The faculty and staff of the College of Humanities and Sciences are dedicated to excellence in teaching, research and public service. The mission of Virginia Commonwealth University provides the framework for this pursuit of excellence. Teaching and learning are central to the college, and the college is central to educational and intellectual life at VCU. The college meets the educational needs of a diverse student body, provides general education for all undergraduate students of the university, preparatory programs for the health sciences, engineering and law, and educates future teachers in the liberal arts and sciences. The college offers comprehensive undergraduate, graduate and professional programs of study that link a foundation of understanding and knowledge with skills on which students can build careers, become responsible citizens and continue lifelong learning.

Scholarship, creative work and professional accomplishment are essential to teaching and learning. The college is responsible for advancing understanding and increasing knowledge for its own sake, for the educational benefit of its students, and for the good of the larger community.

In both teaching and research, the College of Humanities and Sciences seriously upholds the responsibilities of being part of a public, metropolitan university. Through service and public teaching, the college meets the challenges and opportunities afforded by VCU’s urban environment and by its location in the capital of the commonwealth.

The college achieves national and international recognition through the success of its students, the advancement of the disciplines and professions represented by its programs, and through the individual and collaborative research of its faculty.

Administration
828 West Franklin Street
P.O. Box 842019
Richmond, Virginia 23284-2019
(804) 828-1674
Fax: (804) 828-1576
www.has.vcu.edu
James Coleman
Professor and Dean
Alison Baski
Professor and Executive Associate Dean
Kevin Allison
Associate Professor and Associate Dean for Community Activities
James Mays
Associate Professor and Associate Dean for Undergraduate Academic Affairs

History
The College of Humanities and Sciences was organized in 1966 (then the School of Arts and Sciences) as a combination of several existing departments at Richmond Professional Institute: Biology, Chemistry, English, Foreign Languages, and History and Political Science. The departments of Philosophy and Religious Studies, Mathematical Sciences, Physics, Psychology, Sociology and Anthropology, and Political Science were developed or added subsequently.

Arts and Sciences began its first graduate programs in 1969 with master’s programs in psychology and sociology. Master’s programs in biology and mathematical sciences and a doctoral program in clinical psychology were soon to follow in 1971. In 1974, English/English education began a master’s program offered cooperatively by the Department of English and the Division of Teacher Education of the School of Education. In that same year the graduate program in chemistry, a cooperative venture between the departments of Chemistry on the Monroe Park Campus and Pharmaceutical Chemistry on the MCV Campus, was transferred administratively to the School of Arts and Sciences. Beginning in 1976, a master’s degree was created in mass communications, while in 1978, a doctoral program in social policy and social work started in cooperation between the Department of Sociology and Anthropology and the School of Social Work.

In July 1981, the School of Arts and Sciences and the Department of Mass Communications were organized into the College of Humanities and Sciences and the School of Mass Communications. The Master of Fine Arts in Creative Writing commenced in 1983 followed by the M.S. in Physics in 1984. Three years later, the Department of Mathematical Sciences established the M.S. in Computer Science program, and finally, a master’s degree in history was initiated in 1994 through the Department of History.

Effective July 1, 1994, the departments of Criminal Justice, Public Administration and Urban Studies joined the college from the dissolved School of Community and Public Affairs. Each department brought to the college both master’s and post-baccalaureate certificate programs within their disciplines. The Public Administration program was merged with the Political Science program to form the Department of Political Science and Public Administration. The Ph.D. in Public Administration program was initially incorporated into the newly merged department and now resides in the Center for Public Policy.

Accreditation
Chemistry (bachelor’s degree)
The American Chemical Society

Psychology (doctoral degrees: clinical, counseling)
The American Psychological Association

Public Administration (master’s degree)
National Association of Schools of Public Affairs and Administration

Urban and Regional Planning (master’s degree)
Planning Accreditation Board

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

- Biology, M.S.
- Chemistry, M.S. and Ph.D.
- Clinical Psychology, M.S. and Ph.D.
- Counseling Psychology, M.S. and Ph.D.
- Creative Writing, M.F.A.
- Criminal Justice, M.S.
- English, M.A.
- Forensic Science, M.S.
- Health Psychology, Ph.D.
- History, M.A.
- Homeland Security and Emergency Preparedness, M.A.
- Mass Communications, M.S.
- advertising
creative brand management
scholastic journalism
strategic public relations

Mathematical Sciences, M.S.
- applied mathematics
- mathematics
- operations research
- statistics

- Media, Text and Art, Ph.D.
- Physics, M.S.
- Psychology, M.S. and Ph.D.
- Public Administration, M.P.A.
- Sociology, M.S.
- Systems Modeling and Analysis, Ph.D.
- Urban and Regional Planning, M.U.R.P.

Post-baccalaureate graduate certificates
- Applied Social Research
- Criminal Justice
- Gender Violence intervention
- Geographic Information Systems
- Historic Preservation Planning
- Homeland Security and Emergency Preparedness
- Nonprofit Management
- Planning Information Systems
- Public Management (Graduate)
- Statistics (Undergraduate)
- Transportation Planning and Analytics
- Urban Revitalization
In addition to these degree programs, the College of Humanities and Sciences offers selected graduate courses in the Department of Philosophy and the School of World Studies (Foreign Languages and Religious Studies), but does not offer graduate degree programs in these areas.

Graduate admission requirements

In addition to the general requirements for admission to graduate studies as stated in the Graduate Studies at VCU chapter of this bulletin, persons seeking admission to any of the graduate programs in humanities and sciences should:

- Have a bachelor’s degree in the discipline in which application for graduate study is made or, in some programs as noted, a bachelor’s degree in some other appropriate area.
- Submit Graduate Record Examination (GRE) scores (some departments require the scores on the advanced GRE within the discipline; some departments accept LSAT and MAT scores in lieu of GREs).
- Have submitted letters of recommendation that comment on the applicant’s ability to undertake graduate study in the specified area.

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

Applicants whose applications reach the university after July 1 for the fall semester and after Nov. 15 for the spring semester may not have their applications processed in time for registration. The applicant whose application arrives late may be considered for admission as a special student, but there is no guarantee that the special student later will be accepted into a degree program. Refer to the programs section of the Graduate School Web site for specific deadlines for all graduate programs.

Graduate registration

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

Scholarships, assistantships, fellowships and other financial assistance for graduate students

The College of Humanities and Sciences seeks to attract and support graduate students of the highest caliber and to prepare them, through research and instruction, to meet local and national needs for highly trained men and women. Recognizing that financial limitations may inhibit some qualified students from applying, the college attempts to inform students of the options of various loans, grants and work-study opportunities that are available to them as well as assist them in financing their education by offering various forms of financial aid and facilitating the process of seeking financial assistance from external sources. Additionally, the college believes that the experience of being a teaching or research assistant reinforces the learning that takes place in the classroom. The value of teaching assistants also is recognized as being beneficial to the college’s undergraduate programs.

Types of financial aid that are available to graduate students fall into three basic categories: aid that does not have to be repaid (grants, scholarships and tuition waivers), aid that does have to be repaid (loans) and aid that enables students to earn a portion of their school costs (work-study, graduate teaching assistantships and graduate research assistantships).

Offers of financial aid are based on financial need and/or skill and competency. Financial need is determined by information contained in the Federal Application for Student Aid (FAFSA) completed by the student. Not all financial aid is based on financial need. To ascertain your eligibility for the different types of financial aid, contact the VCU Office of Financial Aid at 901 W. Franklin St., P.O. Box 843026, Richmond, VA 23284-3026, (804) 828-6669, and the department to which you will be applying. The university library has reference books listing other types of scholarships and grants. International students should contact: Office of International Education at 916 W. Franklin St., P.O. Box 843043, Richmond, VA 23284-3043, (804) 828-6016.

Graduate teaching assistantships and graduate research assistantships are forms of financial aid that provide teaching and research positions for graduate students within their field of study. These are not loans and do not have to be repaid because the student is actually earning income for services rendered. Usually graduate assistants must work the equivalent of 20 hours per week. Assistantships are awarded to students who have demonstrated academic excellence. Individual departments award the assistantships, which usually include payment of tuition; the teaching and/or research duties of graduate assistants vary among departments. Graduate students interested in seeking these teaching and research positions are advised to contact the departments to which they will apply for admission.

Graduate students applying for financial assistance should remember the following tips:

- Apply early.
- Use federal tax forms to complete the FAFSA.
- Save copies of all forms completed, including tax returns.
- Check with the specific department for application requirements and deadlines.

Students should assume they are eligible, not ineligible.

* Also see departmental listings.

The student adviser and the graduate committee

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

Graduate degree requirements

- Full-time graduate status shall consist of a minimum of nine and a maximum of 15 credits per semester. No more than 12 semester credits may be earned in a summer session. See the Graduate Studies at VCU chapter of this bulletin for course load requirements for students awarded graduate assistantships.
- Graduate students are required to maintain an overall GPA of 3.0 (“B”). Students who do not maintain a “B” average during the course of their program may be dropped from the program at any time on recommendation of the appropriate departmental committee to the dean of the Graduate School. If students earn less than a “B” on 20 percent or more of all attempted credits, their graduate status must be reviewed for continuation by the appropriate department committee.
- At least half of the credits required in the student’s program must be those designated as exclusively for graduate students; that is, those at the 600 level or above.
- Graduate students must have earned an overall GPA of 3.0 (“B”) in order to receive a degree.

In addition to these requirements and those set forth in the Graduate Studies at VCU chapter of this bulletin, students must meet the requirements for specific degrees set forth in the departmental listings. Students also should consult the Continuous Enrollment Policy stated in the Graduate Studies at VCU section of this bulletin.

VCU requires registration for a defined credit-hour level during both the didactic and research phases of advanced degree training. For programs requiring the preparation of a thesis or dissertation, there is no obligatory linkage between the accumulation of credit hours and an expectation that a degree be awarded. As a guide to monitoring the timely completion of the degree requiring a thesis or dissertation within the present enrollment framework, the accumulation of 80 credit hours for a master’s degree and 180 credit hours for a doctoral degree can be taken to be reasonable credit maxima. Unless stated otherwise, these figures apply only to programs offered by the College of Humanities and Sciences.

Students are required to submit in advance of the date when they expect to receive a degree a Graduation Application Form to the dean of the College of Humanities and Sciences. Deadlines for the submission of the Graduation Application Form are listed in the academic calendars online at http://www.vcu.edu/academiccalendars; for departmental deadlines the student should consult the departmental adviser. Individual departments may require additional forms.
Graduate Studies at VCU
section of this bulletin for a summary of www.graduate.vcu.edu

Bachelor of Arts in Political Science (School of Business)
Bachelor of Science in Economics (with the Department of Economics in the School of Business)
Bachelor of Arts in Criminal Justice
Bachelor of Science in Criminal Justice Program
Bachelor of Science in Urban and Regional Studies
Bachelor of Arts in Homeland Security and Emergency Preparedness
Bachelor of Science in Public Management
Bachelor of Arts in Sociology
Bachelor of Science in Urban and regional studies

**Post-baccalaureate graduate certificates**
Certificate in Applied Social Research
Certificate in Criminal Justice
Certificate in Gender Violence Intervention
Certificate in Geographic Information Systems
Certificate in Historic Preservation Planning
Certificate in Homeland Security and Emergency Preparedness
Certificate in Nonprofit Management
Certificate in Planning Information Systems
Certificate in Public Management
Certificate in Public Safety
Certificate in Transportation Planning and Analysis
Certificate in Urban Revitalization

**Master’s degrees**
Master of Arts in Homeland Security and Emergency Preparedness
Master of Public Administration
Master of Science in Criminal Justice
Master of Science in Sociology
Master of Urban and Regional Planning

**Doctoral degree**
Ph.D. in Public Policy and Administration (through the Center for Public Policy)

The school also offers two dual degree programs with the University of Richmond’s T.C. Williams Law School. Through these programs students can simultaneously obtain a law degree (J.D.) and either the Master of Public Administration or the Master of Urban and Regional Planning.

**Graduate information**

**Admission**

Admission to programs of the L. Douglas Wilder School of Government and Public Affairs is available to qualified students on a rolling admissions basis. Since the demand for admission to some programs is high and space availability is limited, students are encouraged to apply well in advance of their proposed admission dates.

As outlined below, admission requirements vary by academic program. No application packet will be considered by the relevant program admissions committee until all the required materials have been submitted by the applicant. Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at www.graduate.vcu.edu.

**Admission to a master’s program from the certificate programs**

The Graduate Certificate in Public Management and the Graduate Certificate in Nonprofit Management are designed for persons in professional positions who require a limited number of courses in contemporary management theory and skills. However, if a student later decides to pursue the M.P.A. degree, successfully completed certificate courses may be applied toward the degree. Successful completion of either certificate does not guarantee admission into the M.P.A. degree program.

The courses in the Postbaccalaureate Certificate in Criminal Justice program are the same as the master’s courses and, with grades of “B” or better and upon acceptance into the master’s degree program, are fully transferable to the Master of Science in Criminal Justice program.

All courses in the Certificate in Urban Revitalization may be applied to meet the requirement of the Master of Urban and Regional Planning degree. However,
successful completion of the certificate program does not guarantee admission into the M.U.R.P. Degree program.

**Provisional admission**
- In rare cases, applicants who do not meet the requirements for full admission may be accepted provisionally upon recommendation of the program’s admissions committee. The conditions for earning full admission are stated in the provisional acceptance letter sent by the dean of the Graduate School. Conditions usually include the requirement that the student complete the first nine hours of departmental graduate courses with a grade of “B” or better in each course.
- Provisional admission does not constitute a waiver of the requirement to submit a GRE or other standardized test score.

**Continuous enrollment requirements and expectations**
To remain in good standing, students must maintain continuous registration for each fall and spring semester (except for approved leaves of absence) until they have completed all requirements. Students who fail to register for two consecutive semesters (summer sessions included) will be dropped automatically from the program and must reapply for admission in order to continue. Exceptions to this policy will be made on an individual basis by petition. Students who reapply after having been dropped for failure to register continuously will be evaluated under the bulletin requirements in effect at the time of readmittance. A minimum GPA of 3.0 on a 4.0 scale must be maintained. Compliance with other university regulations also is required.

**Part-time students**
Since the school schedules many of its courses in the late afternoon or evening, its programs accommodate both full- and part-time students. Students also may take advantage of courses offered in the summer. Thus it is possible for a part-time student taking six credit hours per semester to finish the master’s degree in four years or less.

**Nondegree-seeking students**
Nondegree-seeking students must have an undergraduate degree from an accredited institution and the written approval of the instructor prior to registering for any graduate-level course. Nondegree-seeking students can take no more than six credit hours without authorization from the appropriate program coordinator.

**Financial aid information**
Information and application forms for financial aid may be secured from the VCU Office of Financial Aid, 901 W. Franklin St., Room 107, Richmond, VA 23284-3026, (804) 828-6669.

The L. Douglas Wilder School of Government and Public Affairs also offers a limited amount of financial assistance. Individuals interested in such assistance are urged to apply by March 30. Financial assistance available through the school includes:

- **Graduate teaching assistant positions** – Duties involve helping with the instruction of courses. The level of support varies according to the work level, financial need and scholarship.

- **Research assistant positions** – The stipend and number of positions depend upon the level of sponsored research carried out by the school each year.

- **Tuition fellowships** – There are a limited number of tuition fellowships for full-time students within the three master’s degree programs.

- **T. Edward Temple Memorial Scholarship Award** – This award of approximately $500 per year is given to an outstanding graduate student in the Master of Urban and Regional Planning program each year.

- **The Senator Edward E. Willey Scholarship, the Virginia City Management Association/University Dr. T. Edward Temple Scholarship and the Leigh E. Grosenick Scholarship** – These scholarships are available to outstanding students in the Master of Public Administration program. Preference for these three scholarships is given to those who plan public careers in Virginia.

**Internships** – Paid, on-the-job internships are widely available in the Richmond area and elsewhere and are encouraged. VCU graduates also have been successful in obtaining presidential management internships in the federal government, state-government professional positions and local government positions.

**Transfer credit**
With the consent of the admission committee or program coordinator, a maximum of six semester hours of appropriate graduate credit may be transferred and applied toward the Master of Science in Criminal Justice, the Master of Public Administration or the Master of Urban and Regional Planning. These hours will not have been credited toward another degree.

**School wide master’s-level requirements**
In addition to the program specific requirements of the Master of Public Administration, the Master of Science in Criminal Justice, and the Master of Urban and Regional Planning as outlined elsewhere in this bulletin, the Wilder School requires all master’s-level graduate degree-seeking students to acquire competence in four broad areas:
1. Research methods
2. Planning and/or policy analysis
3. Public administration
4. Ethics

Competence can be demonstrated by completion of the following:

- **Research methods**
  - GVPA/PADM/URSP/CRJS 623 Research Methods for Government and Public Affairs

- **Planning/policy analysis**
  - GVPA/URSP 632 Planning Theory and Processes or GVPA/PADM 625 Public Policy Analysis

- **Public administration**
  - GVPA/PADM 601 Principles of Public Administration

- **Ethics**
  - GVPA/PADM 683 Administrative Ethics
  - A program specific course through which ethical issues are imbedded and discussed within a public sector context. Such courses would include: CRJS 550, PADM 661, PADM 689, URSP 632 and URSP 635.

Selection of courses to meet these competency requirements will be made by the student in consultation with his/her academic adviser. While each graduate of the Wilder School must demonstrate competence in each of the areas outlined above, substitutions for the specific courses may be made with the written approval of the appropriate program coordinator.

**Wilder School courses**
Descriptions for all courses offered by the university may be accessed through the online courses database at [www.pubapps.vcu.edu/VCUCourses](http://www.pubapps.vcu.edu/VCUCourses). You may search by unit, subject or keyword, as well as by degree level.

The L. Douglas Wilder School of Government and Public Affairs offers courses in the following areas:

- Use this link to see criminal justice (CRJS) courses.
- Use this link to see government and public affairs (GVPA) courses.
- Use this link to see homeland security and emergency preparedness (HSEP) courses.
- Use this link to see political science (POLI) courses.
- Use this link to see public administration (PADM) courses.
- Use this link to see public policy and administration (PPAD) courses.
- Use this link to see sociology (SOCY) courses.
- Use this link to see urban studies and planning (URSP) courses.
Admission requirements summary

<p>| Applied Social Research, Certificate in (Post-baccalaureate graduate certificate) |</p>
<table>
<thead>
<tr>
<th>Degree:</th>
<th>Semester(s):</th>
<th>Deadline:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>Fall</td>
<td>Jul 1</td>
<td></td>
</tr>
</tbody>
</table>

The certificate program is designed (1) to enable practitioners to acquire additional knowledge and skills in applied social research without necessarily pursuing a graduate degree and (2) provide marketable job/career skills for graduate degree-seeking students in sociology as well as other graduate programs. Because the certificate program involves a limited number of credit hours and coordinates with the type of statistics and methods courses offered in a number of graduate degree programs, it may be pursued simultaneously with such programs as sociology, social work, public administration, social policy and urban services. At the same time, individuals seeking more limited, specialized training may pursue the certificate independently.

Admission and matriculation requirements

Students possessing a B.A. or B.S. degree and beginning level skills in statistics/research methods are eligible for admission into the certificate program. Relevant course or research experience will be considered in evaluating admission and substitution of courses. Equivalency tests are available for required courses in statistics and methods. No more than six hours of substitution or equivalency credit will be granted. An overall GPA of 3.0 is required for award of the certificate, and no more than one grade of C may be earned in the certificate program curriculum.

Curriculum

A total of 18 hours is required to earn the applied social research certificate. Four courses (12 credits) in statistics and research methods are required. In addition, one internship course (three credits), which offers the opportunity for involvement in all phases of ongoing research projects, is required. One course (three credits) may be elected to develop more specialized types of research skills.

Required courses

| SOCY/STAT 608 Advanced Statistical Methods (Prerequisite: SOCY/STAT 508 or permission of instructor) |
| SOCY 623 Research Methods (Prerequisites: SOCY 320 and SOCY/STAT 508 or equivalent) |
| SOCY 626 Applications of Advanced Research Methods (Prerequisites: SOCY 601 and SOCY/STAT 608) |
| SOCY 603 Seminar in Population Studies or SOCY 656 Social Network Analysis |
| GVPA 693 Internship |

Elective courses

| SOCY 603 Seminar in Population Studies |
| SOCY 656 Social Network Analysis |
| *PADM/GVPA 625 Public Policy Analysis |
| *PSYC 631 Evaluation Research: Psychological Perspectives |
| *URSP 621 Introduction to Geographic Information Systems |
| *URSP 622 Community Socioeconomic Analysis Using GIS |

*Courses offered in other programs may require permission of URSP 622 Community Socioeconomic Analysis Using GIS

Note: Students may not be able to enroll full time or complete the certificate in one year given the limits on course scheduling.

Criminal Justice, Certificate in (Post-baccalaureate graduate certificate)

Admission requirements summary

<p>| Criminal Justice, Certificate in (Post-baccalaureate graduate certificate) |</p>
<table>
<thead>
<tr>
<th>Degree:</th>
<th>Semester(s):</th>
<th>Deadline:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>Fall Spring</td>
<td>Apr 1 Oct 1</td>
<td>None</td>
</tr>
</tbody>
</table>

The Post-baccalaureate Certificate in Criminal Justice program offers an abbreviated graduate-level course sequence of 15 credit hours for individuals with an academic and/or professional background in criminal justice.

This certificate program offers specialization for individuals interested or involved in law enforcement, corrections, juvenile justice or the courts. It combines survey and theory courses with research, management and policy courses on the justice system. The courses in the Postbaccalaureate Certificate in Criminal Justice program are the same as the master’s courses and, with grades of B or better and upon acceptance into the master’s degree program, are fully transferable to the Master of Science program.

Curriculum

Five courses are required for the certificate, as specified in the chart that follows. To receive the certificate the student must achieve a B average in the five courses with no more than one C grade and complete the 15-hour certificate program within three years.

| CRJS 501 Principles of Criminal Justice | 3 |
| CRJS/GVPA 623 Research Methods for Government and Public Affairs | 3 |
| Select three from the following courses: | 9 |
| CRJS 550 Professional Ethics and Liability |
| CRJS 616 Justice Policies and Administration |
| CRJS 620/SOCY 620 Seminar in Criminology |
| CRJS 641 Jurisprudence |
| Graduate elective |

Criminal Justice, Master of Science (M.S.)

Admission requirements summary

<p>| Criminal Justice, Master of Science (M.S.) |</p>
<table>
<thead>
<tr>
<th>Degree:</th>
<th>Semester(s):</th>
<th>Deadline:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S.</td>
<td>Fall</td>
<td>Apr 1* (Mar 1 for financial aid)</td>
<td>GRE, LSAT or GMAT</td>
</tr>
<tr>
<td>Spring</td>
<td>Oct 1*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These deadlines are designed to allow sufficient time for application review and admission processing. Applications may be submitted after the deadline; however, we cannot guarantee sufficient time for processing. Any application submitted late for current semester processing will be considered for the following semester. Please contact the program chair with specific application questions.

The graduate program in criminal justice is designed to provide advanced educational preparation for students and criminal justice professionals pursuing careers in the field of criminal justice. Such preparation includes understanding the range of theory, research and policy in criminal justice. The curriculum is directed especially toward assisting students in developing the advanced knowledge, skills and abilities required by criminal justice professionals.

The Master of Science in Criminal Justice requires 36 semester hours of course work, with an overall grade-point average of 3.0 or above. Students who do not have at least one year of professional-level experience are encouraged to take a three-credit internship as part of their 36 semester hours.

A maximum of nine semester hours of graduate credit from an accredited institution may be applied toward the master’s degree with the approval of the graduate program coordinator. However, these hours will not have been credited toward another degree.

Curriculum

Core requirements (18 credits)

| CRJS 501 Principles of Criminal Justice |
| CRJS 550 Professional Ethics and Liability |
| CRJS 616 Justice Policy and Administration |
CRJS 620 Seminar in Criminology
CRJS/GVPA 623 Research Methods for Government and Public Affairs
CRJS 641 Jurisprudence

Six elective courses (18 credits), to be selected from:

CRJS 591 Topic Seminar
CRJS 612 Criminal Justice Politics and Planning
CRJS 622 Comparative Criminal Justice Systems
CRJS 631 Criminal Justice Management and Leadership
CRJS/FRSC 680 Forensic Psychiatry
CRJS 693 Internship (see Wilder School web page for listing)
FRSC 670 Forensic Evidence and Criminal Procedure
HSEP 501 Institutional Challenges of Security Preparedness
HSEP 502 Survey of Terrorism
HSEP 603 Risk Assessment
PADM/GVPA 601 Principles of Public Administration
PADM/GVPA 625 Public Policy Analysis
SOCY 510 Domestic and Sexual Violence in Social Context
SOCY 631 Battered Women in the Criminal Justice System
SOCY 656 Social Network Analysis

Other course(s) may be selected with permission of the criminal justice graduate director.

To complete the M.S. curriculum, students must submit a portfolio of their work before they graduate. Contact the program director for format and submission details.

