

# ENVIRONMENTAL SCIENCE AND POLICY, MS

**Banner Code:** SC-MS-EVSP

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This master's program meets the increasing need for trained environmental professionals who can address the problems of land and water management, land use and urbanization, wetland loss, microbial ecology, bioremediation, conservation biology, and ecosystem preservation. These professionals will also contribute to the analysis and resolution of global problems, such as deforestation, insufficient world food supplies, acid deposition, population growth and public health, global climate change/warming, and depletion of the stratospheric ozone. Areas of specific departmental focus include ecosystems; conservation; environmental biocomplexity; molecular ecology; sustainability science; environmental policy and management; and human/environmental interactions.

Environmental problems are defined in the real world and do not necessarily conform to traditional academic disciplines. As such, solutions require creative combinations of diverse interests and subjects. Effective training requires rigorous, problem-focused interdisciplinary action in a setting in which research is an essential element supporting instruction.

This has been designated a Green Leaf program.

## Concentrations

The following concentrations are available in the master's program:

- Aquatic Ecology (AQEC)
- Conservation Science and Policy (COSP)
- Earth Surface Processes and Environmental Geochemistry (ESEG)
- Environmental Biocomplexity (EVBC)
- Environmental Science and Policy (EVSP)
- Environmental Science Communication (ESCM)
- Environmental Management (EVMG)

## Admissions & Policies

### Admissions

University-wide admissions policies can be found in Graduate Admissions Policies. Additionally, information on the admission of international students can be found in Admission of International Students.

To apply for this program, please complete the George Mason University Admissions Application (<https://www2.gmu.edu/admissions-aid/apply-now>).

### Eligibility

Applicants should hold a bachelor's degree from a regionally-accredited institution with a GPA of 3.00 in natural or Earth sciences, engineering, resource planning, environmental studies, or a field that leads to an environmental focus.

Applicants should have taken at least two semesters of chemistry and three semesters of biology, including a course in ecology. Applicants who lack this coursework should contact the graduate coordinator's office for advice. Successful completion of a two-semester sequence of introductory graduate-level environmental chemistry and biology courses can be used to satisfy the biology and chemistry prerequisites for admission. These introductory courses would be in addition to the requirements for the degree.

### Application Requirements

Applicants should submit the following:

- Completed George Mason University Admissions Application (<https://www2.gmu.edu/admissions-aid/apply-now>).
- Three letters of recommendation, including at least one from a former professor or, if not available, from someone with a PhD.
- The GRE is required. Successful applicants usually have achieved a minimum score of 235/336 (70%) for verbal and quantitative combined.
- Statement of interest indicating: desired concentration, potential areas of environmental focus/research interest, interactions with potential faculty advisors, and career goals.
- Contact a potential George Mason faculty advisor (appropriate for research interests). An endorsement letter from the potential advisor<sup>1</sup> must be sent to the Department of Environmental Science and Policy's graduate office; the availability of an advisor in the student's area of interest is a prerequisite for admission.

<sup>1</sup> This endorsement letter is not required for students in the Environmental Management Concentration; their advisor will be the graduate program director.

### Policies

For policies governing all graduate programs, see AP.6 Graduate Policies.

### Course Selections

Some program requirements may be fulfilled by completing courses from a variety of academic units at Mason. A student's course selections should reflect a coherent individual program focus, which is stated and briefly described in the program of study. Course selections should also support the research component of the student's degree program (if applicable) and should be developed in close consultation with the supervisory committee. The supervisory committee approves a coursework program (the program of study) individually for each student.

In special cases, the graduate program director may permit the substitution of an alternative course in place of a required one.

### Supervisory Committee

Students must form a supervisory committee<sup>1</sup> and submit a program of study to the graduate coordinator for approval within the first 9 credits of coursework or by the end of the second semester, whichever comes first.

The supervisory committee consists of the advisor and at least two other members, chosen in consultation with the advisor, and must conform to AP.6.9 Requirements for Master's Degrees.

<sup>1</sup> Students choosing the EVMG concentration are not required to form a supervisory committee.

## Requirements

### Degree Requirements

Total credits: 33 or 37

This is a Green Leaf program.

