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 (EBVC)
- Environmental Science and Policy (EVSP)
- Environmental Science Communication (ESCM)
- Environmental Management (EVMG)

Admissions & Policies

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

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 aptitude portion of 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 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.

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 selection 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 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.

1 Students choosing the EVMG concentration are not required to form a supervisory committee.

Requirements

Degree Requirements
Total credits: 33 or 37

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
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

1 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.

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
GGS 653 Geographic Information Analysis
PUAD 511 Problem Solving and Data Analysis I
PUAD 612 Problem Solving and Data Analysis II
SOCI 636 Statistical Reasoning

Total Credits 6

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

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

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 1
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

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 Conservation Biology Institute (https://www.si.edu/ResearchCenters/Conservation-Biology-Institute) (SCBI) in Front Royal, Virginia offers students hands-on education in cutting-edge conservation science and human dimensions through residential, intensive classes. SCBI is renowned for its conservation research and training of conservation practitioners around the world and instructors for these classes are drawn from SCBI’s conservation scientists and other experts from around the world.

**Conservation Science**
Select at least 6 credits of conservation science courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 518</td>
<td>Conservation Biology</td>
</tr>
<tr>
<td>EVPP 519</td>
<td>Marine Mammal Biology and Conservation</td>
</tr>
<tr>
<td>EVPP 520</td>
<td>Marine Mammal Biology and Conservation Field Course</td>
</tr>
<tr>
<td>EVPP 543</td>
<td>Tropical Ecosystems</td>
</tr>
<tr>
<td>EVPP 550</td>
<td>Waterescape Ecology and Management</td>
</tr>
<tr>
<td>EVPP 607</td>
<td>Fundamentals of Ecology ¹</td>
</tr>
<tr>
<td>EVPP 621</td>
<td>Overview of Biodiversity Conservation</td>
</tr>
<tr>
<td>CONS 630</td>
<td>Species Monitoring Conservation ²</td>
</tr>
</tbody>
</table>

Total Credits 6

¹ Required for those without previous coursework in ecology. Can be included within the 6 credits.
² 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.

Select at least 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 521</td>
<td>Marine Conservation</td>
</tr>
<tr>
<td>EVPP 575</td>
<td>Global Biodiversity Governance</td>
</tr>
<tr>
<td>EVPP 608</td>
<td>Introduction to Environmental Social Science ¹</td>
</tr>
<tr>
<td>EVPP 622</td>
<td>Management of Wild Living Resources</td>
</tr>
<tr>
<td>EVPP 642</td>
<td>Environmental Policy</td>
</tr>
<tr>
<td>EVPP 643</td>
<td>Microbial Ecology</td>
</tr>
<tr>
<td>CONS 660</td>
<td>Effective Conservation Leadership</td>
</tr>
<tr>
<td>CONS 665</td>
<td>Conservation Conflict Resolution</td>
</tr>
</tbody>
</table>

Total Credits 6

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

**Conservation Methods**
Select at least 6 credits in relevant experimental methods, statistics, or conservation techniques courses. Suggested courses include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 555</td>
<td>Lab in Waterescape Ecology</td>
</tr>
<tr>
<td>CONS 620</td>
<td>Spatial Ecology, Geospatial Analysis Remote Sensing for Conservation</td>
</tr>
<tr>
<td>CONS 625</td>
<td>Statistics for Ecology and Conservation Biology</td>
</tr>
</tbody>
</table>

Total Credits 6

**Additional Requirements**
See Additional Requirements 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).

Select 16 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 503</td>
<td>Field Mapping Techniques</td>
</tr>
<tr>
<td>EVPP 505</td>
<td>Selected Topics in Environmental Science</td>
</tr>
<tr>
<td>EVPP 543</td>
<td>Tropical Ecosystems</td>
</tr>
<tr>
<td>EVPP 550</td>
<td>Waterescape Ecology and Management</td>
</tr>
<tr>
<td>EVPP 563</td>
<td>Coastal Morphology and Processes</td>
</tr>
<tr>
<td>EVPP 577</td>
<td>Biogeochemistry: A Global Perspective</td>
</tr>
<tr>
<td>EVPP 607</td>
<td>Fundamentals of Ecology ¹</td>
</tr>
<tr>
<td>EVPP 610</td>
<td>Bioremediation: Theory and Applications</td>
</tr>
<tr>
<td>EVPP 643</td>
<td>Microbial Ecology</td>
</tr>
<tr>
<td>EVPP 745</td>
<td>Environmental Toxicology</td>
</tr>
<tr>
<td>CHEM 633</td>
<td>Chemical Thermodynamics and Kinetics</td>
</tr>
<tr>
<td>CHEM 651</td>
<td>Environmental Chemistry of Organic Substances</td>
</tr>
<tr>
<td>CHEM 728</td>
<td>Introduction to Solid Surfaces</td>
</tr>
<tr>
<td>GEOL 500</td>
<td>Selected Topics in Modern Geology</td>
</tr>
<tr>
<td>GEOL 501</td>
<td>Selected Topics in Modern Geology</td>
</tr>
<tr>
<td>GEOL 601</td>
<td>The Lithosphere</td>
</tr>
</tbody>
</table>

Total Credits 16

¹ 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.

