance	3

EMO 501 Teaching Students with Emotional		
Disturbance	3	
MRT 556 Introduction to Mental Retardation ...		3
MRT 560 Methods for students with Mental		
Retardation	3	
MRT 500 Language Intervention for Children		
and Learners with Severe Disabilities		3
or		
LDS 530 Language Disabilities: Assessment and		
Teaching	3	
EDU 631 Behavior Management of the Excep-		
tional Student	3	
EDU 632 Secondary Programming for Excep-		
tional Students	3	
EDU 672 Internship: Emotional Disturbance		6
EDU 672 Internship: Mental Retardation		6
EDU 6XX Foundations Course (choose with		
advisor)	6	
Elective		3

LIBRARY/MEDIA ENDORSEMENT

The Division of Teacher Education provides courses that lead to endorsement as a school library/media specialist. Information about these courses may be obtained from the instructional technology core coordinator in the division.

POST-BACCALAUREATE CERTIFICATE PROGRAM

The post-baccalaureate certificate in teaching is designed for students who have earned bachelor's degrees in fields other than education, who wish to become teachers in one or more grades kindergarten through 12, and for whom a masters degree is not a priority (they may already have earned such a degree or wish later to earn a masters degree in a specialized area of education). Candidates are expected to have earned a liberal arts degree or its equivalent; those planning to teach at the secondary level must have a major or its equivalent in the subject they wish to teach.

Candidates for the certificate are required to complete a minimum of 24 hours beyond the bachelor's level, including the courses below. The minimum number of hours, including some at the undergraduate level, varies by certificate track, with fewer hours—30—required for secondary (high school teachers most frequently teach a single subject) than for elementary—41—(teachers in elementary schools most often teach the array of subjects). Equivalent courses taken within the past five years may transfer; however, a minimum of 24 hours, including clinical experiences, must be taken at VCU after admission to the program.

Persons completing the program are expected, among other attributes, to have an understanding of human development and learning theory appropriate to the age group they will teach, to demonstrate knowledge of the subjects they will teach, to develop an understanding of purposes for education and a defensible philosophical approach toward teaching, to acquire awareness of the diversity of the school-age population in cultural background and styles of learning, to demonstrate an ability to plan and implement effective teaching, and to measure student learning in ways that lead to sustained development and learning.

Criteria for Admission include a baccalaureate (or equivalent) in the liberal arts; at least a 2.75 GPA; satisfactory completion of an application, including a written statement about one's reasons for entering teaching, prior experiences with the age group to be taught, and commitment to teach where needed; recommendations from three individuals in position to evaluate the candidate's attributes, especially in relation to the individual's goals in teaching; relevant experience; review by an admissions committee; scores on the Graduate Record Examinations (GRE) or Miller Analogies Test (MAT). Successful completion of the program includes attaining appropriate scores on the National Teacher Examination tests as well as satisfying program requirements.

Professional Requirements For All Tracks

- I. **Educational Foundations** (6 credits minimum)
 - A. EDU 300 Foundations of Education
 - B. Choose one with advisor approval:
 - EDU 602 Adolescent Growth and Development
 - EDU 603 Seminar in Child Growth and Development
 - EDU/PSY 607 Advanced Educational Psychology
- II. **General Curriculum** (3–6 credits; see track)
- III. **Professional Instruction Courses** (6–15 credits; see track)
- IV. **Field/Clinical Experiences** (early/middle: 14 credits; secondary: 15 credits)
 - EDU 310 Practicum (2–3 credits)
 - EDU 672 Internship (9 credits)
 - EDU 673 Seminar (3 credits)

Total Program 30–41 credits (see track)

NK-4 Certification Track (41 credits)

- I. **Foundations** (6 credits)
 - II. **General Curriculum** (6 credits)
 - EDU 414 Curriculum and Methods for Young Children
- Choice:

- EDU 624 Early Childhood Programs and Policies
- EDU 626 Home/School Communication and Collaboration

- III. **Professional Instruction Courses** (15 credits)
 - EDU 426 Teaching Reading and Other Language Arts
 - EDU 566 Diagnosis and Remediation in Reading
 - EDU 422 Teaching Elementary School Mathematics
 - EDU 517 Science Education in the Elementary School
 - EDU 591 Social Studies Education in the Elementary School
 - EDU 351 Child Literature/Test out option available
- IV. **Field/Clinical Experiences** (14 credits)

4–8 Certification Track (38 credits)

- I. **Foundations** (6 credits)
- II. **General Curriculum** (3 credits)
 - EDU 544 Curriculum and Instruction for Middle Grades
- III. **Professional Instruction Courses** (15 credits)
 - EDU 426 Teaching Reading and Other Language Arts
 - EDU 566 Diagnosis and Remediation in Reading
 - EDU 423 Teaching Mathematics for Middle Education
 - EDU 517 Science Education in the Elementary School
 - EDU 591 Social Studies Education in the Elementary School
- IV. **Field/Clinical Experiences** (14 credits)

Secondary Certification Track (30 credits)

- I. **Foundations** (6 credits)
- II. **General Curriculum** (3 credits)
 - EDU 537 Secondary School Curriculum
- III. **Professional Instruction Courses** (6 credits)
 - EDU 54X Teaching Secondary School (English, Science, Mathematics, Foreign Languages, History/Social Studies)
 - EDU 681 Investigations and Trends in Teaching (English, Science, Mathematics, Foreign Languages, History/Social Studies)
- IV. **Field/Clinical Experiences** (15 credits)

DIVISION OF EDUCATIONAL STUDIES

JOHN R. PISAPIA
Chairman

Andrew Beale
Kathleen Cauley
Jack Duncan
Paul Gerber
Gordon Keese
Susan Leone
Carroll Londoner
Howard Ozmon
Sally Schumacher
Charles Sharman

William Bost
Sam Craver
Barbara Fuhrmann
Thomas Hephner
Rosemary Lambie
Frederic Linder
James McMillan
Charles Ruch
John Seyfarth
Ronald Sherron

Warren Strandberg
Gaynelle Whitlock

Richard Vacca
Mary Ann Wright

Professors Emeriti
James Bailey
Vivien Ely
John Mapp

Frances Briggs
Robert Fleming
Walter Ramey

The Division of Educational Studies offers undergraduate courses that provide students with foundational studies needed for specialized work in education degree programs. All degree seeking students in education are required to take EDU 300 Foundations of Education and EDU 301 Human Development and Learning which also satisfy general education requirements of the College of Humanities and Sciences, List J. Other foundations requirements are listed under each specific program of study.

COURSES IN EDUCATION

ADULT EDUCATION (ADE)

402 How Adults Learn. Semester course; 3 lecture hours. 3 credits. Overview of the adult as a learner. Topics include how and what adults learn, why adults participate in learning, and major barriers to learning for adults. Implications for teachers/trainers of adults are explored.

EDUCATION (EDU)

200 Education in American Society. Semester course; 3 lecture hours. 3 credits. No prerequisite. An elective course for noneducation majors, including those who may be exploring careers in education. An examination of the complex nature of our American educational system and various societal influences on that system. The course will include an exploration of some critical issues affecting the future of American education, on-site visits to educational institutions, and other field experiences in settings that will permit exploration of career options.

203 Focus on Choice. Semester course; 3 lecture hours. 3 credits. A career planning experience for adults focusing on discontinuity in life patterns and a review of current educational and occupational opportunities. Consideration of the world of work, fields of education and volunteer service, and the development of one's own potential will be featured.

300 Foundations of Education. Semester course; 3 lecture hours. 3 credits. The historical, sociological, and philosophical backgrounds of educational theories and practices. The aim of the course is to help the student develop a basic understanding of education in the modern world.

301 Human Development and Learning. Semester course; 3 lecture hours. 3 credits. A study of human development through the life span with special emphasis on child and adolescent psychology, the nature of learning, and basic concepts of learning theories.

305/PSY 305 Educational Psychology. Semester course; 3 lecture hours. 3 credits. The application of psychological

principles to the teaching-learning process, with special emphasis on theories of learning and development.

307/English 307 Teaching Writing Skills. Semester course; 3 lecture hours. 3 credits. Studies the theory and methods for teaching writing to students in middle and secondary schools. Teaches strategies for prewriting, composing, peer revision, evaluation, and topic construction. Includes extensive journal and essay writing. May not be used to satisfy the literature requirements of the College of Humanities and Sciences.

310 Practicum. 1–3 credits. A field placement that precedes student teaching, the nonschool supervised experience, or the internship. Includes planned observations, tutorials, and small group involvement.

330 Survey of Special Education. Semester course; 3 lecture hours. 3 credits. Pre- or corequisite for all other undergraduate special education courses. For majors and nonmajors. An overview of the field of special education. Includes current trends, legal issues, definitions, etiology, identification, characteristics, and appropriate services for children and adults with a range of exceptionalities.

331 Human Interaction in Teaching. Semester course; 3 lecture hours; 3 credits. Develop skills teachers use in interactions with students, family members, and other helping professionals, for relationship building, communication, affective education, teamwork, and consultation.

351/ENG 351 Children's Literature I. Semester course; 3 lecture hours. 3 credits. Designed to give students an appreciation of values of children's literature; includes biography, fable, myth, traditional and modern fanciful tales, and poetry, as well as a survey of the history of children's literature.

400 Independent Study. Semester course; 1–6 hours. 1–6 credits. Opportunities are provided for supervised research and independent study in selected areas. Designed for advanced students. All work offered on an individual basis with the approval of instructor and departmental chairman.

401 Pupil Evaluation. Semester course; 3 lecture hours. 3 credits. Principles and procedures of evaluation of pupil growth in cognitive, affective, and psychomotor domains for a prospective classroom teacher; construction and analysis of teacher-made tests and other formal and informal assessment procedures; interpretation and use of criterion-referenced and norm-referenced standardized tests in measuring group and individual achievement.

407 Educational Media: Utilization. Semester course; 3 lecture hours. 3 credits. The study and use of audio-visual equipment and aids, and means for using them for more effective presentations to groups.

414 Curriculum and Methods for Young Children. Semester course; 3 lecture hours. 3 credits. Prerequisite: admission to Teacher Preparation. A study of developmentally appropriate curriculum and methods for teaching young children. Includes classroom management, planning, selecting materials and evaluating learning. Extensive off-campus activities are integrated with on-campus classes.

417 Teaching Science in Elementary and Middle Schools. Semester course; 3 lecture hours. 3 credits. Emphasis on methods and techniques for developing instruction that reflects the three aspects of science—product, processes, and values. Attention is given to curriculum organization,

current practices, and trends in elementary and middle school science education.

420 The Elementary School Curriculum. Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 300 and 301 or 302. The historical and philosophical background of the modern elementary school; its organization, functions, and recent developments in programs and activities.

422 Teaching Elementary School Mathematics. Semester course; 3 lecture hours. 3 credits. Methods and techniques used to teach mathematics in elementary school. Background material, course content, and modern uses of mathematics will be stressed to give the teacher a better understanding of this subject area.

423 Teaching Mathematics for Middle Education. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 115 or 101. Emphasis on current instructional strategies, learning theories, and manipulative materials appropriate for teaching mathematics to children. The content focus is on grades four-eight. A development approach to this content includes some consideration of topics from the primary grades.

425 Introduction to the Language Arts. Semester course; 3 lecture hours. 3 credits. Surveys the language arts curriculum in elementary and middle grades. Emphasizes the processes and teaching strategies related to the development of oral language, listening, writing, spelling, and handwriting. Presents reading skills and literature as a part of the total communication cycle. Briefly addresses language arts for children with special needs or language diversity.

426 Teaching Reading and Other Language Arts. Semester course; 3 lecture hours. 3 credits. An analysis of instructional programs with emphasis on developmental reading. It incorporates a review of research, curriculum issues, and instructional procedures related to the programs of reading in instructional schools and agency settings.

427 Diagnostic Reading in the Classroom with Practicum. 3 hours. 3 credits. Prerequisites: EDU 426 or 549 and Admission to *Clinical Teacher Education*. Designed for those planning to be classroom teachers. Explores strategies for evaluating reading ability and progress. Procedures appropriate for differentiation of instruction within the classroom are reviewed and practiced in a field setting.

433/ENG 433 Literature for Adolescents. Semester course; 3 lecture hours. 3 credits. Designed to acquaint the prospective secondary school English teacher with the nature, scope, and uses of adolescent literature. The student is acquainted with reading materials for meeting the varied needs and interests of adolescents.

461 Teaching the Mentally Retarded. Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 451 and 456 or permission of instructor. Curriculum development and organization of activities for the mentally retarded at different maturational levels with specific attention to program content equipment, materials, and resources. Taken concurrently with EDU 310.

468 Educational Diagnosis of Exceptional Individuals. Semester course; 3 lecture hours. 3 credits. Study and simulation of basic assessment techniques and their use in determining the nature and extent of learning problems in educational placement decisions and in individual program development and implementation.

476 Methods for Residence Hall Assistants. Semester course; 3 lecture hours. 3 credits. Prerequisite: serve in VCU residence halls or permission of instructor. Course designed primarily to present resident assistants and others with student development concepts, peer assistance and helping skills, and group techniques. Residence halls will be used as primary learning laboratories.

485 Directed Student Teaching I. 6 credits. Prerequisites: admission to EDU 310 or equivalent with a grade of "C" or better and recommendation of practicum supervisor. A classroom teaching experience in a public school or other approved setting which includes opportunities for increasing involvement with children. Culminates in full responsibility for planning, implementing, and evaluating classroom activities.

486 Directed Student Teaching II. 6 credits. Prerequisites: admission to EDU 310 or equivalent with a grade of "C" or better and recommendation of practicum supervisor. A classroom teaching experience in a public school or other approved setting which includes opportunities for increasing involvement with children. Culminates in full responsibility for planning, implementing, and evaluating classroom activities.

487 Supervised Nonschool Experiences I. 6 credits. Prerequisites: completion of EDU 310 or equivalent with a grade of "C" or better, recommendation of practicum supervisor, and satisfaction of eligibility requirements for student teaching. Does not satisfy student teaching or certification requirements. A practical experience in a community agency or other approved non-school setting which provides for the efficient application of knowledge, ideas, and skills related to one's occupational objective. Culminates in full responsibility for planning, implementing, and evaluating activities.

488 Supervised Nonschool Experiences II. 6 credits. Prerequisites: completion of EDU 310 or equivalent with a grade of "C" or better, recommendation of practicum supervisor and satisfaction of eligibility requirements for student teaching. Does not satisfy student teaching or certification requirements. A practical experience in a community agency or other approved non-school setting which provides for the efficient application of knowledge, ideas, and skills related to one's occupational objective. Culminates in full responsibility for planning, implementing, and evaluating activities.

494 Topical Seminar in Education. Semester course; 1-3 variable credits, repeatable up to six credits. A seminar intended for group study by personnel interested in examining topics, issues, or problems related to the teaching, learning, and development of students.

HEALTH EDUCATION (HED)

190/PHE 190 Introduction to Health and Physical Education Professions. Semester course; 3 lecture hours. 3 credits. An overview of the professional aspects of health and physical education. Historical and philosophical concepts, evaluation and research methods, current issues and trends, and career opportunities are discussed. Field experiences allow exposure to various professionals and facilities related to the health and physical education domains.

300 Introduction to Health. Semester course; 3 lecture hours. 3 credits. An introduction to the five dimensions of

health emphasizing personal application and encouraging conscious decisions about a variety of behaviors that can make a difference in one's health status.

310/PHE 310 Early Professional Experience. Semester course; 3 laboratory hours. 1 credit. Opportunities are provided for observation and experience with professionals in the health and physical education fields. Designed for the students entering the fields to explore specific areas on campus or in the community.

325 Treatment of Athletic Injuries. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 205. Theory and techniques for the prevention, recognition, referral, and follow-up care of injuries in physical education and athletics.

L325 Taping Techniques Laboratory. Semester course; 3 laboratory hours. 1 credit. Pre- or corequisite: HED 325. Instruction and practice in the application of adhesive and elastic strapping (Laboratory fee required).

380 Principles of Accident Prevention. Semester course; 3 lecture hours. 3 credits. This course is designed to provide information on the magnitude of the accident problem in the nation. Special attention is given to concepts and theories of accident prevention, particularly as they relate to use of highways.

382 Introduction to Driver Education. Semester course; 3 lecture hours. 3 credits. An introduction to the vehicle operator's task within the highway transportation system: driver task analysis. A current automobile operator's permit is required.

386 School and Community Health Resources. Semester course; 3 lecture hours. 3 credits. Acquaints the student with current available school and community resources and educational materials for health information. Available services in a community health program will be surveyed.