Students should refer to Admissions & Policies for specific policies related to this program.

Students in the AQEC, COSP, ESEG, EVBC, ESCM and EVSP concentrations will complete the concentration's requirements, the research requirement, the seminar requirement, and electives as outlined below (for a total of 33 credits).

Students in the EVMG concentration will complete the concentration's requirements as outlined in the concentration's section below (for a total of 37 credits).

#### Aquatic Ecology Concentration (AQEC)

This concentration will provide students with a well-grounded master's in the study of aquatic environments such as lakes, streams, watersheds, and estuaries. Emphasis is placed on food webs, biogeochemical cycles, water quality, habitat characteristics, and life histories of aquatic organisms. Students will become proficient with research tools including literature review, field and laboratory methods, and analytical tools as well as applications to management issues.

#### Aquatic Science

Code	Title	Credits
EVPP 550	Waterscape Ecology and Management	3
EVPP 581	Estuarine and Coastal Ecology	3
Select 6 credits from the following:		6
EVPP 505	Selected Topics in Environmental Science	
EVPP 519	Marine Mammal Biology and Conservation	
EVPP 521	Marine Conservation	
EVPP 536	The Diversity of Fishes	
EVPP 563	Coastal Morphology and Processes	
EVPP 641	Environmental Science and Public Policy	
EVPP 643	Microbial Ecology	
EVPP 645	Freshwater Ecology	
EVPP 646	Wetland Ecology and Management	
EVPP 648	Population Ecology	
EVPP 652	The Hydrosphere	
EVPP 741	Advanced Topics in Environmental Science and Public Policy	
EVPP 745	Environmental Toxicology	
CLIM 512	Physical Oceanography	

Total Credits 12

#### Public Policy

Select from courses in environmental law, human ecology, environmental ethics, environmental conflict resolution, environmental planning, or public affairs.

Code	Title	Credits
Select at least 6 credits from the following:		6
EVPP 505	Selected Topics in Environmental Science	
EVPP 521	Marine Conservation	
EVPP 608	Introduction to Environmental Social Science <sup>1</sup>	
EVPP 619	The Challenge of Biodiversity	
EVPP 623	Translating Environmental Policy into Action	
EVPP 635	Environment and Society	
EVPP 642	Environmental Policy	
EVPP 670	Environmental Law	
EVPP 675	Environmental Planning and Administration	
EVPP 741	Advanced Topics in Environmental Science and Public Policy	
Total Credits		6

<sup>1</sup> Required for those with limited coursework in the social sciences. Can be included within the 6 credits.

#### Aquatic Methods

Select from statistics, research design, multivariate data analysis, geographic information systems, lab and field classes.

Code	Title	Credits
Select at least 6 credits from the following:		6
EVPP 555	Lab in Waterscape Ecology	
EVPP 582	Estuarine and Coastal Ecology Laboratory	
EVPP 615	Molecular Environmental Biology II	
EVPP 647	Wetland Ecology Lab and Field	
EVPP 650	Ecosystem Analysis and Modeling	
EVPP 651	Multivariate Data Analysis for Ecology and Environmental Science	
CLIM 512	Physical Oceanography	
CSS 600	Introduction to Computational Social Science	
CSS 645	Spatial Agent-Based Models of Human-Environment Interactions	
GG5 653	Geographic Information Analysis	
SOCI 636	Statistical Reasoning	
Total Credits		6

#### Additional Requirements

See the Additional Requirements section below for details on the research requirement, the seminar requirement, and elective.

#### Conservation Science and Policy Concentration (COSP)

This concentration is designed to foster an interdisciplinary, research-oriented degree focusing on the conservation of threatened species and habitats, integrating biological sciences and the human dimensions of conservation practice.

Students may take courses offered by the Department of Environmental Science and Policy and other departments, including CONS courses which are offered through the Smithsonian Mason School of Conservation. This unique partnership with the Smithsonian-Mason School of Conservation (SMSC) in Front Royal, Virginia offers students hands-on education in cutting-edge conservation science and human dimensions through residential, intensive classes. SMSC is renowned for its conservation research and training of conservation practitioners around the world and instructors for these classes are drawn from SMSC's conservation scientists and other experts from around the world.

