Program Change Request

Date Submitted: 09/26/16 12:21 pm

Viewing: **GEOGMS : Geography, Master of Science**

Last approved: 05/20/15 12:03 pm

Last edit: 09/26/16 12:20 pm

Changes proposed by: jatullis

In Workflow

1. **ARSC Dean Initial**
2. **GRAD Dean Initial**
3. **Director of Program Assessment and Review**
4. **Registrar Initial**
5. **GEOS Chair**
6. **ARSC Curriculum Committee**
7. **ARSC Dean**
8. **Global Campus**
9. **Provost Review**
10. **University Course and Program Committee**
11. Graduate Committee
12. Faculty Senate
13. Provost Final
14. Provost's Office--Notification of Approval
15. Registrar Final
16. Catalog Editor Final

Approval Path

1. 09/30/16 12:25 pm jdurdik: Approved for ARSC Dean Initial
2. 09/30/16 12:59 pm pkoski: Approved for GRAD Dean Initial
3. 09/30/16 1:52 pm agriffin: Approved for Director of Program Assessment and Review
4. 10/03/16 5:27 pm lkulcza: Approved for Registrar Initial
5. 10/04/16 8:32 am liner: Approved for GEOS Chair

6. 10/10/16 4:46 pm fspiegel: Approved for ARSC Curriculum Committee
7. 10/10/16 5:05 pm jdurdik: Approved for ARSC Dean
8. 10/11/16 4:38 pm pritchey: Approved for Global Campus
9. 10/13/16 5:00 pm tmartin: Approved for Provost Review

History

1. May 20, 2015 by jatullis

Catalog Pages Using this Program: Geosciences (GEOS)

Submitter: User ID: jatullis
Phone: 5-8784

Academic Level: Graduate

Select a reason for the proposed change: Making Minor Changes to an Existing Degree (e.g. changing 15 or fewer hours, changing admission/graduation requirements, adding Focused Study)

Program Status: **Active**

Academic Unit: Major/Field of Study

Are you adding, changing or deleting a concentration? No

Action	Proposed Code	Proposed Name

Are you adding, changing or deleting a track? No

Action	Proposed Code	Proposed Name

Are you adding, changing or deleting a focused study? No

Action	Proposed Code	Proposed Name

Effective Catalog Year: Fall **2017** ~~2015~~

College, School, Division: Fulbright College of Arts and Sciences (ARSC)

Department Code	Department of Geosciences (GEOS)
Program Code	GEOGMS
Degree	Master of Science
CIP Code	45.0701 - Geography.
Program Title	Geography, Master of Science
Method of Delivery	On Campus
Is this program interdisciplinary or use courses from another College?	No
Does this change the total hours needed to complete the program?	No

Program Requirements, Description and 8-Semester Plan

Geography (GEOG) (M.S.)

The Department of Geosciences offers a Master of Science (M.S.) degree in geography. This program draws on a variety of faculty expertise in physical, environmental, human, and regional studies in geography as well as in cartography, remote sensing, photogrammetry, and computational aspects of geographic information science (GIS) or geoinformatics.

Prerequisites to Degree Program: Applicants must be admitted to the Graduate School and meet the following requirements: 1) satisfactory undergraduate preparation in geography, 2) three letters from persons competent to judge the applicant's potential for graduate studies, 3) satisfactory GRE scores, and 4) a completed departmental application. In addition to these requirements, students applying to the MS program should have adequate mathematical preparation at the undergraduate level, including statistics, algebra, and/or calculus. Students who do not meet these requirements may be admitted conditionally. Students with course deficiencies may enroll concurrently in graduate courses. Students speaking English as a foreign language are encouraged to take the TOEFL with results reported to the department.

Degree Requirements: Requires a total of 30 semester hours. A minimum of 24 semester hours of course work (including a 7-hour core and 6 hours of quantitative or computational electives), six semester hours of thesis, and a comprehensive examination (defense of thesis) conducted by the candidate's thesis committee are required for all students who obtain an M.S. in Geography.

Core		
GEOS 5093	History and Philosophy of Geography (Even years, Sp)	3
GEOS 5333	Research Methods and Materials in Geography (Odd years, Fa)	3
GEOS 5011	Colloquium (Sp)	1

Quantitative and Computational Electives		6
~~GEOS 4513~~	~~Introduction to GIS Programming (Fa)~~	
~~GEOS 4863~~	~~Quantitative Techniques in Geosciences (Sp)~~	
GEOS 5043	**Geospatial Technologies Mathematical Toolkit (Sp, Fa)**	
GEOS 5083	**Geospatial Technologies Statistical Toolkit (Sp, Fa)**	
GEOS 5513	**Introduction to GIS Programming (Fa)**	
GEOS 5863	**Quantitative Techniques in Geosciences (Irregular)**	
GEOS 5033	Advanced Vector Geographic Information Systems (Irregular)	
GEOS 510V	Special Problems in Physical Geosciences (Sp, Su, Fa)	
ECON 4743	Introduction to Econometrics (Sp)	
CSCE 4523	Database Management Systems (Sp)	
CSCE 4613	Artificial Intelligence (Irregular)	
MATH 4153	Mathematical Modeling (Irregular)	
MATH 4353	Numerical Linear Algebra (Sp)	
MATH 4363	Numerical Analysis (Fa)	
MATH 4503	Differential Geometry (Irregular)	
MATH 4513	Advanced Calculus I (Sp, Fa)	
MATH 4523	Advanced Calculus II (Sp)	
STAT 4003	Statistical Methods (Sp, Fa)	
STAT 5413	Spatial Statistics (Fa)	
Other courses as approved by a Department of Geosciences Chair-appointed committee.		
GEOS 600V	Master's Thesis (Sp, Su, Fa)	6

Students should also be aware of Graduate School requirements with regard to master's degrees.

Are Similar Programs available in the area?	No
Estimated Student Demand for Program:	30
Scheduled Program Review Date:	Spring 2024
Program Goals and Objectives:	The goal of the MS Geography is to prepare students for doctoral research or employment in geography or related disciplines. The program will help students develop expertise in key areas of geography. These include physical, environmental, human, and regional studies, as well as cartography, remote sensing, photogrammetry, and computational aspects of geographic information science (GIS) or geoinformatics.
Learning Outcomes:	MS Geography graduates will have geographic science skills to solve problems using a combination of scholarly written and verbal communication, geographic information systems (GIS) and related computational resources, and quantitative reasoning.
Description and justification of the request:	The purpose of this minor change is to update the catalog list of quantitative and computational electives. Two Department of Geosciences courses were added to the list (GEOS 5043 Geospatial Technologies Mathematical Toolkit and GEOS 5083 Geospatial Technologies Statistical Toolkit); please note that name changes to these courses are being proposed separately. In addition, existing 4000-level Geosciences courses already on the list were updated to reflect 5000-level options (since this is part of a graduate degree). Please note that a department chair-appointed committee is authorized to approve new electives related to this

	list (as provided for in the current catalog description). However, the minor changes proposed help improve the official list in the catalog and point students toward two important quantitative course options already approved by the chair appointed committee.
Program reviewer comments	
Uploaded attachments:	~~6a - Board Letter - Reconfig GEOGMS.docx~~ ~~6a - Ltr of Notification - Reconfig GEOGMS.docx~~

Key: 309