397/PHE 397 Methods in Health and Physical Education. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Methods, materials, techniques, and skills in teaching health and physical education are discussed. Major topics include teaching styles, instructional guides, student evaluation, teacher evaluation, and discipline, as well as their application in teaching setting.

398/PHE 398 Curriculum in Health and Physical Education. Semester course; 3 lecture hours. 3 credits. Curriculum planning will include key aspects in the development of school health and physical education programs. Preparations and development strategies for course outlines, unit/lesson plans, and the writing of behavioral objectives are highlighted. Related subject areas, trends, and problems also are examined.

400 Nutrition. Semester course; 3 lecture hours. 3 credits. Provides learning opportunities that enable the student to acquire a practical and useful knowledge based on the sound principles of applied human nutrition. Emphasis will be on nutritional needs through the cycles of life providing information that will enhance the student's own lifestyle and provide experience in interpreting nutritional information for the public.

410 Issues in Sexuality. Semester course; 3 lecture hours. 3 credits. An overview of content, principles, and strategies relating to issues in human sexuality both in the community and school settings. Basic concepts of human sexuality as *they develop in today's world* are presented. Issues include

sexual maturity, reproductive systems, conception, birth, abortion, and varieties of sexual behavior and sexual dysfunctions and disorders.

420 Substance Abuse. Semester course; 3 lecture hours. 3 credits. A survey of drugs that are used and abused in contemporary society. Multidisciplinary lectures and discussions include the historical and sociological perspectives of drugs in the school and community; the psychological and physiological effects of drug use; and the role of local and regional resources. Designed for students, teachers, counselors, administrators, and other interested persons. Rehabilitation methods and prevention programs also will be discussed.

425 Advanced Treatment of Athletic Injuries. Semester course; 3 lecture hours. 3 credits. The course is designed to give the student knowledge of and experience with physical examination, diagnostic testing, and identification of athletic injury, including orthopedic evaluation techniques of specific injuries. This includes an understanding of the anatomical and biomechanical basis of joint motion. The course will include lecture, slide presentation, and practical experience.

426 Therapeutic Modalities and Rehabilitative Techniques. Semester course; 3 lecture hours. 3 credits. This course is designed to provide students with an understanding of the theory and practical application of physical and exercise modalities commonly used in athletic training. The student is also exposed to methods of rehabilitation for specific injuries and surgery, determination of criteria for return to competition, treatment procedures for specific injuries, and methods of fabrication of protective splints and pads. The course will include lecture, slide presentation, practical experience, and guest lecturers.

430 Trends in Modern Diseases. Semester course; 3 lecture hours. 3 credits. Communicable disease, nutritional disease, prevention (immunizations), developmental abnormalities, congenital defects, the handicapped child, and adolescent medicine are included.

480 Safety, First Aid, and CPR. Semester course; 3 lecture hours. 3 credits. This course includes American Red Cross and/or American Heart Association certification in Multimedia Standard First Aid and Basic Life Support (cardiopulmonary resuscitation). In addition, basic principles of accident causation and prevention are presented.

482 Methods In Driver Education. Semester course; 3 lecture hours. 3 credits. Prerequisite: HED 382. This course is designed to provide driver education instructional principles and methodology.

487 Coping and Adaptation. Semester course; 3 lecture hours. 3 credits. Focuses on common stress factors in life such as death, personal loss, life changes, divorce, and emotional problems, such as anger, loneliness, and frustration. Strategies for dealing with such stressors are discussed and applied to both personal and professional settings.

493/PHE 493 Tests and Measurement in Health and Physical Education. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 111. Topics include selecting, administering, scoring, and evaluating tests in the areas of general motor performance, health screening, fitness, sports skills, and knowledge. Scientific test construction and basic statistical analysis.

494/PHE 494 Topical Seminar in Health and Physical Education. Semester course; 1–3 credits, repeatable up to 6 credits. An in-depth study of a topic, issue, or problem in health and/or physical education. See *Schedule of Classes* each semester for specific topics to be offered.

OCCUPATIONAL EDUCATION (OED)

400 Vocational Education Certification Studies. Semester course; 3 lecture hours. 3 credits. Designed for upgrading the Provisional Vocational Certificate to a renewable five-year Vocational Education Certificate (VEC). Course work is individually planned and contracted with the instructor in curriculum planning/development, laboratory/shop management, methods of teaching, program planning and evaluation, professional role and development, technical update, or Cooperative Occupational Education.

409 School and Community Relationships in Occupational Education. Semester course; 3 lecture hours. 3 credits. Examines the coordination function, the vocational student organization, student recruitment, program promotion, community surveys, student/employer follow-up, and communication with local and state agencies. Develops the skills required for maintaining successful relationships with the various communities that support vocational education in the public schools.

PHYSICAL EDUCATION (PHE)

Service Program Courses

Oriented to meet the university students' wide variety of needs. Emphasis is placed on active learning and basic skill acquisition.

- 100 Experimental Physical Education (1 credit)
- 101 Foundations of Physical Conditioning: Jogging, Yoga, Weight Training, Swimming, as specified (1 credit)
- 102 Fitness and Weight Control (1 credit)
- 103 Adapted Physical Education (1 credit)
- 106 Fencing (1 credit)
- 107 Badminton (1 credit)
- 108 Gymnastics Survey (1 credit)
- 109 Racquetball (1 credit)
- 110 Handball (1 credit)
- 112 Tennis (1 credit)
- 113 Wrestling (1 credit)
- 114 *Bowling* (1 credit)
- 115 Rugby (1 credit)
- 116 Archery (1 credit)
- 117 Golf (1 credit)
- 121 Self Defense: Karate or Judo (1 credit)
- 125 Basketball (1 credit)
- 126 Flag Football (1 credit)
- 127 Field Hockey (1 credit)
- 128 Soccer (1 credit)
- 129 Lacrosse (1 credit)
- 137 Volleyball (1 credit)
- 138 Team Handball (1 credit)
- 139 Track and Field (1 credit)
- 150 Beginning Swimming (1 credit)
- 151 Intermediate Swimming (1 credit)
- 155 Scuba Diving (1 credit)
- 156 Synchronized Swimming (1 credit)

- 157 Springboard Diving (1 credit)
- 158 Aquatic Sports and Games (1 credit)

Certification Program Courses

- 250 Advanced Life Saving (1 credit)
- 251 Water Safety Instruction (1 credit)
- 356 Organization and Administration of Aquatic Activities (1 credit)

Professional Activity Courses

Advanced knowledge and skills are acquired in those content areas traditionally taught in the public schools. Emphasis is placed on topics such as history, rules, skills, and strategy. Designed for health and physical education majors or students with instructor's permission.

- 200 Strength Training (1 credit)
- 201 Endurance and Flexibility Training (1 credit)
- 202 Basketball (1 credit)
- 204 Softball (1 credit)
- 208 Volleyball (1 credit)
- 210 Field Hockey (1 credit)
- 212 Soccer (1 credit)
- 214 Wrestling and Flag Football (1 credit)
- 216 Tennis (1 credit)
- 226 Recreational and Indoor Racquet Sports (1 credit)
- 227 Archery, Badminton, and Bowling (1 credit)
- 230 Gymnastics (1 credit)
- 233 Track and Field (1 credit)
- 234 Elementary Rhythmics (1 credit)
- 235 Social Rhythmics (1 credit)
- 236 Developmental Activities and Games (1 credit)

Professional Classroom Courses

190/HED 190 Introduction to Health and Physical Education Professions. (See HED 190.)

300 Coaching Seminar. Semester course; 1 lecture hour. 1 credit. A lecture/discussion course that identifies the practical administrative and organizational responsibilities coaches encounter. Realistic problem-solving is stressed.

310/HED 310 Early Professional Experience. (See HED 310.)

390 Physical Education for the Elementary Teacher. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Methods and curriculum planning in physical education for the elementary school teacher and physical education specialist. Emphasis is placed on using activities and games to foster the growth and development of the child with a focus on the psychomotor and affective domains.

391 Elementary Physical Education for Majors. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: PHE 390. Designed to enhance knowledge of elementary physical education through an analysis of the aims, goals, objectives, programs, and teaching methods. Construction of year-round curriculum and daily lesson plans. Emphasis also placed upon the acquisition of administrative and organizational knowledge dealing with facilities, equipment, teaching aids, testing, measurement, and safety.

392 Kinesiology. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 205 or permission of instructor. A study of the anatomical, physiological, and physical aspects of human motion with application to the analysis of physical activities.

397/HED 397 Methods in Physical Education. (See HED 397.)

398/HED 398 Curriculum in Health and Physical Education. (See HED 398.)

430 Sports Psychology. Semester course; 3 lecture hours. 3 credits. Prerequisite: PSY 101. Examines various psychological aspects of sports performance. Topics include optimal performance, leadership effectiveness, ethics, stress management, coaching strategies, and motivation. Practical experiences include goal-setting, relaxation training, and cognitive intervention strategies.

431 Seminar in Applied Fitness. Semester course; 3 lecture hours. 3 credits. Open only to senior physical education majors or with permission of instructor. An in-depth study of various fitness areas and settings compatible with student career interests and current job market trends. Emphasis is placed on the application of knowledge and fundamental fitness principles. Topics include preparing exercise, nutrition, and weight loss, as well as weight and muscle gain prescriptions. Also includes training the elite athlete and designing fitness programs in the school and community.

432 Movement Education. Semester course; 3 lecture hours. 3 credits. For teachers of early childhood elementary and physical education. Emphasis is given to the role of movement and theory in the educational program and its implications for curriculum development and learning. Major consideration is given to the development of movement competency and self-awareness through creativity and exploration.

439 The Organization, Administration, and Supervision of the Intramural Sports Program. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Experiences in the organization and administration of an intramural sports program. Lecture will be devoted to the theory, philosophy, history, and plans for the conduct of an intramural sports program. Laboratory experience will be obtained by working in intramural programs.

492 Physiology of Exercise. Semester course; 3 lecture and 1 laboratory hour. 3 credits. Prerequisite: BIO 206. Physiological changes in the human organism resulting from exercise, investigation of recent research in diet, drugs, fatigue, cardiovascular/respiratory fitness, conditioning programs for various age groups, and the effects of exercise upon various components of physical fitness and health. Application of specific problems to physical education programs. Laboratory experience in the use of research instruments.

493/HED 493 Tests and Measurement in Health and Physical Education. (See HED 493.)

494/HED 494 Topical Seminar in Health and Physical Education. (See HED 494.)

495 Adaptive Physical Education. Semester course; 3 lecture hours. 3 credits. Provides an overview of those disabilities found most frequently in public schools. Emphasis is placed on developing understanding of various disabilities and skills in adapting activities to meet the needs and abilities of disabled students.

READING/STUDY SKILLS (RSS)

100 Reading and College Study Skills. Semester course; 2 lecture and 2 laboratory hours. 3 credits. A study of effective reading and study skills at the college level. Emphasis is placed on vocabulary development as well as reading and study strategies.

101 Advanced Reading, Study, and Communication Skills. Semester course; 3 lecture and laboratory hours. 3 credits. Prerequisite: EDU 100, advisor's recommendation, or instructor's permission. A study of advanced reading and study skills at the college level. Students develop and apply critical reading-thinking skills, library research skills, and advanced vocabulary.



PART XIV — School of Graduate Studies

Administrative Officers

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Graduate Affairs
SHERRY T. SANDKAM, B.A., M.B.A.
Assistant Dean

Before enrolling in graduate courses, students should consult with a graduate program director in the discipline in which they intend to take courses. In some programs, credit for courses will not apply to a VCU graduate degree unless the student has been admitted previously to a degree program.

Degree-seeking Graduate Students. For information about admission to graduate programs, students should consult the *VCU Graduate Bulletin* or contact the graduate school. Questions concerning graduate school standards should be addressed to the School of Graduate Studies, 1101 East Marshall Street, Room 1-024, Richmond, VA 23298-0568, (804) 786-0347. The Graduate School's office on the academic campus is located at 901 West Franklin Street, Room B1A, (804) 367-6916.

Nondegree-Seeking Graduate Students. An individual who wishes to take graduate courses

without formal admission to a degree program is classified as a nondegree-seeking graduate student. Such students will be required to provide verification of residency and eligibility, which includes awarding of the baccalaureate degree, and written permission from the school(s) in which they intend to take courses. Enrollment in some graduate courses is restricted to degree-seeking students or majors. In courses where enrollment is limited, first priority is given to students admitted to the program, followed by other VCU graduate degree-seeking students. Nondegree-seeking students are not exempt from any prerequisite which may be specified for a course.

There is no limit to the number of credits a nondegree-seeking graduate student may take, as long as the student's academic performance is credible. A nondegree-seeking student who is later admitted as a degree-seeking student, however, may apply only six hours earned as a nondegree-seeking student toward the degree. For information about admission as a nondegree-seeking student, students should contact the Graduate School at (804) 786-0347.



PART XV — School of Medicine

STEPHEN M. AYRES

Dean

REUBEN B. YOUNG

Senior Associate Dean

WILLIAM M. GLEASON

Associate Dean, Administration

JOHN W. HARBISON

Associate Dean, Graduate Medical Education

JAMES M. MESSMER

Associate Dean, Academic Affairs

HEBER H. NEWSOME

Associate Dean, Clinical Services

HUGO R. SEIBEL

Associate Dean, Student Affairs

WILLIAM K. STACY

Associate Dean, Veterans Affairs

DONALD M. SWITZ

Associate Dean, MCV Hospitals Ambulatory

Care Services

PAUL E. MAZMANIAN

Assistant Dean, Medical Education

The School of Medicine was founded in 1838 and is the oldest and largest school on the Medical College of Virginia Campus. The school offers a program leading to the Doctor of Medicine degree and provides post-M.D. training for approximately 500 residents and interns in the university's 1,000-bed Medical College of Virginia Hospitals and the McGuire Veterans Affairs Medical Center. In addition, the Department of Pathology of the School of Medicine offers a graduate program in pathology leading to the Master of Science and Doctor of Philosophy degrees; and a Master of Public Health degree program is offered by the Department of Preventive Medicine. Additional information on the programs offered by the School of Medicine may be found in the Virginia Commonwealth University *Medical College of Virginia Bulletin* and *Graduate Bulletin*.



PART XVI — School of Nursing

NANCY F. LANGSTON

Dean

BETSY A. BAMPTON

Interim Director, Undergraduate Program

LORNA MILL BARRELL

Interim Director, Master's Program

BARBARA A. MARK

Director, Doctoral Program

The School of Nursing originated in 1893 as part of the University College of Medicine. Since then, the program has evolved from a three-year diploma program to an upper division baccalaureate program for generic students as well as those students who are already registered nurses seeking completion of the B.S. degree.

ACCREDITATION

The baccalaureate degree program in nursing is accredited by the National League for Nursing Council of Baccalaureate and Higher Degree Programs. The program is approved by the Virginia State Board of Nursing, and graduates are eligible to take the registered nurse licensing examination.

ACADEMIC ADMISSION REQUIREMENTS

Applicants for admission must either be in good standing at the college last attended or must be eligible for readmission. Science credits must be earned within ten years preceding admission to be considered for transfer.

Admission into the School of Nursing is competitive. Preference will be given to students

with a grade-point average (GPA) of 3.0 based on a scale of 4.0. Computation of the grade-point average utilizes academic courses only. A grade of "D" in any required course is not acceptable. Foreign applicants who do not use English as their natural language must have a minimum TOEFL score of 550.

Students may enter the baccalaureate program in a variety of ways. High school students wishing to attend Virginia Commonwealth University for the entire four years should apply to the pre-nursing program in VCU's College of Humanities and Sciences.

Automatic admission into the School of Nursing is available to pre-nursing candidates who present an academic diploma and minimum high school GPA of 3.2, rank in the top quarter of their class, have combined SAT scores above 900, and have been interviewed in the School of Nursing prior to acceptance. Students wishing to pursue this option should notify the Coordinator of Pre-Health Sciences Advising, College of Humanities and Sciences, Virginia Commonwealth University, Richmond, VA 23284-2012, (804) 367-1673.

All other students will complete a School of Nursing change of major packet at the end of fall semester to be considered for admission into the school. If accepted, the student will begin the nursing curriculum in the sophomore year.

Students who have completed one or two years of study at another college or university may apply for transfer into the School of Nursing. Applicants who have completed all general

education prerequisite courses and who transfer after two years at another college are required to attend the summer session prior to entry with junior standing in the nursing major.

Students who have baccalaureate degrees in other majors should contact the Director of Admissions at the School of Nursing to have their college transcripts evaluated prior to beginning the admissions process. They would then follow the same admission process as transfer students.