### Conservation Science

Code	Title	Credits
Select at least 6 credits of conservation science courses. 6		
Suggested courses include:		
EVPP 518	Conservation Biology	
EVPP 519	Marine Mammal Biology and Conservation	
EVPP 520	Marine Mammal Biology and Conservation Field Course	
EVPP 543	Tropical Ecosystems	
EVPP 550	Waterscape Ecology and Management	
EVPP 607	Fundamentals of Ecology <sup>1</sup>	
EVPP 621	Overview of Biodiversity Conservation	
CONS 630	Species Monitoring Conservation <sup>2</sup>	
Total Credits		6

<sup>1</sup> Required for those without previous coursework in ecology. Can be included within the 6 credits.

<sup>2</sup> Variable topics, may be taken more than once if the topic is different.

### Conservation Policy and Human Dimensions of Conservation

Select from the following courses in conservation policy or social science courses.

Code	Title	Credits
Select at least 6 credits from the following: 6		
EVPP 521	Marine Conservation	
EVPP 575	Global Biodiversity Governance	
EVPP 608	Introduction to Environmental Social Science <sup>1</sup>	
EVPP 622	Management of Wild Living Resources	
EVPP 642	Environmental Policy	
EVPP 643	Microbial Ecology	
Total Credits		6

<sup>1</sup> Required for those with limited coursework in the social sciences. Can be included within the 6 credits.

### Conservation Methods

Code	Title	Credits
Select at least 6 credits in relevant experimental methods, statistics, or conservation techniques courses. Suggested courses include: 6		
EVPP 555	Lab in Waterscape Ecology	
CONS 620	Spatial Ecology, Geospatial Analysis Remote Sensing for Conservation	

CONS 625	Statistics for Ecology and Conservation Biology	
Total Credits		6

### Additional Requirements

See the Additional Requirements section below for details on the research requirement, the seminar requirement, and electives.

### Earth Surface Processes and Environmental Geochemistry Concentration (ESEG)

This concentration offers a specific research focus in the Earth science area and is designed for students desiring a master's with an Earth science geology theme.

### Natural Sciences

Of the required 16 credits, select at least one course from each of the following areas: soils science, hydrogeology, and geochemistry (totaling 10 of the 16 required credits).

Code	Title	Credits
Select 16 credits from the following: 16		
EVPP 503	Field Mapping Techniques	
EVPP 505	Selected Topics in Environmental Science	
EVPP 543	Tropical Ecosystems	
EVPP 550	Waterscape Ecology and Management	
EVPP 563	Coastal Morphology and Processes	
EVPP 577	Biogeochemistry: A Global Perspective	
EVPP 607	Fundamentals of Ecology <sup>1</sup>	
EVPP 610	Bioremediation: Theory and Applications	
EVPP 643	Microbial Ecology	
EVPP 745	Environmental Toxicology	
CHEM 633	Chemical Thermodynamics and Kinetics	
CHEM 651	Environmental Chemistry of Organic Substances	
CHEM 728	Introduction to Solid Surfaces	
GEOL 500	Selected Topics in Modern Geology	
GEOL 501	Selected Topics in Modern Geology	
GEOL 601	The Lithosphere	
Total Credits		16

<sup>1</sup> Required for those without previous coursework in ecology. Can be included within the 6 credits.

### Public Policy

Select from the following courses in environmental law, human dimension of global change, environmental ethics, human ecology, or planning.

Code	Title	Credits
Select at least 6 credits from the following: 6		
EVPP 505	Selected Topics in Environmental Science	
EVPP 524	Introduction to Environmental and Resource Economics	
EVPP 608	Introduction to Environmental Social Science <sup>1</sup>	
EVPP 619	The Challenge of Biodiversity	
EVPP 620	Development of U.S. Environmental Policies	

EVPP 621	Overview of Biodiversity Conservation
EVPP 623	Translating Environmental Policy into Action
EVPP 635	Environment and Society
EVPP 642	Environmental Policy
EVPP 670	Environmental Law

<sup>1</sup> Required for those with limited coursework in the social sciences. Can be included within the 6 credits.