Admission requirements

Beyond the general Graduate School standards listed in Graduate Studies at VCU section of this bulletin, admission to the Master of Science in Criminal Justice also will be based on:

- An undergraduate GPA that exceeds 2.7 overall.
- A satisfactory score on the GRE. Call (800) GRE-CALL for exam information.
- Previous evidence of ability to perform graduate-level work (where applicable).
- Professional experience in criminal justice (where applicable).

Gender Violence Intervention, Certificate in (Post-baccalaureate graduate certificate)

Admissions to this program are currently suspended.

The certificate program is designed to:

1. Enable current practitioners in community agencies to acquire additional knowledge and skills in sexual and domestic violence intervention, prevention and service management/administration without necessarily pursuing a graduate degree
2. Provide marketable job/career skills specific to this area for graduate degree-seeking students in sociology or other graduate programs

The certificate program may be pursued simultaneously with such programs as sociology, social work, criminal justice, public administration, social policy and urban services. At the same time, individuals seeking more limited, specialized training may pursue the certificate independently.

Admission and matriculation requirements

Students possessing a B.A. or B.S. degree are eligible for admission into the certificate program. Relevant course or practical experience will be considered in evaluating admission and substitution of courses. No more than six hours of substitution or equivalency credit will be granted. An overall GPA of 3.0 is required for award of the certificate, and no more than one grade of C may be earned in the certificate program curriculum.

Curriculum

A total of 18 hours is required to earn the certificate in gender violence intervention. Four courses (12 credits) are required. In addition, an internship course (three credits), which offers the opportunity for involvement in all phases of work in this field is required. For the remaining three credits, students may choose one of several elective options.

Required courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCY 623 Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>SOCY 635 Theorizing Gender Violence</td>
<td>3</td>
</tr>
<tr>
<td>SOCY 510 Domestic and Sexual Violence in Social Context</td>
<td>3</td>
</tr>
<tr>
<td>PADM 650 Principles of Nonprofit Management</td>
<td>3</td>
</tr>
<tr>
<td>SOCY 593 Internship in Domestic and Sexual Violence Issues</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCY 660 Sociology of Women</td>
<td>3</td>
</tr>
<tr>
<td>PMCH 619 The Epidemiology and Prevention of Intentional Injury</td>
<td></td>
</tr>
<tr>
<td>SOCY 631 Battered Women in the Criminal Justice System</td>
<td></td>
</tr>
<tr>
<td>SOCY 633 Application of the Policy Process to Issues of Violence</td>
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</tbody>
</table>

Geographic Information Systems, Certificate in (Post-baccalaureate graduate certificate)

Admission requirements summary

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s) of entry</th>
<th>Deadline dates</th>
<th>Test requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>Fall</td>
<td>Apr 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>Oct 1</td>
<td></td>
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</tbody>
</table>

The Post-baccalaureate Graduate Certificate in Geographic Information Systems emphasizes the core functions and applications of GIS. It provides specialized training in the operations and techniques related to the creation, analysis, modeling, visualization, interpretation and management of geographic information.

Admission requirements

Admission requirements include an official application; three letters of reference; a letter of intent describing objectives in applying for the certificate; an official transcript showing successful completion of baccalaureate degree or its equivalent from an accredited college or university with a minimum GPA of 2.7 (out of 4.0) in the last 60 hours of undergraduate study.

Curriculum

This GIS certificate program can be completed in one academic year. To receive the GIS Certificate, students must complete 12 graduate credits of GIS course work that includes two required and two elective courses with a grade-point average of 3.0 or higher (out of 4.0). The following schedule is suggested as a means of completing the certificate program:

Fall semester (6 credits)
- URSP 621 Introduction to Geographic Information Systems (required)
- Plus one elective from the cluster below

Spring semester (6 credits)
- URSP 625 Spatial Database Management and GIS Modeling (required)
- Plus one elective from the cluster below

Electives cluster:
- URSP 622 Community Socioeconomic Analysis Using GIS
- URSP 627 GIS Applications in Urban Design
- Other GIS-related courses approved by the certificate program coordinator.

All credits earned in the GIS certificate program are transferable to the Master of Science in Criminal Justice program, the Master of Public Administration program, or the Master of Urban and Regional Planning program. Also, students may use courses from the GIS certificate simultaneously satisfy requirements in any graduate degree at the university with the respective department’s approval, including the Master of Science in Criminal Justice, the Master of Public Administration, or the Master of Urban and Regional Planning programs.
However, students must apply to the certificate and graduate degree programs separately.

Admission requirements summary

<table>
<thead>
<tr>
<th>Historic Preservation Planning, Certificate in (Post-baccalaureate graduate certificate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree: Certificate</td>
</tr>
<tr>
<td>Semester(s) of entry: All semesters</td>
</tr>
<tr>
<td>Deadline dates: None - rolling admissions</td>
</tr>
<tr>
<td>Test requirements: None</td>
</tr>
</tbody>
</table>

Admission to this program is currently suspended.

The certificate in historic preservation planning provides specialized training in the techniques and processes of historic preservation and planning. This graduate-level program includes courses in historic preservation, architectural history, preservation analysis and methods, building reuse, and the role of the public and private sectors in implementing proposals. The program is useful for mid-career professionals in planning, historic preservation, architecture and those in allied fields who wish to learn new skills to expand their career options. It also is useful for recent college graduates who want advanced training in the application of historic preservation in urban development.

Admission requirements

Students must meet the following admission requirements:

- completion of an official application form,
- letter of intent describing interest in applying to the certificate in historic preservation planning,
- an official transcript showing successful completion of an appropriate undergraduate degree,
- three letters of recommendation and
- a minimum grade-point average of 3.0 (out of 4.0) in the last 60 hours of undergraduate study.

Curriculum

The certificate consists of nine credits in architectural history and nine credits in urban planning.

**Urban planning:** After discussing the program with an adviser, students should choose three of the following courses:

- URSP 517 Historic Preservation in Planning
- URSP 610 Introduction to Planning
- URSP 611 Principles of Urban Design
- URSP 635 Legal and Legislative Foundations of Planning
- URSP 647 Adaptive Reuse of Buildings

**Architectural history:** After discussing the program with an adviser, students should choose three courses from among the offerings in architectural history at the 500 or 700 level. Examples of courses are:

- ARTH 502 Historic Preservation and Architectural History
- ARTH 789 Palladianism and its Alternatives
- ARTH 789 The World of Jefferson and Letrobe
- ARTH 789 From Neoclassicism to World War I
- ARTH 789 The Arts and Crafts Movement

*These deadlines are designed to allow sufficient time for application review and admission processing. Applications may be submitted after the deadline; however, we cannot guarantee sufficient time for processing. Any application submitted too late for current semester processing will be considered for the following semester. Please contact the program chair with specific application questions.*

The Master of Arts in Homeland Security and Emergency Preparedness was developed for current and prospective homeland security and emergency preparedness practitioners to develop managerial competencies supporting these evolving professions. The graduate certificate program requires 15 credit hours, comprised of five three-credit courses delivered through a combination of online technology, and one on-campus session (three days) as described below. The courses offered in the certificate program are the same as those taken by students in the master’s program and, with grades of “B” or better and upon acceptance into the master’s program, are fully transferable to the Master of Arts in Homeland Security and Emergency Preparedness program.

**Online study**

Web-based course delivery in an asynchronous format is designed around each course’s own Blackboard site.

**On-campus study**

During the final week of the semester, the class will have a three-day in-class session from Thursday to Saturday. It will feature presentations and discussion of student projects/papers, as well as lectures, seminar sessions and exercises. (Exceptions will be made for students who are unable to attend these sessions, such as active-duty military personnel or emergency managers involved in ongoing operations).

**Curriculum**

HSEP 501 Institutional Challenges of Security Preparedness
HSEP 502 Survey of Terrorism
HSEP 601 Emergency Management: Response Planning and Incident Command
HSEP 602 Government, Private Industry and Community Strategic Planning
HSEP 603 Risk Assessment

All courses are required for the program.
and economic aspects of disaster studies, in addition to the policy-making and implementation aspects. The scholarly study of homeland security and emergency preparedness rests at the intersection of national defense, emergency management, law enforcement and policy management. With expertise in criminal justice, geography, government (local, state, federal and foreign), international affairs, policy planning and public administration, the L. Douglas Wilder School of Government and Public Affairs at VCU is particularly well-suited for such a program. Its location — in the state capital and situated just 90 minutes from the nation’s capital — also provides easy access to homeland security institutions and practitioners.

The nature of terrorist, natural and technological disaster threats is such that the business community, the public health system, and the scientific community are key components in the theoretical study, policy design, and policy analysis aspects of security and preparedness. The program is designed to approach the study of homeland security and emergency preparedness from multiple perspectives and takes full advantages of the resources in VCU’s schools of Business and Engineering plus the VCU Medical Center.

**Curriculum (36 credits)**

All courses are required
HSEP 501 Institutional Challenges of Security Preparedness
HSEP 502 Survey of Terrorism
HSEP 601 Emergency Management: Response Planning and Incident Command
HSEP 602 Government, Private Industry and Community Strategic Planning
HSEP 603 Risk Assessment
HSEP 610 Law Enforcement Policy and Judicial Precedent
HSEP 620 Private Sector Issues in Security and Preparedness
ENGR 630 Technology, Security, and Preparedness
INFO 644 Principles of Information System Security
HSEP 650 Public Health System Preparedness
HSEP 690 Capstone Seminar

**Admission requirements**

In addition to the general requirements of the university, selection is made on the basis of prior academic performance, professional accomplishments and other indicators of the ability to pursue graduate studies and a professional career in a field related to homeland security and emergency preparedness. The application for admission requires:

- A transcript documenting the completion of a bachelor’s degree.
- Three letters of reference (including both academic and professional references if possible).
- A current resume.
- Satisfactory standardized test score (GRE, GMAT, MAT, LSAT).
- A minimum of a 2.7 GPA (on a 4.0 scale) in their last 60 semester hours of undergraduate work.

Students not meeting these requirements who have demonstrated advanced competency on a professional basis may be admitted to the program provisionally. The provisional period shall consist of the first nine hours of designated graduate work in which all grades must be no less than “B.” Provisional admission does not constitute a waiver of the requirement related to a standardized test.

**Program structure**

**Off-campus study**

Web-based course delivery is designed around each course’s own web-based site utilizing the Blackboard education system, which provides the following:

- Course syllabus.
- Course reference materials and links to supporting Web sites.
- Course lectures.
- Faculty-student and student-student communications via weekly discussion topics.
- Student writing assignments.

Participation in online discussions is mandatory and will count for a significant percentage of each student’s grades. Written work is submitted, evaluated and returned to students via the Blackboard education system assignment function.

**On-campus study**

During the final week of the semester, each class will have a three-day in-class session from Thursday to Saturday. It features presentations and discussion of student projects/papers, as well as lectures, seminar sessions and exercises. These sessions will include the formation of working groups of students from a number of classes in the program. ( Exceptions will be made for students who are unable to attend these sessions, such as active-duty military personnel or emergency managers involved in ongoing operations with provisions for maximum possible inclusion via electronic means and/or the substitution of additional student assignments equivalent to the on-campus study requirements).

**Nonprofit Management, Certificate in (Post-baccalaureate graduate certificate)**

<table>
<thead>
<tr>
<th>Admission requirements summary</th>
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</thead>
<tbody>
<tr>
<td><strong>Nonprofit Management, Certificate in (Post-baccalaureate graduate certificate)</strong></td>
</tr>
<tr>
<td>Degree: Nonprofit Management, Certificate in (Post-baccalaureate graduate certificate)</td>
</tr>
<tr>
<td>Semester(s) of entry: All semesters</td>
</tr>
<tr>
<td>Certificate</td>
</tr>
</tbody>
</table>

The graduate certificate in nonprofit management is a postbaccalaureate program designed to enable practitioners principally in the nonprofit sector to acquire knowledge and skills in managing nonprofit organizations without pursuing a full master’s degree.

**Admission requirements**

Admission to the certificate program requires the same procedure used in applying to the M.P.A., except that a standardized examination is not required.

**Curriculum**

The certificate requires a total of 15 graduate credit hours that is comprised of four courses in the graduate public administration program and one elective that may be public administration, or from elsewhere within the school or university. The following courses are required:

PADM 650 Principles of Nonprofit Management
PADM 656 Fund Development for Nonprofit Organizations
PADM 659 Financial Management for Nonprofit Organizations
PADM 661 Nonprofit Law, Governance and Ethics

**Combined Master of Social Work (M.S.W.) and Certificate in Nonprofit Management (Post-baccalaureate graduate certificate)**

See the individual program pages for admission requirements specific to the separate degrees.

Students seeking a Master of Social Work may pursue a Certificate in Nonprofit Management through Virginia Commonwealth University’s L. Douglas Wilder School of Government and Public Affairs.

Through a cooperative arrangement with the L. Douglas Wilder School of Government and Public Affairs, M.S.W. students pursuing the Social Work Administration, Planning and Policy Practice (SWAPPP) concentration may simultaneously earn the graduate certificate in nonprofit management offered by the L. Douglas Wilder School of Government and Public Affairs.

**Certificate requirements for M.S.W. students**

Social work SWAPPP concentration students are required to complete three nonprofit courses: PADM 656 Fund Development for the Nonprofit Sector (fall course); PADM 659 Financial Management for Nonprofit Organizations (spring course); and PADM 661 Nonprofit Law, Governance and Ethics (summer course) in the L. Douglas Wilder School of Government and Public Affairs.

Two social work SWAPPP courses are substituted for six credit hours of the certificate’s 15 credit hour requirement. One of these courses is SLWK 712 Social
Work Planning and Administrative Practice I. The second course can be SLWK 713 Social Work Planning and Administrative Practice II.

M.S.W. clinical concentration students must complete 15 course credits in nonprofit management. Six of the PADM nonprofit credits will satisfy the M.S.W. elective requirement for either concentration.

Application process

To earn the Certificate in Nonprofit Management simultaneously with the M.S.W., it is necessary to complete a graduate school application for the certificate program; however, no supporting documents are required for students who are already enrolled in good standing in the social work master’s degree program.

Additional information may be obtained from the School of Social Work Web site at: www.vcu.edu/slwweb or by writing:

School of Social Work
Virginia Commonwealth University
1001 West Franklin Street
Richmond, Virginia 23284-2027

Attention: Certificate in Nonprofit Management Adviser

Detailed information about the Certificate in Nonprofit Management can be obtained from Dr. Janet Hutchinson, associate professor and director of the Master of Public Administration program, (804) 828-8041 or e-mail: jhutch@vcu.edu.

Public Administration, Master of (M.P.A.)

Admission requirements summary

Public Administration, Master of (M.P.A.)

<table>
<thead>
<tr>
<th>Degree:</th>
<th>Semester(s) of entry:</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.P.A.</td>
<td>Fall</td>
<td>Apr 1* (Mar 1 for financial aid)</td>
<td>GRE, GMAT or LSAT</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>Oct 1*</td>
<td></td>
</tr>
</tbody>
</table>

Special requirements:

Applicants who submit LSAT scores must have received a grade of C or better in an undergraduate math course.

*These deadlines are designed to allow sufficient time for application review and admission processing. Applications may be submitted after the deadline; however, we cannot guarantee sufficient time for processing. Any application submitted too late for current semester processing will be considered for the following semester. Please contact the program chair with specific application questions.

The Master of Public Administration program is designed to meet the graduate educational needs of pre-service and in-service professionals for careers in public management and analysis in the public and nonprofit sectors. The program is accredited by the National Association of Schools of Public Affairs and Administration.

Admission requirements

In addition to the general requirements, selection is made on the basis of prior academic performance, professional accomplishments and other indicators of the ability to pursue graduate studies and a professional career in public management successfully. Specifically, the application for admission requires a transcript documenting the completion of a bachelor’s degree, three letters of reference (including both academic and professional references if possible), a current resume and a satisfactory standardized test score (GRE, GMAT, LSAT). Students submitting LSAT scores must have taken an undergraduate math course (algebra, statistics, finite mathematics) and passed with a "C" or better.

No applicant will be considered for admission to the M.P.A. program within two years of having been terminated from the program or of having been rejected for admission to the program.

Degree requirements

- A student must complete a minimum of 36 semester hours, as approved, with an overall GPA of 3.0 or above. Students who do not have at least one year of professional-level experience in the public sector or in a nonprofit agency are required to earn three additional hours of credit in a public service practicum (for a total of 39 semester hours of credit for the degree). Students may have no more than two "C" grades to graduate. Students who earn a "D" or "F" in a course will be terminated from the program.

- All students who are required to take the practicum will usually do so during the summer between the first and second years or during the last semester of course work. The practicum should last a minimum of 300 hours as required by the National Association of Schools of Public Affairs and Administration. The scheduling of the practicum will be flexible enough to accommodate the needs of those students who pursue the degree on a part-time basis.

- Each practicum will be negotiated between VCU and the host agency, including the scope of work to be performed by the student, the type and extent of supervision both within the agency and from the university, and the stipend. A learning contract will be executed among the department, the agency and the student. A written student project is required to complete the internship.

- All students are required to complete the courses in the core curriculum unless competence in the subject matter can be demonstrated on the basis of previous experience or course work.

Advising

The program coordinator is also the student adviser. All new students are required to contact the coordinator for advice in developing their curriculum plan. Current students are strongly encouraged to consult with the program coordinator prior to registering for courses.

Core curriculum

<table>
<thead>
<tr>
<th>Required courses</th>
<th>credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PADM 601 Principles of Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>PADM 602 Public Administration Theory</td>
<td>3</td>
</tr>
<tr>
<td>PADM 607 Public Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>PADM 609 Financial Management in Government</td>
<td>3</td>
</tr>
<tr>
<td>PADM 623 Research Methods for Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>PADM 624 Quantitative Methods for Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>PADM 625 Public Policy Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PADM 689 Seminar in Public Administration or PADM 690</td>
<td>3</td>
</tr>
</tbody>
</table>

| Reading Seminar                                      | 3       |
|                                                      | 24      |

| Electives                                            | 12      |
|                                                     | 36      |

| Practicum (if required)                              | 3       |
|                                                     | 39      |

Concentration possibilities

Students may develop a concentration in one of several areas from among the elective courses offered by the department or in combination with courses elsewhere in the university. Possibilities include the following concentrations:

- environmental policy
- human resource management
- public financial management
- executive leadership
- public policy analysis and evaluation
- local government management
- nonprofit management

Other concentrations may be developed including concentrations in other fields. These concentrations may require agreement with other degree programs such as criminal justice, economics, gerontology, social work, urban and regional planning, business, and health administration.

Accelerated Bachelor of Arts (B.A.) in Political Science and Master of Public Administration (M.P.A.)

This program permits selected students to earn the B.A. and M.P.A. in a minimum of five years, by taking certain master’s-level courses during the senior year of their undergraduate program. The program is restricted to students with strong credentials and a clear interest in a career in the public or nonprofit sector. To be eligible, a student must have completed 90 credits of course work and have an overall GPA of 3.0, with a GPA of 3.3 in political science courses. The accelerated program is limited to students majoring in political science who have a minimum of nine credit hours in political science courses.

To be considered for acceptance into the program and before enrolling in 600-level Master of Public Administration courses, a student must complete the graduate school application, submit standardized test scores and supply the supporting information required for admission. Upon being accepted into the accelerated program, a student must meet the same standards of performance as a graduate student that are described in detail in the “Satisfactory Progress” section of the Graduate Bulletin, must maintain a 3.0 GPA and must satisfactorily complete all of the requirements for the degree, as stated in this bulletin. Guidance to students admitted to the accelerated program is given by the public administration program director. Students should contact the M.P.A. graduate director for more information about admission procedures.

To graduate with a bachelor’s degree, a student must complete 120 hours of course work. Of these credits, 33 must be in political science. Of the 33 political science credits, 15 are required (POLI 103 U.S. Government, POLI/INTL 105 International Relations, POLI 107 Political Theory, POLI 109 Comparative Politics and POLI 490 Senior Seminar). Students enrolled in the accelerated program may take up to six credits of graduate public administration courses in each of the final two semesters of their undergraduate course work. These courses are shared credits with the graduate program, meaning that they will be applied toward the undergraduate degree requirement and the graduate degree requirement. A maximum of 12 credits may be taken prior to the completion of the baccalaureate degree. The Bachelor of Arts degree will be awarded when the student has completed all the requirements for the undergraduate degree, which may include the 12 graduate public administration credits.

The graduate courses that may be taken in the public administration program once a student is admitted to the accelerated program are as follows:

- PADM/GVPA 601 Principles of Public Administration (may be used to meet the undergraduate major distribution requirement for U.S. politics and is a required course in the graduate program)
- PADM 602 Public Administration Theory (may be used to meet the undergraduate major distribution requirement for political theory and methodology, and is a required course in the graduate program)
- PADM 607 Public Human Resource Management (core requirement for the M.P.A.; elective for the undergraduate major)
- PADM 609 Financial Management in Government (core requirement for the M.P.A.; elective for the undergraduate major)
- PADM/GVPA/CRJS/URSP 623 Research Methods for Public Administration (may be used to meet the undergraduate major distribution requirement for political theory and methodology, and is a required course in the graduate program)
- PADM 624 Quantitative Methods for Public Administration (core requirement for the public administration degree; elective for the undergraduate major) or a PADM elective course (elective requirement for the M.P.A. and elective for the undergraduate major)
- PADM 650 Principles of Nonprofit Management (required for the concentration in nonprofit management and is an elective for the M.P.A. degree, and may fulfill an elective requirement in the undergraduate major)

All accelerated program students must have their course schedules approved by the graduate public administration program director prior to registration.

Combined Master of Public Administration (M.P.A.) and Juris Doctor (J.D.)

The dual degree program is designed to provide its graduates with two degrees — Master of Public Administration and Juris Doctor — attesting to competency in both public administration and law. This competency is applicable to areas of practice drawing upon knowledge and skills from each of these fields. The program brings together persons interested in both the broader aspects of public policy and government affairs, and the law. It also brings together two fields that require complementary knowledge and skills, which may be directed toward solving problems that are associated with the affairs of the government and nonprofit sectors. This integration of education in public administration and law draws on the contributions that each discipline can make to a professional knowledge base for practice in both fields.

Students who are accepted into the dual degree program are permitted to apply 12 credit hours of work in the M.P.A. toward meeting the graduation requirements in the T.C. Williams School of Law, and up to 12 credit hours of work in the T.C. Williams School of Law toward meeting the graduation requirements for the M.P.A. This credit application enables participants in the dual degree program to complete the requirements for the J.D. and the M.P.A. in an estimated four years of full-time course work. Applicants for this program are required to meet admission standards of both the T.C. Williams Law School of the University of Richmond and the Graduate School and the M.P.A. program of VCU.

Public Management, Certificate in (Post-baccalaureate graduate certificate)

Admission requirements summary

<table>
<thead>
<tr>
<th>Degree: Public Management, Certificate in</th>
<th>Semester(s) of entry: All semesters</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
</thead>
</table>

The graduate certificate in public management is a program designed to enable practitioners in government and nonprofit organizations to acquire knowledge and skills in public administration without pursuing a full master’s degree. Further details are available from the program office.

The graduate certificate in public management is offered in at least two locations off campus: Chesterfield County and Henrico County.

Curriculum

The certificate requires a total of 18 hours of graduate credits involving a mix of required and elective courses. The courses are the same as those offered to M.P.A. students.

Public Safety, Certificate in (Post-baccalaureate graduate certificate)

Admission requirements summary

<table>
<thead>
<tr>
<th>Degree: Public Safety, Certificate in</th>
<th>Admission requirements summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Admissions suspended</td>
</tr>
</tbody>
</table>

The Post-baccalaureate Certificate in Public Safety offers specialization for individuals currently employed in public safety. It combines research, legal and policy courses with management, leadership and human resource development courses. The certificate requires 15 credits, as outlined below.

Curriculum

CRJS 616 Justice Policy and Administration
CRJS/GVPA 623 Research Methods for Government and Public Affairs
Sociology, Master of Science (M.S.)

Admission requirements summary

<table>
<thead>
<tr>
<th>Degree: Sociology, Master of Science (M.S.)</th>
<th>Semester(s) of entry:</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S.</td>
<td>Fall</td>
<td>Apr 1* (Mar 1 for financial aid)</td>
<td>GRE</td>
</tr>
<tr>
<td>Spring</td>
<td>Oct 1*</td>
<td></td>
<td></td>
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</tbody>
</table>

*These deadlines are designed to allow sufficient time for application review and admission processing. Applications may be submitted after the deadline; however, we cannot guarantee sufficient time for processing. Any application submitted too late for current semester processing will be considered for the following semester. Please contact the program chair with specific application questions.

The Sociology Program offers programs leading to the Master of Science in Sociology and the Post-baccalaureate Certificate in Applied Social Research. The goal of the graduate program in sociology is to facilitate the development of theoretical, methodological and substantive competence appropriate for students’ interests and career goals. In keeping with VCU’s role as an urban institution, the program focuses on the study of urban social problems, policy alternatives and strategies for change.

Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and in the College of Humanities and Sciences, the following requirements represent the minimum acceptable standards for admission:

- Applicants must submit a transcript of their undergraduate course work and the results of their GRE in general aptitude (quantitative, analytical and verbal).
- Admission priority is given to students with an undergraduate GPA of 3.0 or higher on a 4.0 scale. Students with GPA below 3.0 will be evaluated by the director of graduate studies and members of the graduate faculty on the basis of the GRE scores, recommendations from references and other data submitted by applicants.
- To be admitted as a regular graduate student, applicants should have completed 24 semester hours in the social sciences (including history), with at least 12 credits in sociology. Undergraduate work in sociology should include a survey of sociological theory, research methods and statistics. Students who otherwise are qualified for admission but lack this background may be admitted provisionally, with the stipulation that they may be requested to make up any deficiencies specified by the director of graduate studies. Nondegree or “special” students must apply for regular student status after completing six sociology graduate credits.
- Because of the diversity in different institutions of higher education, students trained abroad may be judged on an individual basis. Criteria on which this judgment is based include the reputation of the foreign university, the student’s academic record, proficiency in English and recommendations from professors. VCU requires that foreign students demonstrate guarantees of financial support.

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

Degree requirements

Two options are available for students pursuing a master’s degree in sociology. Students must receive approval from the director of graduate studies before choosing either option.

Thesis option

Thirty-six hours of graduate course work must be completed including the following core courses: SOCY 502 Contemporary Sociological Theory, SOCY/STAT 508 Introduction to Social Statistics or SOCY/STAT 608 Statistics for Social Research, SOCY 623 Research Methods, SOCY 626 Applications of Advanced Research Methods and six credit hours of GVPA 693 Internship. Up to six credits of independent study may be presented, as well as six credits outside sociology. Students are strongly encouraged to take one to two courses from other graduate programs within the Wilder School.

For all candidates, an overall GPA of at least 3.0 (B) must be maintained in order to receive a degree. A student who does not maintain a 3.0 average may be dropped from the master’s program at any time by the graduate program director. A review of all first-year graduate students will be conducted at the end of their second semester by the graduate program director and three appointed faculty members. The purpose of this review will be to assess all first-year students on their satisfactory/unsatisfactory progress toward the master’s degree.

Applying for an option

Students are required to apply for either the thesis or applied sociology track. The application is due by May 15, at the end of the second semester in the program. Applications will be submitted to and reviewed by the graduate committee. Decisions will be announced by June 1 in order for students to be prepared to register for the appropriate fall course (SOCY 626 or GVPA 693).

Accelerated Bachelor of Science (B.S.) and Master of Science (M.S.) in Sociology

The accelerated B.S. and M.S. program allows qualified students, with a major in sociology, to earn both degrees in a minimum of five years by completing approved graduate courses during the senior year of their undergraduate program. The program will provide students with the opportunity to expand and deepen their knowledge of sociology, enhance their credentials for the job market and/or to prepare for further professional education. Students in the program may count up to 12 hours of graduate courses toward both the B.S. and M.S. degrees. Thus, the two degrees may be earned with a minimum of 144 hours instead of the 156 required if the degrees are pursued separately.

The program is restricted to students who have demonstrated a clear interest in sociology. Minimum qualifications for admittance to the program include completion of 90 undergraduate credit hours with an overall GPA of 3.0, and a minimum of nine credit hours in sociology with a GPA of 3.3. Prior to being formally considered for admittance and before enrolling in graduate courses, the student must complete the graduate school application, submit GRE general aptitude scores and supply supporting information required for admission. All persons admitted to the program must meet the graduate student standards of performance, e.g., maintain a 3.0 GPA, and satisfactorily complete all requirements for the degree.

The director of graduate studies will provide guidance of students in this program. Students who are interested in this program should consult with the director of graduate studies or the director of undergraduate studies before they have completed 90 credits. Both directors may be contacted for more information about admission procedures.

Requirements for the Bachelor of Science in Sociology include the completion of a minimum of 120 credits. Students in the accelerated program may take up to six graduate sociology credits in each of the final two semesters of their undergraduate course work. These courses are shared credits with the graduate program, meaning that they will be applied to both undergraduate and graduate degree requirements. A maximum of 12 graduate credits may be taken prior to completion of the baccalaureate degree.

The Bachelor of Science degree will be awarded when the student has completed all requirements for the undergraduate degree, which may include the 12 graduate sociology credits. The graduate sociology courses that may be taken, once a student is admitted to the program, are:
• SOCY 502 Contemporary Sociological Theory (may be used to meet the undergraduate major requirement for SOCY 402 Sociological Theory and is a required course in the graduate program)
• SOCY/STAT 508 Introduction to Social Statistics (recommended and may fulfill elective requirement in the undergraduate major)
• SOCY/STAT 608 Statistics for Social Research (a required course in the graduate program and may fulfill elective requirement in the undergraduate major)
• SOCY 623 Research Methods – Prerequisite SOCY/POLI 320 (a required course in the graduate program and may fulfill elective requirement in the undergraduate major)
• Other SOCY graduate courses, with the approval of the director of graduate studies, may serve as an elective requirement for the M.S. degree and an elective for the undergraduate major.

All accelerated program students must have their schedules approved by the director of graduate studies prior to registration.

Admission requirements summary

<table>
<thead>
<tr>
<th>Degree:</th>
<th>Semester(s) of entry:</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.U.R.P.</td>
<td>Fall</td>
<td>Apr 1* (Mar 1 for financial aid)</td>
<td>GRE, GMAT or LSAT</td>
</tr>
<tr>
<td>Spring</td>
<td>Oct 1*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These deadlines are designed to allow sufficient time for application review and admission processing. Applications may be submitted after the deadline; however, we cannot guarantee sufficient time for processing. Any application submitted too late for current semester processing will be considered for the following semester. Please contact the program chair with specific application questions.

The graduate program in urban and regional planning is accredited by the Planning Accreditation Board and provides professional grounding in the theory and methodologies of planning through a curriculum that balances classroom and field experience.

The M.U.R.P. is a two-year degree program requiring 48 semester hours of class work. Each student must complete an internship with a planning agency or organization, as well as school and programmatic required courses totaling 30 semester hours. Core requirements for students within the Master of Urban and Regional Planning program will be met through the following courses:

• Introduction to Planning
• Community Socioeconomic Analysis using GIS
• Foundations for Development Planning
• Research Methods in Government and Public Affairs
• Planning Theories and Processes
• Legal and Legislative Foundations of Planning
• Principles of Public Administration
• Planning Studio I
• Planning Studio II or Thesis

In selecting their elective courses, students may (1) opt for exposure to a wide array of planning-related subject matter (the generalist or comprehensive approach), (2) select one of the areas of specialization defined by the department’s faculty (see the list that follows), or (3) develop an individualized program, focusing on one or more self-defined topics. Regardless of the approach selected, students are expected to meet regularly with their faculty advisers for discussion of their courses of study in relation to their career plans.

The following faculty-defined areas of specialization are offered by the department:

• community revitalization planning
• metropolitan planning
• environmental planning
• international development planning

Admission requirements

Beyond the general Graduate School admissions standards, the following specifications apply:

• Students must have a minimum of a 2.7 GPA (on a 4.0 scale) in their last 60 semester hours of undergraduate work. In addition, a GPA of not less than 3.0 must have been maintained in their undergraduate majors. Finally, applicants are expected to receive satisfactory scores on each of the categories in the GRE, LSAT or GMAT examination.
• Students not meeting these requirements may be admitted to the program on a provisional basis. The provisional period shall consist of the first nine to 12 hours of designated graduate work in which all grades must be no less than “B.” Provisional admission does not constitute a waiver of the requirement related to a standardized test.
• Generally, at least two of the three letters of reference should come from former faculty.
Degree requirements

1. Students must complete a minimum of 48 graduate credits plus an internship. A core of required courses accounts for 30 of these credits; the remaining 18 are electives. An overall GPA of at least 3.0 (on a 4.0 scale) is required for receipt of the M.U.R.P. degree.

2. Students within the M.U.R.P. program are required to complete either a thesis (URSP 764) or to prepare a professional quality plan through the Planning Studio II course (URSP 762). Program administrators request permission to utilize the grade of PR, in addition to normal letter grades (“A,” “B,” “C,” “D,” “F”) in URSP 762 Planning Studio II. This will allow students the ability to work on their plans over a more extended period of time, if necessary.

Internship and placement

The internship is designed to give students practical experience in planning-related activities in an institutional context. Normally, the internship is taken during the summer between the first and second year. Many opportunities for internship positions, as well as part- and full-time jobs in planning at all levels of government, exist within the Richmond area. Upon request, the internship requirement may be waived for students with substantial professional experience.

Curriculum

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
</table>

**First year, first semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>URSP 610 Introduction to Planning</td>
<td>3</td>
</tr>
<tr>
<td>URSP/GVPA 622 Community Socioeconomic Analysis using GIS</td>
<td>3</td>
</tr>
<tr>
<td>URSP 662 Foundations for Development Planning</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**First year, second semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>URSP/GVPA 623 Research Methods in Government and Public Affairs</td>
<td>3</td>
</tr>
<tr>
<td>URSP/GVPA 632 Planning Theory and Processes</td>
<td>3</td>
</tr>
<tr>
<td>URSP 635 Legal and Legislative Foundations of Planning</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Internship**

Normally taken between the first and second year of course work, but other options are available.

**Second year, first semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>URSP 761 Planning Studio I</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
</tr>
</tbody>
</table>

**Second year, second semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>URSP 762 Planning Studio II</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

Total: 48 credits

Combined Master of Urban and Regional Planning (M.U.R.P.) and Juris Doctor (J.D.)

A cooperative arrangement with the T.C. Williams School of Law makes it possible for students to receive a law degree (J.D.) and an urban and regional planning degree (M.U.R.P.) in four years rather than the five years ordinarily required. The purpose of the program is to integrate the two professional curricula and to provide the expertise necessary to apply legal analytical skills and planning methods and analysis to urban and regional policy issues and problems. The dual degree program is designed to equip graduates for a variety of professional positions, including staff for legislative committees and government agencies and commissions, government legal staff, private consulting, neighborhood advocacy, directorships of planning and related agencies, and executive aides to elected officials.

Interested students must apply separately for and be admitted to the T.C. Williams School of Law, University of Richmond, and the Master of Urban Studies and Planning program, VCU. Students will spend their entire first year in either the T.C. Williams School of Law or the L. Douglas Wilder School of Government and Public Affairs, and their second year in the program not selected in the first year. Twelve credit hours of the planning program will be applied toward meeting the graduation requirements of the law school, and 12 credit hours in the law school will be applied toward meeting requirements of the M.U.R.P. program.

Upon admission to the dual degree program, every student will be assigned an adviser in each program who will assist in planning the course of studies that will include all of the required courses in each program plus such elective courses as will best serve the interests of the individual student. Students deciding not to complete the dual degree program must meet all of the regular requirements of either the J.D. or M.U.R.P. to receive the degree of their choice.

Urban Revitalization, Certificate in (Post-baccalaureate graduate certificate)

**Admission requirements summary**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s)</th>
<th>Deadline</th>
<th>Test requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>Fall</td>
<td>Apr 1</td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td>Spring</td>
<td>Oct 1</td>
<td></td>
</tr>
</tbody>
</table>

The urban revitalization certificate program requires 18 semester hours of course work and can be completed in one academic year. A sequence of introductory courses exposes students to the planning process, housing policy, historic preservation, commercial revitalization, adaptive reuse of buildings and urban design. Course work in the area of urban revitalization is a blend of instruction in planning, urban design, business and economics.

**Admission requirements**

Admission requirements include an official application; a letter of intent describing objectives in applying for the certificate; three letters of recommendation; two copies of an official transcript from an accredited institution showing undergraduate work and successful completion of an appropriate degree program with a minimum GPA of 2.7 (out of 4.0) in the last 60 semester hours of undergraduate study; demonstration of professional experience in planning or work related to the certificate program. The experience requirement may be waived for candidates who demonstrate professional promise. All credits earned are transferable to the Master of Urban and Regional Planning program.

Center for Public Policy

The Center for Public Policy focuses the university’s multidisciplinary efforts in public policy. As a comprehensive, university-wide center, the center has responsibilities in each area of the university’s broader missions: teaching, research and public service. The center houses and administers the Ph.D in Public Policy and Administration.

The center conducts basic and applied research on a number of public policy matters, with special attention to health policy, urban and metropolitan development, and state and local government and politics. And, the center engages in significant service through its training programs, conferences, publications and other contributions to public discourse.

**Administration**

919 W. Franklin St.
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Richmond, VA 23284-3061
(804) 828-6837
Fax: (804) 828-6838
http://www.vcu.edu/cppweb

Michael D. Pratt
Director, Center for Public Policy

**Public Policy and Administration, Doctor of Philosophy (Ph.D.)**
The purpose of the Ph.D. in Public Policy and Administration program is to prepare students for scholarly and leadership roles in government, universities, research organizations and other settings where knowledge and research skills in public policy and administration are needed. The doctoral program is committed to accomplishing this mission by creating an intellectually vibrant atmosphere for scholarship involving an active faculty from a broad spectrum of academic disciplines and substantial interaction with government agencies and community groups.

**Faculty**

Faculty for the doctoral program are drawn from graduate faculty across the university. A list of participating faculty and academic units is available from the program office.

**Admission requirements**

Admission is open to qualified persons without regard to age, physical disability, national origin, race, religion or gender. Admission is competitive since it is limited by the number of places available. The admission process is intended to assure a reasonable fit between the student’s professional and research interests and faculty expertise. Consequently, otherwise qualified applicants may be denied admission.

Applicants to the program must hold a master’s degree or a recognized postbaccalaureate degree in one of the professions such as law or medicine from an accredited institution of higher education. A standardized test score, fewer than five years old, is required. Accepted examinations include the Graduate Record Examination (GRE), the Graduate Management Admissions Test (GMAT) and the Law School Admissions Test (LSAT). Professional experience is not required, but is considered desirable.

In order to apply for admission to the Ph.D. in Public Policy and Administration program, prospective students must submit:

- A VCU Application for Graduate Study
- Transcripts from all previous colleges or universities
- Scores from a standardized examination (GRE, GMAT, MAT or LSAT)
- Three letters of reference
- A personal statement describing reasons for applying to the program
- A current professional resume

International applicants must submit the International Application and TOEFL scores. All students admitted to the program must complete prior to admission, or are required to complete during their first year, the following graduate-level courses (or their equivalent):

- research methods (equivalent of PADM 623),
- statistics (equivalent of PADM 624) and
- public policy, economics or administration/management.

The primary admissions deadline is March 15 for enrollment to begin the following fall semester. However, for those students wishing to be considered for a limited number of fellowships, materials must be received no later than Jan. 15. A small number of special admissions may be made in the fall (Oct. 15 application deadline) for entry in the following spring semester. Applicants who wish to be considered for the Oct. 15 deadline must include a letter requesting and justifying early admission. If the request for early consideration is not accepted, the application will be held over to the March 15 application date.

While university rules allow up to six credit hours of course work to be taken as a special student prior to formal admission, taking such courses in no way guarantees admission to the program. Graduate courses designated “doctoral students only” may not be taken prior to formal admission, although they may be taken by fully admitted doctoral students in other programs.

Application packets may be obtained from the program office or the Graduate School. International applicant materials are available from the International Admissions Office.

**Degree requirements**

The doctoral program is structured around a core curriculum and several areas of concentration. The curriculum is designed to provide a sound intellectual foundation for the pursuit of theoretical and applied research in administrative and policy studies. The program includes courses in public policy and administration, research methods, public policy economics, political and organizational process, and law and public policy.

In addition to the core, the program offers three concentration areas including health policy, public management in state and local government and nonprofits, and urban policy.

These concentrations offer students the opportunity to build a tailored program of study within a broad area of scholarship. The range of core and affiliate faculty expertise, from both campuses at VCU, gives doctoral students considerable flexibility in designing their studies and research.

Students take a minimum of 36 credits, or 12 courses, in addition to any prerequisites that might be necessary. Seven of these courses are part of the core and five are concentration courses. Required courses generally will be available on an evening or weekend schedule.

Course work in the Ph.D. program has a strong orientation toward research, both applied and theoretical. Where appropriate, course work may be linked to funded university projects or to external agency-based analytical work. Courses emphasize research, writing and presentation skills.

**Core curriculum**

- PPAD 711 Seminar in Public Policy and Administration I
- PPAD 712 Seminar in Public Policy and Administration II
- PPAD 791 Law and Public Policy
- PPAD 715 U.S. Political Processes and Institutions
- PPAD 716 Public Policy Economics
- PPAD 721 Survey of Applied Research Methods in Public Policy and Administration
- PPAD 722 Survey of Data Analysis Techniques for Public Policy and Administration

**Concentrations**

In addition to the core, all students will take five courses in their selected area of concentration. Each concentration features a required seminar as one of these courses.

- **Health policy**: PPAD 730 Seminar in Health Policy
- **Public management in state and local government**: PPAD 740 Seminar in Public Management
- **Urban policy**: PPAD 750 Seminar in Urban Policy

The remaining four courses will be selected from a list designated by the concentration committee for each area. At least one of these must be a methodologically oriented course relevant to the student’s area. The concentration committee will approve the program of study for each student in the concentration.

**Qualifying examinations**

After completing all of the core courses in the Ph.D. program, each student takes a comprehensive qualifying examination on the core. The examination is designed to evaluate the mastery students have achieved over the body of knowledge represented by the core. It is intended to measure the ability of students to organize, integrate and creatively apply the knowledge in the field to important problems. Although organized around the courses in the core, the examination is not restricted to material covered in those courses. It is expected that doctoral students will read well beyond the confines of individual courses.

In order to continue in the program, students must attempt the qualifying examination no later than the next regular semester following their completion of the core course requirements, and they must pass the exam by the end of the second regular semester after completing the core course requirements. A student may attempt the examination twice. Examinations are offered twice per year.
A student also must take a comprehensive examination in the concentration. Each student, under the direction of the adviser, will prepare a reading list on the concentration or on a significant portion thereof. The student will then take an oral examination with his or her adviser based upon the reading list. A student may attempt the examination twice. Exams are scheduled at the convenience of the student and the adviser. Each student must pass this second examination before defending a dissertation proposal.

Dissertation

After completing the qualifying examination and course work for the concentration, students must prepare a dissertation involving original research that contributes to the body of knowledge in the field. A committee approved by the director of the program supervises the dissertation work. The chair of the committee must be a core or affiliate faculty member of the Ph.D. program.

The first formal step in the dissertation process is the development and defense of a dissertation prospectus that frames the problem to be studied, provides background on the problem, presents a review of relevant literature and justifies the methodology to be used. The defense of the prospectus as well as the completed dissertation must be done orally to the dissertation committee. The dissertation defense is conducted in a forum open to other students and to faculty.

Continuous enrollment requirements and expectations

To remain in good standing, students must maintain continuous registration for each fall and spring semester (except for official leaves of absence) until they have completed all requirements, including the dissertation. Students are required to enroll for a minimum of nine semester hours each calendar year. Once a student has completed all course requirements and passed the comprehensive examinations, he/she may maintain continuous enrollment of three credits of dissertation research per year. A minimum GPA of 3.0 on a 4.0 scale must be maintained. VCU currently requires registration for a defined credit hour level during both the didactic and research phases of advanced degree training. There is no obligatory linkage between the accumulation of credit hours and an expectation that a degree be awarded. As a guide to monitoring the timely completion of the degree within the present enrollment framework, the accumulation of 180 credits for a doctor of philosophy degree can be taken as a reasonable measure.

Compliance with other relevant university regulations also is required.

While the university provides an array of computing facilities, most students find it desirable to have personal access to computing capacity, including Internet connection. The primary mode of communication between the program office and students is through the Internet and e-mail. Several classes use computer-based interactive technology such as newsgroups.

School of Mass Communications

The School of Mass Communications prepares effective and skilled communicators through quality instruction, advising and student services, based on real-world applications. Through research, professional service and scholarship in applied communications, the school advances the knowledge and practice of a multidisciplinary and evolving media environment. The school values truth, ethics, creativity, innovation, collaboration, cultural diversity, shared governance and community engagement.

The school offers a Bachelor of Science in Mass Communications with specialization in one of three sequences: advertising, journalism and public relations. The school also awards the Master of Science in Mass Communications, with concentrations in the areas of advertising, multimedia journalism and strategic public relations. The advertising program is offered through the VCU Brandcenter.

Administration

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Temple Building, Room 2216
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(804) 828-2660
Fax: (804) 828-9175
www.has.vcu.edu/mac

Yan Jin
Associate Professor and Interim Director

Judy V. Turk
Professor and Associate Director for Special Projects

Will Sims
Associate Professor and Assistant Director

Jeff South
Associate Professor and Director of Undergraduate Studies

June Nicholson
Associate Professor and Director of Graduate Studies

Michael E. Hughes
Assistant Director for Development

Natasha Long
Coordinator of Advising

Mass communications courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

Follow this link to mass communications (MASC) courses.

Graduate information

Admission requirements for graduate study

All areas are open to graduates of accredited colleges and universities. Applicants must satisfy the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences (see the College of Humanities and Sciences guidelines in this bulletin). In addition, they should hold a baccalaureate degree in an area appropriate to the program to which they are applying and a GPA that indicates the ability to pursue graduate work. Although the type of undergraduate degree is not critical to admission, the programs require approved undergraduate curricula or the equivalent in order to grant full admission.

Graduate and Professional Bulletins Bulletins 2012-13

Follow this link to mass communications (MASC) courses.

Mass Communications, Master of Science (M.S.) – advertising

Admission requirements summary

Mass Communications, Master of Science (M.S.) – advertising

Indicate specialization: art direction, communications strategy, copywriting, creative brand management or creative technology

<table>
<thead>
<tr>
<th>Degree:</th>
<th>Semester(s)</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S., Mass Communications</td>
<td>Fall only</td>
<td>May 15</td>
<td>GRE or GMAT required for communication strategy and creative brand management tracks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apr 15 (final deadline for international students)</td>
<td></td>
</tr>
</tbody>
</table>

Special requirements:

Contact the Brandcenter for specific admission requirements: Call (800) 311-3341 toll-free, or visit the Web at www.brandcenter.vcu.edu.

VCU Brandcenter is the graduate studies program in advertising and branding. The program provides advanced preparation with concentrations in creative and strategic advertising development. The curriculum is divided into five tracks:

- Art direction
- Communications strategy
- Copywriting
- Creative brand management
- Creative technology

The working environment at the Brandcenter is similar to an advertising agency: teams of students work together to develop campaigns.

After the first year, qualified students are offered internships where they experience ad agency life and foster industry relationships. In their second year,
students are given the opportunity to network through a mentoring program in which students are matched with agency professionals who offer advice and assistance.

**Admission requirements**

In addition to the M.S. in Mass Communications general admission requirements, applicants to the advertising program must submit materials as specified by the intended curricular track within the Brandcenter.

A full description of all Brandcenter requirements is included in the VCU Brandcenter application kit, available on the Web at [www.brandcenter.vcu.edu](http://www.brandcenter.vcu.edu) or by calling the VCU Brandcenter toll free at (800) 311-3341. Applications must be postmarked no later than June 1 prior to the fall semester for which admission is sought.

**General degree requirements**

The Brandcenter’s master’s degree requires 42 hours beyond the baccalaureate degree. Students devote two years of full-time study to complete the degree requirements. To graduate, students must present a final major project, in portfolio form, before a committee review panel.

All students in the Brandcenter must complete the following set of core courses:

<table>
<thead>
<tr>
<th>Core curriculum</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASC 638 Brand Engagement</td>
<td>3</td>
</tr>
<tr>
<td>MASC 651 Creative Thinking</td>
<td>3</td>
</tr>
<tr>
<td>MASC 655 Brand Interaction</td>
<td>3</td>
</tr>
<tr>
<td>MASC 659 Brand Experiences</td>
<td>3</td>
</tr>
<tr>
<td>MASC 664 Persuasion</td>
<td>3</td>
</tr>
<tr>
<td>MASC 677 The Business of Branding</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

**Art direction**

See **General degree requirements** for core curriculum.

Specific requirements for the art direction track:

<table>
<thead>
<tr>
<th>Art direction curriculum</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASC 601 Digital Suite</td>
<td>1</td>
</tr>
<tr>
<td>MASC 622 Visual Storytelling</td>
<td>3</td>
</tr>
<tr>
<td>MASC 630 Problem Solving for Art Directors</td>
<td>3</td>
</tr>
<tr>
<td>MASC 631 Craft</td>
<td>3</td>
</tr>
<tr>
<td>MASC 652 Concept Development</td>
<td>3</td>
</tr>
<tr>
<td>MASC 653 Portfolio Development</td>
<td>3</td>
</tr>
<tr>
<td>MASC 670 Creative Fusion</td>
<td>3</td>
</tr>
<tr>
<td>MASC 673 Experimentation</td>
<td>2</td>
</tr>
<tr>
<td>MASC 678 Professional Possibilities</td>
<td>1</td>
</tr>
<tr>
<td>MASC 696 Individuation</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

**Communications strategy**

See **General degree requirements** for core curriculum.