A minimum of 60 semester hours of general education courses is required for graduation. The courses are as follows:

	<i>Semester Hours (SH)</i>	
COMMUNICATION	6	
Writing	3 SH	
Literature or Composition	3 SH	
HUMANITIES	12	
Ethics, logic, critical thinking or philosophy	3 SH	
Select from literature, foreign language, speech, history, religion, art, music, drama	9 SH	
SOCIAL SCIENCE	12	
General psychology	3 SH	
General sociology	3 SH	
Elective	3 SH	
Concepts in Health Through the Life Span*	3 SH	
SCIENCE	22-25	
Laboratory science**	8 SH	
Anatomy and physiology	5-8 SH	
Microbiology	3 SH	
Nutrition	3 SH	
Mathematics, (algebra/statistics/college mathematics)	3 SH	
ELECTIVES	8 SH	
No more than 3 credits in physical education or other activity course		
Total semester hours credit	60-63	

Entering students must be certified in first aid and CPR.

*School of Nursing Course

**If chemistry is not taken in high school, one of the laboratory sciences must be chemistry

Registered Nurse Applicants. The School of Nursing provides an opportunity for registered nurses to be admitted to the baccalaureate program. Graduates from state-approved diploma programs and associate degree programs in nursing who are currently licensed to practice may be admitted for part- or full-time study. The same prerequisites are required of the registered nurse student as of the generic students.

For further information, additional requirements for admission, and the specific procedures

for application for admission, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or contact the Director of the Undergraduate Program, School of Nursing, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0567.

NURSING CURRICULUM

A typical program is as follows:

<i>Freshman Year, Fall Semester</i>	<i>Credits</i>
Composition	3
Biology	4
Mathematics	3
General Psychology	3
Sociology	3
	16

<i>Freshman Year, Spring Semester</i>	
NUR 100 Risk Appraisal and Health Promotion in Today's World	3
Composition	3
Humanities—Elective	3
Laboratory Science	4
Anatomy	4
	17

Freshman Year, Summer Session Summer Institute

<i>Sophomore Year, Fall Semester</i>	
NUR 261 Health Assessment for Nursing Practice ..	3
NUR 200 Concepts of Health Throughout the Life Span	3
Physiology	4
Ethics/Logic/Critical Thinking	3
Nutrition	3
	16

Sophomore Year, Spring Semester

NUR 201 Concepts of Nursing	3
NUR 202 Technologies of Nursing Practice	3
Microbiology	4
Humanities—Elective	3
Social Science—Elective	3
	16

Sophomore Year, Summer Semester— TRANSFER STUDENTS

NUR 201 Concepts of Nursing	3
NUR 202 Technologies of Nursing Practice	3
NUR 261 Health Assessment for Nursing Practice ..	3
	9

Junior Year, Fall Semester

NUR 365 Nursing Science I	3
NUR 335 Nursing of Women	6
NUR 345 Nursing of Children	6
Humanities—Elective	3
	18

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Junior Year, Spring Semester

NUR 366 Nursing Science II	3
NUR 325 Nursing of Adults I	6
NUR 355 Psychiatric—Mental Health Nursing	6
NUR 370 Theory and Research in Clinical Practice	3
	<hr/>
	18

Senior Year, Fall Semester

NUR 475 Professional Issues in Nursing	3
NUR 415 Community Health Nursing	6
NUR 425 Nursing of Adults II	6
	<hr/>
	15

Senior Year, Spring Semester

NUR 485 Managerial Theory for Nursing Practice	3
NUR 486 Nursing Management Practicum	4
NUR 496 Advanced Clinical Practicum	3
NUR 405 Nursing Management of the Long-Term Care Client	3
Upper division or nursing elective	3
	<hr/>
	16

The School of Nursing reserves the right to restrict enrollment in clinical courses to matriculated nursing students seeking a Bachelor of Science degree. Enrollment in all clinical nursing courses is based on availability of space in these courses.

There are a variety of ways the RN student can

sequence the courses in the nursing major. Students may choose weekend, evening and/or day courses. The following is a typical curriculum plan:

Fall Semester

NUR 261 Health Assessment	3
NUR 302 Dynamics of Professional Nursing Practice	3
NUR 370 Theory and Research in Clinical Practice Elective	3
	<hr/>
	12

Spring Semester

NUR 405 Nursing Management of Long-Term Care Client	3
NUR 475 Professional Issues in Nursing	3
NUR 485 Managerial Theory for Nursing Practice	3
NUR 486 Nursing Management Practicum	4
	<hr/>
	13

Summer Session

NUR 415 Community Health Nursing	6
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For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the School of Nursing, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or *Graduate Bulletin*.



PART XVII — School of Pharmacy

JOHN S. RUGGIERO

Dean

GRAHAM C. WINDRIDGE

Associate Dean

C. EUGENE WHITE

Associate Dean of Students

THOMAS P. REINDERS

Assistant Dean for Clinical Affiliations

The School of Pharmacy of the Medical College of Virginia, Virginia Commonwealth University, was officially established in 1898. The original two-year program was replaced by a three-year program in 1925. In 1932 the program was lengthened to four years and the B.S. degree awarded upon its completion. The curriculum for the Bachelor of Science in pharmacy degree was extended to five years in 1960.

The pharmacy curriculum prepares students for one of several career paths. Most graduates practice in the familiar role of the community pharmacist, as owner or employee, who dispenses prescriptions and provides advice on drug use and other health care matters to the general public. An increasing number of pharmacists, however, practice in hospitals where activities may involve dispensing, consulting with physicians and patients, or management. Some graduates are employed by the pharmaceutical industry in research, production, quality control, sales, or management. Opportunities also exist in various governmental agencies as pharmacists, researchers, and members of regulatory bodies.

The curriculum consists of a two-year pre-professional component, which may be taken at any accredited two- or four-year college, and a

three-year professional component which is taken at the School of Pharmacy. Applications to the school are normally submitted during the second year of pre-professional study.

ACADEMIC ADMISSIONS REQUIREMENTS

Students seeking admission to the School of Pharmacy must complete the following pre-professional curriculum:

	<i>Credits</i>
Biology (Lecture and Laboratory)	8
General Chemistry (Lecture and Laboratory)	8
Organic Chemistry (Lecture and Laboratory)	8
Physics (Lecture and Laboratory)	8
English	6
Mathematics	6
Economics	3
Electives (Liberal Arts or Behavioral Sciences)	18
	65

Mathematics credits must include at least three credits of college calculus.

Credits earned through Advanced Placement (AP) Tests of the College Board are not acceptable in meeting the total sixty-five (65) semester hours requirement. Such AP credits may excuse a student from taking a specific nonscience course such as English, economics, or mathematics, but these credits must be earned in additional electives.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Virginia Commonwealth University Medical*

College of Virginia Bulletin or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0632.

THIRD, FOURTH, AND FIFTH YEAR CURRICULUM

THIRD YEAR

	<i>Credits</i>
<i>Fall Semester</i>	
PHA 301 Principles of Pharmacy I	4.5
PHA 311 Pharmacy Law and Ethics	1
ANA 401 Human Anatomy	4.5
PHA 331 Introduction to Pharmacy Practice	2
PHC 302 Medicinal Chemistry I	3
	15
<i>Spring Semester</i>	
PHA 302 Principles of Pharmacy II	4
BIC 402 Biochemistry	5
PIO 482 Physiology	4
MIC 401 Microbiology	4.5
	17.5

FOURTH YEAR

	<i>Credits</i>
<i>Fall Semester</i>	
PHA 415 Principles of Interpersonal Communication	1
PHA 401 Principles of Pharmacy III	3.5
PHC 403 Medicinal Chemistry II	4
PMC 403 Principles of Pharmacology	4
PHA 411 Clinical Pharmacy & Therapeutics	3.5
Elective	2-3
	18-19

Spring Semester

PHA 416 Pharmacy Communication Skills	1
PHA 402 Principles of Pharmacy IV	3.5
PHA 403 Principles of Pharmacy Practice Management	3
PHA 412 Clinical Pharmacy & Therapeutics	5
PHC 404 Medicinal Chemistry III	2.5
PMC 404 Pharmacologic Agents	3.5
	18.5

FIFTH YEAR

	<i>Credits</i>
<i>Fall Semester</i>	
PHA 406 Applied Pharmacy Practice Management	2
PHA 442 Drug Literature Evaluation	2.5
PHA 533 Nonprescription Medication	2.5
PHA 510 Advance Pharmacy Communication Skills	1
PHA 505 Principles of Law—Pharmacy and Drug Laws	3
PHC 410 Pharmaceutical Analysis	3
Elective	3
	17
<i>Spring Semester</i>	
PHA 512 Professional Practice Clerkships	17

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the School of Pharmacy, please consult the *Virginia Commonwealth University Medical College of Virginia Bulletin* or *Graduate Bulletin*.



PART XVIII — School of Social Work

FRANK R. BASKIND

Dean

THOMAS O. CARLTON

Associate Dean

BEVERLY B. KOERIN

Assistant Dean

ROBERT G. GREEN

Director, Ph.D. Program

JANE REEVES

Director, Baccalaureate Social Work Program

Martin Adler

Joyce O. Beckett

Marilyn Biggerstaff

King E. Davis

Hans S. Falck

Lawrence E. Gary

Julia Hall

Elizabeth Hutchison

Jaclyn Miller

Amy Rosenblum

Connie Saltz

Robert L. Schneider

Sanford Schwartz

Michael Sheridan

Ruby C. Walker

Alice L. Barber

Kia Bentley

Patrick Dattalo

Elizabeth Dungee-Anderson

David Fauri

Carolyn Gruber

Marcia Harrigan

Rosa Jimenez-Vazquez

Robert W. Peay

Mary K. Rodwell

David N. Saunders

Martin Schwartz

James Seaberg

Dale F. Sonnenberg

Mabel G. Wells

The School of Social Work was established in 1917 as the Richmond School of Social Economy. Later, renamed School of Social Work and Public Health, it 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 activity into all areas of human service. The School of Social Work is the oldest of its kind in the south.

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 conference rooms.

Social workers are committed to the enhancement of social functioning and to the promotion of social justice. To achieve these goals, social workers provide services to individuals, families, groups, communities, and organizations; plan and administer the delivery of social services; and advocate positive social and institutional change. Social work education provides the knowledge, skills, and value base for these professional activities.

Social work education at VCU is highly individualized and is characterized by a close relationship between faculty and student. The faculty helps students learn the form and method of social work practice, and students are encouraged to discover their own unique style of helping. The educational programs are designed to prepare students for practice in many different kinds of social agencies. The combination of classroom courses and concurrent field work experiences facilitates integration of knowledge, attitudes, and skills necessary for professional practice. The integrated class and field work curriculum offers opportunities for students to acquire a substantial base in (1) social work practice; (2) the patterns of individual, group, and community behavior as they interact with each other and the social milieu; (3) the development, organization, and operation of social

welfare programs and policies; (4) the methods of scientific inquiry in social work; and (5) the needs of special populations.

ACCREDITATION

The B.S.W. Program is accredited by the Commission on Accreditation of the Council on Social Work Education (CSWE). CSWE is the accrediting body for all schools of social work at both the baccalaureate and master's levels.

BACCALAUREATE SOCIAL WORK PROGRAM

The School of Social Work offers a Bachelor of Social Work degree to prepare graduates for beginning professional practice in social work.

The objectives of the B.S.W. Program are

1. to enable students, through an integrated curriculum, to demonstrate the knowledge and skills essential for the beginning practice of social work with individuals, families, groups, and communities,
2. to enable students, as responsible professionals, to criticize and analyze current knowledge and practice skills in relation to the values and ethics of the social work profession,
3. to sensitize students through classroom emphasis, field instruction and special programs, to the challenge of understanding and confronting differences of racial, ethnic, and cultural background,
4. to increase student understanding of both individual prejudice and institutionalized forms of oppression that affect specific population groups, including those distinguished by racial and ethnic status, gender, sexual orientation, age, and disability, and
5. to prepare students for graduate education.

DEGREE REQUIREMENTS

The Bachelor of Social Work degree requires completion of 125 credits which include 45 credits in the major. The required freshman and sophomore courses constitute a sound liberal arts base for professional social work practice. The prescribed curriculum for the freshman and sophomore level is as follows:

FRESHMAN AND SOPHOMORE YEAR CURRICULUM

	<i>Credits</i>	
	<i>1st Sem.</i>	<i>2nd Sem.</i>
<i>First Year</i>		
ENG 101 Composition and Rhetoric	3	—
ENG 102 Composition and Rhetoric	—	3
PSY 101 General Psychology	3	—
SOC 101 General Sociology	3	—
¹ Social/Behavior Science	3	3
MAT 111 or Math 101	—	3
ANT 103 Cultural Anthropology	—	3
Electives	<u>3</u>	<u>3</u>
	15	15

<i>Second Year</i>		
SLW 201 Introduction to Social Work	3	—
PHI 221 Critical Thinking	3	—
BIO 109 and L109, General Biology	4	—
BIO 110 and L110, General Biology	—	4
SLW 230 Communication in the Helping Process and Lab	—	3
CSE 241 Community Analysis	—	3
PSY 304 Developmental Psychology	—	3
¹ Social/Behavioral Science	3	3
Electives	<u>3</u>	<u>—</u>
	16	16

ADMISSION REQUIREMENTS

To be admitted to the professional preparation program offered in the junior and senior years, students must meet the following requirements:

- Completion of a minimum of 54 credits which include the following:
- ENG 101–102, PSY 101 and 304, SOC 101, ANT 103, MAT 101 or 111, PHI 221, CSE 241, BIO 109–110
- A minimum over-all grade-point average of 2.50
- Completion of ENG 101–102 and SLW 201 and SLW 230 with a minimum grade of “C”

Transfer students may be granted provisional admission contingent upon their meeting the above requirements and completion of 15 credits at VCU.

JUNIOR AND SENIOR YEAR CURRICULUM

The prescribed curriculum in the professional program is as follows:

	<i>Credits</i>	
	<i>1st Sem.</i>	<i>2nd Sem.</i>
<i>Third Year</i>		
SLW 311 Social Discrimination	3	—
SLW 313 Person in Society	3	—

¹Limited to Economics, History, Political Sciences, with maximum of six (6) credits in each of those areas to satisfy this requirement.

SLW 321 Development of Social Welfare . . .	3	—
SLW 331 Social Behavioral Theory for Social Work Practice	—	3
SLW 332 Social Work Practice Fundamentals	—	3
SLW 390 Research in Social Work	3	—
SLW 393 Supervised Social Work Practice Elective	—	4
PSY 407 Psychology of the Abnormal	3	—
	—	3
	15	16

Fourth Year

SLW 441 Social Work Practice: Individuals, Families, and Groups	3	—
SLW 494 Supervised Social Work Practice	4	—
SLW 452 Social Work Practice: Organizations and Communities	—	3
SLW 495 Supervised Social Work Practice Humanities Elective	—	4
SLW 422 Social Welfare Legislation and Services	3	—
Electives	3	9
	16	16

Admission to field work (SLW 393 Supervised Social Work Practice) is contingent upon a committee’s decision that the student has a sufficient grasp of the knowledge, values and skills essential to begin the field practicum.

Students must earn a “C” or above in attempted 300-level social work courses prior to entering 400-level social work courses. Students must have a “C” or above in all required social work courses prior to graduation.

Transfer of credits from other colleges or universities and/or from other programs at VCU is determined on an individual basis.

A minimum of 125 credits is required for the Bachelor of Social Work degree.

MINOR IN SOCIAL WELFARE

A minor in social welfare is available to non-social work majors. The minor shall consist of 18 credits, including SLW 201, Introduction to Social Work, SLW 321, Development of Social Welfare, and SLW 422, Social Welfare Legislation and Services. The remaining nine credits may be fulfilled by completing SLW 230 and 230L, 311, 313, 331, or 390.

HONORS PROGRAM

The Virginia Commonwealth University Honors Program was established to attract gifted students and to provide them with a challenging

opportunity to achieve their highest academic potential. The program is open to all qualified undergraduate students. See detailed description of qualifications and requirements in Part II of this *Bulletin*.

HONORS IN SOCIAL WORK

Baccalaureate Social Work majors may earn honors in social work. Eligible students must apply in the second semester of the junior year. Students must have completed at least 12 credits in social work at VCU and have earned a 3.3 overall grade-point average and a 3.6 grade point average in social work.

To graduate with honors in social work, students must have earned 3 credits in SLW 481 with a grade of “B” or higher and must have earned a 3.3 overall grade-point average and a 3.6 grade-point average in social work. Students who successfully meet these requirements and all other graduation requirements of the university will have honors in social work noted on their transcripts.