### Methods

Select from the following courses in remote sensing, GIS, statistics, instrumentation, or modeling.

Code	Title	Credits
Select at least 6 credits from the following:		
EVPP 503	Field Mapping Techniques	6
EVPP 531	Land-use Modeling Techniques and Applications	
EVPP 615	Molecular Environmental Biology II	
EVPP 631	Spatial Agent-based Models of Human-Environment Interactions	
EVPP 632	Qualitative Research Methods for Environmental Scientists	
EVPP 650	Ecosystem Analysis and Modeling	
EVPP 651	Multivariate Data Analysis for Ecology and Environmental Science	
GG5 531	Land-Use Modeling Techniques and Applications	
GG5 550	Geospatial Science Fundamentals	
GG5 553	Geographic Information Systems	
GG5 560	Quantitative Methods	
GG5 563	Advanced Geographic Information Systems	
GG5 579	Remote Sensing	
GG5 653	Geographic Information Analysis	

### Additional Requirements

See the Additional Requirements section below for details on the research requirement, the seminar requirement, and electives.

### Environmental Biocomplexity Concentration (EVBC)

This concentration is designed for students desiring a master's with an environmental biocomplexity theme encompassing the disciplines of population genetics, microbial ecology, and/or molecular systematics.

Students are encouraged to complete at least 1 credit of directed studies (EVPP 693 Directed Studies in Environmental Science and Public Policy) as a laboratory rotation to enhance their mastery of experimental techniques.

### Natural Sciences

Select from the following courses with topics that can be drawn from offerings in ecology, biogeochemistry, biochemistry, population genetics, molecular biology, molecular systematics, molecular evolution, microbial ecology, microbial diversity, quantitative genetics, and population biology.

Code	Title	Credits
Select at least 6 credits from the following:		
EVPP 505	Selected Topics in Environmental Science	6
EVPP 515	Molecular Environmental Biology I	
EVPP 518	Conservation Biology	
EVPP 519	Marine Mammal Biology and Conservation	
EVPP 520	Marine Mammal Biology and Conservation Field Course	
EVPP 521	Marine Conservation	
EVPP 536	The Diversity of Fishes	
EVPP 550	Waterscape Ecology and Management	
EVPP 551	Fungi and Ecosystems	
EVPP 563	Coastal Morphology and Processes	
EVPP 581	Estuarine and Coastal Ecology	
EVPP 607	Fundamentals of Ecology <sup>1</sup>	
EVPP 615	Molecular Environmental Biology II	
EVPP 641	Environmental Science and Public Policy	
EVPP 643	Microbial Ecology	
EVPP 646	Wetland Ecology and Management	
EVPP 745	Environmental Toxicology	
Total Credits		6

<sup>1</sup> Required for those without previous coursework in ecology. Can be included within the 6 credits.

### Public Policy

Select from the following courses in environmental law, human ecology, environmental ethics, patent law, or legal and ethical issues in science.

Code	Title	Credits
Select at least 6 credits from the following:		
EVPP 505	Selected Topics in Environmental Science	6
EVPP 520	Marine Mammal Biology and Conservation Field Course	
EVPP 521	Marine Conservation	
EVPP 524	Introduction to Environmental and Resource Economics	
EVPP 608	Introduction to Environmental Social Science <sup>1</sup>	
EVPP 619	The Challenge of Biodiversity	
EVPP 620	Development of U.S. Environmental Policies	
EVPP 621	Overview of Biodiversity Conservation	
EVPP 623	Translating Environmental Policy into Action	
EVPP 635	Environment and Society	
EVPP 642	Environmental Policy	
EVPP 643	Microbial Ecology	
EVPP 670	Environmental Law	
EVPP 741	Advanced Topics in Environmental Science and Public Policy	

<sup>1</sup> Required for those with limited coursework in the social sciences. Can be included within the 6 credits.

## Methods and Statistics

Select from the following courses in statistics, bioinformatics, information systems, instrumental analysis, microbiological techniques, molecular methods, or phylogenetic methods.