Select at least 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 505</td>
<td>Selected Topics in Environmental Science</td>
</tr>
<tr>
<td>EVPP 524</td>
<td>Introduction to Environmental and Resource Economics</td>
</tr>
<tr>
<td>EVPP 608</td>
<td>Introduction to Environmental Social Science ¹</td>
</tr>
<tr>
<td>EVPP 619</td>
<td>The Challenge of Biodiversity</td>
</tr>
<tr>
<td>EVPP 620</td>
<td>Development of U.S. Environmental Policies</td>
</tr>
<tr>
<td>EVPP 621</td>
<td>Overview of Biodiversity Conservation</td>
</tr>
</tbody>
</table>
EVPP 623  Translating Environmental Policy into Action
EVPP 635  Environment and Society
EVPP 642  Environmental Policy
EVPP 670  Environmental Law

1 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.

Select at least 6 credits from the following:

EVPP 503  Field Mapping Techniques
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
GGS 531  Land-Use Modeling Techniques and Applications
GGS 550  Geospatial Science Fundamentals
GGS 553  Geographic Information Systems
GGS 560  Quantitative Methods
GGS 563  Advanced Geographic Information Systems
GGS 579  Remote Sensing
GGS 653  Geographic Information Analysis

Additional Requirements
See Additional Requirements 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 in courses 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.

Select at least 6 credits from the following:

EVPP 505  Selected Topics in Environmental Science
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 1
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

1 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.

Select at least 6 credits from the following:

EVPP 505  Selected Topics in Environmental Science
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 1
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

1 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.

Select at least 9 credits from the following:

EVPP 505  Selected Topics in Environmental Science
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 1
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
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.

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

Select at least 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 515</td>
<td>Molecular Environmental Biology I</td>
</tr>
<tr>
<td>EVPP 518</td>
<td>Conservation Biology</td>
</tr>
<tr>
<td>EVPP 519</td>
<td>Marine Mammal Biology and Conservation</td>
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<tr>
<td>EVPP 520</td>
<td>Marine Mammal Biology and Conservation Field Course</td>
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<td>EVPP 543</td>
<td>Tropical Ecosystems</td>
</tr>
<tr>
<td>EVPP 550</td>
<td>Waterscape Ecology and Management</td>
</tr>
<tr>
<td>EVPP 551</td>
<td>Fungi and Ecosystems</td>
</tr>
<tr>
<td>EVPP 581</td>
<td>Estuarine and Coastal Ecology</td>
</tr>
<tr>
<td>EVPP 607</td>
<td>Fundamentals of Ecology</td>
</tr>
<tr>
<td>EVPP 622</td>
<td>Management of Wild Living Resources</td>
</tr>
<tr>
<td>EVPP 641</td>
<td>Environmental Science and Public Policy</td>
</tr>
<tr>
<td>EVPP 643</td>
<td>Microbial Ecology</td>
</tr>
<tr>
<td>EVPP 648</td>
<td>Population Ecology</td>
</tr>
<tr>
<td>EVPP 677</td>
<td>Applied Ecology and Ecosystem Management</td>
</tr>
<tr>
<td>EVPP 745</td>
<td>Environmental Toxicology</td>
</tr>
</tbody>
</table>

Total Credits 6

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

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.

Select at least 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>EVPP 503</td>
<td>Field Mapping Techniques</td>
</tr>
<tr>
<td>EVPP 505</td>
<td>Selected Topics in Environmental Science</td>
</tr>
<tr>
<td>EVPP 524</td>
<td>Introduction to Environmental and Resource Economics</td>
</tr>
<tr>
<td>EVPP 531</td>
<td>Land-use Modeling Techniques and Applications</td>
</tr>
<tr>
<td>EVPP 615</td>
<td>Molecular Environmental Biology II</td>
</tr>
<tr>
<td>EVPP 632</td>
<td>Qualitative Research Methods for Environmental Scientists</td>
</tr>
<tr>
<td>EVPP 650</td>
<td>Ecosystem Analysis and Modeling</td>
</tr>
<tr>
<td>EVPP 651</td>
<td>Multivariate Data Analysis for Ecology and Environmental Science</td>
</tr>
<tr>
<td>EVPP 745</td>
<td>Environmental Toxicology</td>
</tr>
<tr>
<td>GGS 560</td>
<td>Quantitative Methods</td>
</tr>
<tr>
<td>GGS 653</td>
<td>Geographic Information Analysis</td>
</tr>
<tr>
<td>GGS 756</td>
<td>Physical Principles of Remote Sensing</td>
</tr>
<tr>
<td>SOCI 631</td>
<td>Survey Research</td>
</tr>
</tbody>
</table>

