

# Program Change Request

## New Program Proposal

Date Submitted: 01/31/19 8:05 am

Viewing: : **Environmental and Sustainability Management Graduate Certificate**

Last edit: 02/01/19 12:24 pm

Changes proposed by: jbazaz

Are you completing this form on someone else's behalf?

Yes

Requestor:

### In Workflow

1. Registrar-Programs:Workflow Review
2. ESP Chair
3. SC Curriculum Committee
4. SC Associate Dean
5. PP Impacted Unit Approver
6. BU GR Impacted Unit Approver
7. SYST Representative-Graduate
8. SC CAT Editor
9. Assoc Provost-Graduate
10. Registrar:Create Code
11. Registrar-Programs

### Approval Path

1. 01/31/19 4:55 pm  
Max Xiong (pxiong):  
Approved for Registrar-Programs:Workflow Review
2. 01/31/19 5:30 pm  
A. Alonso Aguirre (aaguirr3):  
Approved for ESP Chair

Name	Extension	Email

Name	Extension	Email
Younsung Kim	5165	yiklih@gmu.edu

**Effective Catalog:** 2019-2020

**Program Level:** Graduate

**Program Type:** Certificate

**Degree Type:** Graduate Certificate

**Title:** Environmental and Sustainability Management Graduate Certificate

**Banner Title:** Environ & Sustainability

**Is this a retitling of an existing program?** No

**Registrar/OAPI Use Only – SCHEV Status** Pending Approval

**Registrar’s Office Use Only – Program Start Term**

**Registrar/OAPI Use Only – SCHEV Letter**

**Concentration(s):**

**Registrar/IRR Use Only – Concentration CIP Code**

**College/School:** College of Science

**Department / Academic Unit:** Environmental Science & Policy

**Jointly Owned Program?** No

### Justification

The Graduate Certificate of Environmental and Sustainability Management (GCESM) is designed to provide students with the transdisciplinary perspective on environmental and sustainability challenges. It will focus on design, planning, and management initiatives or practices that will reduce, remove, and redress environmental impacts in various types of organizations.

The proposed Mason’s Graduate Certificate will meet a growing societal need for specialty managers in Environmental and Sustainability Management. Currently, various types of organizations such as private businesses, local governments, local community groups, or non-

profit organizations hire managers who are equipped not only with a deeper understanding of environmental challenges but with professional skills for crafting and undertaking solutions-driven environmental and sustainability programs or projects. The “transdisciplinary format” of the certificate will uniquely meet the market’s demands.

## Catalog Published Information

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**Total Credits Required:** Total credits: 12-13

**Registrar's Office Use Only - Program Code:**

**Registrar/IRR Use Only – Program CIP Code**

**Admission Requirements:**

University-wide admissions policies can be found in the [Graduate Admissions Policies](#) section of this catalog. To apply for this program, please complete the [George Mason University Admissions Application](#). Applicants should have an undergraduate degree from a regionally accredited institution with a minimum GPA of 3.00 (on a 4.00 scale). No specific undergraduate degree is required.

**Program-Specific Policies:**

For policies governing all graduate programs, see [AP.6 Graduate Policies](#).

**Degree Requirements:**

This certificate may be pursued on a full-or part-time basis. Students should refer to the [Admissions & Policies](#) tab for specific policies related to this program.

## Required Courses

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### Course List

Code	Title	Credits
<a href="#">EVPP 638</a>	<b>Corporate Environmental Management and Policy</b>	<b>3</b>
<a href="#">PUAD 502</a> or <a href="#">PUAD 540</a>	<b>Administration in Public and Nonprofit Organizations</b> <b>Public Policy Process</b>	<b>3</b>
<b>Choose one course from the following:</b>		<b>3-4</b>
<a href="#">EVPP 542</a>	<b>Urban Ecosystems Processes</b>	
<a href="#">EVPP 550</a>	<b>Waterscape Ecology and Management</b>	
<a href="#">EVPP 607</a>	<b>Fundamentals of Ecology</b>	
<a href="#">EVPP 646</a>	<b>Wetland Ecology and Management</b>	
<b>Choose one course from the following:</b>		<b>3</b>