STUDENT ASSOCIATION

The Baccalaureate Social Work Student Association, an organization of students enrolled in the B.S.W. Program, was established for the purpose of facilitating communication among students and between the student body and the school. This organization plays a vital role in the educational process. Participation in the decision-making process is accomplished through student representation on committees within the school. In addition, the association enables students to conduct a variety of social and professional activities throughout the year.

GRADUATE SOCIAL WORK PROGRAMS

The school offers a Ph.D. in social policy and social work and a two-year or structured part-time four-year professional curriculum for social work leading to the Master of Social Work degree. A detailed description of the M.S.W. and Ph.D. degree programs may be found in the *VCU Graduate Bulletin*. A copy may be obtained by writing School of Graduate Studies, Virginia Commonwealth University, Richmond, VA 23298-0568.

¹ Application for the field practicum must be made through the School of Social Work Field Department and must be received by the eighth week of the semester prior to enrollment.

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 are to be completed in a summer session followed by an academic year. Each applicant for admission to the Advanced-Standing Program must hold a bachelor's degree from an undergraduate social work program accredited by the Commission on Accreditation of the Council on Social Work Education. This program begins in early June, continues through the summer, and culminates with graduation the following May. The minimum requirements for consideration for admission to the advanced-standing program are a 3.20 grade-point average on a 4.0 scale for the last 60 hours of academic work and a structured interview on campus. The deadline for applications is February 1.

COURSES IN SOCIAL WORK (SLW)

201 Introduction to Social Work. Semester course; 3 lecture hours. 3 credits. Systematic overview of the social work profession. Begins the process of professional socialization, both through class content and required service experience. Knowledge of the nature of social work, the fields of social work practice, target populations, overview of social work methods.

230 Communication in the Helping Process. Semester course; 2 lecture hours. 2 credits. Study of the values, knowledge, and skills of effective human communication and interpersonal relations as necessary for planned change with individuals, groups, families, and communities. Includes observation, collection, and description of data, and verbal and nonverbal communication, and their relevance to social work practice. Social work majors must take SLW 230 concurrently with SLW L230. SLW L230 is strongly recommended as a concurrent course for nonmajors.

L230 Communication in the Helping Process Laboratory. Semester course; 2 laboratory hours. 1 credit. May be taken only concurrently with SLW 230. Laboratory provides systematic training in the skills of effective interpersonal communication.

311 Social Discrimination. Semester course; 3 lecture hours. 3 credits. Examines selected concepts from the social and behavioral sciences as to the etiology and effects of institutional discrimination and individual prejudice as related to social work practice. The impact of discrimination upon individuals and groups is studied with special attention given to blacks, women, and the aged in this society. Concepts studied are applicable to other disadvantaged groups.

313 Person in Society. Semester course; 3 lecture hours. 3 credits. Required of all undergraduate social work majors. Prerequisite: PSY 304. The course uses theoretical concepts from the behavioral sciences as background for understanding and assessing the social functioning of individuals and

families in their social environment. It is designed to help students integrate theory with assessment skills associated with basic social work practice. Emphasis is placed on the social systems approach and problem-solving model as tools in analyzing the impact of various social problems on individual and family dynamics.

321 Development of Social Welfare. Semester course; 3 lecture hours. 3 credits. Traces the development of the institution of social welfare from the English Poor Law tradition to the beginnings of the modern welfare state. Analyzes public and private responses to the economic and social needs of the population in the context of values, social structure, economic change, and political response.

331 Social and Behavioral Theory for Social Work Practice. Semester course; 3 lecture hours. 3 credits. Required of all undergraduate social work majors. Prerequisite: SLW 313. This course builds on the fundamental concepts and theories about human behavior discussed in the prerequisite SLW 313. It examines and assesses the behavior of groups, organizations, and social institutions. Factors such as race, social class, social conflict, and social change are explored to enhance understanding of the diverse ways in which structural arrangements and institutional patterns affect human behavior.

332 Social Work Practice: Fundamentals. First of a three-semester sequence. Semester course; 3 lecture hours. 3 credits. Open only to social work majors with junior status or by permission of instructor. Prerequisites: SLW 201, 230, and 313. Corequisite: SLW 393. This course is designed to introduce students to the basic concepts of beginning-level professional social work practice. Special attention will be given to interviewing, relationship building, problem identification and assessment, goal planning, and application of concepts to the concurrent field practice.

390 Research in Social Work. Semester course; 3 lecture hours. 3 credits. Basic research concepts and methodologies for knowledge development, program evaluation, and evaluation of social work practice. Presents phases of the research process in social work: problem identification, group and single-case designs, data collection techniques, sampling, data analysis procedures, significance testing, and the ethics of social work research.

393 Junior Field Instruction. First of 3 sequential courses. Semester course; 4 credits. Prerequisite: SLW 313. Corequisite: SLW 332. Open only to majors with junior status. 14 hours per week in a community agency under the supervision of an agency based field instructor. Intended to facilitate student's understanding of agency structure and community context, ability to engage in professional relationships, define problems, goals and intervention strategies; beginning identification as a *professional social worker*.

422 Social Welfare Legislation and Services. Semester course; 3 lecture hours. 3 credits. Analyzes social welfare policy as related to social values, social problems, and social structures. Examines frameworks for policy analysis and for evaluation of programmatic outcomes of policy, with application to contemporary social service and income maintenance policies and delivery systems. Considers the economic, political, and ideological factors and processes which affect social welfare legislation, financing, and implementation.

441 Social Work Practice: Individuals, Families, and Groups. Second of a three-semester sequence. Semester course; 3 lecture hours. 3 credits. Prerequisites: SLW 332, 393. Corequisite: SLW 494. Review of problem identification and assessment. Emphasis on the action phase of the problem-solving process with individuals, families, and groups. Development of intervention skills, referral, termination, and evaluation. Use of case material from concurrent field work practice to facilitate integration of learning.

452 Social Work Practice: Organizations and Communities. Semester course; 3 lecture hours. 3 credits. Prerequisites: SLW 441, 494. Corequisite: SLW 495. Extends techniques of social work intervention to large systems. Emphasis on the use of influence, teamwork, and change in communities and organizations. Consideration of issues confronting the social worker in beginning social work practice. Use of case material from concurrent field work practice to facilitate integration of learning.

481 Issues in Social Welfare. Modular course; 3 lecture hours. 1.5 credits per module. Prerequisite: permission of Honors Director or in the case of social work majors, the BSW Program Director. An honors seminar. Identification

and analysis of selected contemporary social welfare issues. Focus on theories, etiology, and empirical research; application of appropriate analytic models.

486 Child Welfare Services. Semester course; 3 lecture hours. 3 credits. Examines the varieties of services to children, both in their homes and in various institutions, with special emphasis on the child as a member of a family. The role of the social worker in these programs is examined with some emphasis on adequate services, innovative services, and improving services.

492 Independent Study. Semester course; 1, 2, 3 lecture hours. 1, 2, 3 credits. Prerequisites: junior or senior standing and permission of instructor. Under supervision of a faculty advisor, whose consent is required to register, study of a topic of concern to the student. Each student must present his/her findings in writing or pass an oral examination.

494-495 Senior Field Instruction I and II. Continuous course; 8 credits. Prerequisite: SLW 332, 393. Corequisite: SLW 441, 452. Open only to majors with senior status. 14 hours per week in a community agency under the supervision of an agency based field instructor. Intended to develop knowledge, values, and social work practice skills appropriate to entry-level practice in human service agencies.



PART XIX — Division of Continuing Studies and Public Service

GRACE E. HARRIS
Vice-Provost
DAVID W. HARTMAN
Assistant Vice-Provost

The Division of Continuing Studies and Public Service is the major unit of Virginia Commonwealth University charged with the dual mission of assuring a diverse student body and providing expertise and resources to the larger community. Since its inception in 1973, the division has expanded its activities significantly in an effort to fulfill this mission.

Through its three units the Division offers a wide variety of programs and services to meet its mission. Those three units are: Adult/Nontraditional Programs, The Center for International Programs, and The Center for Public Service.

ADULT/NONTRADITIONAL PROGRAMS

MARCIA F. ZWICKER
Director

The unit, Adult/Nontraditional Programs, represents the commitment of the division and the university to provide access, services, and credit opportunities to students who differ from the traditionally aged college population and present different needs within the university environment. Through this unit a framework is provided which links mature adults to university programs and services in a holistic way, both on and off campus. Its programs and services

include:

- Summer and Evening Programs
- Nontraditional Degree Programs: Bachelor of General Studies and Master of Interdisciplinary Studies
- Distance Learning: Television and Off-Campus
- Adult Student Services (information, advising, referral)
- Orientation, problem solving and advocacy for adult and non-degree seeking students
- Recruitment of nontraditional students
- College Level Examination Program

EVENING AND SUMMER PROGRAMS

Evening and Summer Programs work with the schools and the college of the university to coordinate courses offered during times other than the usual academic year and the traditional school day.

Evening Programs

In the fall of 1991, nearly 4,800 evening students registered for VCU evening classes, joining more than 8,500 day students who chose to take part of their classes in the late afternoon or evening.

Many departments make it possible for working students to earn their degrees completely in the evening, but VCU also has many students in evening classes who are not working toward a

degree. Evening students might include the individual who presents the equivalent of a high school diploma and the person with a Ph.D. who wishes to continue his or her formal education. The ages of the students in evening classes range from 18 to over 65.

Flexible scheduling includes classes in the evening, during the late afternoon, on weekends, between fall and spring semesters, and in the summer. Credit earned in the evening is the same as that earned in the day program.

Although there is no limit placed on the number of credits that may be earned in the evening, students may apply for degree-seeking status through University Enrollment Services. They are encouraged to do so early as a way of avoiding loss of credits. A bulletin of evening offerings is available by writing to Adult/Nontraditional Programs, Virginia Commonwealth University, 827 West Franklin Street, Richmond, VA 23284-2002.

Summer Studies

The variety and flexibility of VCU's educational program is especially evident during the summer. In 1991, 8,755 students studied at VCU during the summer.

Summer students come to work on a degree, to learn new skills, to explore new fields of study, to keep their professional skills up-to-date, and to seek intellectual refreshment.

Summer classes are planned around various sessions of three, four and one-half, five, six, and eight weeks and even some two-week workshops. During the summer months, classes are beginning and ending almost every week. Good students who plan to devote their summer to study can put together an approved combination of various sessions and earn up to 15 credits in the 13 weeks of summer sessions.

Announcements of VCU summer offerings are available upon request from Adult/Nontraditional Programs, Virginia Commonwealth University, 827 West Franklin Street, Richmond, VA 23284-2002.

Off-Campus Programs

The University provides numerous opportunities for part-time, off-campus study both in the adjacent urban community and throughout the state. Off-campus credit classes feature the same course work that is available on-campus, and off-campus courses are fully degree-applicable within the normal standards of the various

schools of the University.

Many of VCU's off-campus courses are offered in response to an expression of need from various groups within the state. VCU may thus be found offering courses in education for public school teachers at a local high school or serving employees of a local business organization with on-site credit instruction.

Other classes are offered on a continuing basis and serve specific educational needs in various geographical areas throughout the state.

Television and Teleconferences

The Office of Television and Teleconferences works with the academic schools of the University to coordinate the delivery of educational programs (credit and non-credit) via various telecommunications systems. These include VCU courses and workshops/seminars delivered via open broadcast television, public cable TV, audio teleconferencing, closed-circuit television, and pre-recorded media.

In addition to seeing that VCU's unique resources are made accessible to citizens in the Richmond area and beyond, the Office of Television and Teleconferences coordinates the reception/delivery of unique educational resources from providers external to VCU. These activities include the coordination of national satellite-delivered programming for VCU Staff and clientele and international programs such as the annual international teleconference seminars on language and culture.

Announcements of telecourse schedules and other activities are placed in the *VCU Division of Continuing Studies and Public Service Bulletin*. For more information contact Adult/Nontraditional Programs, Virginia Commonwealth University, 827 West Franklin Street, Richmond, VA 23284-2002, (804) 367-0200.

Nontraditional Studies

The Office of Nontraditional Studies coordinates the administration and delivery of two programs: the Bachelor of General Studies, and the Master of Interdisciplinary Studies (described in the current *Graduate Bulletin*).

The Bachelor of General Studies Program

The Bachelor of General Studies program is a university degree program designed for mature students who have clearly articulated goals that cannot be met by existing university programs. It offers flexibly scheduled, highly individualized

curricula leading to a Bachelor of General Studies (B.G.S.) degree. Through individualized advising, the program helps adults define their educational goal(s) and design interdisciplinary curricula drawing on a variety of course offerings. Working with other state-supported colleges and universities in the area, the program can, when appropriate, help students to include the instructional resources of Virginia State University, Richard Bland College, John Tyler Community College, and J. Sargeant Reynolds Community College as part of their individualized degree programs.

To achieve a Bachelor of General Studies degree all students must accumulate at least 124 hours of credit with at least a 2.0 cumulative grade-point average, including at least 45 semester hours of upper-division credit. The following constitute the program requirements.

Competencies

1. *Writing. 9 credits.* ENG 101–102 Composition and Rhetoric (by course or placement with a minimum grade of “C” or equivalent in each course) and one upper-division course in expository writing (i.e., ENG 327, 304, or 302) or demonstrated competency. (Competency may be demonstrated by the presentation of extensive writing samples per program policy. Competency will be judged by the English Department administration.)
2. *Mathematics. 6 credits.* Six credits in lower-division MAT, CSC, or logic (PHI 221, 222) courses. Three credits may be waived for students whose Mathematics Placement Test places them above the level of MAT 101 and who complete a subsequent MAT or CSC course.

General Education

A minimum of 24 hours to be completed as follows: at least six hours must be selected from each of three of the following groups—1, 2, 3, or 4. Additional hours may be distributed in any group 1–5. Up to six hours in one category may also be applied to the focus area.

1. *Literature:* literature courses in English or foreign literature in English translation or in the original language.
2. *History, Culture, or Foreign Language:* courses in history, foreign language (not FLT), philosophy (not logic), religious studies, or European culture.
3. *Natural Science:* courses in biology, chemis-

try, physics, and other introductory laboratory sciences.

4. *Human Behavior and Institutions:* courses from selected departments in the College of Humanities and Sciences and the Schools of Social Work, Community and Public Affairs, Education, and Allied Health.
5. *Arts:* Any course in the School of the Arts including Speech (121 or 321, not both).

Focus Area

The individually designed interdisciplinary focus area requires a minimum of 36 semester hours credit, including at least 24 semester hours of upper-level credit.

Electives

A maximum of 49 semester credits of electives.

The last 30 hours of credit must be taken at VCU or 15 may be taken at VCU and 15 from other institutions in the area. At least 24 hours must be taken after acceptance in the program; 12 of these must be in the focus area. Twenty-one of the junior-senior level hours must be from VCU. No more than one-half the degree may be from a two-year college, and B.G.S. students may have no more than 31 hours of business courses, including transfer courses.

To enter the program, students must: Attend one orientation session (call in advance to preregister); Have a goal that cannot be met by another degree program at VCU; Have a minimum of 30 semester hours of college credit; Have a minimum grade point average of 2.0

Students admitted to the B.G.S. Program have a variety of credit options, including CLEP examinations, credit for formal military training, and credits for certain professional certifications when they do not duplicate college coursework.

For additional information contact Adult/Nontraditional Programs, Virginia Commonwealth University, 827 West Franklin Street, Richmond, VA 23284-2002, (804) 367-0200.

CLEP Examinations

For information on CLEP Examinations, see Part V of the *Bulletin*.

Adult Student Services

Adult Student Services offers assistance with academic and career planning to VCU's adult students. As a part of this service, the staff, which has a special commitment to adult and nontradi-

tional students, offers information and referral to all continuing studies students.

Students studying (or planning to study) at VCU may receive information from the center on University opportunities and services as well as interpretation of University rules and procedures. Workshops and classes that assist students in clarifying educational goals and in refreshing academic skills also are offered. The office serves as an entry point for continuing studies students and as a liaison between these students and the University's academic schools.

Additional information can be obtained by calling (804) 367-0200 or by writing Adult/Nontraditional Programs, Virginia Commonwealth University, 827 West Franklin Street, Richmond, VA 23284-2002. Office hours are Monday–Thursday 8 am–7:30 pm, Fridays 8 am–4:30 pm.