Additional Requirements
See Additional Requirements 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 an master's degree with an interdisciplinary approach to communicating environmental issues and solutions.
Environmental Science
Select 6 credits from EVPP graduate courses, suggestions include:

- EVPP 521 Marine Conservation
- EVPP 543 Tropical Ecosystems
- EVPP 607 Fundamentals of Ecology
- EVPP 621 Overview of Biodiversity Conservation
- EVPP 641 Environmental Science and Public Policy
- EVPP 677 Applied Ecology and Ecosystem Management

Total Credits 6

Science Communication
Select 6 credits of science communication courses; suggestions include, but are not limited to:

- EVPP 529 Environmental Science Communication
- COMM 639 Science Communication

Total Credits 9

Research Methods
Select 6 credits of courses in relevant experimental methods, statistics, or communication techniques. Suggested courses include, but are not limited to:

- 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 511 Problem Solving and Data Analysis I
- 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 Additional Requirements 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 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.

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

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 pass/no credit on the research requirement.

- EVPP 799 Master's Thesis in Environmental Science and Public Policy (at least 3 credits)

Total Credits 1-6

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

- EVPP 692 Master's Seminar in Environmental Science and Public Policy (at least 1 credit)

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 (EVMG)
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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 638</td>
<td>Corporate Environmental Management and Policy</td>
<td>3</td>
</tr>
<tr>
<td>EVPP 641</td>
<td>Environmental Science and Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>EVPP 642</td>
<td>Environmental Policy</td>
<td>3</td>
</tr>
<tr>
<td>PUAD 502</td>
<td>Administration in Public and Nonprofit Organizations</td>
<td>3</td>
</tr>
<tr>
<td>PUAD 540</td>
<td>Public Policy Process</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following methods courses: 3-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 650</td>
<td>Ecosystem Analysis and Modeling</td>
</tr>
<tr>
<td>GGS 550</td>
<td>Geospatial Science Fundamentals</td>
</tr>
<tr>
<td>GGS 553</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>GGS 579</td>
<td>Remote Sensing</td>
</tr>
<tr>
<td>PUAD 511</td>
<td>Problem Solving and Data Analysis I</td>
</tr>
<tr>
<td>SOCI 636</td>
<td>Statistical Reasoning</td>
</tr>
</tbody>
</table>

Total Credits 18-19

**Environmental Law**

Select at least 3 credits from the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 670</td>
<td>Environmental Law</td>
</tr>
<tr>
<td>CEIE 556</td>
<td>Environmental Law</td>
</tr>
<tr>
<td>PRLS 501</td>
<td>Introduction to Natural Resources Law</td>
</tr>
</tbody>
</table>

Total Credits 3

**Field Ecology**

Select at least 4 credits from the following: 4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 550</td>
<td>Waterscape Ecology and Management &amp; Lab in Waterscape Ecology</td>
</tr>
<tr>
<td>EVPP 646</td>
<td>Wetland Ecology and Management &amp; Wetland Ecology Lab and Field</td>
</tr>
</tbody>
</table>

Or

Other approved 4-credit field ecology course 4

Total Credits 9

**Capstone**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 677</td>
<td>Applied Ecology and Ecosystem Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 3

**Electives**

Select 9 credits (or more) to complete 37 credits from the following list of approved electives: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVPP 524</td>
<td>Introduction to Environmental and Resource Economics</td>
</tr>
<tr>
<td>EVPP 525</td>
<td>Economics of Human/Environment Interactions</td>
</tr>
<tr>
<td>EVPP 550</td>
<td>Waterscape Ecology and Management</td>
</tr>
<tr>
<td>EVPP 575</td>
<td>Global Biodiversity Governance</td>
</tr>
<tr>
<td>EVPP 607</td>
<td>Fundamentals of Ecology</td>
</tr>
</tbody>
</table>

**Accelerated Master’s Bachelor’s Degree (Green Leaf)/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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 213</td>
<td>Cell Structure and Function (Mason Core)</td>
<td></td>
</tr>
<tr>
<td>BIOL 214</td>
<td>Biostatistics for Biology Majors</td>
<td></td>
</tr>
<tr>
<td>BIOL 308</td>
<td>Foundations of Ecology and Evolution</td>
<td></td>
</tr>
</tbody>
</table>

**Option 2:**

| 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 | |

**Option 3:**

| CONS 401 | Conservation Theory                           |         |
| CONS 402 | Applied Conservation                          |         |

6 credits of 6 credits of BIOL or CONS electives

**Option 4:**

| CONS 403 | Ecology and Conservation Theory               |         |
| CONS 404 | Biodiversity Monitoring                       |         |

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.