Code	Title	Credits
<a href="#">GBUS 613</a>	<b>Financial Reporting and Decision Making</b>	
<a href="#">GBUS 623</a>	<b>Marketing Management</b>	
<a href="#">GBUS 643</a>	<b>Managerial Finance</b>	
<a href="#">GBUS 653</a>	<b>Organizational Behavior</b>	
<a href="#">SYST 514</a>	<b>Systems Thinking</b>	
<a href="#">SYST 520</a>	<b>System Engineering Design</b>	
Total Credits		12-13

**Retroactive  
Requirements  
Updates:**

**Plan of Study:**

## Additional Program Information

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*This information is required by the Office of Accreditation and Program Integrity.*

**Courses offered via  
distance (if  
applicable):**

**Indicate whether  
students are able  
to pursue on a:** Both Full and Part-time basis

**What is the  
primary delivery  
format for the  
program?** Face-to-Face Only

**Does any portion of this program occur off-campus?**

No

**Are you working with a vendor / other collaborators to offer your program?**

No

**Related  
Departments**

**Could this program prepare students for any type of professional licensure, in  
Virginia or elsewhere?**

No

**Are you adding or removing a licensure component?**

No

**Does this program cover material which crosses into another department?**

Yes

**Impacted  
Departments**

Department
Schar School of Policy & Government
School of Business
Systems Engineering & Operations Research

**Additional  
Attachments**

[ProgramApprovalForm\\_COSCC\\_ESM Certificate.pdf](#)  
[1\\_Graduate Certificate of ESM\\_12-17-2018.pdf](#)  
[2\\_Graduate Certificate of ESM\\_Courses\\_12-17-2018.pdf](#)

**Reviewer  
Comments****Additional  
Comments**

Kindly review expeditiously as we are aiming for fall 2019 start- thank you!

**Is this course required of all students in this degree program?**

%wi\_required.eshtml%

## Graduate Certificate of Environmental and Sustainability Management

The Graduate Certificate of Environmental and Sustainability Management (GCESM) is designed to provide students with the transdisciplinary perspective on environmental and sustainability challenges. It will focus on design, planning, and management initiatives or practices that will reduce, remove, and redress environmental impacts in various types of organizations.

Relying on the certificate program, students will be able to

1. develop the clear, deep understanding about environmental and sustainability management challenges in private or public sector;
2. understand the mechanisms of public policymaking that can influence environmental and sustainability management decisions; and
3. apply and integrate fundamental concepts in management science, environmental science, public administration and management for crafting and undertaking sustainability solutions.

### Admissions / Target Audience

1. Applicants should have an undergraduate degree from an accredited institution, with a minimum GPA of 3.00 (on a 4.00 scale). No specific undergraduate degree is required.
2. Potential graduate students, Professionals in private sector, NGOs, or public sector, or local community developers or organizers, etc.

### Certificate Requirements

Total credits: **12** (Please note that the total credits may be 1 if a lab science course is taken.)

### Required Courses

Scope	Courses	Credits	
<b>Corporate Env Management</b>	EVPP 638 Corporate Environmental Management and Policy	<b>3credit</b>	
<b>Public Management</b>	PUAD 502 Administration in Public and Nonprofit Organizations PUAD 540 Public Policy Process	<b>3credit</b>	Either PUAD 502 or PUAD 540
<b>Environmental Science</b>	EVPP 542 Urban Ecosystems & Processes EVPP 550 Waterscape Ecology and Management EVPP 607 Fundamentals of Ecology EVPP 646 Wetland Ecology and Management	<b>3credit</b>	Select one course from the list
<b>Project Management</b>	SYST 514 Systems Thinking SYST 520 Systems Engineering MBA 638 Operations Management MBA 712 Project Management MBA 725 Leadership	<b>3credit</b>	Select one course from the list