Code	Title	Credits
Select at least 9 credits from the following: 9		
EVPP 615	Molecular Environmental Biology II	
EVPP 632	Qualitative Research Methods for Environmental Scientists	
EVPP 650	Ecosystem Analysis and Modeling	
EVPP 651	Multivariate Data Analysis for Ecology and Environmental Science	
EVPP 745	Environmental Toxicology	
GG5 553	Geographic Information Systems	
GG5 563	Advanced Geographic Information Systems	
GG5 653	Geographic Information Analysis	

## Additional Requirements

See the Additional Requirements section below for details on the research requirement, the seminar requirement, and electives.

## Environmental Science and Policy Concentration (EVSP)

The Environmental Science and Policy concentration is the largest within the master's and serves as a home for a broad array of research foci. It encourages an independent and creative approach to the development of curricula that reside in the general field of environmental science and policy.

The concentration's requirements may be fulfilled by completing courses from a variety of academic units at Mason as outlined below.

## Natural Sciences

Select from the following courses in biology, geology, geography, chemistry, or environmental engineering.

Code	Title	Credits
Select at least 6 credits from the following: 6		
EVPP 515	Molecular Environmental Biology I	
EVPP 518	Conservation Biology	
EVPP 519	Marine Mammal Biology and Conservation	
EVPP 520	Marine Mammal Biology and Conservation Field Course	
EVPP 543	Tropical Ecosystems	
EVPP 550	Waterscape Ecology and Management	
EVPP 551	Fungi and Ecosystems	
EVPP 581	Estuarine and Coastal Ecology	
EVPP 607	Fundamentals of Ecology <sup>1</sup>	
EVPP 622	Management of Wild Living Resources	
EVPP 641	Environmental Science and Public Policy	
EVPP 643	Microbial Ecology	
EVPP 648	Population Ecology	
EVPP 677	Applied Ecology and Ecosystem Management	

Code	Title	Credits
EVPP 745	Environmental Toxicology	
Total Credits		6

<sup>1</sup> Required for those without previous coursework in ecology. Can be included within the 6 credits.

## Public Policy

Select from the following courses in environmental law, human ecology, environmental ethics, planning, or public affairs.

Code	Title	Credits
Select at least 6 credits from the following:		
EVPP 505	Selected Topics in Environmental Science	
EVPP 519	Marine Mammal Biology and Conservation	
EVPP 520	Marine Mammal Biology and Conservation Field Course	
EVPP 521	Marine Conservation	
EVPP 608	Introduction to Environmental Social Science <sup>1</sup>	
EVPP 619	The Challenge of Biodiversity	
EVPP 621	Overview of Biodiversity Conservation	
EVPP 622	Management of Wild Living Resources	
EVPP 623	Translating Environmental Policy into Action	
EVPP 635	Environment and Society	
EVPP 642	Environmental Policy	
EVPP 643	Microbial Ecology	
EVPP 670	Environmental Law	

<sup>1</sup> Required for those with limited coursework in the social sciences. Can be included within the 6 credits.

## Methods and Statistics

Select from the following courses in statistics, remote sensing, information systems, instrumental analysis, or modeling. A course in statistics is highly recommended.

Code	Title	Credits
Select at least 6 credits from the following: 6		
EVPP 503	Field Mapping Techniques	
EVPP 505	Selected Topics in Environmental Science	
EVPP 524	Introduction to Environmental and Resource Economics	
EVPP 531	Land-use Modeling Techniques and Applications	
EVPP 615	Molecular Environmental Biology II	
EVPP 632	Qualitative Research Methods for Environmental Scientists	
EVPP 650	Ecosystem Analysis and Modeling	
EVPP 651	Multivariate Data Analysis for Ecology and Environmental Science	
EVPP 745	Environmental Toxicology	
GG5 560	Quantitative Methods	
GG5 653	Geographic Information Analysis	

GG5 756	Physical Principles of Remote Sensing
SOCI 631	Survey Research

### Additional Requirements

See the Additional Requirements section below for details on the research requirement, the seminar requirement, and electives.

## Environmental Science Communication Concentration (ESCM)

A key to environmental action and behavior change is an ability to communicate environmental science and policy. This concentration is for students desiring a master's degree with an interdisciplinary approach to communicating environmental issues and solutions.

