EA-COS #15-12
Effective: Immediately

The Graduate School
EASTERN ILLINOIS UNIVERSITY™

TO: Council on Graduate Studies

FROM: Robert M. Augustine, Dean

RE: Catalog Update via Executive Action

DATE: May 1, 2015

After the Council on Graduate Studies passed the Master of Science in Geographic Information Sciences (agenda 09-28) as an added option under the MSNS program as a temporary measure as the MS awaited IBHE approval, it was submitted to the National Professional Science Master's Association to be designated as a PSM program and to achieve affiliation with the organization. The degree program was modified in order to meet these requirements and was ultimately approved by the NPSMA with this updated curriculum. In order to ensure that the NPSMA approved curriculum appears in the Graduate Catalog, I ask that you review the changes below and approve these changes via an electronic vote. I would be happy to meet with you or answer any questions via email or phone. Approving this aligns the catalog copy with the PSM approved curriculum. We will reflect your approval as an addendum to the April 21, 2015 Minutes of the Council.

Please register your vote as "Approve," "Do Not Approve," or "Abstain" by Tuesday, May 5, 2015.

Current	Updated
Geographic Information Sciences	Geographic Information Sciences
Program Mission: The Master of Science in Geographic Information Sciences is an interdisciplinary program designed to allow students to pursue an advanced degree with training in the Geographic Information Sciences while at the same time developing skills in business that are highly valued by employers. Program size facilitates the personal development of the student by encouraging student mentoring with faculty from the departments of Geology/Geography, Biological Sciences, Economics, Political Sciences, Business, and Technology. Experiences provided by the faculty in the classroom, laboratory, and field will prepare the student for internships. Each experience will form a basis for the degree requirements of the program as well as for preparing the successful graduate to address the documented local and regional workforce needs in business, government, and non-profit sectors. **Admission Requirements:** To be eligible for degree candidacy, applicants must meet all the requirements for admission to the Graduate School (see "Admission to Graduate Degree and Certificate Programs"). **Degree Audit:** The graduate plan of study is the EIU Degree Audit, which is generated automatically in the Degree Audit Reporting System (DARS) at the time of degree or certificate candidacy. Modifications of the standard EIU Degree Audit are submitted by the graduate coordinator to the certification officer in the Graduate School at the time modifications are approved. The Degree Audit serves as an unofficial summary of requirements for the program. Degree and certificate candidates are advised to review the comprehensive summary of the Degree Audit process specified on the "Requirements for All Degree and Certificate Candidates" section of the *Graduate Catalog*. Individual programs may require candidates to submit plans of study in addition to the Degree	This section unchanged.

Audit, candidates should consult with the program coordinator.	
Degree Requirements Degree requirements include those outlined for the master's degree by the Graduate School (see "Requirements for the Master's Degree"). Additional requirements are outlined below:	This section unchanged .
Core Courses It is assumed that applicants are interested in increasing their current competencies in the area of Geographic Information Sciences and its application to the business, government and non-profit sectors. All degree candidates must successfully complete courses designed as the core classes. The purpose of this group of required courses is to present aspects of the fundamental theory and practice of Geographic Information Sciences and give candidates a preliminary background in business accounting. Students will enroll in the following core courses. Credits: 18 • GEG 5810 - Geographic Information Systems I Credits: 3 • GEG 5820 - Remote Sensing I Credits: 3 • GEG 5860 - Geographic Information Systems II Credits: 3 One Course Three Credits from Each of the Following Areas: • Business Courses • MBA 5010 - Accounting from a Management Perspective. Credits: 3 • Statistics Courses • BIO 4750 - Biometrics. Credits: 3 • BIO 4820 - Spatial Analysis for Environmental Sciences Credits: 4 • BIO 5381 - Advanced Biostatistics. Credits: 3 • MAT 5151 - Probability. Credits: 4 • MBA 5500 - Quantitative Modeling. Credits: 3 • Internship from:	**Core Courses** It is assumed that applicants are interested in increasing their current competencies in the area of Geographic Information Sciences and its application to the business, government and non-profit sectors. All degree candidates must successfully complete courses designed as the core classes. The purpose of this group of required courses is to present aspects of the fundamental theory and practice of Geographic Information Sciences and give candidates a preliminary background in business administration. Students will enroll in the following core courses. Credits: 15 • MBA 5001 – Business Operations in Sustainable Energy Facilities. Credits 3 • OR • MBA 5010 – Accounting from a Management Perspective. Credits 3 • AND • MBA 5680 – Organizational Behavior and Group Dynamics. Credit 3 • GEG 5810 - Geographic Information Systems I. Credits: 3 • GEG 5820 - Remote Sensing I. Credits: 3 • GEG 5860 - Geographic Information Systems II. Credits: 3 **Elective Set I** Students will complete one of the following courses. Credits 3 to 4 • BIO 4750 – Biometrics. Credits 3 • BIO 4820 – Spatial Analysis for Environmental Sciences. Credits 4

- BIO 5980 - Graduate Internship in Biological Sciences. Credits: 6
- ECN 5980 - Internship in Economics. Credits: 1 to 3
- GEG 5980 - Geography Internship Credits: 6
- MBA 5980 - Internship in Business Administration. Credits: 1 to 12
- PLS 5980 - Administrative Internship. Credits: 1 to 3
- TEC 5980 - Industrial Internship in the Technologies. Credits: 1 to 10

In addition to the required core classes, each student must choose one area of concentration and complete courses as specified below:

Biological Sciences: Minimum of 12-semester hours in Biological Sciences with thesis option; 15-semester hours minimum with non-thesis option.