Specific requirements for the communications strategy track:

<table>
<thead>
<tr>
<th>Communications strategy curriculum</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASC 627 Visual Storytelling for Strategists</td>
<td>2</td>
</tr>
<tr>
<td>MASC 629 Strategic Thinking</td>
<td>3</td>
</tr>
<tr>
<td>MASC 639 Consumer Culture</td>
<td>3</td>
</tr>
<tr>
<td>MASC 647 Insights and Implications</td>
<td>3</td>
</tr>
<tr>
<td>MASC 648 Innovation</td>
<td>2</td>
</tr>
<tr>
<td>MASC 649 Brand Analytics</td>
<td>3</td>
</tr>
<tr>
<td>MASC 656 Supervised Research Study</td>
<td>1</td>
</tr>
<tr>
<td>MASC 661 Modern Media</td>
<td>3</td>
</tr>
<tr>
<td>MASC 662 Research Methodologies</td>
<td>3</td>
</tr>
<tr>
<td>MASC 678 Professional Possibilities</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

**Copywriting**

See **General degree requirements** for core curriculum.

Specific requirements for the copywriting track:

<table>
<thead>
<tr>
<th>Copywriting curriculum</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASC 601 Digital Suite</td>
<td>1</td>
</tr>
<tr>
<td>MASC 622 Visual Storytelling</td>
<td>3</td>
</tr>
<tr>
<td>MASC 631 Craft</td>
<td>3</td>
</tr>
<tr>
<td>MASC 640 Problem Solving</td>
<td>3</td>
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<tr>
<td>MASC 652 Concept Development</td>
<td>3</td>
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<td>MASC 653 Portfolio Development</td>
<td>3</td>
</tr>
<tr>
<td>MASC 670 Creative Fusion</td>
<td>3</td>
</tr>
<tr>
<td>MASC 673 Experimentation</td>
<td>2</td>
</tr>
<tr>
<td>MASC 678 Professional Possibilities</td>
<td>1</td>
</tr>
<tr>
<td>MASC 696 Individuation</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

**Creative brand management**

See **General degree requirements** for core curriculum.

Specific requirements for the creative brand management track:

<table>
<thead>
<tr>
<th>Creative brand management curriculum</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASC 608 Accounting for Communication Professionals</td>
<td>3</td>
</tr>
<tr>
<td>MASC 629 Strategic Thinking</td>
<td>3</td>
</tr>
<tr>
<td>MASC 632 Foundations of Brand Management</td>
<td>2</td>
</tr>
<tr>
<td>MASC 649 Brand Analytics</td>
<td>3</td>
</tr>
<tr>
<td>MASC 661 Modern Media</td>
<td>3</td>
</tr>
<tr>
<td>MASC 662 Research Methodologies</td>
<td>3</td>
</tr>
<tr>
<td>MASC 667 Applied Brand Management</td>
<td>3</td>
</tr>
<tr>
<td>MASC 668 Advanced Brand Management</td>
<td>3</td>
</tr>
<tr>
<td>MASC 690 Supervised Business Study</td>
<td>1</td>
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<tr>
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<td>24</td>
</tr>
</tbody>
</table>

**Creative technology**

See **General degree requirements** for core curriculum.

Specific requirements for the creative technology track:
For international applicants (without a university degree with English as the

An undergraduate degree in journalism or a related field or several years of

A portfolio of work in journalism

Transcripts of all previous work

of mass communications. Students in this program learn the theory and practice of

skills. The degree requires 36 credit hours, 30 of which are in the journalism

This professionally oriented graduate program focuses on building multimedia

contemporary newsrooms.

The M.S. in Mass Communications with a concentration in integrated public

relations and advertising is a joint degree offered in collaboration with Fudan

University in Shanghai, one of VCU’s 16 recognized international partners, and

VCU’s School of Mass Communications. It is designed to educate Chinese

students for the practice, in China, of professional public relations and/or

advertising. Because in many agencies and organizations public relations and

advertising are integrated, we are integrating the two professional disciplines in

one degree program. The program is for Chinese students who have undergraduate

degrees from a Chinese institution and who are already working or aspire to work

in China for a public relations or advertising agency or an agency that combines

the two persuasive communication disciplines. It is also open to students in the

U.S. with the same undergraduate education and a desire to work in an

internationally active public relations or advertising agency that does business in

Asia/China. The program will prepare its students to function at a higher

professional level than they can attain with their current academic and professional

credentials.

This is a 30-credit program comprising 15 credit hours of VCU courses and 15

credit hours of Fudan University courses. All but one of the courses, a 1-credit

thesis/project course, would be taught in Shanghai at Fudan University; the VCU

courses would be taught by VCU faculty and the Fudan courses by Fudan faculty.

The 1-credit thesis/project course is taught in a two-week residency at VCU in

Richmond. VCU courses are taught in three-week blocks in Fudan’s winter/spring

semester (January through May), on Fridays and Saturdays, totaling 45 hours of

instruction per 3-credit course. The 1-credit thesis/project course is taught in

Richmond at VCU during the VCU summer session. Fudan courses are taught

over regular Fudan University fall semesters prior to and following the VCU

courses. All students are required to demonstrate proficiency in a suite of software

programs commonly used by public relations and advertising practitioners before

enrolling in their first VCU course.

Mass Communications, Master of Science (M.S.) – integrated PR and advertising

The M.S. in Mass Communications with a concentration in integrated public

relations and advertising is a joint degree offered in collaboration with Fudan

University in Shanghai, one of VCU’s 16 recognized international partners, and

VCU’s School of Mass Communications. It is designed to educate Chinese

students for the practice, in China, of professional public relations and/or

advertising. Because in many agencies and organizations public relations and

advertising are integrated, we are integrating the two professional disciplines in

one degree program. The program is for Chinese students who have undergraduate

degrees from a Chinese institution and who are already working or aspire to work

in China for a public relations or advertising agency or an agency that combines

the two persuasive communication disciplines. It is also open to students in the

U.S. with the same undergraduate education and a desire to work in an

internationally active public relations or advertising agency that does business in

Asia/China. The program will prepare its students to function at a higher

professional level than they can attain with their current academic and professional

credentials.

This is a 30-credit program comprising 15 credit hours of VCU courses and 15

credit hours of Fudan University courses. All but one of the courses, a 1-credit

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instruction per 3-credit course. The 1-credit thesis/project course is taught in

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over regular Fudan University fall semesters prior to and following the VCU

courses. All students are required to demonstrate proficiency in a suite of software

programs commonly used by public relations and advertising practitioners before

enrolling in their first VCU course.

Mass Communications, Master of Science (M.S.) – multimedia journalism

The M.S. in Mass Communications with a concentration in multimedia journalism

will prepare students for the practice of professional journalism in a highly

competitive and multiple-platform (print, broadcast, online/digital) news

environment. The program is designed primarily for recent graduates who have an

undergraduate degree in journalism or a related field or for professional journalists

with several or more years of experience who want to upgrade their professional

skills. The program will prepare students to function at a high level in

contemporary newsrooms.

This professionally oriented graduate program focuses on building multimedia

skills. The degree requires 36 credit hours, 30 of which are in the journalism

discipline. Students take an additional six credit hours in a collateral area outside

of mass communications. Students in this program learn the theory and practice of

journalism in an immersion news environment, and can further specialize through

graduate electives, projects and stories in any number of “beat” areas. For

example, students can focus on coverage of health or the environment or

concentrate on learning about international media coverage.

The program is designed so that students will take three courses each semester

(fall and spring). During each semester, two of the courses will be offered in the

evenings and one will be offered online. Thus, students will be able to complete

the course work over two years of study.

Curriculum

MASC 611 Research Methods in Mass Communication (3)
MASC 642 Online Journalism I (3)
MASC 643 Online Journalism II (3)
MASC 644 Computer-assisted Reporting (3)
MASC 645 Visual Journalism (3)
MASC 646 Convergence Law and Ethics (3)
MASC 684 Multiplatform Storytelling (3)
MASC 685 The Business of Media (3)
MASC 686 International Journalism (3)
MASC 688 Converged Media Applications (3)
or MASC 699 Thesis (3)
Graduate electives (6)

Admission requirements

Beyond the general standards listed in the Graduate studies at VCU section of this

bulletin, admission to the multimedia journalism concentration of the mass

communications master’s program also will be based on:

• An undergraduate degree in journalism or a related field or several years of

  professional journalism experience

• An undergraduate GPA that exceeds 2.7 overall

• A GRE (general test) score that indicates the ability to pursue graduate work

• For international applicants (without a university degree with English as the

  language), TOEFL (or comparable) scores

Students who have not completed baccalaureate course work in journalism or who

have not had the appropriate professional experience may be required to take

undergraduate courses as a foundation. These do not count toward the graduate

degree.

In addition, applicants must provide:

• A detailed CV showing work experience in journalism or appropriate

  educational credentials

• Transcripts of all previous work

• Three recommendations from persons who are qualified to give information

  concerning the applicant’s ability for the specific program of study proposed

• A personal statement detailing specific journalism career goals

• A portfolio of work in journalism

Mass Communications, Master of Science (M.S.) – strategic public relations

Graduates of the fast-track strategic public relations concentration of the Master of

Science in Mass Communications are a new generation of communications

professionals who are able to function in high-level management positions and

apply sophisticated strategic thinking to accomplish organizational objectives.

This selective professional program is 30 credit hours, including six hours of

approved elective courses in areas such as nonprofit management and marketing.

Courses are taught by full-time faculty and experienced public relations

professionals. Students take weekend classes (Friday evenings and all day

Saturday) as a cohort over four semesters. Continued full-time public relations

employment is encouraged during the program.

One of the program’s unique features is a two-week study abroad experience, an

expectation of students while they are enrolled in the “Strategic PR in a Global

Environment” course (MASC 683). The study tour is led by a full-time faculty

member. The cost of the study abroad program is not included in the program’s

tuition.

Admission requirements include an academic background in public relations

(university or professional accreditation program) and appropriate public relations

experience. Applicants also need to take the Graduate Records Examination General Test.

**Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASC 671 Strategic PR in a Digital Environment</td>
<td>3</td>
</tr>
<tr>
<td>MASC 672 Strategic PR Research and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>MASC 675 Strategic PR Management</td>
<td>3</td>
</tr>
<tr>
<td>MASC 676 Public Relations Ethics and Law</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 651 Organizational Communication</td>
<td>3</td>
</tr>
<tr>
<td>MASC 682 Strategic Media Relations</td>
<td>3</td>
</tr>
<tr>
<td>MASC 683 Strategic PR in the Global Environment</td>
<td>3</td>
</tr>
<tr>
<td>MASC 694 Strategic PR Campaign Design and Implementation</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives chosen from these School of Business offerings

- List A: Financial courses                        3
  - ACCT 507 Fundamentals of Accounting
  - ECON 500 Concepts in Economics
  - FIRE 520 Financial Concepts of Management
  - MGMT 524 Statistical Elements of Quantitative Management

- List B: Theory and application courses
  - MGMT 530 Fundamentals of the Legal Environment of Business
  - MGMT 540 Management Theory and Practice
  - MGMT 641 Organizational Leadership and Project Team Management
  - MGMT 655 Entrepreneurship
  - MGMT 656 Best Practices in Leadership
  - MGMT 691 Topics in Management (negotiations)
  - MKTG 570 Concepts and Issues in Marketing
  - MKTG 671 Marketing Management
  - MKTG 672 Concepts in Consumer Behavior

**Admission requirements**

To apply online, complete the application form available at the VCU Graduate School website. Note that this program has a summer admission only. Pay the online application fee. Send official, sealed transcripts for all graduate and undergraduate work to the VCU Graduate School. Make sure that official GRE scores are also sent to the Graduate School. Deadlines for admission are Jan. 15 and March 15 for preferred consideration. The school may admit other students who submit materials beyond those review deadlines, depending on available space.

Include the following items in your application packet:

- An updated resume
- A personal statement of educational and professional objectives
- Three official graduate references, using the forms available on the Graduate School website
- Portfolio material from undergraduate and/or graduate and/or professional experience
- Official transcripts of all graduate work
- Acceptable scores on the GRE General Test

International applicants without a degree from an English-language university must also submit TOEFL scores.

Contact the director of graduate studies in the School of Mass Communications for additional information and mailing instructions.

Students may also choose to enroll in the VCU-Fudan University double master’s degree program. These students take required courses at both Fudan University in Shanghai and at VCU in Richmond, Va. The program requires a minimum of 31 credit hours: 18 are from VCU’s School of Mass Communications and the remaining 13 credit hours — preparatory foundation courses and the thesis supervision — are taken at Fudan University’s School of Journalism. Upon completion of all requirements, students in this double master’s degree program will receive both the M.S. in Mass Communications from VCU and the Master of Literature from Fudan University.

The double degree program generally takes three academic years. The first three semesters are typically completed at Fudan. Students will continue their studies in VCU’s School of Mass Communications for three semesters (second semester and summer of the second academic year and fall semester of the third academic year). Students return to Fudan for the final semester.

**Admission requirements**

In addition to general admission requirements for the M.S. in Mass Communications and those for the strategic public relations track, applicants for the VCU-Fudan double master’s degree program must:

- Pass the entrance examination for postgraduate studies in the School of Journalism at Fudan University.
- Attain a qualified English proficiency level (i.e., greater than 600 for TOEFL or equivalent for iBT Test).
- Attain a GRE General Test level of more than 1050 with no less than 500 for verbal (or equivalent for revised GRE).

**Curriculum information**

**Preparatory foundation courses: taken at Fudan** (10 credit hours, not counted toward 31 credit hours for degree)

- Advanced English (2, 2)
- Political theory training (2, 2)
- Specialized English (2)

**Basic courses: taken at Fudan** (Required, 8 credit hours)

- JOUR6003 Research Methods of Communication (2)
- JOUR6005 Media Management (2)
- JOUR6007 Marxist Journalistic Ideology (2)
- JOUR6008 Research on Journalistic History and Theory (2)

**Specialized courses: taken at Fudan** (Electives, minimum of 5 credit hours)

- JOUR6009 Journalist Practice (3)
- JOUR6010 The History of China’s Journalism Thoughts (2)
- JOUR6011 The Study of Communication (3)
- JOUR6012 Cyber Communication (2)
- JOUR6013 Marketing Communication (3)
- JOUR6014 Consumer Behavior (2)
- JOUR6015 The Study of PR (2)
- JOUR6016 The Study of Current Publishing (3)
- JOUR6017 The Study of Current Newspapers (2)

**Strategic public relations courses: taken at VCU** (Elective, 18 credit hours)

- MASC 671 Strategic PR in a Digital Environment (3)
- MASC 672 Strategic PR Research and Evaluation (3)
- MASC 675 Strategic PR Management (3)
- MASC 682 Strategic Media Relations (3)
- MASC 683 Strategic PR in the Global Environment (3)
- MASC 694 Strategic PR Campaign Design and Implementation (3)

**Internship: taken at VCU** (Elective, 1-3 credit hours)

- MASC 695 Fieldwork/Internship (1-3)

**Thesis: taken at Fudan** (0)

**Media, Art, and Text, Doctor of Philosophy (Ph.D.)**
Admission requirements summary

<table>
<thead>
<tr>
<th>Media, Art, and Text, Doctor of Philosophy (Ph.D.)</th>
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<tbody>
<tr>
<td>Degree:</td>
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<tr>
<td>Ph.D.</td>
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<tr>
<td>Semester(s): Fall only</td>
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<tr>
<td>Deadline:</td>
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<tr>
<td>Jan 15</td>
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<tr>
<td>Test requirements:</td>
</tr>
<tr>
<td>GRE-General</td>
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</tbody>
</table>

Special requirements:
Additional materials to be submitted directly to Thom Didato. For specific instructions please see www.has.vcu.edu/eng/graduate/admission.htm

VCU’s interdisciplinary doctoral program in media, art, and text is a joint endeavor of the Department of English, the School of the Arts and the School of Mass Communications. The program emphasizes the historical and theoretical foundations essential to the scholarly study of media, both old and new, broadly defined. It provides an intellectually stimulating environment that encourages students to work both collaboratively and independently, as well as across and between disciplines and media. Students maintain a base in their primary area of research, which is usually but not always the field in which they have done prior graduate work.

Curriculum
The 42-hour curriculum comprises 36 hours of course work and a minimum of six hours of dissertation research. Course work includes a core of four required courses taken during the first two semesters by all incoming students. Three doctoral seminars provide a shared historical and theoretical foundation for the study of media, art, and text, while a workshop offers the opportunity to develop and expand professional and/or creative skills relevant to the student’s career goals and research focus. In addition, all students will take a research methods course in a field relevant to their anticipated area of dissertation research.

Beyond the core, students select 21 hours of elective credits from course offerings in disciplines relevant to their research interests and career goals. The program offers a topics seminar focused on the history, theory or practice of media, art, and text. Independent study and internships are also available as electives. While enrollment in courses with the MATX prefix is guaranteed to matriculated MATX students, enrollment in other graduate courses is subject to the conditions established by individual units.

Together the core and the electives support the interdisciplinary work of the dissertation, which is an original scholarly examination of some aspect of media, art, and/or text. It may include work in media other than text. It is supervised by a committee consisting of four or five members drawn from disciplines relevant to the research topic.

Core courses (12 credits)
- MATX 601 Texts and Textuality
- MATX 602 History of Media, Art, and Text
- MATX 603 History of Interdiscipnarity and Multimedia
- MATX 604 Workshop

Methods course (3 credits)
Electives (21 credits)
Dissertation (6 credits minimum)

Degree requirements

Credit requirements
Students are required to complete 36 credit hours in core and elective courses and a minimum of six credit hours of dissertation research. Core courses are offered through the MATX program. Additional elective courses are drawn from seminars offered through MATX and approved courses in participating units.

Grade requirements
To graduate, degree applicants must achieve an overall grade point average of 3.0 (B) on a 4.0 scale with a grade of C in no more than two courses. The GPA for graduation will be based on all graduate courses attempted after acceptance into the program.

Requirements for admission to candidacy
Before beginning formal dissertation research, students must complete all 36 hours of required course work, both stages of the e-portfolio and the requirements described below. Upon completion of these, the student will apply for degree candidacy.

Dissertation committee
The dissertation committee consists of the director (who must hold a Ph.D.) and three or four additional members whose scholarly knowledge and interests are relevant to the project. The committee must have at least one member from each of the sponsoring units (Department of English, School of the Arts, School of Mass Communications). All must be members of VCU’s graduate faculty.

Appropriate faculty from outside VCU may serve on committees (but not as director) with the approval of the MATX director and the graduate dean. It is the student’s responsibility to assemble the committee, in consultation with the dissertation director. Committees will not be appointed by the program.

E-portfolio
Work on the e-portfolio will begin in MATX 604 in the spring of the first year. There are no technical specifications, and content will include, but is not limited to, work done in the first two years in the program. It will take the form of a website and must demonstrate the technical skills (Web design, audio, video, etc.) relevant to the student’s work on the dissertation and the career sought after VCU.

Submission is a two-stage process:
- Stage 1: May of the first year
  A three- to five-page design rationale for the portfolio site along with a mock-up or rough structure
- Stage 2: April of the second year
  A finished, live site accompanied by a five-page statement relating it to the student’s work inside and outside the program and outlining how it uses media techniques to promote a specific professional and/or creative identity

Each submission is graded pass/fail and may be repeated once. A second failure results in automatic termination from the program.

Competency
Candidates must demonstrate competency in a skill or technique relevant to the dissertation research or planned professional career. The dissertation committee approves and administers the competency portion. Graded pass/fail, the test may be repeated once.

Bibliography exam
On a reading list of 20 to 30 sources relevant to or supportive of the dissertation topic. The dissertation committee approves and administers the bibliography exam. Graded pass/fail, the test may be repeated once.

Dissertation prospectus and prospectus defense
The prospectus is a 15- to 20-page document that indicates the significance of the proposed research, gives a short review of relevant literature, states the research question, specifies the proposed methodology and indicates how the project lays the foundation for the anticipated academic or professional career. It also includes a work plan for the completion of research and writing, as well as a complete bibliography. The prospectus is defended orally before the dissertation committee, which may accept, reject or require revisions. The defense may be repeated once.

Dissertation and dissertation defense
The dissertation is an original, interdisciplinary and scholarly examination of a topic relevant to an aspect of media, art, and/or text. It may include work in media other than text. Given the varied nature of doctoral research, there is no set time frame for completion of a dissertation. It is expected, however, that the dissertation will be completed about two years after attaining candidacy. The dissertation will be defended orally before the dissertation committee. Successful defense of the dissertation completes the requirements for the degree.

School of World Studies
On May 16, 2003, the Board of Visitors of Virginia Commonwealth University approved the creation of the School of World Studies within the College of Humanities and Sciences. The school is a creative, interdisciplinary grouping of subject areas in the humanities and the social sciences that provides its students with the knowledge, skills and experience necessary for success in an increasingly interdependent, globalized 21st century.
Sensitivity to the values, beliefs and structures of other cultures is a necessary characteristic of community and business leaders of the next century. The ability to live and work alongside those who are perceived as different from oneself and to recognize similarities among all humans will become an increasingly essential attribute of an educated citizen.

To achieve its mission, the School of World Studies actively fosters and promotes a wide range of endeavors, including the establishment of interdisciplinary undergraduate and graduate programs with an international focus across the campuses, and develops close ties with such programs as African American studies, womens studies, English, history, life sciences and other units throughout the university. In addition there are collateral requirements such as experiential learning through an approved internship, service-learning course or study-abroad program, the fulfillment of a World Passport, and advanced language skills.

Although the programs currently encompassed by the school are primarily at the undergraduate level, the School of World Studies offers a select number of graduate courses.

### Administration

312 North Shafer Street  
P.O. Box 842021  
Richmond, Virginia 23284-2021  
(804) 827-1111  
Fax: (804) 827-3479  

www.worldstudies.vcu.edu  

Executive Committee  
Christopher Brooks  
Angelina Overvold  
Mark Wood

### Degree programs

The School of World Studies offers baccalaureate degrees in the following fields:

**Anthropology** – Bachelor of Science  
**Foreign Language** – Bachelor of Arts  
- French  
- German  
- Spanish

**International Studies** – Bachelor of Arts (with the L. Douglas Wilder School of Government and Public Affairs)  
- area studies  
- global studies

**Religious Studies** – Bachelor of Arts

Minors are awarded in these areas:

- African studies  
- Anthropology  
- Arabic and Middle Eastern studies  
- Asian and Chinese studies  
- Catholic studies  
- European studies  
- French  
- German  
- International social justice studies  
- Islamic studies  
- Italian studies  
- Judaic studies  
- Latin American studies  
- Mediterranean studies  
- Religious studies  
- Russian studies  
- Spanish  
- World cinema

Undergraduate certificates are awarded in these areas:

- International management studies (in conjunction with the School of Business)
- International social justice studies (in conjunction with the School of Social Work)
- Spanish/English translation and interpretation

Information regarding curricula is provided on the respective program pages.

### Languages

The School of World Studies offers students significant opportunities to broaden their knowledge of diverse cultures through language study, including:

- Arabic  
- Biblical Hebrew  
- Chinese  
- French (major and minor)  
- German (major and minor)  
- Hindi  
- Italian  
- Latin  
- Portuguese  
- Russian (minor)  
- Spanish (major and minor)  
- Zulu

In cases where the appropriate level of instruction is unavailable, faculty advisers will assist the student in identifying language study options at other U.S. institutions or abroad.

### Experiential learning and study abroad

#### World Passport

As part of the School of World Studies’ commitment to learning through engagement, each student within the school is required to complete a World Passport to introduce him or her to a breadth of experience beyond the core curriculum: cultural opportunities, experiential learning, seminars and conferences, international experiences, and multicultural campus activities.

Students are required to obtain information about their personal World Passport from the School of World Studies Advising Office. The passport will be kept in the student advising file throughout the duration of study. It will be reviewed and stamped by an SWS adviser prior to graduation, and then given to the student upon completion.

The passports are color-coded for **four required categories** of activities to be completed by students before graduation from VCU with a degree from the School of World Studies.

- **Professional preparation** prepares students for careers, graduate school and lifelong learning.
- **Crossing boundaries** exposes students to international and multicultural interactions and ideas.
- **Community engagement** enhances the undergraduate experience by greater involvement in the community.
- **Experiential learning** provides students the opportunity to demonstrate success in applying program content beyond a classroom setting.

The School of World Studies is committed to the premise that learning is best facilitated through engagement with the dynamic complexities and challenges of the world outside the classroom. Both majors and minors in the school are required to participate in experiential learning options. All experiential learning opportunities must receive prior approval from the SWS Advising Office and include internships, service-learning courses, certain noncredit options and study abroad.

### Study abroad

Summer study-abroad programs provide students with opportunities for short-term immersion in the language, culture and civilization of the countries they visit. A list of current VCU study abroad opportunities can be found at [www.international.vcu.edu/about](http://www.international.vcu.edu/about). VCU is a member of the International Student Exchange Program, which offers junior year abroad programs at one of 40 universities worldwide. For more information about study abroad or the World Studies Community Scholars, visit the School of World Studies website at [www.worldstudies.vcu.edu](http://www.worldstudies.vcu.edu).
World Passport completion

The instructions for successful completion of the World Passport requirements, along with a description of each of the color-coded sections, can be found on the World Studies website at www.worldstudies.vcu.edu or in the World Studies Advising Office. Students are responsible for attending appropriate events, securing documentation of attendance and meeting with their adviser to have the passport stamped as points are earned for each category. The potential events can be determined by utilizing the category descriptions noted in the passport or by visiting the SWS Calendar at www.worldstudies.vcu.edu. Evaluation of the passport is on a pass/fail basis. Should a student lose his or her passport, he or she would be required to re-create attendance at events in essay form or complete the requirement in some other way determined by the adviser or program coordinator.

