

# UNIVERSITY OF MARY WASHINGTON – PROGRAM CHANGE PROPOSAL

Electronically submit this completed form with attachments in one file to the Chair of the College Curriculum Committee.

|                                    |   |   |                           |                  |
|------------------------------------|---|---|---------------------------|------------------|
| <b>COLLEGE (check one):</b>        | <b>Arts and Sciences</b>                                      | x | <b>Business</b>           | <b>Education</b> |
| Proposal Submitted By: Brian Rizzo |   |   | Date Prepared: 10/12/2018 |                  |
| Department /Program:               | <b>Geography \ Geographic Information Science Certificate</b> |   |                           |                  |

1. *Note: for any program change entailing the addition any new courses, or revisions to existing courses, separate proposal for those course actions must also be submitted. If the proposal involves changes in course credit hours as a part of the program change, "Change\_Course\_Credits" proposal forms for each course with revised credit hours must also be submitted.*

|  |      |
|--|------|
| <b>PROPOSAL TO CHANGE EXISTING PROGRAM (check no than one of the following).</b> |      |
| Revise requirements for existing <b>major</b>                                    |      |
| Revise requirements for a concentration within an existing <b>major</b>          |      |
| Revise requirements for an existing <b>degree program</b>                        |      |
| Revise requirements for existing <b>certificate</b> program                      | x    |
| Revise requirements for existing <b>minor</b>                                    |      |
| <b>Implementation Date: FALL semester, year:</b>                                 | 2019 |

|   |           |
|---|-----------|
| <b>PROPOSAL TO CREATE NEW PROGRAM NOT REQUIRING STATE ACTION</b><br>(check no more that <b>one</b> of the following)  |           |
| <b>New concentration</b> within existing major  | Name:     |
| <b>New minor</b>  | Name:     |
| New Major but NOT a new degree*   | Name:     |
| <small>*Use ONLY for interdisciplinary majors that will be grouped as part of the "Special Majors/General Liberal Arts and Sciences" degree (CIP Code 24.0101) or reported as a BLS degree (CIP Code 24.0199)</small> |           |
| <b>Implementation Date (semester and year):</b>   | Fall 2019 |

**REQUIRED ATTACHMENTS FOR ALL PROPOSALS FOR PROGRAM CHANGE OR FOR NEW PROGRAMS NOT REQUIRING STATE APPROVAL:**

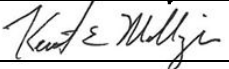
2. **Rationale statement** (Why is this additional program needed? What purposes will it serve?)
3. **Impact Statement** (Provide details about the Library, space, budget, technology, and impacts created by this program change. Supporting statements from the Library, IT Department, etc. evaluating the resource impact and feasibility of adding the new program are required.) *If the proposal involves changes in course credit hours as a part of the program change, "Change\_Course\_Credits" proposal forms for each course with revised credit hours must also be submitted.*
4. **Catalog Copy** (Provide the complete Catalog Description for the proposed new program)
5. **Any change that impacts another Department must have a written statement (such as a copy of an email) from the Chair(s) agreeing to the change.**

Department Chair Approval\*: Jackie Gallagher \_\_\_\_\_

Date: Nov 9 2018

CCC Chair Approval:  \_\_\_\_\_

Date: 12/03/2018

Dean Approval:  \_\_\_\_\_

Date: 12/5/2018

\*COB and COE proposals approved by the Associate Dean.

**BEFORE** consideration by the UCC, the proposal must be approved the three levels noted above. Approval by the UCC, UFC, and Provost\*\* are noted on the proposal "status history" at the UCC web site.

\*\*Provost approval is required in cases of proposals for new concentrations, new minors, new majors that do not involve a new degree, *or program changes involving changes to credit hours of courses in the program's requirements.*

## **GISC program change: Rationale, Impact and Catalog Copy**

The Geography Department hosts an interdisciplinary certificate program in Geographic Information Science (GIS). Open to students in all majors and to non-degree seeking students, the program is designed to address the growing demand for geospatial analysts in business, government, education, health care, natural resource management, and numerous other settings.

