



# Program Approval Form

For approval of new programs and deletions or modifications to an existing program.

## Action Requested:

- ☐ Create New (SCHEV approval required except for minors)  
☐ Inactivate Existing  
☒ Modify Existing (check **ALL** that apply)  
☐ Title (SCHEV approval required except for minors)  
☐ **Concentration** (Choose one): ☐ Add ☐ Delete ☐ Modify  
☐ Degree Requirements  
☐ Admission Standards/ Application Requirements  
☐ Other Changes: \_\_\_\_\_

## Type (Check one):

- ☐ B.A. ☐ B.S. ☐ Minor (req. C3 approval)  
☐ M.A. ☒ M.S. ☐ M.Ed.  
☐ Ph.D.  
☐ Undergraduate Certificate\* (req. C3 approval)  
☐ Graduate Certificate\*  
☐ Bachelor's/Accelerated Master's ☐ Other:

College/School:

College of Science

Department:

Environmental Science and Policy

Submitted by:

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Effective Term:

Fall

2016

**Please note:** For students to be admitted to a new degree, minor, certificate or concentration, the program must be fully approved, entered into Banner, and published in the University Catalog.

**Justification:** (attach separate document if necessary)

Please see attached list of "Suggested Courses by Concentration"

**Program Title:** (Required)

Title must identify subject matter. Do not include name of college/school/dept.

**Concentration(s):**

**Admissions Standards / Application**

**Requirements:** (Required only if different from those listed in the University Catalog)

**Degree Requirements:**

Consult University Catalog for models, attach separate document if necessary using track changes for modifications

**Courses offered via distance:**

(if applicable)

**TOTAL CREDITS REQUIRED:**

Existing	New/Modified
	M.S. in Environmental Science and Policy
	Please see attached list of "Suggested Courses by Concentration"

\*For Certificates Only: Indicate whether students are able to pursue on a

☐ Full-time basis

☐ Part-time basis

## Approval Signatures

XXXXXXXXXXXXXXXXXXXX  
Department Date

College/School

Date

Provost's Office

Date

Required for Minors and Interdisciplinary Programs

If this program may impact another unit or is in collaboration with another unit at Mason, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

## For Minors and UG Certificates only (Cross-College Curriculum Committee Approval)

C3 Committee Member

Provost Office

C3 Committee Approval Date

## For Graduate Programs Only

Graduate Council Member

Provost Office

Graduate Council Approval Date

For Registrar Office's Use Only: Received

Banner

Catalog

revised 7/1/15

## **Program Proposal Submitted to the College of Science Curriculum Committee (COSCC)**

The form above is processed by the Office of the University Registrar. This second page is for the COSCC's reference.  
Please complete the applicable portions of this page to clearly communicate what the form above is requesting.

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### **FOR ALL PROGRAMS** (required)

Program Title: M.S. in Environmental Science and Policy

Date of Departmental Approval: 11/10/2015

### **FOR INACTIVATED PROGRAMS** (required if inactivating a program)

- Reason for Inactivation:

### **FOR MODIFIED PROGRAMS** (required if modifying a program)

- Summary of the Modification: We are adding to suggested courses for the catalog to make advising students easier.
- Text before Modification (title, degree requirements, etc.): See the attached document. Courses in black are courses that are not listed in the catalog. Courses in red are courses that are currently listed in the catalog.
- Text after Modification (title, degree requirements, etc.): Please see the extensive list of "suggested courses by concentration" on the attached list.
- Reason for the Modification: Adding to the list of "suggested courses by concentration" list for the catalog will make advising prospective and current students easier regarding course selection.

### **FOR NEW PROGRAMS** (required if creating a new program)

- Reason for the New Program:
  - Relationship to Existing Programs:
  - Relationship to Existing Courses:
  - Semester of Initial Offering:
  - Insert Tentative SCHEV Proposal Below
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### ***Suggested Courses by Concentration***

<b>AQEC - Core (6 credits)</b>		
EVPP	550	Waterscape Ecology and Management
EVPP	581	Estuarine and Coastal Ecology

<b>AQEC - Aquatic Science (6 credits)</b>		
EVPP	505	Selected Topics in Environmental Science
EVPP	519	Marine Mammal Biology and Conservation
EVPP	520	Marine Mammal Biology and Conservation Field Course (1 credit)
EVPP	521	Marine Conservation
EVPP	536	The Diversity of Fishes
EVPP	551	Fungi and Ecosystems
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

<b>AQEC - Public Policy (6 credits)</b>		
EVPP	505	Selected Topics in Environmental Science
EVPP	521	Marine Conservation
EVPP	575	Global Biodiversity Governance
EVPP	608	Environmental Social Science
EVPP	619	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

