May 11, 2011

MEMORANDUM

TO: John Townshend  
    Dean, College of Behavioral and Social Sciences
    
    Charles Caramello  
    Associate Provost and Dean, Graduate School

FROM: Elizabeth Beise  
    Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Modify the Master of Professional Studies in Geospatial Information Sciences (PCC log no. 10033)

At its meeting on April 1, 2011, the Senate Committee on Programs, Curricula and Courses approved your proposal to modify the curriculum of the Master of Professional Studies in Geospatial Information Sciences. A copy of the approved proposal is attached.

The change is effective Fall 2011. The College should ensure that the change is fully described in the Graduate Catalog and in all relevant descriptive materials, and that all advisors are informed.

MDC/  
Enclosure

cc: David Salness, Chair, Senate PCC Committee  
    Sarah Bauder, Office of Student Financial Aid  
    Reka Montfort, University Senate  
    Erin Howard, Data Administration  
    Donna Williams, Institutional Research & Planning  
    Anne Turkos, Archives  
    Linda Yokoi, Office of the Registrar  
    Thomas Castonguay, Graduate School  
    Wayne McIntosh, Behavioral and Social Sciences  
    Christopher Justice, Geography
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM/UNIT PROPOSAL

- Please email the rest of the proposal as an MSWord attachment to pcc-submissions@umd.edu.

- Please submit the signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus.

College/School: BSOS
College/School Unit Code-First 8 digits: 01202800
Unit Codes can be found at: https://hypprod.umd.edu/Html_Reports/units.htm

Department/Program: GEOG
Department/Program Unit code-Last 7 digits: 1281501

Type of Action (choose one):

☐ Curriculum change (including informal specializations)  ☐ New academic degree/award program
☐ Renaming of program or formal Area of Concentration  ☐ New Professional Studies award iteration
☐ Addition/deletion of formal Area of Concentration  ☐ New Minor
☐ Suspend/delete program  ☐ Other

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

Summary of Proposed Action:
1. Replace GEOG 472 and GEOG 473 with GEOG 652 and GEOG 653, respectively.
3. Reduce the Professional Project (Capstone) course from 6 to 3 credits by eliminating the 2-part GEOG 793 Professional Project I (3cr.) and GEOG 794 Professional Project II (3cr.) and reinstating the 3-credit GEOG 797 Professional Project (final project).
4. Replace INFM 706 with GEOG 796, GIS Project Management

These revisions will enhance the current program by upgrading the basic Remote Sensing and GIS courses, adding a new, highly relevant course, streamlining the final project, adding a department-created project management course. No additional resources needed.

APPROVAL SIGNATURES - Please print name, sign, and date. Use additional lines for multi-unit programs.

1. Department Committee Chair  Shunlin Liang  
2. Department Chair  Chris Justice  
3. College/School PCC Chair  Martha E. Geores
4. Dean  Wayne McIntosh  
5. Dean of the Graduate School (if required)  
6. Chair, Senate PCC  David Zaleness  
7. University Senate Chair (if required)  
8. Vice President for Academic Affairs & Provost  Edgar G. Beria

PCC LOG NO. 10033
Rationale and Justification

The Master of Professional Studies in Geospatial Information Sciences (GIS) at the University of Maryland College Park was launched during the fall semester 2007. This program has been highly successfully to date. Beginning in Fall 2010, the program will go national, with a subsequent increase in enrollment. There are 81 students currently enrolled in the Master's program as of Fall 2010.

The proposed revisions to the Master of Professional Studies in Geospatial Information Sciences were developed in accordance with the needs of the current students and the leading edge trends of the field.

It is proposed to replace GEOG 472, Remote Sensing: Digital Image Processing and Analysis, with a more rigorous version, GEOG 652 (VPAC submission filed). The remote sensing technology has developed fast in recent years, especially the use of software and also the applications of remote sensing. This change will upgrade the course materials at a higher level to provide students with the most cutting-edge knowledge and skills in the field of digital imaging processing and analysis. It is also proposed to replace GEOG 473, GIS and Spatial Analysis, with a more rigorous version, GEOG 653 (VPAC submission filed). There have been many significant changes in the field of geospatial technology, particularly geographic information systems (GIS). This change will upgrade the course materials at a higher level to provide students with the most updated GIS knowledge and skills. This new course will reflect the geospatial technology development trend and match the standards for a graduate level course.

The program faculty, supported by a survey of current and former students, believe that GEOG 678, Web Programming (VPAC submission filed), is a necessary addition to the curriculum as it relates to many practical applications in the students workplace and is an important part of their skill sets. The course is designed to teach students the techniques for Web development, particularly creating dynamic and data-driven Web applications. It introduces a high-level, object-oriented programming language such as VB.Net and the designing, coding, debugging, testing, and documenting for the development of Web-based applications. Other popular Web development tools such as DHTML, CSS and PHP will also be covered.