CENTER FOR INTERNATIONAL PROGRAMS

JEFFREY A. COLE
Director

The Center for International Programs (CIP) promotes a variety of faculty and student activities in the global context. The mission of the CIP is to advance the internationalization of the University, in cooperation with the schools and college, as well as other administrative units. The CIP currently offers programs and services in the following areas:

- Faculty Exchanges
- University Overseas Linkages and Agreements of Cooperation
- Study Abroad and Student Exchanges
- International Student and Scholar Advising
- English Language Program (English as a Second Language)
- International Student Recruitment and Admissions

The Director advises faculty, departments, schools, and the college in their efforts to expand their international activities and linkages; he serves as the initial contact for off-campus groups and agencies requesting information on international activities at VCU; and he drafts, in consultation with the appropriate VCU constituencies, agreements with overseas institutions. For further information please write or call The Center for International Programs, Millhiser House, 916 West Franklin Street, Richmond, VA 23284-3043, (804) 367-8471, Facsimile (804) 367-2552.

Study Abroad and Student Exchanges

VCU students may extend their educational horizons by studying abroad in Europe, Asia, Latin America, or Africa. During the 1990–91 academic year, 171 VCU students studied abroad. Although courses taken abroad need not be taken for credit, their purpose is educational, not recreational.

The CIP regularly administers summer study programs in Austria, Britain, France, Italy, and Spain, and has offered topics courses in Brazil, Indonesia, and Russia during the last two years.

VCU students may also participate in the International Student Exchange Program (ISEP), whereby they study at member sites around the world. This program offers direct enrollment and academic credit toward a student's degree program at home, as well as immersion in another country's language and culture, at a cost no higher than what the student would pay at VCU for tuition, room, and board. Credits earned by a VCU student through ISEP will appear on the transcript, but will not be included in the calculation of the student's cumulative grade point average (GPA).

For further information, please write or call the Center for International Programs, at the address and telephone above.

International Student and Scholar Services

This office serves all international students and visiting scholars, providing assistance and information to them.

International student advising is available on both the Academic and MCV campuses, to assist with personal, financial, cultural, and social adjustment issues facing international students, and to help guide them within the University community, so that they may pursue their academic goals successfully. The office will assist international students to maintain their non-immigrant student visas by issuing and processing the necessary immigration documents in accordance with relevant immigration rules and regulations.

The academic campus office for International Student and Scholar Services is located in the Center for International Programs; the MCV campus office is located in Bear Hall, Room 112, (804) 225-4632.

International Student Union and Student Activities

The International Student Advisor works with

the International Student Union (ISU), the official club of the international students attending the University. Membership is open to all international students, American students, faculty, and staff who are interested in meeting and developing friendships with people of different cultural and national backgrounds.

In addition, the ISU concerns itself with promoting international understanding and awareness through its activities on campus and off. The University is supportive of the ISU and its educational, cultural, and social activities. International students are encouraged to join and participate actively in the various functions of the ISU. The experiences that students gain from their participation are a valuable part of the educational experience.

VCU offers a variety of extra-curricula activities to all students, to complement their formal education. These activities provide opportunities for the exchange of ideas, personal development and growth, and leadership training, and they aid international students in their adjustment to U.S. campus life and provide the opportunity to practice spoken English through close contacts with American friends.

English Language Program

The English Language Program (ELP) offers an intensive English as a Second Language program for international students, permanent residents, and refugees who wish to improve their English language skills for undergraduate or graduate study at an American university or for career and personal purposes.

A full range of courses is offered at the beginning, intermediate, high-intermediate, and advanced levels. Semester-length courses include: Grammar & Composition; Speaking & Listening; and Reading and Vocabulary. Seven-week sessions include courses in pronunciation/ accent reduction and conversation classes, which focus on American idioms and culture.

Admission to the English Language Program may be recommended by the UES/Admissions Office at the time of application review, based on the applicant's TOEFL score. Students who desire English as a Second Language courses only may apply directly to the ELP.

Placement in the ELP is based on the results of the English Language Placement Examination. This two and one-half hour test consists of four parts: writing, grammar, vocabulary, and listening. Students receive their test results by

meeting individually with an ELP advisor, who will make recommendations, answer questions, and register the student in the appropriate ELP course(s).

For further information regarding the English Language Program, including the fees charged, contact the ELP Office at 916 West Franklin Street, Room 205, (804) 367-2551, facsimile (804) 367-2552.

010 Beginning Grammar & Composition. Semester course; 6 hours per week. The objective of this course is to enable students to write grammatical sentences in English. The following areas are covered: The verbs Be and Have; subject-verb agreement and subject pronouns; use of the negative; simple present tense; identification of subject, verb and object; articles; count and non-count nouns; comparatives and superlatives; there is/there are; present progressive tense; direct and indirect objects; simple past tense; the future tenses; and, the past progressive tense. In addition, students are introduced to the idea of topic sentences and transitions within the paragraph. Students should be able to proofread their work for errors.

011 Intermediate Grammar & Composition. Semester course; 6 hours per week. This course provides the student with instruction in and practice with organizing and writing paragraphs and short essays. Narrative, descriptive, and expository writing is introduced. Students also review basic grammatical points, as well as learn more complex grammatical structures used in writing. Grammatical exercises are introduced in conjunction with writing activities.

012 High-Intermediate Grammar & Composition. Semester course; 5 hours per week. In this course, grammar will be taught in conjunction with writing. By the end of this course, students should be able to write well organized and grammatical essays in a unified, logical and coherent manner. They should also have a strong foundation in grammar, including noun and adjective clauses, simple and perfect verb tenses, modals, gerunds and infinitives, and passives.

013 Advanced Grammar & Composition. Semester course; 5 hours per week. This course will explore the student's role as a writer and communicator of ideas while looking at a range of writing styles, topics, and purposes utilized by effective writers. This will be accomplished by working on critical reading skills, vocabulary growth, grammar & mechanics, and rhetorical strategies.

020 Beginning Reading & Vocabulary. Semester course; 6 hours per week. This course will provide instruction in and practice of basic academic reading skills using a variety of texts. The focus will be on comprehension, identifying topics and main ideas, vocabulary development, reading speed, and dictionary skills. Library skills will be introduced. Students will keep reading logs and vocabulary notebooks, and will do weekly timed readings.

021 Intermediate Reading & Vocabulary. Semester course; 6 hours per week. This course introduces the student to a variety of academic reading skills necessary for successful study at the college level. Emphasis is placed on identifying main ideas and supporting ideas, word and sentence analysis, organizing paragraphs, vocabulary expansion,

dictionary skills, and increasing reading speed. Students will be expected to keep a vocabulary list and reading log.

022 High-Intermediate Reading & Vocabulary. Semester course; 5 hours per week. This course will provide instruction in and practice of academic reading skills using a variety of texts. The focus will be on comprehension, vocabulary development, dictionary skills, library skills, and critical reading. Students will do library research, and will keep vocabulary notebooks.

023 Advanced Reading & Vocabulary. Semester course; 5 hours per week. This course introduces the student to various types of academic readings consistent to those found in college level classes. The readings are taken from college texts, journals, and magazines. Skills to be practiced include identifying the main idea and supporting ideas, scanning, identifying context clues, summarizing, inferring, understanding logical inferences, understanding transitions, and drawing conclusions. Practice in notetaking, library skills, increasing reading speed, and answering essay questions is ongoing throughout the course.

030 Beginning Speaking & Listening. Semester course; 6 hours per week. This course is designed to give students the opportunity to practice their speaking and listening skills in English through realistic use of the language in individual, pair, and small group work. Included in the course will be practice in day-to-day comprehension for survival and effective listening strategies for on and off-campus.

031 Intermediate Speaking & Listening. Semester course; 6 hours per week. This course stresses the development of formal and informal communication skills through organized and impromptu speaking and listening experiences. These experiences include student speeches, class discussions, guest speakers and listening practice exercises.

032 High-Intermediate Speaking & Listening. Semester course; 5 hours per week. This course provides high-intermediate level students with listening comprehension, notetaking, and oral communication skills necessary for success at the university level. Students practice formal and informal oral communication through a variety of classroom exercises and activities.

033 Advanced Speaking & Listening. Semester course; 5 hours per week. This course provides advanced level students with practice in formal and informal oral communication, listening comprehension, and notetaking skills necessary for academic study. Students practice notetaking skills by listening to simulated lectures and actual lectures by VCU instructors. Students prepare and give persuasive, descriptive, and informative speeches, as well as formal debates, during the course. Vocabulary expansion and idiomatic speech is continued.

034 Conversation. Semester course; 2 hours per week. Or, seven-week course; 4 hours per week. This course is designed to provide students with opportunities to develop conversational skills through practice with functional English used in real life (on and off-campus) situations while learning about the culture of the U.S.A. Students will be able to express their ideas, opinions, and emotions through a multiskill approach to communication while participating in individual, pair, and small group activities.

035 Pronunciation. Semester course; 2 hours per week. Or, seven-week course; 4 hours per week. This course in foreign accent reduction is designed to improve the speaking skills of

non-native speakers of English. It will offer systematic instruction for mastery of the pronunciation and intonation of standard American English.

Goals include increasing speech intelligibility through modifications in the speech rate, intonation, and pronunciation. Increased speech naturalness will be achieved by modelling conversational patterns of American English.

International Student Recruitment and Admissions

VCU encourages qualified international students, both immigrant and nonimmigrant, to seek admission to VCU. Complete information and application materials may be obtained from UES/Admissions-International, Virginia Commonwealth University, 821 West Franklin Street, Room 210, Richmond, VA 23284-2526, USA, 804-367-6016.

English Language Proficiency Requirement.

To ensure maximum benefit from academic study at VCU, all non-native English-speaking applicants, regardless of immigration status, must provide evidence of English language proficiency prior to admission and/or prior to enrollment in the University.

Evidence of English language proficiency will be evaluated based on factors such as length of stay in the United States, amount and type of formal U.S. education, Test of English as a Foreign Language (TOEFL) scores, and Scholastic Aptitude Test (SAT) scores. In general, VCU requires a minimum score of 550 on the TOEFL for admission, but some programs may require a higher TOEFL score. The University reserves the right to require additional testing and remedial study in the VCU English Language Program (see above) prior to full-time enrollment in University courses.

Nonimmigrants

(Students with temporary U.S. visas).

Due to the time constraints involved in processing international applications and obtaining visas, prospective international applicants should submit the application for admission at least nine (9) months before they plan to enroll. In order for immigration documents to be issued, all required admission credentials must be submitted no later than eight (8) weeks prior to registration for classes. Applicants who are unable to meet the credentials deadline should plan to defer the intended term of entry.

As required by U.S. regulations and by VCU

admission policies, nonimmigrant applicants must demonstrate:

1. satisfactory academic achievement;
2. adequate English language proficiency as described above; and
3. the ability to finance all educational and living expenses.

Refer to the freshman admission guidelines, transfer admission guidelines, and admission procedures for specific program requirements in the section labelled *Academic Campus Undergraduate Admission*.

Applicants must submit academic records that demonstrate successful completion of secondary school education, usually twelve (12) years of pre-university study in their own country.

VCU is unable to provide financial support for undergraduate international students. Therefore, applicants who need a study (F-1) visa or a visiting scholar (J-1) visa must also present documented evidence of available financial support to cover annual living and educational expenses while studying at VCU.

U.S. Immigration and Naturalization Service regulations usually do not allow nonimmigrant students to study at VCU as special (nondegree-seeking) students. The University registers international students **only** if they present a current and valid visa that permits enrollment in a university. Proof of current visa type must be submitted to University Enrollment Services/ Admissions prior to enrollment, unless the applicant is requesting an F-1 or J-1 visa. F-1 students and J-1 visiting scholars admitted to VCU must submit copies of all immigration documents to the international student advisor prior to enrolling in classes.

Immigrants (permanent residents, resident aliens, and asylum applicants).

Since immigrant applicants usually are in the U.S. at the time an application is submitted, these students are required to meet the same application deadlines as U.S. citizens.

If educated in the U.S., immigrant applicants will be considered for admission under the same academic policies as those applicable to U.S. citizens. If educated outside the U.S., the same academic records are required for those for nonimmigrant applicants.

The University requires detailed information concerning U.S. immigration status. Proof of permanent residency must be submitted with the admission application.

The Minor in International Studies

This program, coordinated within the College of Humanities and Sciences, is designed to increase student's awareness of and sensitivity to the values, traditions, and aspirations of peoples in other parts of the world, and to provide comprehensive knowledge of a specific geographical location. Students may earn a Minor in International Studies while completing departmental, school, and university requirements for a B.A. or B.S. degree. The insights offered by the wide variety of disciplines that focus on an international perspective are intended to enhance the Minor.

For additional information, please write or call Coordinator of International Studies, Department of Political Science, 920 West Franklin Street, Richmond, VA 23284-2028, (804) 367-1575.

CENTER FOR PUBLIC SERVICE

JUDITH B. BRADFORD
Executive Director

The Center for Public Service provides coordination and support for public service activities throughout the university. The Center is responsive to current and emerging needs of diverse community groups and organizations with which students, faculty and staff interact. In all its programs, staff of the Center seek to develop and strengthen effective linkages between the university and the community. Its programs include:

- Survey Research Laboratory
- Policy Studies/Evaluation
- Governor's Institute on Alcohol and Other Drug Abuse
- African American Research Institute
- Continuing Education and Conferences
- Community Outreach Programs
- Community Service Associates Program
- Faculty/Executive Exchanges
- Free University
- Cooperative Education and Internship Programs
- Retired Faculty Program

Survey Research Laboratory

The Survey Research Laboratory (SRL) is a comprehensive survey unit, which conducts applied research projects utilizing telephone, mail, and personal interview methodologies. The Lab operates a sophisticated CATI (Computer-

Assisted Telephone Interviewing) facility in its field operation, as well as a high-production mail survey facility. An off-site data collection facility is maintained in Cabell Library for non-ambulatory interviewers. The University's membership in ICPSR, the International Consortium for Political and Social Research, is managed by the Lab as a service to faculty throughout the university.

SRL undertakes several dozen externally funded projects each year and provides technical assistance and data support services to university administration and faculty on both campuses. Recent projects have included a study of faculty allocation of time on public campuses in Virginia, paired surveys of attorneys and low income households with respect to the provision and need for pro bono legal services, and a study of the characteristics and service needs of Virginians with disabilities.

Policy Studies and Evaluation

Policy Studies and Evaluation is the developmental unit of the Center. This unit of the Center will focus on support of faculty interests and applied research development. It will also provide a home base for service-oriented faculty who would like to work in a collaborative mode with peers from other disciplines and who can benefit from the resource sharing and administrative support offered by the Center.

Initially, there are three Institutes within Policy Studies and Evaluation—the Governor's Institute on Alcohol and Other Drug Abuse, the Institute for Local and State Government, and the African American Research Institute.

The Governor's Institute on Alcohol and Other Drug Abuse was created to provide scholarly assistance to the Office of the Governor regarding research, program development and evaluation, and specialized professional training aimed at improving and documenting the effectiveness of substance abuse prevention, treatment, and related activities of the Commonwealth.

The Institute for Local and State Government provides training, consultation, and applied research focused on the needs and interests of local and state government agencies. Institute staff coordinate the publication of the *Commonwealth Papers* series.

The African American Research Institute provides a nexus for collaboration and funding of research by African American faculty and

related to African American issues. The Institute seeks to enhance the knowledge of African American culture and issues related to the African American community; impact policy, programs, and intervention strategies that address problem areas in the African American community; facilitate the research and training of those who want to study African American populations; serve as a resource in developing proposals for funding; serve as a clearinghouse for dissemination of information related to African Americans; and facilitate research and publications of African American faculty.

Continuing Education and Community Projects

Programs within Continuing Education and Community Projects include continuing education workshops, seminars and conferences, retired faculty seminars, Cooperative Education, the Free University, the Community Service Associates Program, a faculty/community exchange program, and a leadership training program for non-profit agency personnel.

Continuing Education

Noncredit professional education programs afford opportunities for practitioners in a variety of disciplines to participate in continuing education activities. Each school of the University has a director of continuing education who is responsible for the design, implementation, and evaluation of noncredit continuing education activities within the specialties of the school. In many of these programs, participants are awarded Continuing Education Units (CEUs). Each year several hundred programs are held.

The Division of Continuing Studies and Public Service provides the communication link among the various programs and facilitates the coordination of work on tasks and problems shared by all program areas. With accountability for the total University effort in noncredit continuing education, the division is a clearinghouse for channeling important information about continuing education to the school directors. It is also a point of contact for comprehensive information about continuing education when such information is needed by the wider community outside the university.

The Continuing Education Office within the Center for Public Service also offers a limited number of workshops and seminars designed to

support community learning needs in a non-credit format. These offerings are often interdisciplinary in content and are taught by faculty from many different departments in the university.

Other public service outreach programs include the Free University, which allows people over 60 to take non-credit classes; the retired faculty program; special summer programs and faculty exchange programs. Additionally, the director provides conference and workshop consultation and facilitation to university departments.