World Studies Community Scholars

Outstanding School of World Studies majors can be considered for special recognition as World Studies Community Scholars through faculty recommendation.

For more information, contact the SWS Advising Office: SWSAdvising@vcu.edu.

School of World Studies courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

The World School offers courses in the following areas:

- Use this link to see anthropology (ANTH) courses.
- Use this link to see foreign literature in English translation (FLET) courses.
- Follow these links to geography (GEOG) courses or the (GEZO) laboratories.
- Use this link to see international studies (INTL) courses.
- Use this link to see religious studies (RELS) courses.
- Use this link to see world studies (WRLD) courses.

Foreign language courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

Students planning to take a foreign language course at VCU must take the placement test in order to determine proper course selection. Specific information about the placement test is available on the School of World Studies website at www.has.vcu.edu/wld/placement.

Students who wish to complete a language through the intermediate level or higher are required to consecutively complete 101, 102 and 201 or the equivalent. Students may then choose either 202 or 205 to complete the intermediate level.

The School of World Studies offers courses in the following languages:

- Use this link to see Arabic (ARBC) courses.
- Use this link to see Chinese (CHIN) courses.
- Use this link to see foreign languages (FLRL) courses.
- Use this link to see French (FREN) courses.
- Use this link to see German (GRMN) courses.
- Use this link to see Italian (ITAL) courses.
- Use this link to see Latin (LATN) courses.
- Use this link to see Portuguese (PORT) courses.
- Use this link to see Russian (RUSS) courses.
- Use this link to see Spanish (SPAN) courses.

Department of African American Studies

The Department of African American Studies at Virginia Commonwealth University provides an educationally rich environment in which students and scholars research, learn and teach about the past and present realities of people of African descent. Employing a wide range of theories, perspectives, methods and tools, African American Studies faculty explore social, political, economic and cultural realities and connections between the experiences of persons in Africa and throughout the African Diaspora. The department emphasizes experiential learning, offers study abroad opportunities and internships.

African American Studies Courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

Follow this link to African American studies (AFAM) courses.

Department of Biology

The Department of Biology offers programs leading to baccalaureate, master’s and doctoral degrees; the doctoral degree is offered through the Integrative Life Sciences program. Students may specialize within many areas, such as molecular and cellular biology, genetics, aquatic and terrestrial ecology, systematics, physiology, neurobiology, and developmental biology. Students also may develop an interdisciplinary focus to their degree program, for example within areas such as bioinformatics, cancer biology, forensic science and environmental science.

In addition to the courses offered by the Department of Biology, graduate students may enroll in graduate courses offered through VCU Life Sciences and these departments at the VCU Medical Center: Anatomy and Neurobiology, Biochemistry, Biostatistics, Human and Molecular Genetics, Microbiology and Immunology, Pathology, Pharmacology and Toxicology, and Physiology and Biophysics. Visit the Department of Biology’s Web site: www.has.vcu.edu/bio.

Administration

Donald R. Young
Professor and Department Chair

Jennifer K. Stewart
Associate Professor and Director of Graduate Studies

www.has.vcu.edu/bio

Biology courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

The following courses do not apply toward the major in biology: BIOL 101, BIOC 101, BIOC/ENVS 103, BIOL 201, BIOC 201, BIOL 205, BIOC 205, PHIS 206, PHIZ 206, BIOL 209, BIOC 209, BIOL 217, and BIOL 332. A C grade or better in each prerequisite course is required for enrollment in all biology courses BIOL 205 or higher that have prerequisites listed in their course descriptions.

Follow these links to biology (BIOL) courses or the (BIOZ) laboratories.

Biology, Master of Science (M.S.)

Admission requirements summary

<table>
<thead>
<tr>
<th>Biology, Master of Science (M.S.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree:</strong></td>
</tr>
<tr>
<td>M.S.</td>
</tr>
<tr>
<td>Other semesters by special permission from the graduate director</td>
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</tbody>
</table>

The Department of Biology offers programs leading to a Master of Science degree. Areas of specialization include molecular and cellular biology, terrestrial and aquatic ecology, systematics, and physiology and developmental biology.
Admission requirements
In addition to the general requirements for admission to the Graduate School, the following requirements of the Department of Biology represent the minimum acceptable standards for admission:

- Bachelor’s degree in biological or related science or equivalent
- Appropriate college-level background in mathematics, chemistry and physics
- Three letters of recommendation pertaining to the student’s potential ability as a graduate student in biology
- Student’s written statement concerning career and research interests
- Transcripts of all previous college work
- Satisfactory scores on the GRE (general test)

Most entering graduate students in the Department of Biology have a 3.0 GPA or above on undergraduate work and a combined score of 1,000 or more on the verbal and quantitative sections of the GRE. Students who do not meet the minimum entrance requirements, but nevertheless wish to pursue an advanced degree in biology, are encouraged to contact the director of the graduate program in biology to discuss their interests and concerns. Admission on a provisional basis may be possible for students lacking the necessary requirements for full admission. Deficiencies must be removed by the end of the first year of residence. Courses that are remedial or designed to remove deficiencies will not be accepted toward the fulfillment of the course requirements for the master’s degree.

Degree requirements
Master of Science degree candidates are required to take a minimum of 30 semester credits, which shall include the following specifications:

- 19 credits must be courses designated exclusively for graduate students
- A minimum of two and a maximum of four credits must be BIOL 693
- A minimum of six and a maximum of nine credits must be BIOL 698 Thesis
- At least five lecture or lecture laboratory courses must be taken from at least three different instructors (excluding Thesis, Research Seminar and Independent Study)

All graduate students are required to write a thesis proposal and a formal thesis following a prescribed format. The thesis proposal must be approved by the student’s graduate committee and the chair of the department to initiate thesis research. At the earliest possible opportunity, students must take STAT 543 or an equivalent statistics course approved by the student’s graduate committee. Students entering the program with a statistics background equivalent to STAT 543 may petition the Biology Department Graduate Academic Committee to have this requirement waived.

A maximum of six semester hour credits from graduate work taken at other institutions may be transferred if they meet approval of the department.

Receipt of a grade of C or lower in two courses constitutes automatic dismissal from the graduate program in biology. Courses with a grade of C or lower cannot be applied to satisfying the degree requirements.

Each student will be required to pass a final examination, which will be primarily a defense of the thesis.

Continuous enrollment in the graduate program is required. Interruption in continuous enrollment for any reason without a leave of absence approved by the director of the graduate program in biology will require that students reapply to the Department of Biology Graduate Academic Committee.

Admission requirements summary

<table>
<thead>
<tr>
<th>Integrative Life Sciences, Doctor of Philosophy (Ph.D.)</th>
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</thead>
<tbody>
<tr>
<td>Degree: Ph.D.</td>
<td>Semester(s) of entry:</td>
</tr>
<tr>
<td></td>
<td>Fall (preferred)</td>
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<tr>
<td>Testing dates:</td>
<td>Feb 1</td>
</tr>
<tr>
<td>Test requirements:</td>
<td>GRE</td>
</tr>
<tr>
<td>Special requirements:</td>
<td>See program Web site</td>
</tr>
</tbody>
</table>

The Ph.D. in Integrative Life Sciences is designed for students who want to conduct research that is integrative across multiple disciplines and that takes a systems approach to emerging research questions across the many fields that comprise the life sciences. Students may opt to work with faculty members from departments on both campuses. The program provides the opportunity to conduct interdisciplinary research at multiple scales of study from the molecular to ecosystem levels with an emphasis on the concepts of systems biology and biological complexity.

Admission requirements, procedures and financial aid
The purpose of the admission requirements for the Ph.D. program is to ensure selection of outstanding students whose motivation, ability and education prepare them for interdisciplinary graduate study in the life sciences. The following requirements and procedures incorporate those of the VCU Graduate School.

1. Admission requirements
   a. Graduation from an accredited college or university, with a degree in a discipline, a spectrum of course work, and/or professional experience that provides an appropriate background for graduate-level study in the life sciences.
   b. An undergraduate or graduate record indicating superior performance. Applicants must have a minimum GPA of 3.0 on a 4.0 scale for at least the last 60 credits of undergraduate work or for a completed graduate degree. In very unusual cases, this requirement may be waived by approval of the dean of the Graduate School.
   c. Satisfactory scores on the Graduate Record Examination. Scores for appropriate advanced tests, in particular biology, chemistry or molecular biology/biochemistry, are recommended.
   d. For applicants whose native language is not English, satisfactory scores from a standardized test commonly used and deemed appropriate for evaluation of English language proficiency, such as the TOEFL.
   e. Letters of recommendation from three present or former instructors or other individuals qualified to evaluate the applicant’s ability to engage in graduate study in the life sciences.
   f. A written statement describing the applicant’s interests, motivation, education and goals for pursuing graduate study in the life sciences.

2. Admission procedure
   a. The above material must be sent along with a completed application form and the required application fee to the Graduate School, Virginia Commonwealth University, Richmond, VA 23284-3051. Application forms and further information can be found on the Graduate School’s Web page at www.grauate.vcu.edu.
   b. Applicants may apply for admission to begin studies any semester of the year, but fall admission is recommended. Admission to graduate study in integrative life sciences requires majority approval and recommendation by the Graduate Program Committee and acceptance by the vice provost for Life Sciences and the dean of the Graduate School.

3. Types of admission
   a. Degree-seeking student: An applicant who meets all requirements for admission to the program.
   b. Provisional student: An applicant who has not fully met the requirements of the program but shows exceptional promise. Applicants with outstanding potential but who lack courses or training in specific areas deemed necessary for success in the program may be required to complete specific course work. Provisionally accepted students must remove all conditions of the provisional admission within one year of enrollment. Failure to meet these conditions will result in the student being dismissed from the program. No prerequisite courses taken as a provisional student may be applied toward the graduate degree.

4. Financial aid. In addition to need-based financial aid awarded through the Office of Financial Aid, students may be eligible to be considered for a variety of scholarships, fellowships, and teaching and research assistantships. Information regarding available financial support will accompany an offer of acceptance.
Degree requirements

Students are required to complete course work in core and elective courses and to conduct significant research. All work toward the degree must be completed within seven years of the first enrollment.

1. **Credit requirements.** Students in the program are required to earn a minimum of 64 hours of graduate-level credits. At least one-half of the credit hours presented for graduation must be at the 600 level or higher.

2. **Grade requirement.** Degree applicants must achieve an overall GPA of 3.0 (“B”) with a grade of “C” in no more than two courses. The GPA for graduation is based on all graduate courses attempted after acceptance into the program.

3. **Transfer and M.S. credits.** Graduate-level course work taken in another program at VCU or at another institution, shall be evaluated to determine whether it can be used to fulfill degree requirements of this program. There is no limit to the number of credits that can be transferred from another program at VCU as long as they have not been previously applied toward another degree. A maximum of six credits earned at another institution can be accepted for transfer into the program if not previously applied toward another degree. A minimum grade of “B” is required for credits transferred.

4. **Research adviser and committee.** New students entering the program may be initially advised by an advisory committee of faculty members to assist students with initial course selection and to provide advice concerning the program. Students should select a research adviser prior to their third semester of study. The research adviser may be chosen from among the many graduate faculty members associated with this program from either campus.

Students are required to form a research advisory committee that is headed by the research adviser and consists of a minimum of five members of the VCU graduate faculty. Individuals who are not graduate faculty members (i.e. individuals from another institution or industry) must apply to the dean of the Graduate School for temporary membership. The significant areas of the student’s research focus should be represented by the members of the research advisory committee. At least two members of the committee shall be from departments other than that of the research adviser, with one of those members being integrally associated with the student’s research to foster the interdisciplinary intent of this degree program. Students should form their committee no later than the end of their third semester of study.

5. **Written and oral examinations.** Before admission to candidacy for the Ph.D. degree, students must successfully complete a comprehensive written examination and an oral examination. The student’s research advisory committee will administer both exams. Students should take the written exam upon completion of all required didactic course work. It will focus on material covered in core and selected elective courses as well as fundamental knowledge relevant to the student’s research field. Upon successful completion of the written examination and submission and acceptance of a research proposal, students should take an oral examination that includes a defense of the proposed research project and other subject areas deemed appropriate by the committee. Students may retake the written and oral examinations only once.

6. **Dissertation research.** The dissertation research project should represent a significant contribution to the body of knowledge in its field and should be deemed suitable for publication in refereed journals. The emphasis of the research conducted by students in this program should be on interdisciplinary research, incorporating two or more disciplines and with a systems approach. Research projects may take advantage of the many research opportunities across the life sciences on both campuses. Projects may encompass multiple scales of study from molecular to ecosystem levels. Students shall prepare a written dissertation describing the completed research using the format approved by the Graduate School. An oral defense of the dissertation, under the direction of the research advisory committee and open to all faculty members, also is required. Upon successful completion of all degree requirements, students will graduate with the Ph.D. in Integrative Life Sciences.

Curriculum requirements

A minimum total of 64 credits is required and is distributed as follows:

- 12 credits in core courses
  - LFSC 510/BIOL 545 Biological Complexity
  - LFSC 520/BIOL 548 Bioinformatic Technologies
  - LFSC 630 Integrative Life Sciences Research
  - LFSC 690 Research Seminar in Integrative Life Sciences
  - OVPR 601 Scientific Integrity

- a minimum of three credits in an advanced statistics, advanced mathematics or experimental design course depending on the students area of research
  - BIOL 606 Quantitative Ecology
  - BIOS/STAT 523 Nonparametric Statistical Methods
  - BIOS 524 Biostatistical Computing
  - BIOS 572 Statistical Analysis of Biomedical Data
  - BINO/BIOL 601 Integrated Bioinformatics
  - ENV 603 Environmental Research Methods
  - LFSC 610 Analytical Methods in Biocomplexity Analysis
  - MATH 591 Topics in Mathematics: Mathematical Biology
  - MATH 617 Applied Mathematics I
  - STAT/BIOL 544 Statistical Methods II
  - STAT 623 Discrete Multivariate Analysis
  - STAT 643 Applied Linear Regression
  - Other courses based on approval of research advisory committee

- a minimum of nine credits in elective courses based on research interest and approved by research advisory committee

- a minimum of 40 credits in directed research (LFSC 697)

* Students are expected to enter the program with a proficiency in statistics at the introductory level, as exemplified by STAT/BIOL 543 Statistical Methods. Students not at this level, as evidenced by prior course work, will be required to take STAT/BIOL 543 or an equivalent course.

Department of Chemistry

The Department of Chemistry offers programs leading to the Bachelor of Science, Master of Science and Doctor of Philosophy degrees. For undergraduate students, the Bachelor of Science offers concentrations in chemical science, professional chemist, professional chemist with honors, biochemistry and chemical modeling. For graduate students, the Master of Science and Doctor of Philosophy programs provide opportunities for concentrated study in analytical, inorganic, organic or physical chemistry, or chemical physics. A plan of study is worked out for each student to ensure a sound basis for research. In keeping with the university’s commitment as an urban institution, the department also offers part-time programs leading to these degrees.

Refer to the department’s website for more information: www.has.vcu.edu/che.

Administration

Scott Gronert
Professor and Department Chair

Sally S. Hunnicutt
Associate Professor and Assistant Department Chair

www.has.vcu.edu/che

Admission requirements for graduate study

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

Graduate students in the Department of Chemistry may receive financial support via teaching or research assistantships or fellowships. Application forms and instructions for applying to all graduate programs are available on the Graduate School website at www.graduate.vcu.edu.
General degree requirements for graduate programs

Entering graduate students are required to take proficiency examinations in analytical, inorganic, organic and physical chemistry. These examinations are at the level of sound undergraduate courses and are offered preceding the start of the school’s fall and spring semesters. These tests are used to evaluate the student’s strengths and weaknesses, and the student’s program is planned accordingly.

Chemistry courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

A minimum grade of C is required in each prerequisite course: CHEM 100 (if required through placement qualifiers), CHEM 101, CHEM 102, CHEM 301, CHEM 302 and CHEM 309.

In chemistry laboratories each student is charged for breakage incurred. Approved safety glasses are required. Failure to check out of laboratory, upon withdrawal or for other reasons, will incur a charge, billed from the Student Accounting Department.

Follow these links to chemistry (CHEM) courses or the (CHEZ) laboratories.

Admission requirements summary

Chemistry, Doctor of Philosophy (Ph.D.)
Indicate specialization:
Analytical, Inorganic, Organic, Physical or Chemical Physics

<table>
<thead>
<tr>
<th>Degree: Ph.D.</th>
<th>Semester(s): Fall</th>
<th>Deadline: Mar 15</th>
<th>Test requirements: GRE</th>
</tr>
</thead>
</table>

Students seeking the Doctor of Philosophy degree must demonstrate competency in analytical, inorganic, organic and physical chemistry by satisfactory performance on the proficiency exams or with a minimum grade of B in the appropriate course.

The Doctor of Philosophy student must earn a minimum of 18 credits in eight graduate courses, not including credit for seminar (CHEM 690 or 692), research (CHEM 697) or CHEM 693 Chemistry Perspectives and Ethics. The credit hours must include three of the core courses (9 credits) selected from the following four areas.

Analytical:
3 credits of graduate analytical course work

Inorganic:
CHEM 620 Advanced Inorganic Chemistry

Organic:
CHEM 504 Advanced Organic Chemistry

Physical:
CHEM 510 Atomic and Molecular Structure or CHEM 511 Chemical Thermodynamics and Kinetics

Additional graduate courses to be taken will be determined in consultation with the faculty research adviser and the faculty of the Department of Chemistry. Students are expected to participate in the department’s seminar program and present at least two formal talks in the seminar program (2 credits of CHEM 692). In addition to course work and seminar, the doctorate requires a minimum of 30 credits in CHEM 697 (directed research), and the total of all credits must be at least 60.

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

Chemical physics track

Students entering the chemical physics track must pass proficiency examinations in two areas of chemistry and two areas of physics (mechanics, electricity and magnetism). Students entering with a bachelor’s or master’s degree in chemistry who have not taken the courses previously may satisfy the physics requirement with an A or B in PHYS 301, 302 and 376. Students entering with a bachelor’s or master’s degree in physics who have not taken the chemistry courses previously may satisfy the chemistry requirement with an A or B in two of the four courses, CHEM 301-302 (organic chemistry; the two-course sequence counts as one course only), CHEM 406 (inorganic chemistry), CHEM 409 (instrumental analysis) or CHEM 510 (atomic and molecular structure).

Students in the chemical physics program are required to complete CHEM 510 or PHYS 580, CHEM 511, CHEM 612, PHYS 576 and 641, plus three courses from the following list: CHEM 512, 550, 591, 610, 611, 615, 616, 620, 634, 635, 691; PHYS 550, 571, 573, 591, 661, 691; MATH 532, 533; NANA 650, 651. A minimum of four graduate courses must be in chemistry. All graduate students seeking the Ph.D. degree must complete 30 hours of CHEM 697 (research) as part of fulfilling the requirements for the degree. However, students electing the chemical physics option may substitute 15 credits of PHYS 697 for 15 credits of CHEM 697.

All other requirements are the same as those stated for the Ph.D. in Chemistry. Additional information and a more detailed description of the graduate program may be obtained from the Department of Chemistry.
**Chemistry, Master of Science (M.S.)**

**Admission requirements summary**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s)</th>
<th>Deadline</th>
<th>Test requirements</th>
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</thead>
<tbody>
<tr>
<td>M.S.</td>
<td>Fall</td>
<td>Mar 15</td>
<td>GRE</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>Nov 15</td>
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</tbody>
</table>

Students seeking the Master of Science degree must demonstrate competency in analytical, inorganic, organic and physical chemistry by satisfactory performance on the proficiency exams or with a minimum grade of B in the appropriate course. The Master of Science student must earn a minimum of 15 credits in six graduate courses, not including credit for seminar (CHEM 690 or 692), research (CHEM 697) or CHEM 693 Chemistry Perspectives and Ethics. The credit hours must include three of the core courses (9 credits) selected from the following four areas.

**Analytical:**
- 3 credits of graduate analytical course work

**Inorganic:**
- CHEM 620 Advanced Inorganic Chemistry I

**Organic:**
- CHEM 504 Advanced Organic Chemistry I

**Physical:**
- CHEM 510 Atomic and Molecular Structure or
- CHEM 511 Chemical Thermodynamics and Kinetics

Additional graduate courses to be taken will be determined in consultation with the faculty research adviser and the faculty of the Department of Chemistry. Students are expected to participate in the department’s seminar program and present at least two formal talks in the seminar program (2 credits of CHEM 692). In addition to course work and seminar, the master’s degree requires a minimum of 15 credits in CHEM 697 (directed research), and the total of all credits must be at least 30.

An acceptable research thesis and a final oral examination on the thesis are required. Full-time students should complete these degree requirements in two to three years.

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**Nanoscience and Nanotechnology, Doctor of Philosophy (Ph.D.)**

**Admission requirements summary**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s)</th>
<th>Deadline</th>
<th>Test requirements</th>
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</thead>
<tbody>
<tr>
<td>Ph.D.</td>
<td>Fall</td>
<td>Mar 15</td>
<td>GRE</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>Nov 15</td>
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</tbody>
</table>

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, students are expected to have a bachelor’s degree from an accredited college or university with 30 semester credits in chemistry, physics or engineering.

Admission on a provisional basis is possible for a student temporarily lacking the expected background. Acceptance is based upon undergraduate performance, satisfactory scores on the GRE and letters of recommendation.

Graduate students in the nanoscience and nanotechnology Ph.D. program may receive financial support via teaching or research assistantships or fellowships available from the “home” department. Application forms and instructions for applying to all graduate programs are available on the Graduate School website at [www.graduate.vcu.edu](http://www.graduate.vcu.edu).

**General degree requirements for graduate program**

Students preparing for the Doctor of Philosophy degree in nanoscience and nanotechnology must earn a minimum of 72 credits consisting of core courses (9 credits), elective courses (9 credits), seminar (8 credits) and research (46 credits). The core courses include:

- NANO 570 Nanoscale Physics (3 credits)
- NANO 571 Nanoscale Chemistry (3 credits)

NANO 650, 651 Experimental Techniques in Nanoscience I, II (3 credits) or NANO 660 Theoretical Studies of Nanostuctures (3 credits)

The 9 elective credits shall be chosen from the following courses or other courses as approved by the program director.

- CHEM 510 Atomic and Molecular Structure
- CHEM 511 Chemical Thermodynamics and Kinetics
- CHEM 580 Mechanical Properties of Plastics and Polymers
- CHEM 591 Topics in Chemistry
- CHEM 610 Applied Quantum Chemistry
- CHEM 611 Molecular Spectroscopy
- CHEM 612 Modern Statistical Mechanics: Fundamentals and Applications
- CHEM 634 Surface Science
- CHEM 635 Spectrochemical Analysis
- CHEM 691 Topics in Chemistry
- PHYS 550 Techniques in Material Research
- PHYS 580 Quantum Mechanics
- PHYS 591 Topics in Physics
- PHYS 641 Solid State Physics
- PHYS 661 Surface and Materials Physics
- PHYS 691 Special Topics
- ENGR 645 Biosensors and Bioelectronic Devices
- CLSE 675 Polymers in Medicine
- EGRB 613 Biomaterials
- EGRE 525 Fundamentals of Photonics Engineering
- EGRE 621 Spintronics
- EGRE 623 Nanomaterials and Nanodevices
- ENGR 505 Characterization of Materials
- ENGR 591 Special Topics in Engineering

The student will attend NANO 690 Research Seminar in Nanoscience and Nanotechnology throughout their degree program, receiving an S or U grade based on attendance and participation. The student will also give two seminar presentations, one on a literature topic and one on their dissertation research, which will be graded on the A/B/C/D/F scale.

Before admission to candidacy for the Ph.D. degree, students must have (a) completed at least 12 credits of their required course work; (b) successfully completed cumulative exams; and (c) successfully completed an oral candidacy examination based on a research proposal. The student will be required to complete a series of cumulative exams in the area of nanoscience and nanotechnology, which will normally occur during the student’s second year in residence. After completion of the cumulative exams, an oral candidacy examination is then required to become a Ph.D. candidate. The oral examination, which is administered by the student’s Graduate Dissertation Committee, is based upon a written proposal describing the proposed dissertation research project. It is intended to evaluate the adequacy of the proposed project, the student’s level of understanding of the project and the likelihood that the dissertation can be completed successfully.

The student must conduct a substantial original investigation under the supervision of his/her advisor and must submit to the Graduate Dissertation Committee a written dissertation reporting the results of the research and analyzing its significance in relation to existing scientific knowledge. The oral dissertation defense, conducted under direction of the Dissertation Committee, will examine the candidate’s research, dissertation documentation and underlying fundamental knowledge encompassed by his/her research. Upon successful completion of the defense and the dissertation, the student may apply for graduation with the Ph.D. in Nanoscience and Nanotechnology. Full-time students should complete the degree requirements in four to five years.