**Summary of proposed change:** The change described allows students to take *either* GISC 450 GIS Programming *or* GISC 482 Web GIS: Concepts and Applications, instead of requiring *all* certificate students to take GISC 450. Undergraduate students who wish to take both GISC 450 and GISC 482 can do so, counting one as an elective in the certificate.

**Rationale:** This change recognizes that students pursuing different careers based on their primary majors (environmental science, historic preservation, biology, etc.) may not need expertise in GIS programming. In addition, it recognizes the growing role of web-based GIS. However, the primary reason for the change is to reduce the number of undergraduates taking GISC 450, thus making it possible to cross-level cross-list the course in our graduate program so that students entering the Master of Science in Geospatial Analysis (MSGA) can take GIS Programming without our needing an additional instructor. Elsewhere in this packet, we propose to cross-level cross-list GISC 450 as a new course, MSGA 555.

**Impact statement:** GISC 482 will be taught on a regular basis in fall semesters; it is currently being offered for the first time to just 9 students; the low number is probably because students are not aware that it counts as an elective in the certificate. We anticipate continuing to teach GISC 450 every semester but are hoping for lower enrollments so that MSGA students who enter that program with no knowledge of GIS programming can join the graduate level version of the class. These are most commonly students from other universities. This way, we can require GIS programming without having to staff an additional graduate class. As a result, we do not see any impacts from this change in the immediate future.

At the present time the requirements for the certificate as stated in the catalog are as follows:

1) Introductory Course (4 credits)

GISC 200 or GEOG 250 or EESC 205

2) Intermediate Course (4 credits)

GISC 351 or GEOG 351

3) GISC 450 GIS Programming (4 credits)

4) Elective (4 credits)

Students must choose one elective from the following list: GEOG 340, 355; GISc 440, 471 or 482.

5) Capstone Experience (3 credits)

To earn the certificate, students must complete either GISC 491 or GISC 499. All directed studies and internships must be approved by the Director of GIS Programs.

With respect to item 3, students would be required to choose between:

GISC 450 GIS Programming or GISC 482 Web GIS: Concepts and Applications.

With respect to item 4, we have removed reference to GISC 460 which was previously eliminated, continued to reference GEOG 340 and 355 as electives, and included any other 400-level GISC courses to simplify the language and to ensure all current and future GISC 400-level additions could be included as electives. The description of the new program follows:

### **Catalog Copy**

The Geography Department hosts an interdisciplinary certificate program in Geographic Information Science. Open to students in all majors and to non-degree seeking students, the program is designed to address the growing demand for GIS-trained personnel in business, government, education, health care, natural resource management, and numerous other settings. The field encompasses integrated hardware, software, and database systems that are capable of capturing, storing, analyzing, and displaying geographical information. Upon completion of the certificate, students may be eligible to apply for an additional professional certification in GIS administered by the GIS Certification Institute (GISCI).

Geographic Information Science Certificate (19 credits)

1) Introductory Course (4 credits)

GISC 200 or GEOG 250 or EESC 205

2) Intermediate Course (4 credits)

GISC 351 or GEOG 351

3) Programming or Web-GIS Course (4 credits)

GISC 450 or GISC 482

4) Elective (4 credits)

Students must choose one elective from the following list: GEOG 340, 355; or an additional 400-level GISC course.

5) Capstone Experience (3 credits)

To earn the certificate, students must complete either GISC 491 or GISC 499. All directed studies and internships must be approved by the Director of GIS Programs.

\* Course descriptions for GEOG 250, 340, 351, and 355 can be found in this section of the Catalog while the course description for EESC 205 is on page 132. All GISC course descriptions are on pages 152-153. Students with professional experience in GIS may have a maximum of one course or four credits waived with appropriate approval, but must take additional course credits to total 19 credit hours. Consult with Dr. Brian Rizzo (GIS program advisor) for additional information.

Academic/Continuance Policies for the Certificate in GIS:

A maximum of two approved courses (3-8 credits) may be transferred from another regionally-accredited institution to meet certificate program requirements. All classes for the certificate must be completed within a four-year period following matriculation into the certificate program.

Students must maintain an overall 2.5 grade-point average in certificate program courses, or have permission from the faculty advisor, prior to registering for the final directed study or internship course. Students may be required to meet with an advisor for an annual review of progress and a summary review at the completion of course work.