Community Service Associates Program

Through the Community Service Associates Program, faculty members from throughout the University participate in approved community assistance projects. Community programs can propose a project in partnership with a specific faculty member or can make a direct request for assistance to the Program Coordinator, who seeks to find a match within the faculty.

Cooperative Education

Cooperative Education (Co-op) is an optional program open to students who meet minimum program qualifications and are pursuing undergraduate degrees in certain academic disciplines within the College of Humanities and Sciences, the School of the Arts, the School of Business, the School of Community and Public Affairs, the School of Education, and the School of Social Work. Eligible students make application to Co-op positions for which they may qualify. Once accepted for Co-op employment, students register for non-credit Co-op courses that will maintain enrollment at the university and provide a record of the experience on the official transcript.

Students must maintain satisfactory performance with their Co-op employer and the min-

imum grade-point average set by the University or the employer, whichever is higher. Students must work a minimum of three Co-op work periods (semesters) between their sophomore and senior years.

In order to be eligible for the program a student must (1) be enrolled in a participating discipline; (2) have completed the freshman year or one full semester if the student is a transfer student; (3) have a 2.5 overall grade-point average as a sophomore or a 2.0 overall grade-point average as a junior or senior; (4) have recommendations from two VCU faculty from whom the student has had course work. Once accepted for Co-op employment, a student must enroll in the appropriate non-credit Co-op course. Special administrative fees for students registered for non-credit Co-op experiences are shown in the Schedule of Classes catalog.

For additional information contact Cooperative Education, Virginia Commonwealth University, 827 West Franklin Street, Richmond, VA 23284-2508.

COOPERATIVE EDUCATION (COP)

298 Cooperative Education Experience. Semester course; no credit. Open to full-time students who have been placed in an approved Co-op position with an agency, business, industry, or institution. The Co-op work experience will provide broad exposure to a career field related to one's academic major. The student works a maximum of 20 hours per week, completes all off-campus/on-campus assignments. Prior to placement, a student must have eligibility verified, two letters of recommendation from VCU faculty, and successful completion of the Co-op orientation sessions.

398 Cooperative Education Experience. Semester course; no credit. Open to full-time students who have been placed in an approved Co-op position with an agency, business, industry, or institution. The student works a maximum of 40 hours per week, completes all off-campus/on-campus assignments. Prior to placement, a student must have eligibility verified, two letters of recommendation from VCU faculty, and successful completion of the Co-op orientation sessions.



PART XX — Board, Administration, and Faculty 1992-1994

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Vice-Provost for Student Affairs
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School of Nursing

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School of Pharmacy

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 Associate Dean, School of Pharmacy
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 Director of Residence Education
 Mike Ballweg, B.S.
 Sports Information Director
 Eva Bard, B.A.
 Head Women's Tennis Coach
 Jack Bell, B.S.
 Head Golf Coach
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 Athletic Ticket Office Manager
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Doris E. Rice, B.S.B.A.
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Director of Academic Campus Computing Services

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Director of Intercollegiate Athletics

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Manager of Advancement Services

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Director, Health Careers Opportunity Program, MCV Campus

Russell VanStratt, B.S., M.S.

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Susan Walvius, M.S.

Head Women's Basketball Coach

Eddie Webb, B.A., M.Ed.

Assistant Men's Basketball Coach

Jon F. Wergin, B.A., M.A., Ph.D.

Director, Center for Educational Development and Faculty Resources

Velma J. Williams, B.A., M.A.

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Horace W. Wooldridge, Jr., B.A., M.Ed.

Director for UES/Admissions

Jean M. Yerian, A.B., Higher Diploma, M.A.

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INSTRUCTIONAL STAFF

The date after each name indicates year of appointment.

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- Breitenbach, Robert J. (1980) *Assistant Professor of Justice and Risk Administration* B.S., M.P.A., Indiana University.
- Breitinger, Donald (1984) *Assistant Professor of Fashion* A.A.S., Los Angeles Trade Technical Junior College.
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- Brilliant, Susan S. (1989) *Assistant Professor of Mathematical Sciences* B.S., Wake Forest University; M.S., Virginia Commonwealth University; M.S., Ph.D., University of Virginia.
- Brinkerhoff, Robert (1985) *Instructor of Communication Arts and Design* B.F.A., Virginia Commonwealth University.
- Brinks, Lindsay (1978) *Associate Professor of Communication Arts and Design* B.A., Birmingham Polytechnic, England; M.A. Western Michigan University.
- Brittain, Mary M. (1978) *Associate Professor of Education* A.B., Agnes Scott College; M.A. Emory University; Ph.D., University of Miami.
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- Broglio, Lawrence A. (1992) *Assistant Professor of Theatre and Assistant Chair Department of Theatre* B.A., College of the Holy Cross; M.A., M.F.A., Cornell University.
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- Brooks, Christopher A. (1990) *Assistant Professor of Music* B.A., University of Maryland; M.A., University of Michigan; M.M., Ph.D., University of Texas at Austin.
- Brooks, Michael P. (1986) *Professor of Urban Studies and Planning and Special Assistant to the Provost for Strategic Planning* B.A., Colgate University; M.C.P., Harvard University; Ph.D., University of North Carolina.
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- Brown, Darrel R. (1970) *Professor of Management* B.S., University of Kansas; M.B.A., University of New Mexico; Ph.D., University of Oregon.
- Brown, Patricia Johnson (1978) *Assistant Professor of Recreation, Parks, and Tourism and Director of Continuing Education and Community Programs* B.S., Michigan State University; M.S., Indiana University; Ed.D., Virginia Polytechnic Institute and State University.
- Brown, Russell V. (1974) *Professor of Biology* B.A., M.A., University of Tulsa; Ph.D., Iowa State University.
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- Bucher, Karlynn (1988) *Visiting Assistant Professor of Biology* B.S., Tulane University; Ph.D., Johns Hopkins University.
- Bumgardner, James A. (1958) *Professor of Painting* B.F.A., Virginia Commonwealth University; Hans Hofmann School of Art.
- Burnett, Monique (1989) *Instructor of Fashion* A.A., Art Institute of Atlanta.
- Burnside, Chris (1985) *Associate Professor and Chair, Department of Dance and Choreography* B.F.A., Virginia Commonwealth University; M.M., Florida State University.
- Burton, David (1977) *Associate Professor of Art Education* B.F.A., Syracuse University; M.A., New York University; Ph.D., Pennsylvania University.
- Bush, Joseph P. (1983) *Associate Professor of Psychology* B.A., University of California at Santa Cruz; M.A., Ph.D., University of Virginia.
- Bushway, Collin (1969) *Professor Emeritus of Management* M.B.A., University of Chicago; D.B.A., George Washington University.
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- Byrd, Donna G. (1979) *Instructor of Management Science* B.A., College of William and Mary; M.B.A., Virginia Commonwealth University.
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- Campbell, Kenneth (1970) *Professor of Theatre* M.A., Catholic University; M.A., University of Glasgow; Ph.D., University of Denver.
- Canavos, George C. (1975) *Professor of Management Science* B.S., M.S., Ph.D., Virginia Polytechnic Institute and State University.
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- Craver, Samuel M. (1971) *Professor of Education* B.A., M.A.T., Ph.D., University of North Carolina.
- Creighton-Zollar, Ann (1981) *Assistant Professor of Sociology and Afro-American Studies* B.A., M.A., Ph.D., University of Illinois at Chicago Circle.
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- Danish, Steven J. (1985) *Professor of Psychology and Chair, Department of Psychology and Chair, Faculty Athletic Committee* A.B., Bucknell University; M.S., Springfield College; Ph.D., Michigan State University.
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- DeSmidt, Thomas H. (1971) *Professor of Painting and Printmaking and Associate Dean, School of the Arts* A.A., Lincoln College; B.F.A., Layton School of Art; M.F.A., Syracuse University.
- Deveney, James K. (1974) *Professor of Mathematical Sciences* B.S., Boston College; Ph.D., Florida State University.
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- Donovan, Gregory E. (1983) *Assistant Professor of English* B.A., University of Missouri at Columbia; M.A., University of Utah; Ph.D., State University

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- Duke, E. F. (1966) *Associate Professor of English* B.A., Longwood College; M.A., University of Virginia; Ph.D., University of Iowa.
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- Dunham, Belynda Sue (1990) *Instructor of Mathematical Sciences* B.S., M.S., Virginia Commonwealth University.
- Durham, Rolla (1976) *Instructor of Music* B.M., M.M., Juilliard School of Music.
- Duvall, Robert W. (1983) *Instructor of Information Systems* B.S., Clemson University; M.Div., University of the South.
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- Dvorak, Paul F. (1974) *Associate Professor of German and Chair, Department of Foreign Languages* B.A., LaSalle College; M.A., Ph.D., University of Maryland.
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- Earley, Donald T. (1984) *Assistant Professor of Fashion* A.A.S., Fashion Institute of Technology.
- Eastman, Allan A. (1950) *Professor Emeritus of Crafts* B.S., University of New York at Buffalo; Diploma in Art Education, Pratt Institute; Diploma in Design, Vesper George School of Art.
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- Elliott, Clifford J. (1977) *Professor of Marketing* B.S., University of Southampton (England); M.Econ., University of Queensland (Australia); Ph.D., Ohio State University.
- Elliott, McPherson G. (1984) *Instructor of Education and Coordinator, Outdoor Adventure Program* B.S., The Citadel; M.A., West Virginia University.
- Elliott, Timothy R. (1987) *Assistant Professor of Psychology* B.S., Freed-Hardeman College; M.S., Auburn University; Ph.D., University of Missouri-Columbia.
- Ellis, Anthony (1990) *Professor of Philosophy* B.D., M.A., London University.
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- Engel, Arthur J. (1976) *Associate Professor of History* A.B., Clark University; M.A., Ph.D., Princeton University.
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- Erickson, Maurice Leonard (1970) *Associate Professor of Theatre* B.S., Dickinson State College; M.F.A., Ohio University.
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- Wells, Mabel G. (1973) *Associate Professor of Social Work* B.A., M.S.W., Howard University; Ph.D., Bryn Mawr College.
- Welzel, Alvin K. (1968) *Associate Professor Emeritus of Marketing* B.S., Rutgers University; M.S., New York University.
- Wessells, Frances D. (1975) *Associate Professor Emerita of Dance and Choreography* B.A., University of Denver; M.A., New York University.
- West, Charles (1987) *Associate Professor of Music* B.A., B.M., University of Northern Colorado; M.F.A., D.M.A., University of Iowa.
- West, Larry (1989) *Assistant Professor of Mathematical Sciences* B.S., Southwest Missouri State University; Ph.D., The University of Kansas.
- West, Susan (1987) *Instructor of Music* B.M., M.A., University of Iowa.
- Wetton, Phillip S. (1969) *Professor of Painting and Printmaking* Diploma, Coventry College of Art.
- Wetzal, James N. (1974) *Associate Professor of Economics* B.S., University of Wisconsin; Ph.D., University of North Carolina.
- Whaley, John H. (1985) *Associate Professor and Head, Special Collections and Archives, ULS* B.A., Western Maryland College; M.A., M.L.S., Ph.D., Indiana University.
- White, David M. (1974) *Professor Emeritus of Mass Communications* A.B., Cornell College; M.S., Columbia University; Ph.D.; University of Iowa; Honorary degrees: L.H.D., Cornell College; LL.D., Saints College (Mississippi).
- White, Doris A. (1978) *Associate Professor of Education* B.S., Tennessee A and I State University; Ed.M., Ed.D., University of Illinois.
- Whitehead, Camden (1986) *Assistant Professor of Interior Design* B.A., Averett College; M.Arch., Virginia Polytechnic Institute and State University.
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- Whitlock, A. Gaynelle (1980) *Associate Professor of Guidance and Counseling and Director, Alcohol and Other Drug Training Center, School of Education* B.A., College of William and Mary; M.Ed., University of Miami, Florida; Ed.D., University of Virginia.
- Wijnholds, Heiko deB. (1979) *Associate Professor and Chair, Department of Finance and Marketing* B. Comm., University of Pretoria; M. Comm., D. Comm., University of South Africa.
- Wikstrom, Nelson (1971) *Associate Professor of Political Science* B.A., Northeastern University; M.A., Ph.D., University of Connecticut.
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- Williamson, Elizabeth M. (1975, 1977) *Instructor and Admissions Counselor* B.A., University of Pittsburgh; M.A., Virginia Polytechnic Institute and State University.
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- Wilson, Howard B. (1982) *Associate Professor of Information Systems* B.A., M.A., University of Northern Colorado; Ph.D., University of Denver.
- Wilson, Neil (1987) *Professor of Music* B.F.A., M.M., University of New Mexico; Ph.D. Indiana University.
- Wilson, Richard I. (1969) *Professor of Education and Vice-Provost for Student Affairs* B.A., University of New Hampshire; M.A., Columbia University;

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- Wilson, Russell (1978) *Instructor of Music* B.M., M.M., Memphis State University.
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- Woodson, Juliet L. (1944) *Associate Professor Emerita of Foreign Languages* A.B., Westhampton College; M.A., Columbia University; Sorbonne; Université de Grenoble; Université de Poitiers.
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- Yoo, Jang H. (1976) *Professor of Economics* B.A., Seoul National University; M.A., University of California at Los Angeles; Ph.D., Texas A and M University.
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- Yucha, James B. (1986) *Instructor and Associate Director of Academic Campus Computing Services* B.S., Pennsylvania State University; M.S., University of Florida.
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- Adcock, Charles R., B.S., M.S.W.
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Business
- Alexander, Nancy L., B.S.
Education
- Ames, Barbara, M.A., Ph.D.
Art History
- Anton, Charlotte T., B.A., M.H.
Foreign Languages
- Antsiferov, Fedya A., M.A.
Foreign Languages

- Arbues, Miguel Angel, M.A.
Foreign Languages
- Arnold, Virginia A., B.S., M.A., Ph.D.
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- Aron, Linwood M., B.A.
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- Ault, Virginia Kelly, B.F.A.
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- Austin, Robert J., B.A., M.A., Ph.D.
Political Science
- Aydlotte, Caroline P., B.S., M.S.
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- Bacon, Frank W., B.S., M.S.
Business
- Baedke, Ronald L., B.A., M.M.
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- Baerent, Kathryn C., B.A., M.A., Ph.D.
Foreign Languages
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Adm. of Justice & Public Safety
- Bailey, Cynthia W., B.S.N., M.S.N.
Nursing
- **Bailey, James W., A.B., B.D., M.Ed.
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- Baker, Kris K., A.B., M.A.
English
- Barcus, J. Michael, B.S., M.Ed.
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Rehabilitation Counseling
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Biology
- Beliaev, Sergei B., M.S., Ed.D.
Physical Education
- Benson, Maria-Luisa S., B.A., M.A.
Foreign Languages
- Benson, Sandra, B.A.
Urban Studies and Planning
- Berman, Myron R., B.S., M.A., Ph.D.
History
- Berry, Paige E., B.S., M.S.
Rehabilitation Counseling
- *Berryhill, Bruce
Dance/Choreography
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- Bilech, Robert O., B.A., M.S.
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- Blake, P. Cory, B.A.
Music
- Blum, David L., B.A., M.B.A.
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Adm. of Justice & Public Safety
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Physics
- Bolger, John P., B.S., M.S.
Gerontology
- Boltz, Kathryn L., B.F.A., M.F.A.
Crafts
- Boswell, I., Keith, B.A.
Foreign Languages
- Bowdler, Jo Ensign, B.A., B.S., M.S.
Nursing
- Boykin, Jr., James H., B.A., M.A.
Philosophy & Religious Studies
- Brandt, F. Lamar, B.S.
Geography
- Brannon, R. Marshall, B.A., M.A.
Education
- Bray, Marilyn C., B.S., M.Ed.
Physical Education
- Breedlove, Vickie H., A.S., B.S., M.S.
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- Briceland, Penelope W., A.B., M.A.
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Women's Studies
- Bromley, David J., B.F.A., M.F.A.
Art Foundation
- Brookman, C. Scott, B.A., M.A.
English
- Brooks, Clifford W., B.A., M.S., Ed.S.
Rehabilitation Counseling
- Brooks, John G., B.S., M.S.
Mathematical Sciences
- Brown, Kathy Hamilton, B.S., M.S.
Recreation, Parks and Tourism
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English Language Program
- Brown, Richard E., A.B., M.T.S.
Philosophy & Religious Studies
- Bruner, Frederick M., B.A., J.D.
Urban Studies and Planning
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English Language Program
- Burns, Michael F., B.S., M.S.W., M.B.A.
Health Care Management
- Bush, Larry C., B.A., M.A.
English
- Butler, Beverley B., B.S., M.S.W.
Social Work
- Butson, Denver S., B.A., M.F.A.
English
- Bynum, James W., B.A., M.Ed.
Theatre
- Caines, Mel, B.A., M.A.
Art Foundation
- Calligeros, James E., B.S., M.S.
Biology
- Campbell, Patty V., B.A., M.S.
Business