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**Department of English**

The purpose of the Department of English is to teach students to see their worlds with clarity and respond to them with sensitivity, through reading and writing. Students are invited to read and explore a diversity of texts created in different times and voices and then to respond to these texts variously and critically, situating them within their contexts and discerning their important aesthetic features, rhetorical elements and social functions.

Students in this department also are encouraged 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 Department of English offers a Bachelor of Arts in English, as well as minors in American studies (in conjunction with the Department of History), British studies, English (for non-English majors), writing and creative writing, the Master of Arts in English and the Master of Fine Arts in Creative Writing, and a doctoral program leading to a Ph.D. in Media, Art, and Text. Use the program search navigation to view individual program descriptions and curricula, or visit the department’s website at www.has.vcu.edu/eng for additional information.

Administration

Katherine Bassard
Professor and Department Chair

David Latané
Professor and Associate Department Chair

David Coogan
Associate Professor and Director of Undergraduate Studies

Joshua Eckhardt
Associate Professor and Director of the M.A. Program

Susann Cokal
Associate Professor and Director of Creative Writing/M.F.A. Program

Eric Garberson
Associate Professor of Art History and Director, MATX Program

www.has.vcu.edu/eng

English courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

Follow this link to English (ENGL) courses.

Creative Writing, Master of Fine Arts (M.F.A.)

Admission requirements summary

Creative Writing, Master of Fine Arts (M.F.A.)
Indicate specialization:
Fiction, Poetry or both genres

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s) of entry</th>
<th>Deadline dates</th>
<th>Test requirements</th>
<th>M.F.A.</th>
<th>Fall</th>
<th>Feb 1</th>
<th>GRE-General</th>
</tr>
</thead>
</table>

Special requirements:
Portfolio

The Master of Fine Arts in Creative Writing is designed to attract students from diverse undergraduate backgrounds who are writers of promise. The program is suited particularly to those interested primarily in the writing of fiction and poetry; however, some emphasis also is placed on the writing of nonfiction, playwriting and screenwriting.

Graduate students in creative writing are encouraged to develop a strong personal sense of aesthetics and ethics and to pursue excellence in writing and scholarship, as well as in teaching, if they are pursuing that career option. Through the workshop experience, as well as personal conferences with the writing faculty, the program aims to help students significantly advance the quality of their writing, to enable them to become expert critics of their own and others’ work, and to advise them as they seek to publish their writing.

Admission requirements

Admission to the Master of Fine Arts Program is based most importantly on the candidate’s submitted creative writing portfolio (thus students who have produced little or no creative writing prior to their application would not be eligible. The deadline for application to the Master of Fine Arts Program is Feb. 1. In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, the following requirements, established by the Creative Writing Master of Fine Arts Committee, represent the minimum acceptable standards for admission:

- A portfolio of promising fiction or poetry, possibly with drama (as a minimum, approximately eight to 10 poems, or 20 or more pages of fiction, or one act from a play, or some combination of these, in all cases, applicants should submit only their strongest creative writing samples) to be submitted to the M.F.A. program director
- Three recommendations from persons who are qualified to give information concerning the applicant’s probable success in graduate school, especially in a creative writing program
- A scholastic record that is indicative of the applicant’s ability to pursue a graduate degree successfully
- A baccalaureate degree or its equivalent
- Completion of the GRE (Applicants for the literature track may, but are not required to, submit scores for the GRE subject test in literature.)

Degree requirements

A total of 48 semester hours is required to complete the degree. The basic course of study required in the program includes: 12 semester hours of graduate creative writing workshops (required), 12 hours of graduate literature courses (required), and six to 12 hours of thesis work (required); the remaining 12 to 18 hours are electives, taken in literature, workshops or other graduate courses. Beyond the required courses, the student is free to work out a total program of 48 hours, with the advice of the program director or the student’s thesis adviser, which is appropriate to the individual student’s aims and interests. The thesis work gives students the opportunity to produce a manuscript of publishable quality. Course work also is available in the techniques of teaching creative writing, and the program is flexible enough to include studies undertaken in other departments of the university as well, including Art History, Theatre, Philosophy and the School of Mass Communications.

English, Master of Arts (M.A.)

Admission requirements summary

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s) of entry</th>
<th>Deadline dates</th>
<th>Test requirements</th>
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<tbody>
<tr>
<td>M.A.</td>
<td>Fall</td>
<td>Mar 1</td>
<td>GRE-General</td>
</tr>
<tr>
<td>M.A. in English with a research concentration</td>
<td>Fall</td>
<td>Mar 1</td>
<td>GRE-General</td>
</tr>
<tr>
<td>M.A. in English</td>
<td>Spring</td>
<td>Nov 15</td>
<td>GRE-General</td>
</tr>
</tbody>
</table>

The Department of English offers a program leading to a Master of Arts in English with courses in literature, and writing and rhetoric.

Students may pursue either of the following programs of study:

- **M.A. in English with a research concentration** — for students pursuing advanced English studies with an emphasis on research, criticism and methodology. Students may choose to focus their course work in either literature or writing and rhetoric. This program is suitable for students considering a Ph.D. and requires 30 credit hours; ENGL 501; either ENGL 605 or 606; and a directed study resulting in a major paper with presentation.
- **M.A. in English** — for students pursuing advanced English studies. Students may choose to focus their course work in either literature or writing and rhetoric. This program requires 30 credit hours; ENGL 501; either ENGL 605 or 606; and a directed study resulting in a major paper with presentation.

Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, the following requirements, established by the English Graduate Studies Committee, represent the minimum acceptable standards for admission:

- A baccalaureate degree in an area appropriate to the study of literature or writing
- A GPA that indicates the applicant can pursue successfully a graduate degree
- Three letters of recommendation from former instructors
- Completion of the GRE (Applicants for the literature track may, but are not required to, submit scores for the GRE subject test in literature.)
Degree requirements
The English program consists of a minimum of 30 semester credits. After these credits have been attained, students shall be examined over their courses and research as the Graduate Committee recommends. Students also may wish to present a thesis or project, credit for which shall be determined by the Master of Arts Committee.

Media, Art, and Text, Doctor of Philosophy (Ph.D.)

<table>
<thead>
<tr>
<th>Degree requirements summary</th>
<th>Media, Art, and Text, Doctor of Philosophy (Ph.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree:</td>
<td>Semester(s)</td>
</tr>
<tr>
<td></td>
<td>of entry:</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>Fall only</td>
</tr>
</tbody>
</table>

Special requirements:
Additional materials to be submitted directly to Thorn Didato. For specific instructions please see www.has.vcu.edu/eng/graduate/admission.htm

VCU’s interdisciplinary doctoral program in media, art, and text is a joint endeavor of the Department of English, the School of the Arts and the School of Mass Communications. The program emphasizes the historical and theoretical foundations essential to the scholarly study of media, both old and new, broadly defined. It provides an intellectually stimulating environment that encourages students to work both collaboratively and independently, as well as across and between disciplines and media. Students maintain a base in their primary area of research, which is usually but not always the field in which they have done prior graduate work.

Curriculum
The 42-hour curriculum comprises 36 hours of course work and a minimum of six hours of dissertation research. Course work includes a core of four required courses taken during the first two semesters by all incoming students. Three doctoral seminars provide a shared historical and theoretical foundation for the study of media, art, and text, while a workshop offers the opportunity to develop and expand professional and/or creative skills relevant to the student’s career goals and research focus. In addition, all students will take a research methods course in a field relevant to their anticipated area of dissertation research.

Beyond the core, students select 21 hours of elective credits from course offerings in disciplines relevant to their research interests and career goals. The program offers a topics seminar focused on the history, theory or practice of media, art, and text. Independent study and internships are also available as electives. While enrollment in courses with the MATX prefix is guaranteed to matriculated MATX students, enrollment in other graduate courses is subject to the conditions defined. It provides an intellectually stimulating environment that encourages students to work both collaboratively and independently, as well as across and between disciplines and media. Students maintain a base in their primary area of research, which is usually but not always the field in which they have done prior graduate work.

The dissertation is an original, interdisciplinary and scholarly examination of a topic relevant to an aspect of media, art, and/or text. It may include work in media other than text. It is supervised by a committee consisting of four or five members drawn from disciplines relevant to the research topic.

Core courses (12 credits)
- MATX 601 Texts and Textuality
- MATX 602 History of Media, Art, and Text
- MATX 603 History of Interdisciplinarity and Multimedia
- MATX 604 Workshop

Methods course (3 credits)
Electives (21 credits)
Dissertation (6 credits minimum)

Grade requirements
To graduate, degree applicants must achieve an overall grade point average of 3.0 (B) on a 4.0 scale with a grade of C in no more than two courses. The GPA for graduation will be based on all graduate courses attempted after acceptance into the program.

Requirements for admission to candidacy
Before beginning formal dissertation research, students must complete all 36 hours of required course work, both stages of the e-portfolio and the requirements described below. Upon completion of these, the student will apply for degree candidacy.

Dissertation committee
The dissertation committee consists of the director (who must hold a Ph.D.) and three or four additional members whose scholarly knowledge and interests are relevant to the project. The committee must have at least one member from each of the sponsoring units (Department of English, School of the Arts, School of Mass Communications). All must be members of VCU’s graduate faculty. Appropriate faculty from outside VCU may serve on committees (but not as director) with the approval of the MATX director and the graduate dean. It is the student’s responsibility to assemble the committee, in consultation with the dissertation director. Committees will not be appointed by the program.

E-portfolio
Work on the e-portfolio will begin in MATX 604 in the spring of the first year. There are no technical specifications, and content will include, but is not limited to, work done in the first two years in the program. It will take the form of a website and must demonstrate the technical skills (Web design, audio, video, etc.) relevant to the student’s work on the dissertation and the career sought after VCU.

Submission is a two-stage process:
- Stage 1: May of the first year
  A three- to five-page design rationale for the portfolio site along with a mock-up or rough structure
- Stage 2: April of the second year
  A finished, live site accompanied by a five-page statement relating it to the student’s work inside and outside the program and outlining how it uses media techniques to promote a specific professional and/or creative identity

Each submission is graded pass/fail and may be repeated once. A second failure results in automatic termination from the program.

Competency
Candidates must demonstrate competency in a skill or technique relevant to the dissertation research or planned professional career. The dissertation committee approves and administers the competency portion. Graded pass/fail, the test may be repeated once.

Bibliography exam
On a reading list of 20 to 30 sources relevant to or supportive of the dissertation topic. The dissertation committee approves and administers the bibliography exam. Graded pass/fail, the test may be repeated once.

Dissertation prospectus and prospectus defense
The prospectus is a 15- to 20-page document that indicates the significance of the proposed research, gives a short review of relevant literature, states the research question, specifies the proposed methodology and indicates how the project lays the foundation for the anticipated academic or professional career. It also includes a work plan for the completion of research and writing, as well as a complete bibliography. The prospectus is defended orally before the dissertation committee, which may accept, reject or require revisions. The defense may be repeated once.

Dissertation and dissertation defense
The dissertation is an original, interdisciplinary and scholarly examination of a topic relevant to an aspect of media, art, and/or text. It may include work in media other than text. Given the varied nature of doctoral research, there is no set time frame for completion of a dissertation. It is expected, however, that the dissertation will be completed about two years after attaining candidacy. The dissertation will be defended orally before the dissertation committee. Successful defense of the dissertation completes the requirements for the degree.
The Department of Forensic Science offers programs leading to bachelor’s and master’s degrees. The Bachelor of Science is for students who plan a career or graduate study in the forensic sciences. This specialization features a prescribed curriculum with special emphasis in biology, chemistry and criminal justice. The B.S. in Forensic Science provides students with a solid education preparing them for effective professional careers in forensic laboratories, public and private, basic research laboratories, clinical laboratories, and/or to pursue graduate studies. Students also will be prepared to pursue advanced degrees in the physical sciences, biological sciences, forensic science, law, allied health and medicine, to name a few.

The Master of Science in Forensic Science prepares students for careers as forensic scientists in government and private laboratories. Students receive in-depth exposure to specializations within the field, including drug analysis, DNA analysis, trace evidence, criminalistics and legal issues. For more information visit www.has.vcu.edu/forensics.

Administration

Michelle R. Peace
Instructor and Interim Department Chair

Tracey Dawson Cruz
Associate Professor and Graduate Program Director

Sarah J. Seashols
Instructor and Undergraduate Program Director

www.has.vcu.edu/forensics

Forensic science courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level. Follow these links to forensic science (FRSC) courses or the (FRSZ) laboratories.

Admission requirements summary

<table>
<thead>
<tr>
<th>Forensic Science, Master of Science (M.S.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree:</td>
</tr>
<tr>
<td>M.S.</td>
</tr>
</tbody>
</table>

Special requirements:

Undergraduate degree in natural sciences or degree with equivalent course work; completion of two semesters or equivalent of organic chemistry with two laboratories and two semesters or equivalent of general biology with laboratories; three letters of recommendation; GPA that exceeds 2.9 on 4.0 scale; prior graduate course work and/or relevant laboratory experience will be assessed where applicable.

Most students entering the forensic science graduate program have a 3.0 GPA or above on undergraduate work and a combined score of 1,000 or more on the verbal and quantitative sections of the GRE. Review of applications and offers of admission will begin January 15 and proceed until enrollment openings are filled. All application materials must be received by March 1. All applicants will be notified of a decision. There are no spring admissions in the program. The program may request a phone or in-person interview for admission. Upon acceptance of an offer of admission, a nonrefundable deposit is required.

The Master of Science in Forensic Science is one of only a few of its kind in the U.S. The objective of the Master of Science in Forensic Science program is to prepare students for careers as forensic scientists in government and private forensic laboratories. In addition, students will be prepared to pursue further graduate and/or professional academic degrees.

Core courses in the forensic science curriculum offer broad exposure to forensic laboratory equipment and instrumentation, as well as legal issues, expert testimony, forensic biology, forensic chemistry, trace evidence, physical evidence, professional ethics, quality assurance and current topics in research and development within the forensic sciences. Students entering the program will be required to select a concentration track by the end of their first semester. Tracks offered include forensic biology, forensic chemistry/drugs and toxicology, forensic chemistry/trace and forensic physical evidence. A strong emphasis is placed on laboratory course work, providing students with significant laboratory experience. Several of the laboratory courses are taught by practicing professional forensic scientists at the Virginia Division of Forensic Science Central Laboratory, which is nationally accredited by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board.

The graduate program is a full-time, two-year program. Courses taken will vary depending on the track selected. Required and elective courses are offered at various times, day and night, throughout the week. The Master of Science in Forensic Science degree requires 42 semester hours of course work, including 27 semester hours of required core course work and 15 semester hours of specialized course work designed for each track (including electives). The required course work includes a directed research project, which is an extensive research experience conducted within a forensic laboratory setting. The curriculum offers four tracks: forensic biology, forensic chemistry/drugs and toxicology, forensic chemistry/trace, and forensic physical evidence.

General admission requirements

Beyond the general Graduate School standards listed in the Graduate Studies at VCU section in this bulletin, admissions will be based on:

• Bachelor’s degree in a natural science discipline, including forensic science, or a degree with equivalent work

• An undergraduate GPA that exceeds 2.9 on a 4.0 scale

• Completion of eight credits (two semesters or equivalent) of organic chemistry with laboratories and eight credits (two semesters or equivalent) of general biology with laboratories

• Assessment of prior graduate course work and/or relevant laboratory experience (where applicable)

• Three letters of recommendation pertaining specifically to the student’s potential ability as a graduate student in forensic science

Most students entering the forensic science graduate program have a 3.0 GPA or above on undergraduate work and a combined score of 1,000 or more on the verbal and quantitative sections of the GRE. Applicants are required to select a concentration track and will be considered only for that track. After entry into the program, students may request to change tracks by submitting a letter detailing the request and justification to the Forensic Science Graduate Committee. The committee will consider these requests on a case-by-case basis and only when the appropriate admissions requirements are met. If course work deficiencies are identified, students may be required to take additional foundational courses beyond those required for the concentration track. Students that wish to complete a second concentration track will be required to submit a formal request to the Forensic Science Graduate Committee; requests will be considered only for those individuals who have completed all admissions requirements for the second concentration track. Review of applications and offers of admission will begin Jan. 15 and proceed until enrollment openings are filled. All application materials must be received by March 1. All applicants will be notified of a decision. There are no spring admissions in the program. The program may request a phone or in-person interview for admission. Upon acceptance of an offer of admission, a nonrefundable deposit is required.

General degree requirements

The following requirements are in addition to those described for graduate programs in the School of Graduate Studies and the College of Humanities and Sciences.

• Students must complete a minimum of 42 graduate semester credits as outlined in the accompanying list of core and track requirements, including electives.

• Maintenance of an ongoing, cumulative GPA of 3.0 or above is required while enrolled.

• Courses below the 500 level will not count toward degree requirements.
Receipt of a grade of C in two or more courses will constitute an automatic dismissal from the graduate program in forensic science.

Receipt of a grade of D or lower in any one course will constitute an automatic dismissal from the graduate program in forensic science.

Continuous, full-time enrollment in the graduate program is required. Interruption in continuous enrollment or full-time status for any reason without a leave of absence approved by the Forensic Science Graduate Committee will result in automatic dismissal from the graduate program in forensic science.

Request for credit for graduate course work taken at other institutions must be submitted to the director of graduate studies in forensic science and will be considered on a case-by-case basis by the Forensic Science Graduate Committee.

If course work deficiencies are identified, students may be required to take additional foundational courses beyond those listed below. These will not count toward the 42 required credits.

**Core requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRSC 570 Forensic Science Seminar*+</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 661 Analysis of Pattern Evidence</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 667 Forensic Evidence and Criminal Procedure</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 671 Instrumentation in Forensic Chemistry*</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 673 Forensic Microscopy*</td>
<td>2</td>
</tr>
<tr>
<td>FRSZ 673 Forensic Microscopy Laboratory*</td>
<td>1</td>
</tr>
<tr>
<td>FRSC 675 Forensic Serology and DNA Analysis*</td>
<td>2</td>
</tr>
<tr>
<td>FRSZ 675 Forensic Serology and DNA Analysis Laboratory*</td>
<td>1</td>
</tr>
<tr>
<td>FRSC 677 Professional Practices and Expert Testimony</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 793 Directed Research in Forensic Science</td>
<td>3</td>
</tr>
<tr>
<td>STAT/BIOS 543 Statistical Methods I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

(6-9 credits; see concentration track for requirements)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRSC 520 Forensic Fire Investigation</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 565 Scientific Crime Scene Investigation (lecture/laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 566 Advanced Crime Scene Investigation (lecture/laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>FRSC/PHTX 644 Forensic Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 661 Analysis of Pattern Evidence</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 662 Firearms and Toolmark Identification (lecture/laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 663 Forensic Medicine</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 672 Advanced Drug Analysis (lecture/laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 676 Advanced Forensic DNA Analysis (lecture/laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>FRSC/CRJS 680 Forensic Psychiatry</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 681 Analysis of Fire Debris and Explosives (lecture/laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 682 Forensic Analysis of Paints and Polymers (lecture/laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 692 Forensic Science Independent Study</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 693 Current Topics in Forensic Science</td>
<td>1</td>
</tr>
<tr>
<td>BIOC/MICR 503 Biochemistry, Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOC/MICR 504 Biochemistry, Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 530/HGEN 501 Human Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL/BNFO 540 Fundamentals of Molecular Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 693 Current Topics in Biology (molecular biology)</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 506 Introduction to Spectroscopic Methods in Organic Chemistry</td>
<td>1.5</td>
</tr>
<tr>
<td>CHEM 606 Advanced Spectroscopic Methods in Organic Chemistry</td>
<td>1.5</td>
</tr>
<tr>
<td>CHEM 630 Electroanalytical Chemistry</td>
<td>1.5</td>
</tr>
<tr>
<td>CHEM 631 Separation Science</td>
<td>1.5</td>
</tr>
<tr>
<td>CHEM 632 Chemometrics</td>
<td>1.5</td>
</tr>
<tr>
<td>CHEM 633 Mass Spectrometry</td>
<td></td>
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<tr>
<td>CHEM 634 Surface Science</td>
<td></td>
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<tr>
<td>CHEM 635 Spectrochemical Analysis</td>
<td></td>
</tr>
<tr>
<td>CRJS 591 Topic Seminar (drugs and crime)</td>
<td>3</td>
</tr>
<tr>
<td>PHIS 501 Mammalian Physiology</td>
<td>5</td>
</tr>
<tr>
<td>PHTX 536 Principles of Pharmacology and Toxicology</td>
<td>5</td>
</tr>
<tr>
<td>PHTX 548 Drug Dependence</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives for each concentration track must be selected with academic adviser. Other electives may be permitted with permission of adviser.

* Courses required the first fall semester upon entry into the forensic science program.
+ This course is one credit; three credits total must be taken; one credit must be completed in each semester of the first full year of enrollment.

**Financial information**

Information and application forms for financial aid information may be secured from the VCU Office of Financial Aid, Harris Hall, 1st Floor, P.O. Box 843026, Richmond, VA 23284-3026, (804) 828-6669.

**Correspondence and information**

General program information can be obtained by accessing the program’s Web site at www.has.vcu.edu/forensics. Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at www.graduate.vcu.edu.

**Forensic biology**

**Admission requirements**

In addition to the M.S. in Forensic Science general admission requirements, applicants to the forensic biology track should have a minimum of nine semester credits or equivalent of upper-level course work in the biological or biochemical sciences. This may include, but is not limited to, courses in cell biology, general biochemistry, genetics and/or molecular biology.

**Degree requirements**

The forensic biology track requires a minimum of 15 additional credit hours beyond the core course work for a total of 42 credit hours. See General degree requirements for the core curriculum.

In addition to the core curriculum, the following courses are required for the forensic biology track:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRSC 565 Scientific Crime Scene Investigation (lecture/laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>FRSC 676 Advanced Forensic DNA Analysis (lecture/laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>BIOL/HGEN 516 Population Genetics</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>6</td>
</tr>
</tbody>
</table>

* Electives must be selected with academic adviser; at least one elective must be a graduate-level molecular biology-related course.

**Forensic chemistry/drugs and toxicology**

Graduate and Professional Bulletins Bulletins 2012-13
Admission requirements
In addition to the M.S. in Forensic Science general admission requirements, applicants to the forensic chemistry/drugs and toxicology track should have a minimum of nine semester credits or equivalent of upper-level chemistry or biochemistry coursework. This may include, but is not limited to, courses in physical chemistry, instrumental analysis, quantitative analysis, pharmacology and/or general biochemistry.

Degree requirements
The forensic chemistry/drugs and toxicology track requires a minimum of 15 additional credit hours beyond the core course work for a total of 42 credit hours. See General degree requirements for the core curriculum.

In addition to the core curriculum, the following courses are required for the forensic chemistry/drugs and toxicology track:

- FRSC/PHTX 644 Forensic Toxicology 3
- FRSC 663 Forensic Medicine or FRSC 565 Scientific Crime Scene Investigation (lecture/laboratory) 3
- FRSC 672 Advanced Drug Analysis (lecture/laboratory) 3
- Electives* 6

* Electives must be selected with academic adviser; at least one elective must be a graduate-level chemistry course.

Forensic chemistry/trace

Admission requirements
In addition to the M.S. in Forensic Science general admission requirements, applicants to the forensic chemistry/trace track should have a minimum of nine semester credits or equivalent of upper-level chemistry course work. This may include, but is not limited to, courses in physical chemistry, instrumental analysis, quantitative analysis, pharmacology and/or general biochemistry.

Degree requirements
The forensic chemistry/trace track requires a minimum of 15 additional credit hours beyond the core course work for a total of 42 credit hours. See General degree requirements for the core curriculum.

In addition to the core curriculum, the following courses are required for the forensic chemistry/trace track:

- FRSC 565 Scientific Crime Scene Investigation (lecture/laboratory) 3
- FRSC 661 Analysis of Pattern Evidence (lecture/laboratory) or FRSC 662 Firearm and Toolmark Identification (lecture/laboratory) 3
- Electives* 9

* Electives must be selected with academic adviser.

Department of Gender, Sexuality and Women’s Studies

Janet R. Hutchinson
Professor and Department Chair
www.has.vcu.edu/wst

Gender, sexuality and women’s studies provides a broad interpretation and view of diversity, including the interdisciplinary, cross-cultural examination of women’s perspectives and experiences, masculinity and femininity, and heterosexuality and alternate sexualities as culturally constructed and socially experienced.

Women’s studies courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

Follow this link to women’s studies (WMNS) courses.

Gender, Sexuality and Women’s Studies, Certificate in (Post-baccalaureate graduate certificate)

Admission requirements summary

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s) of entry:</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>Fall</td>
<td>Jul 30</td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td>Spring</td>
<td>Nov 30</td>
<td></td>
</tr>
</tbody>
</table>

Special requirements:
Fall entrance is required for those without prior course work in gender, sexuality or women’s studies (graduate or undergraduate).

The certificate is composed of 15 credit hours of graduate-level course work and focuses on core concepts in gender, sexuality and women’s studies. Nine of the credit hours are met with the following required core courses:

- WMNS 501 Feminist Theory
- WMNS 602 Feminist Research Epistemology and Methods
- WMNS 620 Theorizing Sexuality

Students may choose the additional six credits in elective courses from department offerings (WMNS 622 Women and Public Policy, WMNS 624 Gender and Cultural Production and WMNS 691 Topics in Gender, Sexuality and Women’s Studies) or may take courses in the subject matter from other graduate departments with permission of the chair.