It is also proposed that the Professional Project course be reduced to 3 credits (currently taught as GEOG 793 and 794, Professional Project I and II). The experience over the last couple of years has shown that most students incorporate and expand their projects from other courses in the program. In addition, the data and materials for this project can originate from an internship (internal or external to the department), or from relevant work experience at the student's current employer. Thus, no initial development time is needed and 3 credits is sufficient for completion of the program's capstone. Under the direction of a faculty advisor, the student will still prepare a project report which shall contain an explanation of the requirements for the work, a technical account of the activities undertaken, including a literature review, a description of the methods and approaches taken, a critical discussion of the results obtained, along with conclusions and recommendations developed from the project. The final project will consist of a full-fledged GIS application that is up and running and can be tested. This will enable the student to present potential employers with a portfolio containing an example of their ability to manage and develop a GIS application project and will show that they understand how to apply the technology to real world situations.

Finally, the Department has developed its own Project Management course, GEOG 796, GIS Project Management (VPAC submission filed), tailored specifically to GIS. It was formerly taught as INFM 706, Project Management, which is a generic management course focusing on theories.
<table>
<thead>
<tr>
<th>MPS GIS Program before Revisions</th>
<th>MPS GIS Program after Revisions</th>
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<tbody>
<tr>
<td><strong>Required Courses (15 credits):</strong></td>
<td><strong>Required Courses (18 credits):</strong></td>
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<tr>
<td>GEOG 472 Remote Sensing: Digital Processing and Analysis; (3 credits)</td>
<td>GEOG 606 Quantitative Spatial Analysis; (3 credits)</td>
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<tr>
<td>GEOG 473 Geographic Information Systems and Spatial Analysis; (3 credits)</td>
<td>GEOG 652 Digital Image Processing and Analysis; (3 credits)</td>
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<td>GEOG 606 Quantitative Spatial Analysis; (3 credits)</td>
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<td>GEOG 676 Programming for GIS; (3 credits)</td>
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<td>Geog 677 Internet GIS; (3 credits)</td>
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<tr>
<td><strong>Advanced GIS (6 credits; select 2 of the 4):</strong></td>
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<td>Geographic Information Systems:</td>
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<td>GEOG 673 GIS Modeling; (3 credits)</td>
<td>GEOG 673 GIS Modeling; (3 credits)</td>
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<td>GEOG 674 GIS Spatial Databases (3 credits)</td>
<td>GEOG 674 GIS Spatial Databases (3 credits)</td>
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<td>Remote Sensing:</td>
<td>Remote Sensing:</td>
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<td>GEOG 671 Remote Sensing Instruments and Observations (3 credits)</td>
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<td>GEOG 672 Biophysics of Optical Remote Sensing (3 credits)</td>
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<td>Professional Project Management and Final Project (10 credits):</td>
<td>Professional Project Management and Final Project (7 credits):</td>
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<td>GEOG 795 Professional Practices Seminar (1 credit)</td>
<td>GEOG 795 Professional Practices Seminar (1 credit)</td>
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<tr>
<td>INFM 706 Project Management (3 credits)</td>
<td>GEOG 796 GIS Project Management (3 credits)</td>
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<tr>
<td>GEOG 797 Professional Project (6 credits)</td>
<td>GEOG 797 Professional Project (3 credits)</td>
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Hi Mike,

In your previous email, you mentioned that Dr. Betsy Beise requests that I provide documentation that the College of Information Studies is aware that we will no longer be requiring INFM 706. I talked to the Vice Chair of the Geography Dept - Dr. Martha Geores who just got an email from Associate Dean Diane Barlow acknowledging the change. See the message below.

Please attach it to our proposal. Thanks a lot.

Best,

Jack

*****
Jianguo (Jack) Ma, Ph.D.
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Master of Professional Studies in Geospatial Information Sciences
University of Maryland
Department of Geography
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-------- Original Message --------
Subject: RE: INFM 706
Date: Wed, 2 Feb 2011 11:48:49 -0500
From: Diane Ledbetter Barlow <dbarlow@umd.edu>
To: Martha E. Geores <mgeores@umd.edu>

Thank you for your email. The change in the geography program will not have any impact on our programs, but we appreciate knowing of your plans.

Diane
Diane L. Barlow, Associate Dean
College of Information Studies
University of Maryland
College Park, MD 20742
telephone: 301-405-2042
fax: 301-314-9145

From: Martha E. Geores
Dear Associate Dean Diane Barlow,

The Geography MPS program in Geospatial Information Sciences is now several years old and we have redesigned some of our curriculum based on the changing technologies and resultant priorities in the field.

As part of the change, we have replaced INFM 706 with other technology courses that we feel better meet the Geospatial Information Sciences needs.

We have not used INFM 706 for over a year and the times we did use the INFM 706 class, an adjunct was hired to teach just our students so this should not have had a negative impact on the regular sections to this course. This email is just to make sure you are aware of this change.

We appreciate being allowed to offer the course when the Geography MPS was initially started.

Please confirm you received this email and let me know if you have any questions or concerns.

Best regards,

Martha

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Martha E. Geores
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