UNIVERSITY OF MARY WASHINGTON -- NEW COURSE PROPOSAL
Electronically submit this completed form with attachments in one file to the Chair of the College Curriculum Committee.

COLLEGE (check one): Arts and Sciences  x  Business  x  Education

Proposal Submitted By: Geography  Date Prepared: 10/16/13
Course Title: Independent Study
Department/discipline and course number*: MSGA 591

*This course number must be approved by the Office of the Registrar before the proposal is submitted.

Number of credits proposed: 4  Prerequisites: none

Will this be a new, repeatable “special topics” course?  (Do you want students to be able to take this new course more than once if the topic changes?)  NO  YES  x

Date of first offering of this new course: FALL SEMESTER, year Spring 2015

Proposed frequency of offering of the course: Any semester as needed

List the faculty who will likely teach the course: Rizzo, Hanna, Gallagher new hire(s) in GIS

Are ANY new resources required? NO  x  YES  Document in attached impact statement

This new course will be (check all that apply):
Required in the major  General Elective  x
Elective in the major  General Education**

**AFTER the new course is approved, a separate proposal must be sent to the General Education Committee.

Catalog Description: MSGA 591 Independent Study. With permission from the director of the GIS program, this course may substitute for MSGA 550 or MSGA 580. Students will work with a faculty member to create a set of readings and assignments culminating in a project equivalent to those assigned in the course which they are substituting. Application of appropriate geospatial technologies using the computer laboratory is expected (4 credits).

COURSE HISTORY
Was this course taught previously as a topics or experimental course?  YES  x  NO

Course Number and Title of Previous Course  Semester Offered  Enrollment

CHECK HERE if the proposed course is to be equated with the earlier topics or experimental offerings. This means that students who took the earlier “topics” course will only be able to take the new course if they made a C- grade or lower in the earlier course.

NOTE: If the proposed course has not been previously offered as a topics or experimental course, explain in the attached rationale statement why the course should be adopted even though it has not been tried out.

REQUIRED ATTACHMENTS:
1. Rationale Statement (Why is this course needed? What purposes will it serve?)
2. Impact Statement (Provide details about the Library, space, budget, and technology impacts created by adding this new course. Include supporting statements from the Library, IT Department, etc. as needed.)
3. Sample Syllabus

Department Chair Approval: Stephen Hanna  Date: 8/16/13
CCC Chair Approval: Tim ODonnell  Date: 10-23-13
UCC Chair Approval:  Date:

New Course Proposal Cover Sheet (July 2013)
Rationale Statement
The Masters in Geospatial Analysis is a 30-credit hour non-thesis degree which emphasizes instruction in the theoretical and practical applications of spatial analysis, and serves as a preparation for a professional career. It is a coherent, highly structured program designed to assure the mastery of specific knowledge and skills. Entering students will have either undergraduate coursework in GIS or professional experience working with GIS. The following courses have been created specifically for the MSGA:

**Introduction**
- MSGA 510 – Spatial Thinking (4 credits)

**Methods**
- MSGA 520 – GeoDesign and Geovisualization (4 credits)
- MSGA 540 – Modeling and Spatial Statistics (4 credits)
- MSGA 550 – Remote Sensing and Digital Imagery (4 credits)

**Applications**
- MSGA 570 – Geospatial Intelligence (4 credits)
- MSGA 580 – Geospatial Data and Services on the Web (4 credits)

**Independent research**
- MSGA 595 – Capstone Project (1-6 Credits)

We anticipate that some students will have expertise in either remote sensing (MSGA 550) or geospatial data and services on the web (MSGA 580). We propose an Independent Study that can be taken by such students. A student with the appropriate background, training and experience may petition the program director to substitute one of these courses with an independent study: MSGA 591 – Independent Study (4 credits).

Final approval will be authorized by the GIS program director following a consultation with the student's academic advisor and the instructor who is proposed as the supervisor for the independent study. Students proposing an independent study will work with a supervisor to create a set of readings and assignments culminating in a project equivalent to those assigned in the course which they are substituting. Substitution decisions will be based on an assessment of the student's work history, publications and reports, interviews with faculty, and the appropriateness of the proposed independent study project. An independent study may not be requested as a substitute for any course in the program other than MSGA 550 or 580.

Impact Statement

The MSGA has been approved by UMW’s Board of Visitors and is to be reviewed by SCHEV October 28-29, 2013. The proposal document includes the following statements about resource needs. This course will be adequately covered by these resources.