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- Campbell, Paulette R., B.S.
Fashion
- Cardwell, George M., B.A., M.A.
Mathematical Sciences
- Carlucci, Paola, B.S.
Foreign Languages
- Carnevale, Thomas A., B.S., MST, D.B.A.
Mathematical Sciences
- Carter, Robert A., A.B., M.Litt., Ph.D.
Urban Studies and Planning
- Cartwright, Dennis H., A.B., M.S.
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- Chalkley, Mason T., M.S.
Adm. of Justice & Public Safety
- Chapman, Carolyn A., A.B., M.S.
Rehabilitation Counseling
- Chase, Carol R., B.S., M.A.
Chemistry
- Chase, Christopher D., B.A., M.Ed.
Sculpture
- Chavis, Rosa C., B.S., M.S.
Mathematical Sciences
- Childress, Jr., G. Wesley, B.S., M.S.
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- Cicatko, Judy, B.A., M.A.
English
- Clark, Donna L., B.S., M.Ed.
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- Coiner, Mary G., B.A., M.S.W.
English Language Program
- Collier, Carl H., B.A., M.S.
Rehabilitation Counseling
- Colvin, Robert E., A.A.S., B.S., M.B.A.
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- *Compton, Anna Rolando
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- Concannon, Kevin, B.A.
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- Cone, Robert T., B.S., M.S., D.B.A.
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- Cook, V. Stuart, A.A., B.S., M.S.
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- Cook-Tench, Diane M., B.A.
Mass Communications
- Correia, Charles, B.S., M.A., M.S., Ph.D.
Business
- Costello, Nancy L., B.A., M.S.
Nursing
- Coudriet, Stephen C., B.A., M.B.A.
Business
- Couk, Macon S., B.S., M.D.
Rehabilitation Counseling
- Courtney, Judith Lee, B.S.
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- Cousins, Taylor K., B.S.
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- Crabb, Ann, B.A., M.A., Ph.D.
History
- Crocker, Patricia B., B.S., M.A.
Mathematical Sciences
- Crow, Donald C., B.A., M.F.A.
Painting and Printmaking
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- De Echeandia, Diane, B.S., M.Ed.
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- Denslow, Suzette P., B.S, M.A.
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- Devany, Catherine W., B.A., M.S.
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- Dillard, Margaret M., B.F.A.
Fashion
- DiPasquale, Paul, B.A., M.F.A.
Art Foundation
- Dombroska, Mary Ann, B.A., M.A.
English
- Doud, Sally, B.A., M.A.
English
- Dozier, O. Kemp, B.A., M.B.A.
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- Eichhorn, Eve-Anne A., D.M.A.
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- Ellis, Robert L., B.A., M.A.
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- Eloud, Karen Hufford, B.A., M.A., M.F.A.
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- Emory, Jr., Samuel T., A.B., M.A., Ph.D.
Geography
- *Ess, Michael
Applied Music
- Essex, David J., B.A., M.A., M.F.A.
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- Estelle, Linda Anne, B.A., M.A.
Philosophy & Religious Studies

- Fagan, Alexina R., B.A., M.H.
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- Falk, Robert S., B.A., M.S., Ph.D.
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- Farley, S. Kelly, B.P.E., M.S.
Rehabilitation Counseling
- Farmer, Jr., E. Donald, B.A.
Business
- Farrar, Pamela G., B.A., M.A.
Foreign Languages
- Faulders, John David, B.A., M.S., J.D.
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- Ferguson, Patricia J., B.S., M.S.
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- Fields, Mary Jo, B.A., M.P.A.
Public Administration
- Fischer, Maribeth, B.A., M.F.A.
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- Fischer, Victoria S., B.A., M.S.
Physics
- Fitt, Cathleen B., B.A., M.F.A.
Crafts
- Flanagan, Elizabeth A., B.A., M.S.W., Ph.D.
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Social Work
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- Forte, James A., B.S., M.S.W.
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- Fox, James D., A.A. B.S., M.S.
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- Francis, Patricia K., B.S., M.A., Ph.D.
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- Franco, Patricia C., B.S., M.S.
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- Frazier, Robert L., B.A., M.A., Ph.D.
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Education
- Gardner, Katherine A., B.S.
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- Garey, Patricia E., B.S., M.S.
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- Geller, Norman J., B.S., M.S.
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- Gemayel, Tanios H., B.S., M.S.
Foreign Languages
- Gero, Thomas W., B.A., M.S.
Chemistry
- Gibbons, Richard G., B.S.
Recreation
- Gibson, J. Larry, B.S., M.C.
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English
- Gilinsky, Ellen, B.A., Ph.D.
Biology
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Rehabilitation Counseling
- Godwin-Jones, Elizabeth, B.A., M.A., J.D.
Foreign Languages
- Golden, Alan L., B.A., M.A.
History
- Golden, Kimberly M., B.A., M.M., Ph.D.
Music
- Goos, Robert B., B.S., M.D.
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- Hart, H. Roger, B.S., M.S.
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- Hatch, Hesbit N., B.F.A.
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- Hawner, Pierre H., B.S., B.B.A., M.A.
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- Herndon, Cynthia L., B.S., M.S.
Recreation, Parks, and Tourism
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- Howell, Daphne L., B.A., M.S.
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- Hu, Jiang, M.A.
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Foreign Languages
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- Hylton, Raymond O., B.A., M.A., Ph.D.
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- Kelley, Kevin, M.F.A.
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- King, Bertha C., B.S., M.S., Ph.D.
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- King, Irving R., B.S.
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- King, Ronald L., B.A., M.A.
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- Kinzey, James R., B.A., M.A.
English
- Kirwan, John P., Jr., B.A.
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- Klosenberg, Cathy L., B.B.A., M.S.
Mathematical Sciences
- Knight, Wayne S., B.S., M.A., Ph.D.
History
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- Kruse, Thomas J., B.S., M.B.A.
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- Kulp, James E., B.S., LL.B.
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- Lamb-Bowring, Sally, A.A.S., B.A., M.F.A.
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- Lambert, Deborah J., B.A., M.F.A.
English
- Lambert, Ron J., B.A.
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- Laposata, Samuel M., B.S., M.A., Ph.D.
Economics
- Larkin, John J., B.S., M.B.A.
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- Lawrence, James T., B.F.A., M.F.A.
Afro-American Studies
- Lawrence, John S., B.S.
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- Lawson, Sandra D., B.A., M.H., M.A.
English
- Lazzari, Andrea M., B.A., M.S., Ed.D.
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- Le Bescond, Patrick L., B.S.
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- Lee, Robert E., B.S., LL.B.
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- Lohrman, Timothy A., B.S., M.S.
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- Longaker, Jon D., B.A.
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- Lonnes, Jerome L., B.A., M.A., J.D., Ph.D.
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- Loving, Ann M., B.S., M.Ed.
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- Lucas, Brenda S., B.S., M.Ed.
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- Lynch, Janet R., B.S., M.A., M.S., Ph.D.
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- Macdonald, Linda J., B.S., M.B.A., M.P.A.
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- MacMillan, Jr., James M., B.A., M.B.A.
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- Maker, Jessie A., B.A., M.S.
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- Malcan, Jay W., B.A., M.A., Ph.D.
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- Mani, Bonnie G., B.M., M.P.A., D.P.A.
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- Mardavich, Frank E., B.S., J.D.
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- Markham, Paulette C., B.S.
Fashion
- Marone, Peter N., B.S., M.S.
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- Marshall, III, Alexander J., Ph.D.
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- Massey, John D., B.A.
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- Masullo, Antonio, LL.D.
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- **May, Margaret L., B.S., M.S.
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- McAllister, William E., B.S., M.Ed.
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- McCahill, Ann B., B.S., M.S.
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- White, Garnett L., B.A., M.A., Ph.D.
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- Wiggins, Ralph C., A.B., M.A., Ph.D.
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- Wilbourne, Mary T., B.S., M.S.
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- Wilkes, Susan B., B.A., M.Ed., M.S.
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- Wilkinson, James B., LL.B.
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- Williams-Petersen, Margaret, B.A., M.Ed., M.S.
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- **Willis, H. David, B.S., M.Ed.
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- Wilson, Mike, B.F.A.
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- **Wright, Keith C., A.B., M.A.
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Rights of Students Under The Family Educational Rights and Privacy Act

Pursuant to a federal statute enacted to protect the privacy rights of students (Family Educational Rights and Privacy Act of 1974, as amended, enacted as Section 438 of the General Education Provisions Act), eligible students of Virginia Commonwealth University are permitted to inspect and review education records of which the student is the subject. A list of education records maintained by the University is available from University Enrollment Services/Records and Registration. A statement of University policy concerning inspection and disclosure of education records has been formulated in compliance with the federal statute. Copies of the policy are also available from University Enrollment Services/Records and Registration.

Generally, the Act provides that no personally identifiable information will be disclosed without

the student's consent, except for directory information and information to other school officials with a legitimate educational interest. When personally identifiable information, other than directory information, is disclosed, a record will be maintained of these disclosures. This record is also available for inspection and review by the student.

If an eligible student feels that his or her education record is inaccurate, misleading, or otherwise in violation of the student's privacy or other rights, the student may request an amendment to the record.

Should the University fail to comply with the requirements of the Act, the student has the right to file a complaint with the Family Policy and Regulations Office, U.S. Department of Education, Washington, D.C. 20202.

Determination of Student Classification for In-State Tuition Purposes

Section 23-7.4, of the *Code of Virginia*, governs eligibility for in-state tuition. Effective July 1, 1984, the statute provides:

§23-7.4. Eligibility for in-state tuition charges. — A. For purpose of this section the following definitions shall apply:

“Date of the alleged entitlement” means the first official day of class within the term, semester, or quarter of the student’s program.

“Dependent student” means one who is listed as a dependent on the federal or state income tax return of his parents or legal guardian or who receives substantial financial support from his parents or legal guardian.

“Domicile” means the present, fixed home of an individual to which he returns following temporary absences and at which he intends to stay indefinitely. No individual may have more than one domicile at a time. Domicile, once established, shall not be affected by mere transient or temporary physical presence in another jurisdiction.

“Domiciliary intent” means present intent to remain indefinitely.

“Emancipated minor” means a student under age of eighteen on the date of the alleged entitlement whose parents or guardians have surrendered the right to his care, custody, and earnings and who no longer claim him as a dependent for tax purposes.

“Full-time employment” means employment resulting in, at least, an annual earned income reported for tax purposes equivalent to fifty work weeks or forty hours at minimum wage.

“Independent student” means one whose parents have surrendered the right to his care, custody, and earnings, have ceased to support him, and have not claimed him as a dependent on federal and state income tax returns for at least twelve months prior to the date of the alleged entitlement.

“Special arrangement contract” means a contract between a Virginia employer or the authorities controlling a federal installation or agency located in Virginia and a public institution of higher education for reduced rate tuition charges as described in paragraph G of this section.

“Substantial financial support” means financial support in an amount which equals or exceeds that required to qualify the individual to be listed as a dependent on federal and state income tax returns.

“Unemancipated minor” means a student under the age of eighteen on the date of the alleged entitlement who is under the legal control of and is financially supported by either of his parents, legal guardian, or other person having legal custody.

“Virginia employer” means any employing unit organized under the laws of Virginia or having income from Virginia sources regardless of its organizational structure, or any public or nonprofit organization authorized to operate in Virginia.

B. In order to become eligible for in-state tuition, an independent student shall establish by clear and convincing evidence that for a period of at least one year immediately prior to the date of the alleged entitlement, he was domiciled in Virginia and had abandoned any previous domicile, if such existed.

In order to become eligible for in-state tuition, a dependent student or unemancipated minor shall establish by clear and convincing evidence that for a period of at least one year prior to the date of the alleged entitlement, the person through whom he claims eligibility was domiciled in Virginia and had abandoned any previous domicile, if such existed.

In determining domiciliary intent, all of the following applicable factors shall be considered: continuous residence for at least one year prior to the date of alleged entitlement, state to which income taxes are filed or paid, driver’s license, motor vehicle registration, voter registration, employment, property ownership, sources of financial support, location of checking or passbook savings accounts, and any other social or economic relationships with the Commonwealth and other jurisdictions. Domiciliary status shall not ordinarily be conferred by the performance of acts which are auxiliary to fulfilling educational objectives or are required or routinely performed by temporary residents of the Commonwealth.

Mere physical presence or residence primarily for educational purposes shall not confer domiciliary status.

Those factors presented in support of entitlement to in-state tuition shall have existed for the one-year period prior to the date of the alleged entitlement.

C. The domicile of a married person shall be determined in the same manner as the domicile of an unmarried person.

The domicile of an emancipated minor shall be established in the same manner as any other independent student.

Any alien holding an immigration visa or classified as a political refugee shall also establish eligibility for in-state tuition in the same manner as any other student. However, absent congressional intent to the contrary, any person holding a student or other temporary visa shall not have the capacity to intend to remain in Virginia indefinitely and, therefore, shall be ineligible for Virginia domicile and for in-state tuition charges.

The domicile of a dependent student shall be rebuttably presumed to be the domicile of the parent or legal guardian claiming him as an exemption on federal or state income tax returns currently and for the tax year prior to the date of the alleged entitlement or providing him substantial financial support.

A matriculating student who has entered an institution classified as out-of-state shall be required to rebut by clear and convincing evidence the presumption that he is in the Commonwealth for the purpose of attending school and not as a bona fide domicile.

For the purposes of this section, the domicile of an unemancipated minor or a dependent student eighteen years of age or older may be either the domicile of the parent with whom he resides or the parent who claims the student as a dependent for federal and Virginia income tax purposes for the tax year prior to the date of the alleged entitlement and is currently so claiming the student. If there is no surviving parent or the whereabouts of the parents are unknown, then the domicile of an unemancipated minor shall be the domicile of the legal guardian of such unemancipated minor unless there are circumstances indicating that such guardianship was created primarily for the purpose of conferring a Virginia domicile on the unemancipated minor.

D. It is incumbent on the student to apply for changes in domiciliary status on becoming eligible for such change. Changes in domiciliary status shall only be granted prospectively from the date such application is received.

A student who knowingly provides erroneous information in an attempt to evade payment of out-of-state fees shall be charged out-of-state fees for each term, semester, or quarter attended and may be subject to dismissal from the institution. All disputes related to the veracity of information provided to establish Virginia domicile shall be appealable through the process procedure required by paragraph H below.

E. A nonmilitary student whose parent or spouse is a member of the armed forces may establish domicile in the same manner as any other student. However, a nonmilitary student, not otherwise eligible for in-state tuition, whose parent or spouse is a member of the military stationed or residing in the Commonwealth pursuant to military orders and claiming a state other than Virginia on their State of Legal Residence Certificate, shall be entitled to in-state tuition charges when the following conditions are met: (i) if the student is a child of a member of the armed forces, then the nonmilitary parent shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition charges, resided in Virginia, been employed full

time and paid individual income taxes to Virginia. Such student shall be eligible for in-state tuition charges only if the nonmilitary parent claims him as a dependent for Virginia and Federal income tax purposes; or (ii) if the student is the spouse of a member of the armed forces, then such student shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition, resided in Virginia, been employed full-time, and paid individual income taxes in Virginia. Any student whose spouse or parent is a member of the armed forces shall be eligible for in-state tuition charges so long as these conditions continue to be met.

F. Students who live outside this Commonwealth and have been employed full time inside Virginia for at least one year immediately prior to the date of the alleged entitlement for in-state tuition shall be eligible for in-state tuition charges if such student has paid Virginia income taxes on all taxable income earned in this Commonwealth for the tax year prior to the date of the alleged entitlement. Students claimed as dependents for federal and Virginia income tax purposes who live outside this Commonwealth shall become eligible for in-state tuition charges if the nonresident parent claiming him as a dependent has been employed full time inside Virginia for at least one year immediately prior to the date of the alleged entitlement and paid Virginia income taxes on all taxable income earned in the Commonwealth for the tax year prior to the date of the alleged entitlement. Such students shall continue to be eligible for in-state tuition charges for so long as they or their qualifying parent are employed full time in Virginia, paying Virginia income taxes on all taxable income earned in this Commonwealth, and the student is claimed as a dependent for Virginia and federal income tax purposes.

