

Proposal for a New Option in the Masters in Sciences, Natural Sciences Program

Rationale: It will be beneficial to students seeking to serve local and regional workforce needs in business, government, and non-profit sector, and make Eastern Illinois University eligible to apply for substantial grants if a Professional Science Masters in Geographic Information Sciences is created. Therefore, a committee comprised of members from all participating departments has developed the following program, presented here in the form of the proposed catalog entry.

**Professional Science Masters in Geographic Information Sciences (PSM in GISci):
An option under the Masters in Sciences, Natural Sciences Program.**

Program Mission: The Professional Science Masters in Geographic Information Sciences (PSM in GISci) 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”). Candidates in the Geographic Information Sciences option of the Master of Science in Natural Sciences program are exempt from the teacher accreditation requirement.

Study Plan Approval: A study plan must be approved by the student’s advisory committee and filed with the graduate coordinator prior to the completion of 12 semester hours of graduate credit.

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.

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 designated 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 in the Program Will Enroll in the Following Core Courses. Credits: 18.

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- 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, 3 credits, from each of the following areas:
 - Business courses:
 - MBA 5010 – Essentials of Accounting. Credits: 3.
 - Statistics course:
 - BIO 4750 – Biometrics. Credits: 3, or
 - BIO 4820 – Spatial Analysis for Environmental Sciences. Credits: 3, or
 - BIO 5381 – Advanced Biostatistics. Credits: 3, or
 - MAT 5151 – Statistics. Credits: 3, or

- MBA 5500 – Quantitative Modeling. Credits: 3.
 - Internship from:
 - BIO 5980 – Graduate Internship in Biological Sciences, or
 - ECN 5980 – Internship in Economics, or
 - GEG 5980 – Internship in Geography, or
 - MBA 5980 – Internship in Business Administration, or
 - PLS 5980 – Administrative Internship, or
 - TEC 5980 – Industrial Internship in the Technologies

Discipline Component

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 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.

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.

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.

Comprehensive Examination and the Examining Committee

The candidate for the Professional Science Masters in Geographic Information Sciences 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.

Study Plan Approval

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.

Graduate Assistantships

Information on graduate assistantships may be obtained by contacting the program director.

Date Approved:

Department of Geology-Geography:

College of Sciences Curriculum Committee:

Council on Graduate Studies:

_____ 11 November 2009

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