



# 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:** College of Science **Department:** Academic Affairs  
**Submitted by:** Padmanabhan Seshaiyer **Ext:** 3-9787 **Email:** psheshai@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)

To create a minor to help prepare STEM majors with the professional skills needed out in the STEM workforce.

**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


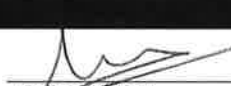
**Courses offered via distance:**  
 (if applicable)

**TOTAL CREDITS REQUIRED:**

Existing	New/Modified
	Leadership and Professional Development in STEM
	Please see attached
	16-19

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

### Approval Signatures

 12/7/2017 Department Date  
 12/7/2017 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 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

## **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.

---

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

Program Title: Leadership and Professional Development in STEM Minor

Date of Departmental Approval: Fall 2017

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

- **Reason for the New Program:**  
To create a minor to help prepare STEM majors with the professional skills needed out in the STEM workforce.
  - **Relationship to Existing Programs:**  
This will be a minor that can be added to any undergraduate bachelor's degree at Mason, although it will be focused toward preparing STEM majors.
  - **Relationship to Existing Courses:**  
The minor includes courses from the ASTR, CLIM, GEOL, FRSC, ESP, MATH, CDS, GGS, and PHYS departments as well as from the college's prefix, "COS". The curriculum also contains COMM and ENGH course options to fulfill the writing and communication portion of the minor.
  - **Semester of Initial Offering:** Fall 2018
  - **Insert Tentative SCHEV Proposal Below**
-

# Leadership and Professional Development in STEM Minor

College of Science

Fall 2018 Semester

Eight credits of coursework must be unique to the minor. Additional minor policies can be found here: <https://catalog.gmu.edu/policies/academic/undergraduate-policies/#ap-5-3-4>

## Writing and Communication

COS 300 3 credits Professional Preparation for STEM Majors (new course)

Min 6 Max 6

### Choose at least one from the following:

EVPP 429 3 credits Environmental Science Communication

COMM 320 3 credits Business and Professional Communication

ENGH 388 3 credits Professional and Technical Writing

Any Honors thesis or writing course (with approval from the minor advisor)

## Ethics and Leadership

COS 400 3 credits Problem Solving and Leadership in STEAM (new course)

3 3

## Quantitative Reasoning

### Choose one course from the following:

MATH 111 3 credits Linear Mathematical Modeling

MATH 113 4 credits Analytical Geometry and Calculus I

MATH 125 3 credits Discrete Mathematics

## Computational Thinking

### Choose one course from the following:

CDS 301 3 credits Scientific Information and Data Visualization

CDS 302 3 credits Scientific Data and Databases

GGG 110 3 credits Introduction to Geoinformation Technologies

GGG 311 3 credits Introduction to Geographic Information Systems

PHYS 251 3 credits Introduction to Computer Techniques in Physics

## Internship

### Choose one course from the following:

COS 499 1-3 credits Internship (new course under development)

ASTR 409 3 credits Astronomy Internship

CLIM 409 3 credits Research Internship

GEOL 480 1-3 credits Internship

1 3

CDS 491	1-3 credits	Internship
EVPP 494	1-3 credits	Internship
FRSC 406	3 credits	Forensic Internship
GGG 480	1-3 credits	Internship
PHYS 409	3 credits	Physics Internship

Or any other internship course as approved by the minor advisor.

**Minor Credit Total:**

16

19