PRE-MEDICAL GRADUATE HEALTH SCIENCES, CERTIFICATE IN (POST-BACCALAUREATE GRADUATE CERTIFICATE)

Program goal
The Certificate in Pre-medical Graduate Health Sciences program in the School of Medicine provides an advanced level of didactic training in the biomedical sciences that will enhance the preparation of students for a variety of career options, particularly professional degree training (i.e. M.D./D.O., D.D.S., M.S. and Ph.D.). The program supports student success by providing Kaplan standardized test preparation for enrolled students, academic advising and application review, and workshops that foster an informed approach to the professional school admission process.

Student learning outcomes
1. Achievement of a threshold competency in the basic health sciences: The candidate will achieve/surpass expectations of a threshold-level competency in the basic health sciences, particularly in areas related to gaining admission to professional and/or higher-level degree programs.
2. MCAT/DAT preparation: The candidate will be prepared to take and/or retake standardized tests. The candidate will achieve a score that fulfills medical or dental school admission requirements.
3. Preparation for career advancement: The candidate who meets the threshold competency objective will display an enhanced level of advancement to higher levels of professional and/or advanced degree training.

VCU Graduate Bulletin, VCU Graduate School and general academic policies and regulations for all graduate students in all graduate programs
The VCU Graduate Bulletin website documents the official admission and academic rules and regulations that govern graduate education for all graduate programs at the university. These policies are established by the graduate faculty of the university through their elected representatives to the University Graduate Council.

It is the responsibility of all graduate students, both on- and off-campus, to be familiar with the VCU Graduate Bulletin as well as the Graduate School website (http://www.granduate.vcu.edu/) and academic regulations in individual school and department publications and on program websites. However, in all cases, the official policies and procedures of the University Graduate Council, as published on the VCU Graduate Bulletin and Graduate School websites, take precedence over individual program policies and guidelines.

Visit the academic regulations section for additional information on academic regulations for graduate students. (http://bulletin.vcu.edu/academic-reggs/)

Graduation requirements
As graduate students approach the end of their academic programs and the final semester of matriculation, they must make formal application to graduate. No degrees will be conferred until the application to graduate has been finalized.

Graduate students and program directors should refer to the following graduation requirements as published in the Graduate Bulletin for a complete list of instructions and a graduation checklist.

Visit the academic regulations section for additional information on graduation requirements. (http://bulletin.vcu.edu/academic-reggs/grad/graduation-info/)

Other information
Applying to professional school and advanced graduate degree programs
Students must follow admission guidelines for applications to the M.D./D.O., M.S., D.D.S. and other programs. Completion of the certificate program does not afford a guaranteed admission to other professional training programs at VCU.

M.D./D.D.S. program linkage: Students who demonstrate exceptional academic performance in the certificate program (3.5 GPA) and earn an MCAT score of 508 or higher are eligible for a guaranteed interview (to be used within two years of certificate completion) at the VCU School of Medicine. Pre-dental students who earn a 3.5 GPA in the certificate and a DAT score of 20 are eligible for early application file view at the VCU School of Dentistry.

M.S. program linkage: Certificate graduates are eligible to apply to one of six different Master of Science programs administered by basic science departments in the VCU School of Medicine. Course credits earned during enrollment in the certificate program can, with the master’s program approval, be counted toward M.S. degree requirements. Admission into these master’s programs is competitive and separate from the certificate program.

Advising: Students are encouraged to seek opportunities for academic, personal and professional development from the Division for Academic Success, Career Services and the CERT Program Office. For students who choose to take a year off between the certificate and professional school, several School of Medicine professors hire students for research positions and area hospitals offer Scribe programs that actively recruit VCU graduates. The CERT Program Office can also help identify options for clinical observerships and non-clinical community volunteer service.

Letters of reference: A certificate program adviser will provide an individualized letter of reference for professional school applications. Students are expected to get to know their adviser through one-on-one meetings and regular correspondence.

Program duration: The certificate is designed as a two-semester program and student are expected to complete all certificate requirements within one calendar year. Extensions may be approved by the program director on an individual, as-needed basis. Please contact the program if you are a non-traditional student who may require additional time to complete the program.

Apply online today. (https://www.vcu.edu/admissions/apply/graduate/)
Admission requirements

<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>Certificate</td>
<td>Fall</td>
<td>Jul 16</td>
<td>GRE, MCAT or DAT no more than five years old; TOEFL for international students</td>
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Spring  Nov 15

Special requirements

- While there is no official deadline for applying to the certificate program, the school strongly recommends applicants have all materials into the graduate admissions office by July 16 (for fall semester matriculation) or Nov. 15 (for spring semester matriculation) to ensure that the file can be processed in time for the appropriate semester. The program has rolling admissions for a limited number of positions.

Applicants must meet all general admission requirements of the VCU Graduate School (http://bulletin.vcu.edu/graduate/study/admission-graduate-study/admission-requirements/).

Degree requirements

In addition to general VCU Graduate School graduation requirements (http://bulletin.vcu.edu/academic-regis/grad/graduation-info/), students must complete a minimum of 27 graduate credit hours of course work with a minimum final GPA of 3.0 (4.0 scale). The curriculum is composed of three required courses (15 credit hours) and 12 credit hours of electives spread over two semesters. The curriculum should be completed in one academic year (fall and spring semester).

Required and elective courses are drawn from departments within the School of Medicine: the departments of Anatomy and Neurobiology, Biochemistry and Molecular Biology, Human and Molecular Genetics, Microbiology and Immunology, Pharmacology and Toxicology, and Physiology and Biophysics. All courses are held on the MCV Campus. In addition to the elective courses shown other courses may be applied as electives with the approval of the course director.

Curriculum requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Required courses</td>
<td></td>
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</tr>
<tr>
<td>BIOC 503</td>
<td>Biochemistry, Cell and Molecular Biology</td>
<td>5</td>
</tr>
<tr>
<td>BIOC 504</td>
<td>Biochemistry, Cell and Molecular Biology</td>
<td>5</td>
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<tr>
<td>PHIS 501</td>
<td>Mammalian Physiology</td>
<td>5</td>
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| Electives |
| Select 12 credits from: | 12 |
| ANAT 608 | Functional and Clinical Neuroanatomy |
| ANAT 611 | Histology |
| ANAT 612 | Human Embryology |
| DENS 606 | Oral Research: Independent Study |
| DENS 610 | Fundamentals of Oral and Maxillofacial Radiology |

HGEN 501 Introduction to Human Genetics
HGEN 620 Principles of Human Behavioral Genetics
IBMS 635 Cellular Signalling
IBMS 690 Basic Health Sciences Research Seminar
IBMS 691 Special Topics in Interdisciplinary Biomedical Sciences
IBMS 692 Special Topics in Interdisciplinary Biomedical Sciences
MICR 505 Immunobiology
PHIS 512 Cardiac Function in Health and Disease
PHIS 697 Directed Research in Physiology
PHTX 548 Drug Dependence
PHTX 630 Basic Concepts in Pharmacology for Graduate Students
PHTX 641 Introduction to Clinical Pharmacology

Total Hours 27

The minimum number of graduate credit hours required for this certificate is 27.

Contact
Certificate program office
premedcert@vcuhealth.org (premedcert@vcu.edu)  
(804) 828-9501

Additional contact
I. Scott Ramsey, Ph.D.
Program director
ian.ramsey@vcuhealth.org (jsilberg@vcu.edu)

Program website: medschool.vcu.edu/education/graduate/certificate-programs/cert (https://medschool.vcu.edu/education/graduate/certificate-programs/cert/)