### Environmental Science

Code	Title	Credits
Select 6 credits from EVPP graduate courses, suggestions include:		6
EVPP 521	Marine Conservation	
EVPP 543	Tropical Ecosystems	
EVPP 607	Fundamentals of Ecology <sup>1</sup>	
EVPP 621	Overview of Biodiversity Conservation	
EVPP 641	Environmental Science and Public Policy	
EVPP 677	Applied Ecology and Ecosystem Management	
Total Credits		6

<sup>1</sup> Required for those without previous coursework in ecology. Can be included within the 6 credits.

### Science Communication

Code	Title	Credits
EVPP 529	Environmental Science Communication	3
COMM 639	Science Communication	3
Select 6 credits of science communication courses; suggestion include, but are not limited to:		6
COMM 637	Risk Communication	
COMM 640	Controversies in Science Communication	
COMM 641	Advanced Communication Skills for STEM	
COMM 642	Science and the Public	
COMM 644	Analysis and Criticism of Science Journalism	
COMM 660	Climate Change and Sustainability Communication Campaigns	
COMM 735	Crisis Communication	
Total Credits		12

### Research Methods

Code	Title	Credits
Select 6 credits of courses in relevant experimental methods, statistics, or communication techniques. Suggested courses include, but are not limited to:		6
EVPP 631	Spatial Agent-based Models of Human-Environment Interactions	
EVPP 683	Environmental Conflict Resolution: Situation Assessment, Process Design and Best Practices	

COMM 725	Qualitative Methods	
COMM 775	Media Content Analysis	
PUAD 613	Economic Analysis in Public Administration	
SOCI 620	Methods and Logic of Social Inquiry	
SOCI 631	Survey Research	
SOCI 634	Qualitative Research Methods	
SOCI 636	Statistical Reasoning	
Total Credits		6

### Additional Requirements

See the Additional Requirements section below for details on the research requirement, the seminar requirement, and electives.

## Additional Requirements for the Concentrations: AQEC, COSP, ESEG, EVBC, ESCM, EVSP

Students choosing the EVMG concentration are not required to fulfill these additional requirements; the EVMG requirements are listed in a separate section below.

### Research Requirement

The research requirement may be satisfied in one of two ways: a research project or a formal thesis.

The depth and sophistication of the research differs between the two options. The thesis normally involves original research with independent acquisition and interpretation of data, with the goal of peer-reviewed publication. Projects are generally less extensive and can include a broader range of activities.

### Project Option

Students fulfilling the research requirement with the project option register for EVPP 798 Master's Research Project in Environmental Science and Public Policy and are required to take a comprehensive examination covering knowledge mastered throughout the program of study. This examination includes both a written and an oral component and is administered by the student's supervisory committee.

Code	Title	Credits
EVPP 798	Master's Research Project in Environmental Science and Public Policy (at least 1 credit)	1-3
Total Credits		1-3

### Thesis Option

Students fulfilling the research requirement with the thesis option register for EVPP 799 Master's Thesis in Environmental Science and Public Policy, present their results in a public seminar, and defend their thesis before their supervisory committee. Students will be graded "Satisfactory/No Credit" on the research requirement.

Code	Title	Credits
EVPP 799	Master's Thesis in Environmental Science and Public Policy (at least 3 credits)	1-6
Total Credits		1-6

### Seminar Requirement

An appropriate course topic must be taken in order to fulfill this requirement.

Code	Title	Credits
EVPP 692	Master's Seminar in Environmental Science and Public Policy (at least 1 credit)	1
Total Credits		1

### Electives

If necessary, students take additional electives to bring the degree total to 33 credits. These courses must be approved by the student's supervisory committee and outlined on the student's program of study.

### Environmental Management Concentration (EMVG)

This concentration combines the managerial and administrative skills developed in a traditional master of public administration degree program with the scientific knowledge and understanding normally found in a master of science degree. It serves as a terminal professional master's degree for individuals working in or aspiring to work as managers in the environmental field in government or private industry.