G. Public institutions of higher education may enter into special arrangement contracts with Virginia employers or authorities controlling federal installations or agencies located in Virginia. The special arrangement contracts shall be for the purpose of providing reduced rate tuition charges for the employees of the Virginia employers or federal personnel when the employers or federal authorities are assuming the liability for paying to the extent permitted by federal law, the tuition for the employees or personnel in question, and the employees or personnel are classified by the requirements of this section as out-of-state.

Special arrangement contracts with Virginia employers or federal installations or agencies may be for group instruction in facilities provided by the employer or federal authority or in the institution's facilities or on a student by student basis for specific employment-related programs.

Special arrangement contracts shall be valid for a period not to exceed two years and shall be reviewed for legal sufficiency by the office of the Attorney General prior to signing. All rates agreed to by the public institutions shall be at least equal to in-state tuition and shall only be granted by the institution with which the employer or federal authorities have a valid contract for students for whom the employer or federal authorities are paying the tuition charges.

All such contracts shall be registered with the State Council of Higher Education to assure accurate tabulation of the domiciles of the students.

All special arrangement contracts with authorities controlling federal installations or agencies shall include a specific number of students to be served at reduced rates. In any fiscal year, the total number of such students at all state-supported institutions of higher education shall not exceed one-half of one percent of the projected annual full-time equivalent student enrollment in the state-supported

institutions of higher education.

Nothing in this subsection shall change the domiciliary status of any student for the purposes of enrollment reporting or calculating the proportions of general funds and tuition and fees contributed to the cost of education.

H. Each public institution of higher education shall establish an appeals process for those students who are aggrieved by decisions on eligibility for in-state tuition charges. The Administrative Process Act (§§9-6.14:1 et seq.) shall not apply to these administrative reviews.

An initial determination shall be made. Each appeals process shall include an intermediate review of the initial determination and a final administrative review. The final administrative decision shall be in writing. A copy of this decision shall be sent to the student. Either the intermediate review or the final administrative review shall be conducted by an appeals committee consisting of an odd number of members. No person who serves at one level of this appeals process shall be eligible to serve at any other level of this review. All such due process procedures shall be in writing and shall include time limitations in order to provide for orderly and timely resolutions of all disputes.

Any party aggrieved by a final administrative decision shall have the right to review in the circuit court for the jurisdiction in which the relevant institution is located. A

petition for review of the final administrative decision shall be filed within thirty days of receiving the written decision. In any such action, the institution shall forward the record to the court, whose function shall be only to determine whether the decision reached by the institution could reasonably be said, on the basis of the record, to be supported by substantial evidence and not to be arbitrary, capricious, or otherwise contrary to law.

I. In order to ensure the application of uniform criteria in administering this section and determining eligibility for in-state tuition charges, the State Council of Higher Education shall issue and from time to time revise guidelines, including domiciliary status questions to be incorporated by all state institutions of higher education in their admissions applications. These guidelines shall not be subject to the Administrative Process Act (§§9-6.14:1 et seq.) of this Code.

An advisory committee, composed of ten representatives of the public institutions, shall be appointed by the Council each year to cooperate with the Council in developing the guidelines for determining eligibility or revisions thereof. The Council shall consult with the Office of the Attorney General and provide opportunity for public comment prior to issuing any such guidelines.

The first set of such guidelines shall be issued September 1, 1984.

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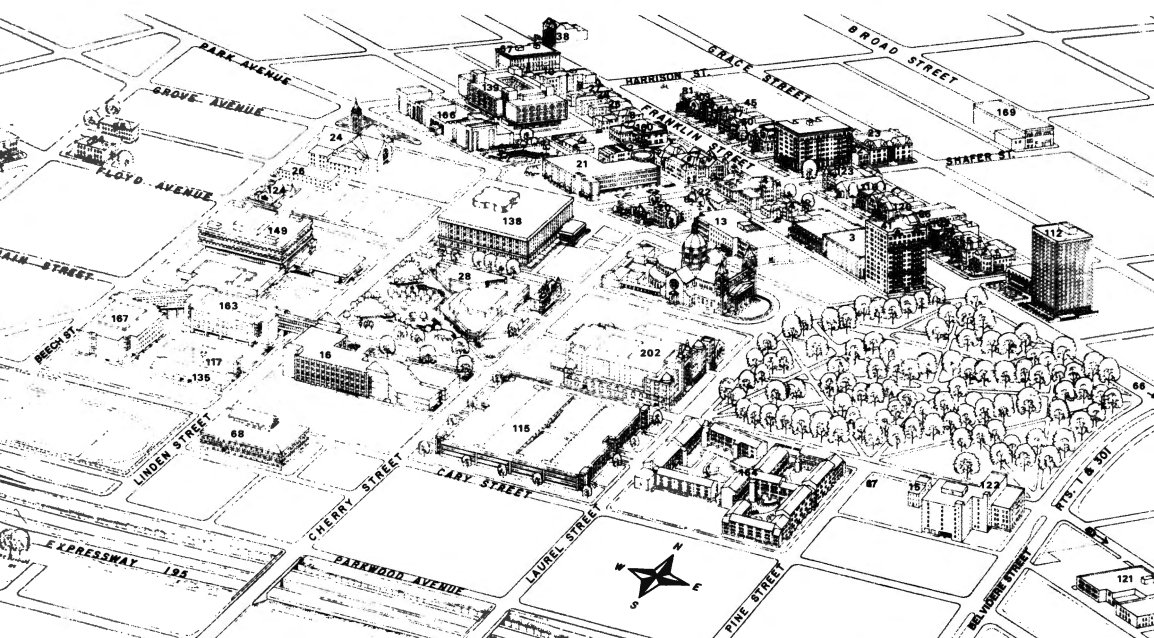
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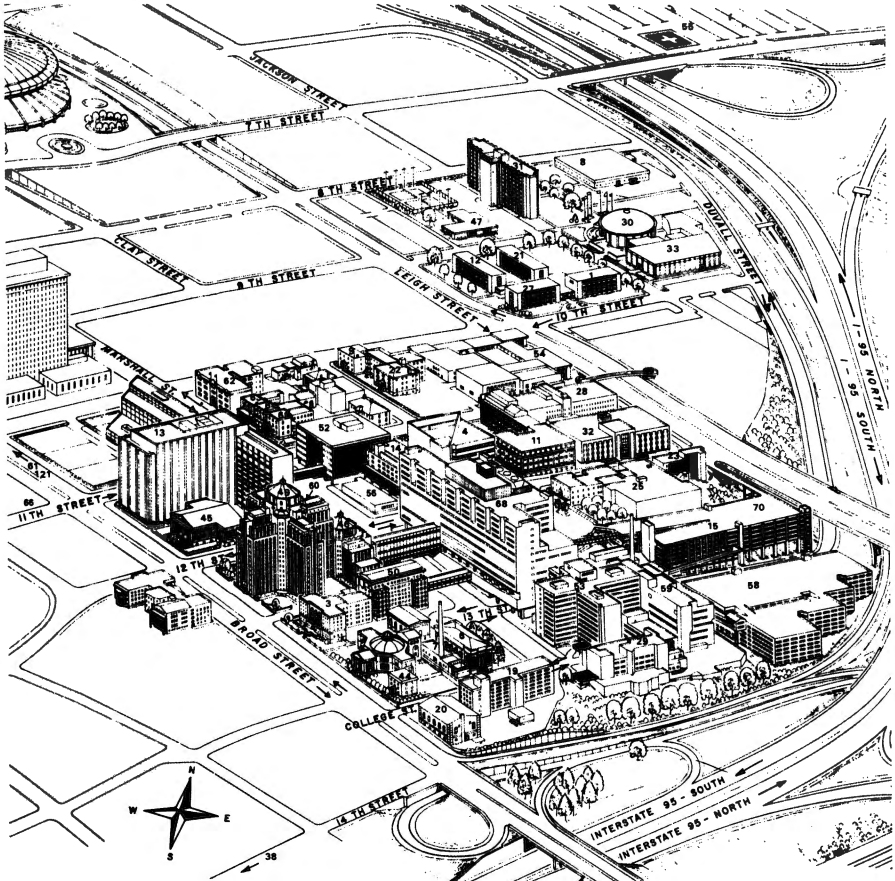
Code Building

- | | | |
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| <p>2 Williams House, 800 W. Franklin St.
 3 Franklin Street Gymnasium, 817 W. Franklin St.
 4 Founders Hall, 827 W. Franklin St.
 5 President's House, 910 W. Franklin St.
 7 Ginter House, 901 W. Franklin St.
 8 Anderson House, 913 W. Franklin St.
 9 Kearney House, 921 W. Franklin St.
 10 Scherer Hall, 923 W. Franklin St.
 11 1814 W. Main St.
 12 Anderson Gallery, 907½ W. Franklin St.
 13 Life Sciences Building, 816 Park Ave.
 14 Ritter-Hickok House, 821 W. Franklin St.
 15 609 W. Main St.
 16 General Purpose Academic Building, 901 W. Main St.
 17 McAdams House, 914 W. Franklin St.
 18 1326-28 W. Main St.
 19 1315 Floyd Ave.
 20 Adkins House, 824 Park Ave.
 21 Hibbs Building, 900 Park Ave.
 22 Shafer Street Playhouse, 221 N. Shafer St.
 23 Lafayette Hall, 312 N. Shafer St.
 24 VCU Music Center, 1015 Grove Ave.
 25 Stark House, 915 W. Franklin St.
 26 Education Annex, 109 N. Harrison St.
 27 Younger House, 919 W. Franklin St.
 28 Student Commons, 907 Floyd Ave.
 31 1312 W. Main St.</p> | <p>32 Treehouse Apartments, 5701 Pony Farm Dr.
 33 Sports Medicine Center, 104 N. Belvidere St.
 34 Bowe House, 917 W. Franklin St.
 35 611 W. Main St.
 36 Thurston House, 808 W. Franklin St.
 37 621 W. Main St.
 38 Meredith House, 1014 W. Franklin St.
 40 401 E. Main St., Purchasing
 41 Johnson Hall, 801 W. Franklin St.
 42 Lindsay House, 600 W. Franklin St.
 44 Millhiser House, 916 W. Franklin St.
 45 916 W. Franklin St. (rear)
 46 Sitterding House, 901 Floyd Ave.
 52 310 N. Shafer St.
 55 White House, 806 W. Franklin St.
 58 Stokes House, 918 W. Franklin St.
 60 Stagg House, 912 W. Franklin St.
 64 1128 Floyd Ave.
 65 107 N. Morris St.
 66 Holiday Inn, 301 W. Franklin St.
 67 Raleigh Building, 1001 W. Franklin St.
 68 Cary Street Recreational Facilities, 911 W. Cary St.
 81 Buford House, 922 W. Franklin St.
 96 Franklin Terrace, 812-14 W. Franklin St.
 102 Hunton House, 810 W. Franklin St.
 103 Valentine House, 920 W. Franklin St.
 112 Rhodes Hall, 710 W. Franklin St.
 115 VCU Public Parking
 116 Bird House, 820 W. Franklin St.</p> | <p>117 Physical Plant Warehouse, 6 S. Linden St.
 120 Harrison House, 816 W. Franklin St.
 121 327 W. Main St., Financial Operations
 122 Fine Arts Center, 601 W. Main St.
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 138 James Branch Cabell Library, 901 Park Ave.
 139 Pollak Building, 325 N. Harrison St.
 149 School of Business, 1015 Floyd Ave., Business School Auditorium, 14 N. Linden St.
 150 VCU Dance Center, 10 N. Brunswick St.
 160 Boccock House, 909 W. Franklin St.
 163 Oliver Hall-Physical Sciences Wing, 1001 W. Main St.
 164 Gladding Residence Center, 711 W. Main St.
 166 Performing Arts Center, 922 Park Ave.
 167 Oliver Hall-Education Wing, 1015 W. Main St.
 169 1001 W. Broad St.
 170 1314 W. Main St.
 202 Mosque</p> |
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Medical College of Virginia Campus Locator

Code Building

- | | | |
|-----------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------|
| 1 Bear Hall, 10th & Leigh Sts. | 21 Rudd Hall, 10th & Leigh Sts. | 50 East Hospital, 1215 E. Marshall St. |
| 3 Nursing Education Building, 1220 E. Broad St. | 22 Sheltering Arms Building, 1008 E. Clay St. | 52 Nelson Clinic, 401-09 N. 11th St. |
| 4 Robert Blackwell Smith, Jr., Building, 410 N. 12th St. | 23 Strauss Research Laboratory, 527 N. 12th St. | 53 North Hospital, 1300 E. Marshall St. |
| 5 Dooley Building, 1225 E. Marshall St. | 24 Monumental Church, 1224 E. Broad St. | 54 Virginia Treatment Center, 515 N. 10th St. |
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| 7 Pathological Incinerator, 316 College St. | 27 Warner Hall, 10th & Leigh Sts. | 58 Faculty/Staff Parking Deck (Lot D), 515 N. 13th St. |
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| 9 Leigh House, 1000 E. Clay St. | 29 Massey Cancer Center, 401 College St. | 60 George Ben Johnston Auditorium, 305 N. 12th St. |
| 11 McGuire Hall, 1112 E. Clay St. | 30 Larrick Student Center, 641 N. 8th St. | 61 Richmond Plaza Building, 1105. 7th St. |
| 12 McRae Hall, 10th & Leigh Sts. | 31 Cabaniss Hall, 600 N. 8th St. | 62 Virginia Mechanics Institute Building, 1000 E. Marshall St. |
| 13 Sanger Hall, 1101 E. Marshall St. | 32 Lyons Dental Building, 520 N. 12th St. | 63 Zeigler House, 1006-08 E. Marshall St. |
| 14 Ambulatory Care Center, 408 N. 12th St. | 33 Gymnasium, 9th & Leigh Sts. | 64 Samuel Putney House, 1010 E. Marshall St. |
| 15 MCV/VCU Visitor/Patient Parking Deck, 1220 E. Clay St. | 38 Consolidated Lab. Building, 9 N. 14th St. | 65 Stephen Ben Putney House, 1012 E. Marshall St. |
| 17 Central Heating & Power Plant, 400 N. 13th St. | 44 Newton House, College & Broad Sts. | 68 Main MCV Hospital, 401 N. 12th St. |
| 18 MCV Alumni House, 1105 E. Clay St. | 45 First Baptist Church, 323 N. 12th St. | 70 Faculty/Staff Parking Deck (Lot E) N. 12th St. |
| 19 Randolph-Minor Hall, 307-15 College St. | 46 A. D. Williams Memorial Clinic, 1201 E. Marshall St. | 121 Finance Building, 327 W. Main St. |
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- 53 Nuclear Medicine
- 19 Nursing Education, Department of, MCVH
- 49 Nursing Services Personnel Office, MCVH
- 53 Occupational Therapy, Department of, MCVH
- 53 Oncology Clinic
- 52 Ophthalmology, Department of
- 32 Oral & Maxillofacial Surgery, Department of
- 52 Orthopedic Surgery
- 14 Otolaryngology, Department of
- 68 Patient Accounting
- 68 Patient Resources
- 50 Pediatric Cardiology
- 32 Pediatric Dentistry, Department of
- 19 Pediatric Neurology
- 52 Pediatric Surgery
- 19 Pediatrics Clinics
- 49 Personnel Department, MCVH
- 52 Plastic Surgery
- 19 Psychiatric Outpatient Clinic
- 29 Radiation Therapy
- 19 Randolph-Minor Hall
- 50 Sickle Cell Anemia Clinic
- 52 Surgical Oncology
- 52 Trauma/General Surgery
- 52 Vascular/General Surgery
- 49 West Hospital (MCV Hospital)

AUXILIARY

- 49 Alumni Association, MCV
- 52 Bank of Virginia Branch
- 11 Bookstore
- 22 Campus Police
- 122 Computer Center
- 52 11th Street Cafe
- 49 Employee Health Services
- 13 Environmental Health & Safety Office
- 9 Facilities Management
- 8 Facilities Management Shops Building
- 65 MCV Foundation
- 55 MCV Hospitals Heliport
- 70, 58 Parking Deck, Faculty/Staff
- 15 Parking Deck, MCV/VCU Visitor/Patient
- 52 Parking, Nelson Clinic Patients
- 62 Parking Office, MCV
- 62 Post Office
- 45 Print Shop
- 47 VCU Day Nursery

HOSPITALS

- 46 A. D. Williams Memorial Clinic
- 68 Administration, MCVH
- 68 Admitting Office, MCVH
- 19 Adolescent Medicine Clinic
- 14 Ambulatory Care Center
- 14 Ambulatory Surgery



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