## Graduate Certificate of Environmental and Sustainability Management (GCESM) Required Courses

Course Title	Participating School(s)	Description
<b>EVPP 638 Corporate Environmental Management and Policy</b>	COS	<p><b><u><a href="#">EVPP 638 Corporate Environmental Management and Policy</a></u></b>                      Provides understanding of how environmental issues interact with business strategy decisions. Emphasizes learning about proactive win-win environmental management strategies being implemented by world's leading firms and shows how government policies and regulations can be designed to simultaneously promote higher environmental protection and competitiveness.</p>
<p><b>PUAD 502 Administration in Public and Nonprofit Organizations</b>                      or  <b>PUAD 540 Public Policy Process</b></p>	Schar School of Policy and Government	<p><b><u><a href="#">PUAD 502 Administration in Public and Nonprofit Organizations</a></u></b>                      Focuses on structure, functions, and processes of executive branch agencies of national, state, and local governments. Emphasizes nonprofit organizations as co-actors with government in policy-making/policy implementation nexus.</p> <p><b><u><a href="#">PUAD 540 Public Policy Process</a></u></b>                      Processes of making public policy, including detection of public issues, consideration of alternatives, and adoption and implementation of solutions. Highlights major actors in policy process, and environment within which they work.</p>
<p><b>Select one from the following courses:</b></p> <p>EVPP 542 Urban Ecosystems &amp; Processes                      EVPP 550 Waterscape Ecology and Management                      EVPP 607 Fundamentals of Ecology                      EVPP 646 Wetland Ecology and Management</p>	COS	<p><b><u><a href="#">EVPP 542 Urban Ecosystem and Processes</a></u></b>                      Provides an overview of the challenges and opportunities that urban environments present to the plants and animals inhabiting cities and the ways that those organisms and entire ecosystems respond. Includes ecosystem ecology for engineered ecosystems, along with reviews of urban metabolism, energy budgets, water cycles, and soil ecology.</p> <p><b><u><a href="#">EVPP 550 Waterscape Ecology and Management</a></u></b>                      Studies physical, chemical, and biological components of freshwater ecosystems with emphasis on streams, rivers, and lakes; links between watersheds and freshwater ecosystems; and impact of human management.</p> <p><b><u><a href="#">EVPP 607 Fundamentals of Ecology</a></u></b>                      Overview of concepts in physiological, population, community, ecosystem, biogeographical and human ecology.</p> <p><b><u><a href="#">EVPP 646 Wetland Ecology and Management</a></u></b>                      Emphasizes structure, functions, and ecological processes of created and natural wetlands from an ecosystem perspective. Students will be expected to develop an understanding of hydrologic, physicochemical, and ecological aspects of wetlands and the management of these systems through in-class and field/lab works.</p>

<p><b>Select one from the following courses:</b></p> <p>SYST 514 Systems Thinking  SYST 520 Systems Engineering  MBA 638 Operations Management  MBA 712 Project Management  MBA 725 Leadership</p>	<p>COS/School of Business</p>	<p><b><u>SYST 514 Systems Thinking</u></b>  Enables students to understand and use systems thinking concepts, tools and techniques that can apply across all system types, especially those which exhibit a fusion of technology and human activities. Additionally, the course extends the understanding of systems beyond technology, to systems with significant human activity components, such as organizations and enterprises.</p> <p><b><u>SYST 520 Systems Engineering</u></b>  System engineering design methods are studied and practiced, including object- oriented and structured analysis-based techniques. Design Description languages such as UML, SysML, IDEF0 and IDEF1x are introduced and used in carrying out complete system designs. Teams make presentations of their designs.</p> <p><b><u>MBA 638: Operations Management</u></b>  Focuses on design, planning, and control activities to produce and deliver goods and services in modern organizations. Introduces wide range of operations management decisions, such as operations strategy, process analysis and design, capacity planning, supply chain management, total quality management, and project management</p> <p><b><u>MBA712 Project Management</u></b>  Focuses on designing, planning, monitoring, and controlling projects. Involves practical examination of how projects should be managed from start to finish, including specific emphasis on how to avoid common pitfalls.</p> <p><b><u>MBA 715 Leadership</u></b>  Examines advanced topics in project and program management with specific attention to issues and skills that managers needs to effectively manage multiple projects and programs. Topics include project selection, multiple project resource allocation, and organization of project office.</p>
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