Students in this concentration have the graduate program director as their advisor upon admission. Full-time students can complete this degree in three semesters; part-time students can take six semesters. The requirements are as follows:

#### Core Courses

Code	Title	Credits
EVPP 638	Corporate Environmental Management and Policy	3
EVPP 641	Environmental Science and Public Policy	3
EVPP 642	Environmental Policy	3
PUAD 502	Administration in Public and Nonprofit Organizations	3
PUAD 540	Public Policy Process	3
Select one from the following methods courses:		3-4
EVPP 650	Ecosystem Analysis and Modeling	
GGS 550	Geospatial Science Fundamentals	
GGS 553	Geographic Information Systems	
GGS 579	Remote Sensing	
SOCI 636	Statistical Reasoning	
Total Credits		18-19

#### Environmental Law

Code	Title	Credits
Select at least 3 credits from the following:		3
EVPP 670	Environmental Law	
CEIE 556	Environmental Law	
PRLS 501	Introduction to Natural Resources Law	
Total Credits		3

#### Field Ecology

Code	Title	Credits
Select at least 4 credits from the following:		4
EVPP 550 & EVPP 555	Waterscape Ecology and Management and Lab in Waterscape Ecology	
Or		
EVPP 646 & EVPP 647	Wetland Ecology and Management and Wetland Ecology Lab and Field	

Or	Other approved 4-credit field ecology course	
Total Credits		4

#### Capstone

Code	Title	Credits
EVPP 677	Applied Ecology and Ecosystem Management	3
Total Credits		3

#### Electives

Code	Title	Credits
Select 9 credits (or more) to complete 37 credits from the following list of approved electives: <sup>1</sup>		9
EVPP 524	Introduction to Environmental and Resource Economics	
EVPP 525	Economics of Human/Environment Interactions	
EVPP 550	Waterscape Ecology and Management	
EVPP 575	Global Biodiversity Governance	
EVPP 607	Fundamentals of Ecology <sup>2</sup>	
EVPP 608	Introduction to Environmental Social Science <sup>3</sup>	
EVPP 620	Development of U.S. Environmental Policies	
EVPP 621	Overview of Biodiversity Conservation	
EVPP 622	Management of Wild Living Resources	
EVPP 626	Environment and Development in Asia	
EVPP 627	Environmental Policy in Latin America	
EVPP 628	Environment and Development in Africa	
EVPP 630	Methods and Logic of Social Inquiry	
EVPP 635	Environment and Society	
EVPP 638	Corporate Environmental Management and Policy	
EVPP 643	Microbial Ecology	
EVPP 646	Wetland Ecology and Management	
EVPP 650	Ecosystem Analysis and Modeling	
EVPP 675	Environmental Planning and Administration	
CLIM 690	Scientific Basis of Climate Change	
GGS 550	Geospatial Science Fundamentals (only if not taken as part of the core courses above)	
PUAD 509	Justice Organizations and Processes	
PUAD 615	Administrative Law	
PUAD 622	Program Planning and Implementation	
PUAD 645	Policy Analysis	
PUAD 657	Association Management	
PUAD 729	Issues in Public Management	
MBA 623	Marketing Management	
MBA 712	Project Management	
MBA 724	Marketing Communications	
MBA 725	Leadership	
Total Credits		9

- <sup>1</sup> Other courses may be used, subject to approval of the graduate program director.
- <sup>2</sup> Required for those without previous coursework in ecology.
- <sup>3</sup> Required for those with limited previous coursework in the social sciences.

## Accelerated Master's

# Bachelor's Degree (selected)/ Environmental Science and Policy, Accelerated MS

## Overview

This degree option allows highly qualified George Mason University students to earn an Environmental Science and Policy, MS in less time than if they had first graduated with an environmentally-focused Green Leaf-designated BA or BS degree and then applied to the MS program sequentially.

For more detailed information, see AP.6.7 Bachelor's/Accelerated Master's Degrees. For policies governing all graduate programs, see AP.6 Graduate Policies.