Department of History

The Department of History offers programs at the graduate and undergraduate levels, specializing in a multidimensional analysis of the human past. Faculty research interests vary among thematic, topical, national or chronological emphases. For more information regarding the department and its specialty areas, visit the Web at www.has.vcu.edu/has.
**Admission**

811 and 813 South Cathedral Place  
P.O. Box 842001  
Richmond, Virginia 23284  
(804) 828-1635  
Fax: (804) 828-7085  
www.has.vcu.edu/has  

John T. Kneebone  
Associate Professor and Department Chair  

John C. Powers  
Collateral Assistant Professor and Assistant to the Chair  

Nicholas Wolf  
Collateral Assistant Professor and Undergraduate Adviser  

Timothy Thurber  
Associate Professor and Director of Graduate Studies  

Kathleen Murphy  
Administrative Specialist  

**History courses**

Descriptions for all courses offered by the university may be accessed through the online courses database at [www.pubapps.vcu.edu/vcuocourses](http://www.pubapps.vcu.edu/vcuocourses). You may search by unit, subject or keyword, as well as by degree level.

Follow this link to history (HIST) courses.

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**History, Master of Arts (M.A.)**

**Admission requirements summary**

<table>
<thead>
<tr>
<th>Degree: History, Master of Arts (M.A.)</th>
<th>Semester(s) of entry:</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
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<tbody>
<tr>
<td>M.A. Fall</td>
<td>Jul 1</td>
<td></td>
<td>GRE</td>
</tr>
<tr>
<td>Spring</td>
<td>Dec 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer</td>
<td>Apr 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Master of Arts in History program allows maximum flexibility by permitting each student, in consultation with the department’s director of graduate studies, to select those courses most appropriate to their interests, in order to develop competence in pursuit of his or her scholarly and professional objectives.

**Admission requirements**

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, the following requirements, established by the History Graduate Affairs Committee, represent the minimum acceptable standards for admission:

- 30 hours of undergraduate history courses, of which 18 should be at the upper-division level
- a GPA that is indicative of the applicant’s ability to successfully pursue a graduate degree
- three recommendations from persons who are qualified to give information concerning the applicant’s probable success in graduate school
- completion of the GRE
- submission of a 500-word written statement of intent, indicating why the applicant wishes to pursue a graduate degree in history

A personal interview is not required, but may be requested by either the applicant or the department’s Graduate Affairs Committee.

**Degree requirements**

The Master of Arts in History may be achieved through one of two options. The thesis option requires 30 semester credits, including six credits of HIST 698; or the non-thesis option requires 36 semester credits. Those in the non-thesis track must take a minimum of six semester credits in research-level courses, and also an oral comprehensive exam. All students in both tracks must take HIST 601 as a prerequisite or corequisite for all research courses; students entering in January should take HIST 601 the next time it is offered.

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**Elective courses**

Students may take up to six semester credits of non-history electives from an approved list. The department’s Graduate Affairs Committee maintains the list of approved courses, and students may use these courses for credit with the approval of the graduate director. In addition, students who wish to pursue specific areas of study may, with the approval of the graduate director, substitute other courses when appropriate, but in no case shall be able to count more than six semester hours of non-history courses.

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**Department of Mathematics and Applied Mathematics**

The Department of Mathematics and Applied Mathematics offers an undergraduate program leading to a Bachelor of Science in Mathematical Sciences with concentrations in applied mathematics, biomathematics, mathematics and secondary mathematics teacher preparation. The department administers the Master of Science in Mathematical Sciences concentrations in applied mathematics or mathematics and is involved in administering the Doctor of Philosophy in Systems Modeling and Analysis. The curricula of these programs are run jointly with additional concentrations offered by the Department of Statistical Sciences and Operations Research.

**Admission**

Andrew M. Lewis  
Associate Professor and Department Chair  
www.math.vcu.edu  

**Mathematics and applied mathematics courses**

Descriptions for all courses offered by the university may be accessed through the online courses database at [www.pubapps.vcu.edu/vcuocourses](http://www.pubapps.vcu.edu/vcuocourses). You may search by unit, subject or keyword, as well as by degree level.

Students registering for CMSC 201 or 255, MATH 131, 141, 151, 200, 211 or 300, or STAT 208 or 210 must place into these courses either from receiving VCU credit for stated prerequisite courses (for instance, MATH 151 is a stated prerequisite course for MATH 200) or from a satisfactory score (within a 39-month period immediately preceding the beginning of the course) on the VCU Mathematics Placement Test.

Follow this link to mathematics and applied mathematics (MATH) courses.

Use this link to see systems modeling and analysis (SYSM) courses.

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**Mathematical Sciences, Master of Science (M.S.)**

**Admission requirements summary**

<table>
<thead>
<tr>
<th>Mathematical Sciences, Master of Science (M.S.)</th>
<th>Semester(s) of entry:</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S. Fall</td>
<td></td>
<td>Mar 1</td>
<td>GRE-General</td>
</tr>
<tr>
<td>Spring</td>
<td></td>
<td>Out 1</td>
<td>Priority deadlines for funding consideration</td>
</tr>
</tbody>
</table>

**Special requirements:**

Contact director of graduate studies for specific admission requirements

A Master of Science in Mathematical Sciences is offered jointly by the Department of Mathematics and Applied Mathematics and the Department of Statistical Sciences and Operations Research. The Master of Science in Mathematical Sciences offers specializations in several possible areas, including applied mathematics, mathematics, operations research, statistics, discrete structures and others.

For additional information, visit the departmental Web sites at [www.math.vcu.edu](http://www.math.vcu.edu) or [www.stat.vcu.edu](http://www.stat.vcu.edu).

**Admission requirements**
In addition to the general requirements for admission to graduate programs listed in the Graduate Studies at VCU section and the College of Humanities and Sciences section of this bulletin, the following requirements represent the minimum acceptable standards for admission:

- Thirty credits in undergraduate mathematical sciences, computer science or related areas of which at least 18 semester credits must represent upper-level courses.
- Three letters of recommendation pertaining to the student’s potential ability as a graduate student in mathematical sciences.
- General GRE scores required.

Provisional admission may be granted when deficiencies exist. These deficiencies must be removed by the end of the first year of residence, or its part-time equivalent, when the student’s application will be re-examined. Courses that are remedial or designed to remove deficiencies will not be accepted for credit toward the fulfillment of the course requirements for the master’s degree.

**Degree requirements**

The program offers maximum flexibility by allowing students, in consultation with their graduate committees, to design a course of study that will best develop competence in those areas most relevant to their scholarly and professional objectives. This program consists of a minimum of 30 semester credits of which at least 15 must be at the 600 level.

Students may obtain a designation on their transcripts indicating that their graduate study has emphasized one of the following graduate concentrations by completing the requirements that are listed here for that concentration. A student who has not satisfied the requirements for one of these concentrations, but who has otherwise fulfilled all the requirements for a master’s degree, will be awarded a degree of Master of Science in Mathematical Sciences without any specialization.

- applied mathematics
- mathematics
- operations research
- statistics

Note that the following courses cannot be applied to the credit requirements for the M.S. in Mathematical Sciences: STAT/SOCY 508, STAT/BIOS/EPID 543 and STAT/SOCY 608.

**Curricula**

**Mathematics and applied mathematics concentrations**

Each student will select either the thesis or non-thesis option. If a student chooses the non-thesis option, they must complete a directed research project and a comprehensive examination. If a student elects to write a thesis, the student’s advisor determines the number of credits completed in MATH 698.

**Non-thesis option**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematical sciences (including both semesters of a 600-level sequence)</td>
<td>21</td>
</tr>
<tr>
<td>Mathematical sciences or allied field*</td>
<td>6-9</td>
</tr>
<tr>
<td>Research Seminar credits**</td>
<td>2-5</td>
</tr>
<tr>
<td>Directed research credits**</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>30</td>
</tr>
</tbody>
</table>

**Thesis option**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematical sciences (including both semesters of a 600-level sequence)</td>
<td>18</td>
</tr>
<tr>
<td>Mathematical sciences or allied field*</td>
<td>6-9</td>
</tr>
<tr>
<td>Thesis credits</td>
<td>3 or 6</td>
</tr>
<tr>
<td>Research seminar credits**</td>
<td>1-3</td>
</tr>
<tr>
<td>Directed research credits**</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>30</td>
</tr>
</tbody>
</table>

* Courses selected from an allied field must be approved by the department’s Graduate Affairs Committee.

**Statistics and operations research concentrations**

Each student will complete either a thesis or an applied project. A student who chooses the thesis option has a choice of writing a research thesis or an expository thesis. A research thesis is one that, in the opinion of the student’s thesis adviser and thesis committee, contains significant original research. For this thesis, the student may count six credits of STAT 698 or OPER 698. Otherwise, a student may write an expository thesis. For this type of thesis, the student may count three credits of STAT 698 or OPER 698.

The student who elects the applied project must prepare a written report of the project and make an oral presentation; these students may count three credits of STAT 698 or OPER 698. Students cannot receive credit for both STAT/OPER 696 and STAT/OPER 698.

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematical sciences (including both semesters of a 600-level sequence)</td>
<td>18</td>
</tr>
<tr>
<td>Mathematical sciences or allied field*</td>
<td>6-9</td>
</tr>
<tr>
<td>Thesis or applied project credits</td>
<td>3 or 6</td>
</tr>
<tr>
<td>Directed research credits**</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>30</td>
</tr>
</tbody>
</table>

* Courses selected from an allied field must be approved by the department’s Graduate Affairs Committee.

**Applied mathematics concentration**

**Master of Science in Mathematical Sciences with a concentration in applied mathematics**

MATH 532, 533*; a six-credit sequence selected from MATH 632-634, 719, 721 and at least six credits selected from MATH 511, 512, 515, 516, 615, STAT 513-514. Also, at least one seminar and the thesis (if chosen) must concern topics of applied mathematics.

* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 15 credits of course work in the concentration.

**Mathematics concentration**

**Master of Science in Mathematical Sciences with a concentration in mathematics**

MATH 507, 508*; a six-credit sequence selected from 601-602, 603-604, 607-608, 711-712, and at least three credits from MATH 505, 509, 510, 521, 525 or any otherwise uncounted 600-level course for this concentration. Also, at least one seminar and the thesis (if chosen) must concern topics of pure mathematics.
General requirements for admission to graduate programs in the Department of Statistical Sciences and Operations Research and the Department of Systems Engineering and Operations Research are as follows:

**Admission requirements**

In addition to the general requirements for admission to graduate programs in the Graduate School (in the Graduate study section of this bulletin), there is a wide range of preparatory courses that will be needed for admission to this interdisciplinary program. To be admitted to the program, a student must have completed an undergraduate degree with at least 30 credits of undergraduate-level mathematics, including calculus I and II, multivariate calculus, linear algebra, probability and statistics.

In addition, the candidate must have either completed 18 credits in the following six graduate courses: optimization, stochastic simulation, mathematical statistics I and II, differential equations and real analysis, or they can be conditionally admitted to the program pending completion of these six courses with a grade of B or better in each course.

Students who received their previous degree more than three years prior to entering this program and who have not taken additional courses in mathematics, operations research or statistics in the last three years will be required to take an entrance exam covering the six graduate courses listed above.

**Core courses**

- OPER 527*
- OPER 528*
- OPER 613
- OPER 639
- OPER 643
- OPER 649
- OPER 650
- OPER 675
- OPER 696
- OPER 698

**Additional courses**

The remaining six credit hours may be taken from the above list or in other disciplines with courses subject to the approval of the graduate director.

Students who received their previous degree more than three years prior to entering this program and who have not taken additional courses in mathematics, operations research or statistics in the last three years will be required to take an entrance exam covering the six graduate courses listed above.

**Core course work**

- OPER 527*
- OPER 528*
- OPER 613
- OPER 639
- OPER 643
- OPER 690

Electives in three subject areas: mathematics, operations research and statistics. If a student chooses to take electives in three subject areas, they must take at least three credits in each. If a student chooses to take electives in two subject areas, they must have at least six credits in each. If a student chooses to take electives in three subject areas, they must take at least three credits in each. Electives will be determined based on the student’s research interests and in consultation with the student’s adviser and the doctoral program director.

**Examinations**

All students must pass two comprehensive examinations: Foundations of Operations Research, covering OPER 527 and OPER 528, and Methods of Operations Research, covering OPER 613, OPER 639 and OPER 643. All students will be given two attempts to pass each exam.

If a student previously received credit for one or both of these courses or their equivalents, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 18 credits of course work in the concentration.

**Portfolio**

The portfolio will include:

- Research projects and publications
- Research products from systems research projects
- Writing samples from the research seminars
- Course work from declared concentration(s)
- A portfolio of work will be prepared. The portfolio will include a description of the research, the results, and a statement of the student’s understanding of the research.

The portfolio will be submitted to the Graduate Affairs Committee of the department at the time the course is scheduled.

**Admission to candidacy**

Admission to candidacy is made by evaluation of a qualifying portfolio, including exams and project work from courses; writing samples from the research seminars (SYSM 681, 682 and 683); research products from systems research projects (SYSM 697); and statements from faculty advisers and instructors. The portfolio can be submitted after all course work has been completed, as well as any additional preparatory course work required at admission. The candidacy committee will evaluate the student’s readiness to begin their dissertation work. Supplementary examination may be required by the committee.

**Dissertation proposal**

After admission to candidacy and the completion of all course work, the student will prepare a written and oral proposal of the intended dissertation research area, including a complete literature review. A successful proposal must be completed at least nine months prior to the dissertation defense.

**Dissertation defense**

The student must complete 18 credits in SYSM 798 Dissertation Research resulting in a publishable dissertation and a successful oral defense. The student also must have submitted at least one paper to a refereed academic journal and prepared a second manuscript or given a conference presentation on the research prior to the defense.
Department of Philosophy

Anthony Ellis
Professor and Department Chair
www.has.vcu.edu/phi/philos/phi_home.htm

Philosophy aims at a deeper understanding of matters that should most concern the human race. Philosophical questions crop up in science, religion, art, morality, politics, medicine and in everyday life. Students enrolled in philosophy 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 and analytical reasoning, philosophy equips students for careers in medicine, law, business and other fields that require careful thought and the clear expression of ideas.

The Department of Philosophy offers a Bachelor of Arts in Philosophy. The department offers courses for students in other programs, as well as for those majoring in philosophy or religious studies.

Philosophy courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

Follow this link to philosophy (PHIL) courses.

Department of Physics

The Department of Physics offers programs leading to the Bachelor of Science in Physics and the Master of Science in Physics and Applied Physics. The department also offers an accelerated B.S.-M.S. program that allows students in the baccalaureate program to take graduate courses that will count toward the M.S. in Physics degree.

Administration

Robert Gowdy
Associate Professor and Interim Department Chair
www.has.vcu.edu/phy

Physics courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

Follow these links to physics (PHY) courses or the (PHYZ) laboratories.

Nanoscience and Nanotechnology, Doctor of Philosophy (Ph.D.)

Admission requirements summary

<table>
<thead>
<tr>
<th>Degree</th>
<th>Nanoscience and Nanotechnology, Doctor of Philosophy (Ph.D.)</th>
<th>Semester(s)</th>
<th>Deadline</th>
<th>Test</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph.D.</td>
<td>Semester(s)</td>
<td>Deadline</td>
<td>Test</td>
<td></td>
<td>Requirements</td>
</tr>
<tr>
<td>Fall</td>
<td>Mar 15</td>
<td>GRE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>Nov 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, students are expected to have a bachelor’s degree from an accredited college or university with 30 semester credits in chemistry, physics or engineering.

Admission on a provisional basis is possible for a student temporarily lacking the expected background. Acceptance is based upon undergraduate performance, satisfactory scores on the GRE and letters of recommendation.

Graduate students in the nanoscience and nanotechnology Ph.D. program may require financial support via teaching or research assistantships or fellowships available from the “home” department. Application forms and instructions for applying to all graduate programs are available on the Graduate School website at www.graduate.vcu.edu.

General degree requirements for graduate program

Students preparing for the Doctor of Philosophy degree in nanoscience and nanotechnology must acquire a minimum of 72 credits consisting of core courses (9 credits), elective courses (9 credits), seminar (8 credits) and research (46 credits).

The core courses include:

- NANO 570 Nanoscale Physics (3 credits)
- NANO 571 Nanoscale Chemistry (3 credits)
- NANO 650, 651 Experimental Techniques in Nanoscience I, II (3 credits) or NANO 660 Theoretical Studies of Nanostructures (3 credits)

The 9 elective credits shall be chosen from the following courses or other courses approved by the program director.

- CHEM 510 Atomic and Molecular Structure
- CHEM 511 Chemical Thermodynamics and Kinetics
- CHEM 580 Mechanical Properties of Plastics and Polymers
- CHEM 591 Topics in Chemistry
- CHEM 610 Applied Quantum Chemistry
- CHEM 611 Molecular Spectroscopy
- CHEM 612 Modern Statistical Mechanics: Fundamentals and Applications
- CHEM 634 Surface Science
- CHEM 635 Spectrochemical Analysis
- CHEM 691 Topics in Chemistry
- PHYS 550 Techniques in Material Research
- PHYS 580 Quantum Mechanics
- PHYS 591 Topics in Physics
- PHYS 641 Solid State Physics
- PHYS 661 Surface and Materials Physics
- PHYS 691 Special Topics
- CLSE 645 Biosensors and Bioelectronic Devices
- CLSE 675 Polymers in Medicine
- EGRB 613 Biomaterials
- EGRE 525 Fundamentals of Photonics Engineering
- EGRE 621 Spintronics
- EGRE 623 Nanotechnologies and Nanodevices
- ENGR 609 Advanced Characterization of Materials
- ENGR 505 Characterization of Materials
- ENGR 691 Special Topics in Engineering

The student will attend NANO 690 Research Seminar in Nanoscience and Nanotechnology throughout their degree program, receiving an S or U grade based on attendance and participation. The student will also give two seminar presentations, one on a literature topic and one on their dissertation research, which will be graded on the A/B/C/D/F scale.

Before admission to candidacy for the Ph.D. degree, students must have (a) completed at least 12 credits of their required coursework; (b) successfully completed cumulative exams, and (c) successfully completed an oral candidacy examination based on a research proposal. The student will be required to complete a series of cumulative exams in the area of nanoscience and nanotechnology, which will normally occur during the student’s second year in residence. After completion of the cumulative exams, an oral candidacy examination is then required to become a Ph.D. candidate. The oral examination, which is administered by the student’s Graduate Dissertation Committee, is based upon a written proposal describing the proposed dissertation research project. It is intended to evaluate the adequacy of the proposed project, the student’s level of understanding of the project and the likelihood that the dissertation can be completed successfully.

The student must conduct a substantial original investigation under the supervision of his/her adviser and must submit to the Graduate Dissertation Committee a written dissertation reporting the results of the research and analyzing its significance in relation to existing scientific knowledge. The dissertation defense, conducted under direction of the Dissertation Committee, will examine the candidate’s research, dissertation documentation and underlying fundamental knowledge encompassed by his/her research. Upon successful completion of the defense and the dissertation, the student may apply for graduation with the Ph.D. in Nanoscience and Nanotechnology. Full-time students should complete the degree requirements in four to five years.

Physics and Applied Physics, Master of Science (M.S.)

Follow these links to physics (PHY) courses or the (PHYZ) laboratories.
Admission requirements summary

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s) of entry</th>
<th>Deadline dates</th>
<th>Test requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S.</td>
<td>Fall</td>
<td>Aug 1</td>
<td>GRE</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>Dec 1</td>
<td></td>
</tr>
</tbody>
</table>

The Master of Science program offers traditional core physics courses and a variety of specialized electives emphasizing the department’s strengths in theoretical and experimental physics. Research interests include theoretical and experimental condensed matter physics, general relativity and cosmology, and physics education. This degree is designed to be completed in two years (four semesters).

Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, students are expected to satisfy the following minimum standards for admission:

- Students must have a minimum of 30 semester credits in undergraduate physics or engineering, of which at least 18 semester credits must be at the upper level in physics.
- Satisfactory GRE scores.
- Provisional admission may be granted where deficiencies exist. These deficiencies must be removed by the end of the first year of residence or its part-time equivalent, when the student’s application will be re-examined. Courses that are designed to remove deficiencies will not be accepted for credit toward the graduate degree.

Degree requirements

Each student is required to take 30 semester credits of approved graduate courses (see M.S. plan of study) with at least 15 semester credits at the 600 level. PHYS 690 and PHYS 697 may not exceed 15 of the required 30 credit hours.

M.S. plan of study

Each student will choose a primary adviser during the first semester of study. At the end of the first semester, the student and adviser will propose and the Physics Graduate Curriculum Committee to indicate which graduate courses they intend to offer toward the physics master’s degree; (3) should have a B average or better.

The M.S. Degree Completion Form should be accompanied by a memo from the Department of Physics Graduate Admission Committee to indicate which graduate courses were taken under the Accelerated B.S.-M.S. Program.

Department of Psychology

In addition to the Bachelor of Science in Psychology, the Department of Psychology offers instruction in clinical, counseling, health and general psychology leading to the Doctor of Philosophy degree. Students in all doctoral degree programs are educated first as psychologists and then helped to develop competence in a more specialized area relevant to their scholarly and professional objectives. In addition, special training and experience in college teaching is available.

Administration

Wendy Kliether Professor and Department Chair
Michael Southam-Gerow Associate Professor and Director of Graduate Studies
Linda E. Zyniewski Associate Professor and Director of Undergraduate Programs
Dorothy E. Fillmore Associate Director of Academic Operations

www.psychology.vcu.edu

Admission requirements for doctoral programs

In addition to the general requirements for admission to the graduate programs in the Graduate School (in the Graduate study section of this bulletin), the following requirements represent the minimum acceptable standards for admission:

- Graduation with a bachelor’s degree from an accredited college or university, but not necessarily with a major in psychology.
- 18 semester hours of undergraduate course work in psychology is the minimal, but not optimal, number of hours for an applicant to be considered for admission. Included must be each of the following courses: general psychology, statistics and experimental psychology. Exceptionally well-qualified applicants with less than a major in psychology, or applicants whose undergraduate work is considered outdated by the admissions committee, may be advised to complete some additional undergraduate courses at the beginning of their graduate study program.
- An undergraduate record indicating superior academic potential.
- Satisfactory performance on the GRE.
- Three letters of recommendation from previous instructors.
- A personal interview may be required at the discretion of the department.

The number of students who can be admitted is limited by the facilities and staff available. All applicants will be notified of the decision made. The screening process may begin as early as Jan. 1. First offers of admission are made by April 1. By June 1, after other offers to alternates have been made and final acceptances by students have been received, admissions may be closed. See the admission requirements summary tables to view admission deadlines for each of the Ph.D. programs: clinical psychology, counseling psychology, general psychology (biopsychology, developmental psychology, social psychology) and health psychology.

Applicants to the general psychology program should specify to which of the three divisions they are applying (i.e., biopsychology, developmental or social).

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

Degree requirements for doctoral programs
The following requirements are in addition to those described for the graduate programs in the Graduate School (the Graduate study section of this bulletin) and the College of Humanities and Sciences section of this bulletin.

All students are required to complete a core curriculum of 15 credits (or its equivalent for students entering with a master’s degree).

Students who receive grades of B or better in each of the department core courses are considered to have fulfilled the university requirements of a master’s level comprehensive examination and will then officially be considered candidates for the Master of Science degree. Students who receive grades of C or lower in two or more department core courses will have failed the comprehensive examination and will be dismissed automatically from the program. Students who receive a grade of C or lower in one of the department core courses must either (a) satisfactorily complete a re-examination of the material covered in the course within one semester following the receipt of the grade (this re-examination is to be arranged and evaluated by the course instructor), or (b) repeat the course for credit the next time it is offered and receive a grade of B or better. Regardless of how these approaches is chosen, the students will be given only one opportunity to demonstrate that they have mastered the course material. Students who either fail the re-examination or repeat the course and receive a grade of C or lower will have failed the comprehensive examination and will be dismissed from the program.

Additional courses and training experiences will be determined in consultation with and subject to the approval of the student’s faculty adviser and graduate program committee.

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

All students are required to complete a master’s thesis and to defend it successfully in an oral examination. Ideally, the thesis should be publishable as a piece of research and make a contribution to the field of psychology. Students who have previously completed a master’s thesis in psychology at another university may have the thesis requirement waived if the thesis is accepted by their graduate program committee.

The residence requirement for the master’s degree is 18 hours, nine in each of two consecutive semesters. Completion of the degree usually requires four semesters. At least six semester credits in PSYC 798 Master’s Thesis must be completed, and no more than six can be counted toward the M.S. degree.

Students are obligated to request, in writing from their program committees, continuation of study beyond the master’s degree and approval of their doctoral plan of study. Application from a student for continuation beyond the master’s level will be evaluated by the appropriate program committee after completion of all requirements for the master’s degree. The program committee reviews the student’s request and approves or disapproves the request.

The student must pass a written preliminary examination to become a doctoral candidate. Students are required to complete this requirement prior to defense of their dissertations and prior to leaving on internship for students in the clinical and counseling psychology programs.

