

# ENVIRONMENTAL STUDIES, MASTER OF SCIENCE (M.S.)

## Program goal

The goal of the M.S. in Environmental Studies is to provide an interdisciplinary master's degree program in environmental studies that emphasizes the critical links between environmental life sciences and public policy. This goal necessitates training that crosses disciplinary boundaries. Through a program of study combining environmental science, environmental technology and environmental policy, the successful graduate will gain a range of skills designed to facilitate a science-based understanding of the natural world and human interactions with it. The M.S. is specifically designed to prepare students for careers involving science and policy research through the completion of a culminating thesis project.

## Student learning outcomes

1. Graduates will be able to use emerging environmental technologies and apply them under real-world conditions.
2. Graduates will be able to conduct objective research and/or interpret research findings, and apply scientific concepts and information to the decision-making process for environmental regulations and policies.
3. Graduates will be able to effectively bridge the realms of policy and science on critical environmental issues and be able to make significant contributions in an interdisciplinary professional and academic environment.
4. Graduates will possess a sophisticated and practical understanding of methods for collection, analysis, presentation and critical interpretation of environmental data using appropriate statistical and quantitative tools.

## 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.graduate.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-regs>)

## Degree candidacy requirements

A graduate student admitted to a program or concentration requiring a final research project, work of art, thesis or dissertation, must qualify for continuing master's or doctoral status according to the degree candidacy requirements of the student's graduate program. Admission to degree candidacy, if applicable, is a formal statement by the graduate student's faculty regarding the student's academic achievements and the student's readiness to proceed to the final research phase of the degree program.

Graduate students and program directors should refer to the following degree candidacy policy as published in the VCU Graduate Bulletin for complete information and instructions.

**Visit the academic regulations section for additional information on degree candidacy requirements.** (<http://bulletin.vcu.edu/academic-regs/grad/candidacy>)

## 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-regs/grad/graduation-info>)

**Apply online at** [graduate.admissions.vcu.edu](http://graduate.admissions.vcu.edu) (<http://graduate.admissions.vcu.edu>).

## Admission requirements

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Jan 10	TOEFL (or IELTS or equivalent) for international students
	Spring	Aug 15	

## Special requirements

- For students seeking consideration for fall admission and potential funding, preference is given to applications received by Jan. 10. See program website (<http://www.vcu.edu/cesweb>) for details.

In addition to the general admission requirements of the VCU Graduate School (<http://bulletin.vcu.edu/graduate/study/admission-graduate-study/admission-requirements>), applicants must have successfully completed undergraduate training and hold a bachelor's degree from an accredited institution reflecting ability to perform at the graduate level.

While qualified students from any baccalaureate program will be considered for admission to the Master of Science in Environmental Studies (M.S.) program, due to the program goal of linking science and policy, students with narrow training in one field or the other may be required to complete some basic education in the alternate field prior to full admission. Moreover, admission to the M.S. program requires a

sponsoring faculty adviser, who will function as a thesis adviser for the admitted student. Students without such sponsorship will be considered for admission to the Master of Environmental Studies (M.Envs.) degree program. If an appropriate adviser is identified following admission, the student's program may be changed to the M.S. program.

Students admitted to the program are generally drawn from applicants with a minimum undergraduate GPA of 3.0 (on a 4.0 scale or equivalent). Applicants holding an undergraduate degree from recognized foreign institutions should display an acceptable level of English proficiency by achieving a minimum score of 600 on the TOEFL paper-based examination or 100 on the Internet-based examination. The IELTS or equivalent is considered as well.

## Degree requirements

In addition to general VCU Graduate School graduation requirements (<http://bulletin.vcu.edu/academic-regs/grad/graduation-info>), students must:

1. Complete a minimum of 33 graduate credit hours, approved by the program director, with an overall minimum GPA of 3.0 on all graduate course work attempted after acceptance into the program (At least one-half of required course work must be at the 600 level or higher).
2. Complete four required core courses (10 credit hours)
3. Complete an additional 10 credit hours of approved graduate electives
4. Develop a research proposal approved by a committee of three faculty members
5. Qualify for degree candidacy based upon satisfactory completion of the above requirements
6. Complete the proposed research culminating in a publication-quality thesis (minimum of 13 research/thesis credit hours)
7. Successfully defend the research thesis

## Curriculum requirements

Course	Title	Hours
<b>Core requirements</b>		
ENVS 543	Environmental Data Literacy	3
ENVS 601	Survey in Environmental Studies	3
ENVS 603	Environmental Research Methods	3
OVPR 601	Scientific Integrity	1
<b>Thesis</b>		
Select a minimum of 13 credit hours (M.S. degree only):		13
ENVS 697 or ENVS 698	Research Thesis	
<b>Electives</b>		
Choose any ENVS course at the 500 or 600 level or select from electives below. <sup>1</sup>		10
Total Hours		33

1

Courses must represent at least two of the disciplines below. Listed courses are options and are not comprehensive of all electives. Other electives may be allowed with prior permission of major adviser and program director.

## Electives

Course	Title	Hours
<b>Environmental studies</b>		
ENVS 550	Ecological Risk Assessment	3
ENVS/ANTH 556	Historical and Cultural Landscapes	3
ENVS 692	Independent Study <sup>1</sup>	1-3
ENVS 693	Internship in Environmental Studies <sup>1</sup>	1-3
<b>Environmental policy and administration</b>		
ENVS/PADM 628	Environmental Policy and Administration	3
ENVS/GVPA 640	River Policy	3
ENVS 660	Virginia Environmental Law	3
PADM 601	Principles of Public Administration	3
URSP 650	Natural Resources and Environmental Planning	3
URSP 652	Environmental Analysis	3
<b>Environmental science/health</b>		
BIOL 510	Conservation Biology	3
BIOL 514	Stream Ecology	4
BIOL 532	Water Pollution Biology	3
BIOL 591	Special Topics in Biology (applied and environmental microbiology)	1-4
ENVS 650	Pesticides, Health and the Environment	3
ENVS 655	Hydrogeology	3
ENVS 670	Pollution Physiology	3
<b>Environmental technology</b>		
ENVS/URSP 521	Introduction to Geographic Information Systems	3
ENVS 602	Environmental Technology	1-3
ENVS/URSP 654	Environmental Remote Sensing	3
ENVS 691	Topics in Environmental Studies (environmental applications of GIS)	1-3

1

Students may not apply more than three credit hours (total) of ENVS 692 and/or ENVS 693 to the degree without prior approval of the major adviser and program director.

**The minimum total of graduate credit hours required for this degree is 33.**

## Graduate program director

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**Program website:** [vcu.edu/cesweb](http://vcu.edu/cesweb) (<http://vcu.edu/cesweb>)