<b>AQEC - Aquatic Methods (6 credits)</b>		
EVPP	651	Multivariate Analysis for Ecology / Environment
EVPP	555	Lab in Waterscape Ecology (1 credit)
EVPP	582	Estuarine and Coastal Ecology Lab (1 credit)
EVPP	615	Molecular Environmental Biology II
EVPP	647	Wetland Ecology Lab and Field (1 credit)
EVPP	650	Environmental Analysis and Modeling
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
CSS	645	Spatial Agent Based Models of Human-Environment Interaction
CSS	600	Introduction to Computational Social Science

### ***Suggested Courses by Concentration***

	<b>EVSP - Natural Science (6 credits)</b>	
EVPP	515	Molecular Environmental Biology I
EVPP	518	Conservation Biology
EVPP	519	Marine Mammal Biology/ Conservation
EVPP	520	Marine Mammal Biology/ Conservation Field Course (1 credit)
EVPP	543	Tropical Ecosystems
EVPP	550	Waterscape Ecology and Management
EVPP	551	Fungi and Ecosystems
EVPP	581	Estuarine and Coastal Ecology
EVPP	607	<b>Fundamentals of Ecology</b>
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/ Ecosystem Management
EVPP	745	Environmental Toxicology

	<b>EVSP - Public Policy (6 credits)</b>	
EVPP	505	Selected Topics in Environmental Science
EVPP	575	Global Biodiversity Governance
EVPP	608	Environmental Social Science
EVPP	619	Challenge of Biodiversity
EVPP	622	Management of Wild Living Resources
EVPP	520	Marine Mammal Biology/ Conservation Field Course (1 credit)
EVPP	521	Marine Conservation
EVPP	621	Overview Biodiversity Conservation
EVPP	519	Marine Mammal Biology/ Conservation
EVPP	642	Environmental Policy
EVPP	643	Microbial Ecology
EVPP	670	Environmental Law
EVPP	623	Translating Environmental Policy Into Action
EVPP	635	Environment and Society

	<b>EVSP - Methods (6 credits)</b>	
EVPP	615	Molecular Environmental Biology I
EVPP	651	Multivariate Analysis Ecology / Environment
EVPP	745	Environmental Toxicology
EVPP	503	Field Mapping Techniques
EVPP	650	Environmental Analysis and Modeling
EVPP	505	GIS for the Environment
EVPP	524	Introduction to Environmental and Resource Economics
EVPP	632	Qualitative Research Methods in Environmental Science
EVPP	531	Land-use Modeling Techniques and Applications
GGS	560	Quantitative Methods
GGS	653	Geographic Information Systems
GGS	756	Physical Principles of Remote Sensing

### ***Suggested Courses by Concentration***

SOCI	631	Survey Research
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<b>ESEG - Natural Sciences (16 credits)</b>		
EVPP	503	Field Mapping Techniques
EVPP	505	Selected Topics in Environmental Science
EVPP	543	Tropical Ecosystems
EVPP	550	Waterscape Ecology and Management
EVPP	551	Fungi and Ecosystems
EVPP	563	Coastal Morphology and Processes
EVPP	577	Biogeochemistry: A Global Perspective
EVPP	607	Fundamentals of Ecology
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

<b>ESEG - Public Policy (6 credits)</b>		
EVPP	505	Selected Topics in Environmental Science
EVPP	524	Introduction to Environmental and Resource Economics
EVPP	575	Global Biodiversity Governance
EVPP	608	Environmental Social Science
EVPP	619	Challenge of Biodiversity
EVPP	620	Development of U.S. Environmental Policies
EVPP	621	Overview Biodiversity Conservation
EVPP	623	Translating Environmental Policy Into Action
EVPP	635	Environment and Society
EVPP	642	Environmental Policy
EVPP	670	Environmental Law

<b>ESEG - Methods (6 credits)</b>		
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	Environmental 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

### ***Suggested Courses by Concentration***

GGS	579	Remote Sensing
GGS	653	Geographic Information Analysis

#### **EVBC - Natural Science (6 credits)**

EVPP	518	Conservation Biology
EVPP	505	Selected Topics in Environmental Science
EVPP	515	Molecular Environmental Biology I
EVPP	519	Marine Mammal Biology and Conservation
EVPP	520	Marine Mammal Biology and Conservation Field Course (1 credit)
EVPP	521	Marine Conservation
EVPP	536	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
EVPP	615	Molecular Environmental Biology II
EVPP	641	Environmental Science and Public Policy
EVPP	643	Microbial Ecology
EVPP	646	Wetland Ecology and Mangement
EVPP	745	Environmental Toxicology