**Projected Resource Needs**
The following items detail the resources necessary to initiate and sustain the program. Assuming approval of the rate by the UMW Board of Visitors, the program will charge a differential tuition rate and will be revenue positive assuming an enrollment in excess of 12 student FTE annually. Based on a ratio of 9 student FTE requiring 1.0 FTE of instructional effort for a graduate program, the MSGA program will require 1.1 instructional FTE effort in the program initiation year rising to an effort of 1.6 faculty FTE by the target year. (Note that numbers are rounded.) These calculations assume an initiation year student FTE of 10 rising to 14 by the target year.
Full-time Faculty
One current full-time faculty with a GIS specialty plus a second faculty member hired to initiate the graduate program will provide a total of .75 FTE effort toward the delivery of the master’s program in the initiation year. The new full-time faculty member will be hired at the rank of Assistant Professor and at a salary range of $68,000 - $72,000. (Remaining portions of FTE effort from these full-time faculty positions will be in support of the undergraduate GIS program.) By the target year, FTE effort provided by full-time faculty rises to 1.25.

Part-time Faculty
In the initiation year, two faculty from the undergraduate program in Geography will contribute a total effort of .175 FTE to the delivery of the graduate program by teaching graduate courses in areas of their expertise and by serving as faculty director/mentor of required graduate capstone projects. This figure remains constant to the target year.

Adjunct Faculty
Adjunct faculty (two persons) will deliver graduate courses representing an effort of .175 FTE to initiate the program and remaining constant to the target.

Graduate Assistants
One graduate assistant, to serve as a laboratory aide, will be required to initiate the program. This position will not teach but will assist faculty members with laboratory arrangements required for their courses and will also provide a portion of the administrative support for the program director. Assuming growth in enrollment, a second graduate assistant position will be added by the target year. Graduation assistants will be paid $10,000 each per year. Space and equipment are in place for their use.

Classified Positions
Additional clerical support for the program director will be provided by the current Geography Department office manager, representing five percent of her assigned work, tasks, and duties and calculated as .05 FTE effort.

Targeted Financial Aid
No targeted financial aid is projected for this program.

Equipment
Equipment needs are as follows: (1) additional office equipment (furnishings, computer, and software) for the new full-time faculty member hired to help deliver the program ($10,000); (2) additional specialized laboratory equipment and specialized software required for the GIS laboratory supporting courses and instruction ($15,000); and (3) replacement costs for equipment as it ages/deteriorates; and the costs associated with software upgrades and license renewals ($30,000).

Library
The requested amounts for the initiation year will enable the Library to add the journals Cartography and Geographic Information Science to the Library’s holdings along with additional books and other resources. Amounts for the target year represent costs required to sustain new journals added to the collection plus the cost of additional books and other resources added as the program expands and new knowledge is produced in the field.

Telecommunications
Telecommunication costs shown are based on: (1) the expenses of voice and data services required by all reallocated and new positions that will be dedicated to delivery of this program ($3,500) and (2) the costs required for server, disk storage space, and associated software required to support the hosting and management of geospatial imagery and data that will be utilized by the program ($2,000).

Space
No additional space is required to launch or sustain the program.

Other Resources
Additional costs shown represent: (1) costs associated with a booth at annual GIS related conferences and shows, an essential element for establishing the program’s prominence in the field and for attracting highly qualified students ($10,000); and (2) cost associated with specialized promotional materials ($3,000).
Sample Syllabus
MSGA 591: Independent Study

Course Description: MSGA 591 is an Independent Study designed for students with professional expertise in either remote sensing or geospatial data management. A student who has been employed in these fields may petition the director of GIS programs to use this course to substitute for either MSGA 550 (Remote Sensing and Digital Imagery) or MSGA 580 (Geospatial Data and Services on the Web). Content is therefore variable and specifics will be decided by the student and the faculty member acting as instructor for this course.

Readings:
• There will be no single textbook
• Texts and journal articles will be selected as appropriate to the subject matter

Assignments:
• Annotated bibliography
• Laboratory exercises in specific software and/or techniques
• Project
  o Paper, minimum 12 pages
  o Presentation of project to an audience of peers and professors
  o Portfolio entry

Schedule: weekly meetings with the instructor will be required, at a time to be decided.

Sample Evaluation:
• Annotated bibliography 15%
• Laboratory work 35%
• Project 50%