



# 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

Master's

Ph.D.

Undergraduate Certificate\*

Graduate Certificate\*

Bachelor's/Accelerated Master's  Other:

College/School: VSE Department: CEIE

Submitted by: Lisa Nolder Ext: 3-5607 Email: snolder@gmu.edu

Effective Term: Fall 2018 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)

*THIS IS A NEW COURSE OFFERED BY ENVIRONMENTAL SCIENCE - AND WOULD BE A GOOD COMPLEMENT AS A COURSE SELECTION FOR OUR MINOR*

**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
Environmental Engineering (EENG)	
See below.	Add EVPP 442 Urban Ecosystems and Processes as a selection for an EVPP elective course

\*For Certificates Only: Indicate whether students are able to pursue on a  Full-time basis  Part-time basis

### Approval Signatures

*Chagwood* 10/2/17 Department: CEIE Date: 10/2/17

*Shelley* 10/20/17 College/School: \_\_\_\_\_ Date: 10/23/17

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
ENVIRONMENTAL SCIENCE AND POLICY	CHAGWOOD HHN	<i>[Signature]</i>	10/2/17

### For Undergraduate Programs only

Undergraduate Council Member \_\_\_\_\_ Provost Office \_\_\_\_\_ Undergraduate Council Approval Date \_\_\_\_\_

### For Graduate Programs Only

Graduate Council Member \_\_\_\_\_ Provost Office \_\_\_\_\_ Graduate Council Approval Date \_\_\_\_\_

## Minor Requirements

Code	Title	Credits
<u>CEIE 240</u>	Hydraulics	3
<u>CEIE 355</u>	Environmental Engineering and Science	3
<u>CEIE 450</u> or <u>CEIE 453</u>	Environmental Engineering Systems Water and Wastewater Treatment Processes	3
<u>PHYS 331</u>	Fundamentals of Renewable Energy	3
<u>EVPP 355</u> or <u>EVPP 378</u> or <u>EVPP 442</u>	Ecological Engineering and Ecosystem Restoration RS: Ecological Sustainability ( <u>Mason Core</u> ) Urban Ecosystems and Processes	4 4
<u>GGG 302</u> or <u>GGG 319</u>	Global Environmental Hazards Air Pollution	3
Total Credits		19

### EVPP 442 Course Description:

This undergraduate/graduate course will provide an overview and introduction of challenges and opportunities we face in current urban environment as affected by climate change and urbanization. The course provides students with ecological literacy with scholarly reviews on urban metabolisms of energy, water, soil, plants, and foods with cultural and historical context. The course also focuses on urban water cycles, soil processes, and biodiversity that are critical for functioning urban ecosystems and processes with several cases of coupled natural and human (social) processes and their relationship with design elements that can be incorporated into creating functional urban landscape. Students will engage in studying up-to-date information on green infrastructure implementation and applications through exciting field trips and visits, including urban farms, rooftop garden/farm, green buildings, sustainable homestead, wastewater treatment facility, city museum, and urban wetland/floodplain restoration sites. Students will also participate in a design or an observational study of a chosen topic for the semester. For Fall 2017, students enrolled in the class will be part of the on-going Dirt Project by Dr. Ahn (<https://ecoscienceplusart.wordpress.com/the-dirt-project/>) for their research and scholarship training. The course also features guest lectures by speakers from The Nature Conservancy (Urban Ecosystem division) to Urban Design and Mental Health (UD/MH).