Physical Sciences: Minimum of 12-semester hours in Geology/Geography with thesis option; 15-semester hours minimum with non-thesis option.

Social Sciences: Minimum of 12-semester hours in Economics or Political Sciences with thesis option; 15-semester hours minimum with non-thesis option.

Business: Minimum of 12 semester hours in Masters in Business Administration with thesis option; 15-semester hours minimum with non-thesis option.

Technology: Minimum of 12 semester hours in Masters of Science in Technology with thesis option; 15-semester hours minimum with non-thesis option.

The student, in consultation with the advisor, shall select appropriate elective courses to complete the remaining hours for the degree.

These courses may be taken in a single discipline or in more than one discipline; the

This course is not available if selected for Elective Set II
- MAT 5151 – Probability. Credits 4
- BIO 5381 – Advanced Biostatistics. Credits 3

Elective Set II
Students will complete minimally 11 credit hours from the following list. Credits 11
- PLS 4793 – Public Organizational Theory. Credits 3
- BIO 4820 -- Spatial Analysis for Environmental Sciences. Credits 4: This elective is not available if completed for Elective Set I
- BIO 4840 – Resource Management and Environmental Assessment. Credits 3
- GEG 4910 – GIS Programming. Credits 4
- PLS 4893 – Government Budgeting and Politics. Credits 3
- BIO 5380 – Landscape Ecology. Credits 3
- PLS 5543 – Proseminar in Public Administration Policy. Credits 3
- GEG 5830 – Building Geodatabases. Credits 3
- GEG 5850 – Mapping the Modern Way. Credits 3
- GEG 5870 – Remote Sensing II. Credits 3
- GEG 5880 -- GIS Modeling. Credits 3

Required Experiential (Internship) Component
Minimum of 3 credit hours of internship
- BIO 5980 – Graduate Internship in Biological Sciences. Credits 6
- ECN 5980 – Internship in Economics. Credits 1 to 3
- GEG 5980 – Geography Internship. Credits 6
- PLS 5980 -- Administrative Internship. Credits 1 to 3
- TEC 5980 – Industrial Internship in the Technologies. Credits 1 to 10

unifying principle is their significance to the specialized professional work of the candidate. The unity displayed in the selection of courses of this group is the primary consideration in the process of approving the study plan. • Experiences Up to 12 hours of course work may be substituted upon approval of the Program Director and the student's Advisory Committee upon successful submission of a "proof of competency" project taken under the Special Projects listing.	• MBA 5980 – Internship in Business Administration. Credits 1 to 12
Non Thesis Option If the student elects not to submit a thesis, the minimum credit required for graduation is 33 semester hours, to include the 18 semester hours of the required core classes, 15 semester hours in an area of concentration, to be determined by the candidate in consultation with the advisor.	This section eliminated as the non-thesis option is now the only option via comprehensive examinations.
Thesis Option Although preparation of a formal paper or thesis is not required of candidates for the degree, Professional Science Masters in Geographic Information Sciences, a student may elect this alternative. If the student elects to submit a thesis, the minimum credit required for graduation is 33 semester hours to include the 18 semester hours of the required scientific core, 12 semester hours in an area of concentration, and 3 semester hours of thesis and research to be determined by the candidate in consultation with the advisor. The thesis must be read by at least two faculty members other than the advisor before it is given final approval. Candidates who contemplate graduate study beyond the master's degree are urged to write a thesis.	This section eliminated as the thesis option was not part of the IBHE approved degree.
Required Comprehensive Examination and Examination Committee The candidate for the Professional Science Masters in Geographic Information Sciences	This section unchanged

must successfully complete a final comprehensive examination. The examination will require the candidate to complete a literature review of a topic within their field of study, present a seminar to their graduate committee, and demonstrate comprehensive knowledge in their field of study. The candidate's examining committee shall consist of a minimum of the candidate's advisor and two other faculty members agreed upon by the candidate and advisor. Successful completion of the examination in a specific concentration must be filed in the Graduate School at least one week prior to the graduation date.	
Transfer Credit Up to six semester hours of transfer credit from another accredited graduate school may be applied to the degree. Course work must be applicable to the degree program. The program director must approve transfer credit. All transfer credit must meet the requirements for transfer credit established by the Graduate School.	This section unchanged.
Study Plan The student, in consultation with the advisor, must obtain approval of the study plan from the program director and student's advisory committee prior to the completion of 12 semester hours of graduate credits, which count toward the graduate degree.	This section eliminated (Now covered by the Degree Audit section above.)
Graduate Assistantships Information on graduate assistantships may be obtained by contacting the program director.	This section unchanged.