#### **EVBC - Public Policy (6 credits)**

EVPP	505	Selected Topics in Environmental Science
EVPP	520	Marin Mammal Biology/ Conservation Field Course (1 credit)
EVPP	521	Marine Conservation
EVPP	524	Introduction to Environmental and Resource Economics
EVPP	575	Global Biodiversity Governance
EVPP	608	Environmental Social Science
EVPP	619	Challenge of Biodiversity
EVPP	620	Development of U.S. Environmental Policy
EVPP	621	Overview Biodiversity Conservation
EVPP	623	Translating Environmental Policy Into Action
EVPP	635	Environment and Society
EVPP	643	Microbial Ecology
EVPP	670	Environmental Law
EVPP	741	Advanced Topics in Environmental Science and Public Policy
EVPP	642	Environmental Policy

#### **EVBC - Methods (9 credits)**

EVPP	615	Molecular Environmental Biology II
EVPP	632	Qualitative Research Methods/ Environmental Science
EVPP	745	Environmental Toxicology
EVPP	535	Analysis of Experimental Data
EVPP	651	Multivariate Analysis for Ecology/ Environment
EVPP	650	Environmental Analysis and Modeling
GGS	553	Geographic Information Systems

### ***Suggested Courses by Concentration***

GGS	563	Advanced Geographic Information Systems
GGS	653	Geographic Information Analysis

#### **COSP - Conservation Science (6 credits)**

EVPP	518	Conservation Biology
EVPP	519	Marine Mammal Biology and Conservation
EVPP	520	Marine Mammal Biology and Conservation Field Course (1 credit)
EVPP	543	Tropical Ecosystems
EVPP	550	Waterscape Ecology and Management
EVPP	551	Fungi and Ecosystems
EVPP	607	Fundamentals of Ecology
EVPP	621	Overview of Biodiversity Conservation
CONS	630	Species Monitoring and Conservation

#### **COSP - Conservation Policy and Human Dimensions (6 credits)**

EVPP	575	Global Biodiversity Governance
EVPP	608	Environmental Social Science
EVPP	621	Marine Conservation
EVPP	622	Management of Wild Living Resources
EVPP	642	Environmental Policy
EVPP	643	Microbial Ecology
CONS	660	Effective Conservation Leadership
CONS	665	Conservation Conflict Resolution

#### **COSP - Conservation Methods (6 credits)**

EVPP	555	Lab in Waterscape Ecology (1 credit)
CONS	620	Spatial Ecology, Geospatial Analysis & Remote Sensing for Conservation
CONS	625	Statistics for Ecology and Conservation Biology

#### **EVMG - core (18-19 credits)**

EVPP	638	Corporate Environmental Management and Policy
EVPP	641	Environmental Science and Public Policy
EVPP	642	Environmental Policy
PUAD	502	Administration in Public and Nonprofit Organizations
PUAD	540	Public Policy Process

#### **EVMG - Methods (3 credits)**

EVPP	650	Environmental Analysis and Modeling
GGS	550	Geospatial Science Fundamentals
GGS	553	Geographic Information Systems
GGS	579	Remote Sensing
PUAD	511	Problem Solving and Data Analysis I
SOCI	636	Statistical Reasoning

#### **EVMG - Environmental Law (3 credits)**

EVPP	670	Environmental Law
CEIE	556	Environmental Law

### ***Suggested Courses by Concentration***

PRLS	501	Introduction to Natural Resources Law
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<b>EVMG - Field Ecology (lecture plus lab - 4 credits)</b>		
EVPP	550/ 555	Waterscape Ecology and Management & Lab in Waterscape Ecology
EVPP	646/ 647	Wetland Ecology and Management & Wetland Ecology Lab & Field
or any other approved 4 credit field ecology course		

<b>EVMG - Electives (9 credits)</b>		
EVPP	524	Introduction to Environmental and Resource Economics
EVPP	525	Economics of Human/Environment Interactions
EVPP	550	Waterscape Ecology and Mangement
EVPP	551	Fungi and Ecosystems
EVPP	575	Global Biodiversity Governance
EVPP	607	Fundamentals of Ecology
EVPP	608	Environmental Social Science
EVPP	620	Development of U.S. Environmental Policies
EVPP	621	Overview of Biodiversity Conservation
EVPP	622	Mangement of Wild Living Resources
EVPP	626	Environment and Development in Asia
EVPP	627	Environment and Development 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	Environmental Analysis and Modeling
EVPP	675	Environmental Planning and Analysis
CLIM	60	Scientific Basis of Climate Change
GGS	550	Geospatial Science Fundamentals
PUAD	509	Justice Organizations and Processes
PUAD	615	Administrative Law
PUAD	622	Program Planning and Implementation
PUAD	645	Policy Analysis
PUAD	646	Program Evaluation
PUAD	657	Association Management
PUAD	729	Issues in Public Management
MBA	623	Marketing Mangement
MBA	712	Project Management
MBA	724	Marketing Communications
MBA	725	Leadership