With the consent of the program committee, doctoral students may design a minor consisting of courses in departments other than psychology or courses in an area of psychology other than the major.

Both the clinical and counseling psychology programs require completion of applied practica and a one-year predoctoral internship approved by the program committee. Research practica are required by all programs. Practicum credit will vary depending on the program. Internship will be one-half credit per semester.

A dissertation requiring the planning, completion and oral defense of an original research project is an integral part of the doctoral program. At least 12 semester credits in PSYC 898 Doctoral Dissertation must be completed, and no more than 12 can be counted toward the Ph.D. degree.

Completion of the entire program usually requires four to six years (including the internship year for students in the clinical and counseling programs). Candidates must complete all requirements for the Ph.D. degree within an eight-year period from the date of admission to the graduate program unless permission is granted for an extension. In some cases, specific programs and divisions may have requirements in addition to those stated here.

A more detailed description of the requirements for each of the graduate programs is included in the Department of Psychology’s Graduate Student Handbook, which is provided to each incoming graduate student. Visit the website for more information: www.psychology.vcu.edu.

Psychology courses

Descriptions for all courses offered by the university may be accessed through the online courses database at www.pubapps.vcu.edu/vcucourses. You may search by unit, subject or keyword, as well as by degree level.

Follow this link to psychology (PSYC) courses.

Clinical Psychology, Doctor of Philosophy (Ph.D.)

Admission requirements summary

Clinical Psychology, Doctor of Philosophy (Ph.D.)

<table>
<thead>
<tr>
<th>Degree: Ph.D.</th>
<th>Semester(s) of entry: Fall only</th>
<th>Deadline dates: Dec 1</th>
<th>Test requirements: GRE-General</th>
</tr>
</thead>
</table>

Special requirements:

Applicants should apply to the Ph.D. program only, but will earn a master’s degree during their course of study. Applicants who are interested in only the terminal master’s degree are not admitted.

Personal interview may be required for the clinical program.

The Doctor of Philosophy in Clinical Psychology offered by Virginia Commonwealth University is accredited by the American Psychological Association. The program emphasizes the scientist-practitioner model and prepares students for research and service in professional psychology, including positions in university academic and medical school departments, counseling centers, mental health agencies and hospitals, physical health facilities, and other organizational settings. The clinical psychology program offers tracks in child and adolescent psychology and behavioral medicine psychology.

The Center for Psychological Services and Development, a campus-based community service agency operated by the department, provides training opportunities for graduate students in all departmental programs, including practicum and research training for graduate students in the clinical psychology program. A wide variety of other on- and off-campus practicum placements also are available.

The department maintains laboratory facilities for research in the areas of behavioral assessment, behavioral medicine, developmental, learning, behavioral pharmacology, psychophysiology, psychotherapy process, social perception, social influence and group dynamics. Opportunities for field research also are available in a variety of settings. A collection of current journals and books in psychology is housed in the James Branch Cabell Library on the Monroe Park Campus and in the Tompkins-McCaw Library on the MCV Campus.

Teaching assistantships, research assistantships and paid practicum placements are available.

Curriculum requirements

Department core

PSYC 617 Sensation and Perception or PSYC 629 Biological Basis of Behavior
PSYC 619 Learning and Cognition
PSYC 675 Ethical Principles of Psychology (two credits)
PSYC 680 Statistics in Psychological Research I
PSYC 681 Statistics in Psychological Research II

Clinical psychology curriculum

Successful completion of clinical psychology program core courses (PSYC 616, 627, 624, 643, 644, 645, 650, 652 or 667, and 662).

Successful completion of 22 credit hours of clinical practicum (PSYC 694) and one credit hour of research practicum (PSYC 690). Up to six credit hours may be waived depending on experience and ability.

Successful completion of one three-credit assessment elective (e.g., PSYC 626, 641, 645, 646, 647, 648, 649).

Successful completion of one three-credit therapy/intervention elective (e.g., PSYC 623, 624, 652, 653, 654, 656, 660, 666, 667, 668, 669, 670).

Students need to meet a social aspects of behavior breadth requirement by successfully completing PSYC 630, PSYC 633 or another graduate course in social aspects of behavior approved by the clinical faculty.
Students need to meet a cultural/individual diversity breadth requirement by successfully passing PSYC 677 or another graduate course in cultural/individual diversity approved by the clinical faculty.

Successful completion of three one-half credit consecutive semesters of an approved predoctoral internship, PSYC 696.

A minimum of 87.5 semester hours of approved courses beyond the baccalaureate degree.

Students should, if planning to practice clinical psychology, attend to the current licensure requirements of the state in which they plan to practice.

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### Counseling Psychology, Doctor of Philosophy (Ph.D.)

**Admission requirements summary**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester(s)</th>
<th>Deadline dates</th>
<th>Test requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph.D.</td>
<td>Fall only</td>
<td>Dec 1</td>
<td>GRE-General</td>
</tr>
</tbody>
</table>

**Special requirements:**

Please submit a curriculum vitae or resume.

Applicants should apply to the Ph.D. program only, but will earn a master’s degree during their course of study. Applicants who are interested in only the terminal master’s degree are not admitted.

The finalists for admission will be interviewed on site (or by phone) by counseling faculty.

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The Doctor of Philosophy in Counseling Psychology offered at Virginia Commonwealth University is accredited by the American Psychological Association. The program emphasizes the scientist-practitioner-leader model and prepares students for research and service in professional psychology, including positions in university academic and medical school departments, counseling centers, mental health agencies and hospitals, physical health facilities, and other organizational settings.

The counseling psychology program emphasizes the enhancement of life skills and personal competence. Typical subspecializations include disease prevention and health promotion, career and life planning, work with medical populations, college students, community outreach, interpersonal processes, group counseling, marriage and family counseling, multiculturalism and sport psychology.

The Center for Psychological Services and Development, a campus-based community service agency operated by the department, provides training opportunities for graduate students in all departmental programs, including practicum and research training for graduate students in the counseling psychology program. A wide variety of other on- and off-campus practicum placements also are available.

The department maintains laboratory facilities for research in the areas of behavioral assessment, behavioral medicine, developmental, learning, behavioral pharmacology, psychophysiology, psychotherapy process, social perception, social influence and group dynamics. Opportunities for field research also are available in a variety of settings. A collection of current journals and books in psychology is housed in the James Branch Cabell Library on the Monroe Park Campus and in the Tompkins-McCaw Library on the MCV Campus.

Teaching assistantships, research assistantships and paid practicum placements are available.

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### Curriculum requirements

#### Department core

- PSYC 617 Sensation and Perception or PSYC 629 Biological Basis of Behavior
- PSYC 619 Learning and Cognition
- PSYC 675 Ethical Principles of Psychology (two credits)
- PSYC 680 Statistics in Psychological Research I
- PSYC 681 Statistics in Psychological Research II

#### Counseling psychology curriculum

Counseling psychology program core curriculum successfully completed (PSYC 608, 611, 616, 623, 625, 643, 644, 645, 651, 655, 660/or approved health psychology elective, 676, and 695).

Successful completion of 12 credit hours of counseling practicum (PSYC 693) and three credit hours of research practicum (PSYC 690).

Successful completion of other required courses, including PSYC 603 or 633 or other approved developmental course.

Students need to meet a social aspects of behavior breadth requirement by successfully completing PSYC 630 or another graduate course in social aspects of behavior approved by the counseling faculty.

Successful completion of three one-half credit consecutive semesters of an approved predoctoral internship (PSYC 696).

A minimum of 88 credit hours of approved courses beyond the baccalaureate degree. The current recommended curriculum totals 97.5 credit hours.

Counseling psychology program core curriculum successfully completed (PSYC 608, 611, 616, 623, 625, 643, 644, 645, 651, 655, 660/or approved health psychology elective, 676, and 695).

Students should, if planning to practice clinical psychology, attend to the current licensure requirements of the state in which they plan to practice.

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### Health Psychology, Doctor of Philosophy (Ph.D.)

**Admission requirements summary**

<table>
<thead>
<tr>
<th>Health Psychology, Doctor of Philosophy (Ph.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree:</strong></td>
</tr>
<tr>
<td><strong>Semester(s) of entry:</strong> Fall only</td>
</tr>
<tr>
<td><strong>Deadline dates:</strong> Jan 10</td>
</tr>
<tr>
<td><strong>Test requirements:</strong> GRE-General</td>
</tr>
</tbody>
</table>

**Special requirements:**

Applicants should apply to the Ph.D. program only, but will earn a master’s degree during their course of study. Applicants who are interested in only the terminal master’s degree are not admitted.

Personal interview may be required.

The Doctor of Philosophy in Health Psychology offered by Virginia Commonwealth University is an experimentally oriented program that is designed to train students to contribute to our knowledge of psychological contributions to health and illness via training in basic and clinical research. Students completing the Ph.D. in Health Psychology will not be eligible for licensure. Research in health psychology examines the causes and development of illness, methods to help individuals develop healthy lifestyles to promote good health and prevent illness, the treatment individuals receive for their medical problems, the effectiveness with which individuals cope with and reduce stress and pain, biopsychosocial connections with immune functioning, and factors in the recovery, rehabilitation and psychosocial adjustment of patients with serious health problems. Thus, graduates from the Ph.D. program in Health Psychology are prepared for work in a range of settings including colleges and universities, medical centers, research centers, nonprofit agencies, and local, state and national government.

The Center for Psychological Services and Development, a campus-based community service agency operated by the department, provides training opportunities for graduate students in all departmental programs. A wide variety of other on- and off-campus practicum placements also are available.

The department maintains laboratory facilities for research in the areas of behavioral assessment, behavioral medicine, developmental, learning, behavioral pharmacology, psychophysiology, psychotherapy process, social perception, social influence and group dynamics. Opportunities for field research also are available in a variety of settings. A collection of current journals and books in psychology is housed in the James Branch Cabell Library on the Monroe Park Campus and in the Tompkins-McCaw Library on the MCV Campus.

Teaching assistantships and research assistantships are available.

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### Curriculum requirements

#### Department core

- PSYC 617 Sensation and Perception or PSYC 629 Biological Basis of Behavior
- PSYC 619 Learning and Cognition
- PSYC 675 Ethical Principles of Psychology (two credits) or OVPR 601 Scientific Integrity (1 credit) or ALHP 708 Ethics and Health Care (3 credits)
- PSYC 680 Statistics in Psychological Research I
- PSYC 681 Statistics in Psychological Research II

Graduate and Professional Bulletins Bulletins 2012-13
Health psychology curriculum

Department core curriculum above, six credits of PSYC 798 (master’s thesis) and the following courses:

Required health courses: PSYC 660 Health Psychology, PSYC 691 Special Topics: Research Methods in Health Psychology (other methods courses may be substituted on approval of the faculty), PSYC 691 Special Topics: Culture, Ethnicity and Health, PSYC 691 Special Topics: Brown Bag Research Colloquium (required each semester in the program).


Two (or more) of the following courses: PSYC 622 Physiological Correlates of Emotion, PSYC 635 Psychology of Health and Health Care in the Elderly, PSYC 666 Crisis Intervention: Theory, Research and Practice, PSYC 691 Special Topics: Child Health Psychology, PSYC 691 Special Topics: Cancer Prevention and Control, PSYC 691 Special Topics: Occupational Health, or PHTX 548 Drug Dependence.

Independent readings and research: At least three credits of either PSYC 671 or 690 are required for the master’s degree. Both are required for the Ph.D. These courses may be repeated for credit.

A minimum of 40 credit hours are required to complete the master’s degree. Consistent with the other Ph.D. programs offered in the Department of Psychology, the master’s degree earned will be in general psychology. Students who do not enter the program with a master’s degree earn a master’s degree while working toward the Ph.D.

Additional course work for the Ph.D. includes: PSYC 603 Developmental Processes (or another approved course in developmental psychology), PSYC 630 Social Psychology (or another approved course in social psychology), PSYC 700 Grant Writing or ALHP 716 Grant Writing and Project Management in Health Related Sciences, and PSYC 795 Practicum in the Teaching of College Psychology.

Students must take at least one course in methodology or statistics in addition to the core requirements. Options include: BIOS 531, BIOS 571, BIOS 572, BIOS 647, EPID 606, HADM 762, MGMT 643, MGMT 691 Topics in Management (CARMA), NURS 772, PSYC 702, SOCY 605, STAT 644 or other relevant courses as approved by program faculty.

Dissertation credits: Students must declare 12 units of PSYC 898 but may take additional credit hours.

In addition to the above requirements, students, working with faculty, should choose additional elective courses as needed for their career goals. Possible elective courses include, but are not limited to: ALHP 701, GRTY 601, GRTY 627, HADM 615, HADM 626, IDAS 610, PHTX 614 or SBHD 605.

Students awarded the health psychology Ph.D. are required to complete a minimum of 80 semester hours, broken down as follows: department core courses, 13-15 credits; master’s thesis, six credits; health psychology core courses, 17 credits; applied requirement, three credits; electives for master’s, six credits; readings and research, three credits; research practicum, three credits; post-master’s electives, 15 credits; and dissertation, 12 credits. Students also must pass a comprehensive examination.

### Psychology, Doctor of Philosophy (Ph.D.)

**Admission requirements summary**

<table>
<thead>
<tr>
<th>Psychology, Doctor of Philosophy (Ph.D.)</th>
<th>Degree</th>
<th>Semester(s) of entry</th>
<th>Deadline dates</th>
<th>Test requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph.D.</td>
<td>Fall only</td>
<td>Jan 10 (biopsychology, developmental psychology)</td>
<td>Dec 15 (social psychology)</td>
<td>GRE-General</td>
</tr>
</tbody>
</table>

**Special requirements:**

- Applicants should apply to the Ph.D. program only, but will earn a master’s degree during their course of study. Applicants who are interested in only the terminal master’s degree are not admitted.

- Please indicate your interest in biopsychology, developmental psychology or social psychology in your application.

**Websites** – biopsychology: [www.psychology.vcu.edu/biopsychology](http://www.psychology.vcu.edu/biopsychology); developmental psychology: [www.psychology.vcu.edu/developmental](http://www.psychology.vcu.edu/developmental); social psychology: [www.psychology.vcu.edu/social](http://www.psychology.vcu.edu/social)

- Personal interview may be required.

The Doctor of Philosophy in Psychology offered by Virginia Commonwealth University prepares students for basic or applied research and includes three specialty areas: biopsychology, developmental and social psychology. The concentration in developmental trains students for work in either college or university academic departments or applied settings. Applied developmentalists work in a variety of settings and programs (violence prevention, community intervention, schools, family service agencies, nonprofit agencies, health care settings, disability agencies) with a variety of human populations (infants and young children, school-age children, adolescents, at-risk youth, incarcerated youth and adults, parents, older adults, persons with disabilities); they do not offer counseling/therapy services.

The Center for Psychological Services and Development, a campus-based community service agency operated by the department, provides training opportunities for graduate students in all departmental programs. A wide variety of other on- and off-campus practicum placements also are available.

The department maintains laboratory facilities for research in the areas of behavioral assessment, behavioral medicine, developmental, learning, behavioral pharmacology, psychophysiology, psychotherapy process, social perception, social influence and group dynamics. Opportunities for field research also are available in a variety of settings. A collection of current journals and books in psychology is housed in the James Branch Cabell Library on the Monroe Park Campus and in the Tompkins-McCaw Library on the MCV Campus.

Teaching assistantships, research assistantships and paid practicum placements are available.

### Curriculum requirements

#### Department core

| PSYC 617 Sensation and Perception or PSYC 629 Biological Basis of Behavior | PSYC 619 Learning and Cognition |
| PSYC 675 Ethical Principles of Psychology (two credits) | PSYC 680 Statistics in Psychological Research I |
| PSYC 681 Statistics in Psychological Research II |

#### Psychology curriculum

General psychology program doctoral courses completed (PSYC 638; three hours of 671 and/or 690; and 602 or 603 or 605).

Successful completion of one of the following specialized division curricula:

#### Biopsychology division curriculum

PSYC 629, PSYC 617, PSYC 639 and three courses from the following list: PSYC 612, PSYC 622, PHTX 632, PHIS 501, PHTX 633 and approved special topics courses (PSYC 691).

#### Developmental division curriculum

PSYC 603, PSYC 636, and PSYC 671 or PSYC 690
• Three or more “age-stage” courses chosen from: PSYC 691 Infant Behavior and Development, PSYC 691 Early and Middle Childhood, PSYC 628 Psychology of Adolescent Development and PSCY 602 Psychology of Aging.

• One course in diversity (most often PSYC 677 Minority Mental Health).

• Two applied courses chosen from PSYC 691 Program evaluation, PSYC 700 Grant-writing, PSYC 705 Teaching of Psychology, PSYC/GRTY 642 Practicum in Clinical Geropsychology, PSYC/IDDS 600 Interdisciplinary Studies in Developmental Disabilities: Teamwork, PSYC/IDDS 692 Directed Studies in Developmental Disabilities, IDDS 691 Special Topics or other courses approved by adviser.

• Students will take one or more courses in psychopathology or disabilities, choosing from PSYC/GRTY 615 Aging and Mental Disorders, PSYC 616 Psychopathology, PSYC 650 Advanced Child Psychopathology, PSYC/IDDS 600 Interdisciplinary studies in Developmental Disabilities: Teamwork, PSYC/IDDS 692 Directed Studies in Developmental Disabilities, IDDS 691 Special Topics or other relevant classes as approved by adviser.

• Additional training in methodology or statistics: one or more courses selected from NURS 772 Advanced Qualitative Research, MGMT 643 Applied Multivariate Methods, MGMT/PSYC 702 Causal Analysis for Organizational Studies, SOC 605 Survey Research Methods, HADM 762 Health Services Research Methods II, BIOS 544 or other relevant courses as approved by adviser.

• One graduate course in social psychology is required.

Students specializing in life span development and gerontology must take the following set of gerontology courses in addition to other developmental and core requirements — these courses will result in a Certificate in Aging from the Department of Gerontology:

GRTY 601 Biological and Physiological Aging
GRTY 602 Psychology of Aging
GRTY 605 Social Gerontology
GRTY 692 Independent Study (two credits)

Six additional hours of gerontology electives, chosen with adviser.

Electives

Students, working with faculty, should choose additional courses as needed for their career goals; the number of electives taken is optional, and other courses not on this list may qualify, provided students work in consultation with faculty advisers:

GRTY 601 Biological and Physiological Aging
GRTY 602 Psychology of Aging
GRTY 605 Social Gerontology
HG 620 Introduction to Principles of Human Behavioral Genetics
PSYC 613 Cognitive Development
PSYC/GRTY 635 Psychology of Health and Health Care in the Elderly
PSYC 638 Evolution of Psychological Systems
PSYC 644 Individual Tests of Intelligence
PSYC 645 Assessment of Personality
PSYC/GRTY 641 Survey of Psychological Assessment and Treatment of the Older Adult
PSYC 655 Community Interventions: Development, Implementation and Evaluation
PSYC 659 Seminar in Consultation Psychology
PSYC 660 Health Psychology
PSYC 691 Parenting or other special topics courses as available

Social division curriculum

PSYC 630, PSYC 632 and three courses from the following list: PSYC 604, PSYC 610, PSYC 633 and PSYC 634.

• A minimum of 72 semester hours of approved courses beyond the baccalaureate degree
Each student will complete either a thesis or an applied project. A student who
Statistics and operations research concentrations

Note that the following courses cannot be applied to the credit requirements for
Core courses: All students must take OPER 527*, 528*, 613, 639, 643 and 690.
Core courses: All students must take MATH 507, 508*; a six-credit sequence selected from MATH 632-634, 719, 721 and at least six credits selected from MATH 511, 512, 515, 516, 615, STAT 513-514. Also, at least one seminar and the thesis (if chosen) must concern topics of pure mathematics.

* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 15 credits of course work in the concentration.

Mathematics concentration

Master of Science in Mathematical Sciences with a concentration in applied mathematics

* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 15 credits of course work in the concentration.

Operations research concentration

Master of Science in Mathematical Sciences with a concentration in operations research

Core courses: All students must take OPER 527*, 528*, 613, 639, 643 and 690.
Additional courses: Students must also take six credit hours in OPER elective courses at the 600- or 700-level and an additional six credit hours that may be
taken in operations research courses, courses in other disciplines (subject to the approval of the program director) or in OPER 698.

All students must pass two comprehensive examinations: Foundations of Operations Research, covering OPER 527 and OPER 528, and Methods of Operations Research, covering OPER 613, OPER 639 and OPER 643. All students will be given two attempts to pass each exam.

*If a student previously received credit for one or both of these courses or their equivalents, then one or two other operations research courses must be taken in their place.

Statistics concentration

Master of Science in Mathematical Sciences with a concentration in statistics

Core course work:
STAT 513, 514*, 546, 642, 643 and 690

Additional course work:
At least six additional credit hours in courses selected from STAT 613, 623, 636, 645, 648, 649, 650, 656 or 698, approved 691**, 736, 742, 744, 745 and approved 791**. The remaining six credit hours may be taken from the above list or in other disciplines with courses subject to the approval of the graduate director.

All students must pass two comprehensive examinations: statistical theory (covering STAT 513 and 514) and statistical application (covering STAT 546, 642 and 643). All students will be given two attempts to pass each exam.

* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 18 credits of course work in the concentration.

** Use of STAT 691 and STAT 791 to meet this requirement must be approved by the Department of Statistical Sciences and Operations Research and the Graduate Affairs Committee of the department at the time the course is scheduled.

Systems Modeling and Analysis, Doctor of Philosophy (Ph.D.)

Admission requirements summary

<table>
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<tr>
<th>Degree: Systems Modeling and Analysis, Doctor of Philosophy (Ph.D.)</th>
<th>Semester(s) of entry:</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph.D.</td>
<td>Fall</td>
<td>Feb 1 Priority deadline for funding consideration</td>
<td>GRE-General</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>Nov 1</td>
<td></td>
</tr>
</tbody>
</table>

Admission requirements

A Doctor of Philosophy in Systems Modeling and Analysis is offered jointly by the Department of Statistical Sciences and Operations Research and the Department of Mathematics and Applied Mathematics. The program focuses on the development of the mathematical and computational skills used to model and analyze real-world systems. Faculty and students will engage and collaborate to contribute to the knowledge base used in the fields of science, medicine, business and engineering. The continued development of operations research, statistics and applied mathematics is critical to scientific advancement in the 21st century. The doctoral curriculum enables students to expand the frontiers of knowledge through original, relevant research involving quantitative and qualitative complex systems derived from real, contemporary problems facing our world.

In addition to the **general requirements for admission** to graduate programs in the Graduate School (in the Graduate study section of this bulletin), there are a wide range of preparatory courses that will be needed for admission to this interdisciplinary program. To be admitted to the program, a student must have completed an undergraduate degree with at least 30 credits of undergraduate-level mathematics, including calculus I and II, multivariate calculus, linear algebra, probability and statistics.

In addition, the candidate must have either completed 18 credits in the following six graduate courses: optimization, stochastic simulation, mathematical statistics I and II, differential equations and real analysis, or they can be conditionally admitted to the program pending completion of these six courses with a grade of B or better in each course.

Students who received their previous degree more than three years prior to entering this program and who have not taken additional courses in mathematics, operations research or statistics in the last three years will be required to take an entrance exam covering the six graduate courses listed above.

Degree requirements

The program requires a minimum of 57 graduate-level credits.

Core courses
MATH 532 Ordinary Differential Equations I (3 credits)
OPER 639 Practical Optimization (3 credits)
STAT 546 Linear Models (3 credits)

Seminar courses
SYSM 681 Systems Seminar I (1 credit)
SYSM 682 Systems Seminar II (1 credit)
SYSM 683 Systems Seminar III (1 credit)

Systems research
Each student will be required to take SYSM 697 Systems Research (3 credits) with a faculty adviser before admission to candidacy.

Electives
Students will take 24 credits in electives at the 600– and 700–level. At least 12 credits must be at the 700-level. A student must take electives in at least two of the three subject areas: mathematics, operations research and statistics. If a student chooses to take electives in two subject areas, they must have at least six credits in each. If a student chooses to take electives in three subject areas, they must take at least three credits in each. Electives will be determined based on the student’s research interests and in consultation with the student’s adviser and the doctoral program director.

Admission to candidacy

Admission to candidacy is made by evaluation of a qualifying portfolio, including exams and project work from courses; writing samples from the research seminars (SYSM 681, 682 and 683); research products from systems research projects (SYSM 697); and statements from faculty advisers and instructors. The portfolio can be submitted after all course work has been completed, as well as any additional preparatory course work required at admission. The candidacy committee will evaluate the student’s readiness to begin their dissertation work. Supplementary examination may be required by the committee.

Dissertation proposal

After admission to candidacy and the completion of all course work, the student will prepare a written and oral proposal of the intended dissertation research area, including a complete literature review. A successful proposal must be completed at least nine months prior to the dissertation defense.

Dissertation defense

The student must complete 18 credits in SYSM 798 Dissertation Research resulting in a publishable dissertation and a successful oral defense. The student also must have submitted at least one paper to a refereed academic journal and prepared a second manuscript or given a conference presentation on the research prior to the defense.