## Admission Requirements

Students with an overall GPA of at least 3.20 who are pursuing any Green Leaf-designated major or minor may apply for provisional acceptance into this accelerated master's program after completing two semesters of chemistry (including CHEM 211 General Chemistry I (Mason Core) and CHEM 212 General Chemistry II (Mason Core) and three semesters of biology, including a course in ecology, or the equivalent, for example:

Code	Title	Credits
Select one of the following options:		13
<b>Option 1:</b>		
BIOL 213	Cell Structure and Function (Mason Core)	
BIOL 214	Biostatistics for Biology Majors	
BIOL 308	Foundations of Ecology and Evolution	
<b>Option 2:</b>		
EVPP 210	Environmental Biology: Molecules and Cells	
EVPP 301	Environmental Science: Biological Diversity and Ecosystems	
EVPP 302	Environmental Science: Biomes and Human Dimensions	
EVPP 305	Environmental Microbiology Essentials	
EVPP 306	Environmental Microbiology Essentials Laboratory	
<b>Option 3:</b>		
CONS 401	Conservation Theory	
CONS 402	Applied Conservation	
6 credits of BIOL or CONS electives		
<b>Option 4:</b>		
CONS 403	Ecology and Conservation Theory	

## CONS 404 Biodiversity Monitoring

6 credits of BIOL or CONS electives

By the beginning of the undergraduate's senior year, they should first submit a Graduate Application for Accelerated Master's Program form (obtained from the Office of Academic and Student Affairs (<https://cos.gmu.edu/about/contact-us>)). Secondly, in their senior year accelerated master's students must complete the two graduate courses indicated on their Accelerated Master's Program Application with a minimum grade of 3.00 in each course. They must maintain a minimum GPA of 3.00 in all coursework and in coursework applied to their major. Upon completion and conferral of the undergraduate degree in a Green Leaf-designated program, in the semester indicated in the application, they must additionally submit the Bachelor's/Accelerated Master's Transition form (found on the Office of the University Registrar website (<http://registrar.gmu.edu/forms>)) and will subsequently be admitted into graduate status.

By at least the beginning of their senior year, they should seek out a faculty member in the Department of Environmental Science and Policy who is willing to serve as their advisor (unless the student is planning to enroll in the MS concentration in Environmental Management). This advisor will aid the student in choosing the appropriate graduate courses to take and help to prepare the student for graduate studies. Admission into a research-oriented master's concentration is dependent upon securing the agreement of a faculty advisor. Faculty from a variety of departments and colleges at George Mason (called "program faculty") can serve as master's advisors. Potential students are encouraged to speak with the graduate program coordinator in the department to obtain guidance on this issue.

## Application Requirements

Applicants to all graduate programs at Mason must meet the admission standards and application requirements for graduate study as specified in the Graduate Admission Policies section of this catalog, *excluding* the GRE exam requirement (which is not required for those enrolled in the accelerated program). This includes three letters of recommendation (at least one from a former professor or someone with a PhD), a recent resume, a statement of interest/research goals and interests (including information on the candidate's proposed MS research), and a letter from their advisor stating that the advisor agrees to take on the candidate as an MS student, how the candidate would be a good fit for them and why candidate's research topic would be suitable (please note that a letter of endorsement from an advisor not necessary for candidates taking the Environmental Management concentration).

For information specific to the accelerated Environmental Science and Policy, MS, see Graduate Admissions on the department's website (<http://esp.gmu.edu/academic-programs/graduate/admissions>).

## Reserve Graduate Credits

Students admitted to this program may take graduate courses after completing 90 undergraduate credits, and up to 6 credits of appropriate environmentally-focused graduate coursework may be used in partial satisfaction of the requirements for the undergraduate degree. If students earn at least a 3.00 GPA in these classes, they are granted advanced standing in the master's program and must then complete an additional 27-31 credits to receive the master's degree.

To apply these credits to the master's degree, students must request that the credits be moved from the undergraduate degree to the graduate degree using the Bachelor's/Accelerated Master's Transition



form found on the Office of the University Registrar website (<http://registrar.gmu.edu/forms>) (as noted above).

Students may take up to 6 additional environmentally-focused graduate credits as reserve graduate credit. These credits do not apply to the undergraduate degree but will reduce the subsequent master's degree credits accordingly (e.g., with 6 credits counted towards undergraduate degree plus the maximum 6 reserve credits, an MS could be completed with 21 post-bachelor's credits). The ability to take courses for reserve graduate credit is available to all high achieving undergraduates with the permission of the department.