CGS Agenda Item: 17-53
Effective Spring 2018

In order to accommodate changing faculty, course offerings and program needs, the following changes are proposed to the Post-baccalaureate certificate in Geographic Information Sciences in the Environmental Life Sciences:

Summary of Changes:

1. Name
   a. Abbreviate name from "Geographic Information Sciences in the Environmental Life Sciences" to "Geographic Information Sciences"
2. Purpose
   a. Broaden purpose to include other disciplines besides Environmental Life Sciences
3. Required courses
   a. remove GEO 5850 – Mapping the Modern Way from list of core courses
   b. add GEO 5820 – Remote Sensing I to list of core courses
4. Elective Courses
   a. Remove stipulation that up to 6 credits may come from GEG
   b. Add GEO 5880 – Geospatial Data Models
   c. Add GEO 4910 – Introduction to GIS Programming

Rationale:

The current name is long and unwieldy. The abbreviated name is already in widespread use, for example on the Biology department web page. The abbreviated name would also allow us to market to groups other than environmental science. The curriculum changes reflect changes in course offerings as well as the importance of Remote Sensing technologies in all areas of GIS but especially in ecological applications.

Current catalog language:

Geology/Geography: Graduate Certificate in Geographic Information Sciences in Environmental Life Sciences

Purpose of the Program: The mission of the GISci Certificate Program is to provide individuals who hold a Bachelors degree in the environmental life sciences with the requisite knowledge-base to be proficient in GISci. Specifically, the certificate will allow individuals to be competitive in both the job market as well as in admission to higher-level degree programs.

Admission Requirements: To be eligible for admission to the GISci Certificate Program, applicants must meet all of the requirements for admission to the Graduate School (see "Admission to Graduate Degree and Certificate Programs") and the PSM in Geographic Information Sciences.

Course/Curriculum Requirements

The GiSci Environmental Life Sciences Certificate requires 18 semester hours of study including both required and elective courses. Specific requirements are as follows:

Required Courses
Students must complete the following core courses. Credits: 6

GEO 5810 - Introduction to Geographic Information Science Credits: 3
GEO 5850 - Mapping the Modern Way Credits: 3

Elective Courses
Students must complete 12 hours in the following elective courses to fulfill credit requirements. Credits: 12

Up to 6 credits may come from GEG. Maximum of 6 at the 4750-4999 level will apply.

BIO 4820 - Spatial Analysis for Environmental Sciences Credits: 4
BIO 4840 - Resource Management and Environmental Assessment Credits: 3
BIO 5380 - Landscape Ecology. Credits: 3
GEO 5820 - Remote Sensing I Credits: 3
GEO 5870 - Remote Sensing II Credits: 3
GEO 5830 - GIS: Building Geodatabases Credits: 3
GEO 5860 - Geographic Information Systems II Credits: 3

Substitution for Equivalent Courses
If students have equivalent courses from their undergraduate degree programs, alternative GISci courses may be taken instead upon approval of the Biological Sciences graduate coordinator.

Courses Applicable Toward a Specific Concurrent or Future Degree Program
Courses in this program may be counted toward an MS in Biological Sciences with permission of the graduate student's committee.

New Catalog Proposed Changes:

Geology/Geography: Graduate Certificate in Geographic Information Sciences ~~in Environmental Life Sciences~~

Purpose of the Program: The mission of the GISci Certificate Program is to provide individuals who hold a Bachelor's degree in disciplines in which GIS is widely used, such as geography, the environmental life sciences, history and economics, with the requisite knowledge-base to be proficient in GISci. Specifically, the certificate will allow individuals to be competitive in both the job market as well as in admission to higher-level degree programs. Students may choose to earn the certificate online or on-campus.

Admission Requirements: To be eligible for admission to the GISci Certificate Program, applicants must meet all of the requirements for admission to the Graduate School (see "Admission to Graduate Degree and Certificate Programs") and the PSM in Geographic Information Sciences.

Course/Curriculum Requirements

The GiSci ~~Environemental Life Sciences~~ Certificate requires 18 semester hours of study including both required and elective courses. Specific requirements are as follows:

Required Courses
Students must complete the following core courses. Credits: 6

GEO 5810 - Introduction to Geographic Information Science Credits: 3
~~GEO 5850 - Mapping the Modern Way Credits: 3~~
GEO 5820 - Remote Sensing I Credits: 3

Elective Courses
Students must complete 12 hours in the following elective courses to fulfill credit requirements. Credits: 12

~~Up to 6 credits may come from GEG.~~ Maximum of 6 credits at the 4750-4999 level will apply.

BIO 4820 - Spatial Analysis for Environmental Sciences Credits: 4
BIO 4840 - Resource Management and Environmental Assessment Credits: 3
GEO 4910 - GIS Programming. Credits: 4
BIO 5380 - Landscape Ecology. Credits: 3
~~GEO 5820 - Remote Sensing I Credits: 3~~
GEO 5870 - Remote Sensing II Credits: 3
GEO 5830 - GIS: Building Geodatabases Credits: 3
~~GEO 5850 - Mapping the Modern Way Credits: 3~~
~~GEO 5860 - Geographic Information Systems II Credits: 3~~
GEO 5880 - Geospatial Data Models. Credits: 3

Substitution for Equivalent Courses
If students have equivalent courses from their undergraduate degree programs, alternative GISci courses may be taken instead upon approval of the ~~Biological Sciences~~ GISci Certificate graduate coordinator.

Courses Applicable Toward a Specific Concurrent or Future Degree Program
Courses in this program may be counted toward an MS in Biological Sciences, PSM in Geographic Information Science, or MA in Economics or History with permission of the graduate student's committee.

New Catalog (clean):

Geology/Geography: Graduate Certificate in Geographic Information Sciences

Purpose of the Program: The mission of the GISci Certificate Program is to provide individuals who hold a Bachelors degree in disciplines in which GIS is widely used, such as geography, the environmental life sciences, history and economics, with the requisite knowledge-base to be proficient in GISci. Specifically, the certificate will allow individuals to be competitive in both the job market as well as in admission to higher-level degree programs.

Admission Requirements: To be eligible for admission to the GISci Certificate Program, applicants must meet all of the requirements for admission to the Graduate School (see "Admission to Graduate Degree and Certificate Programs") and the PSM in Geographic Information Sciences.

Course/Curriculum Requirements

The GiSci Certificate requires 18 semester hours of study including both required and elective courses. Specific requirements are as follows:

Required Courses
Students must complete the following core courses. Credits: 6

GEO 5810 - Introduction to Geographic Information Science Credits: 3
GEO 5820 - Remote Sensing I Credits: 3

Elective Courses
Students must complete 12 hours in the following elective courses to fulfill credit requirements. Credits: 12

Maximum of 6 credits at the 4750-4999 level will apply.

BIO 4820 - Spatial Analysis for Environmental Sciences Credits: 4
BIO 4840 - Resource Management and Environmental Assessment Credits: 3
GEO 4910 - GIS Programming. Credits: 4
BIO 5380 - Landscape Ecology. Credits: 3
GEO 5870 - Remote Sensing II Credits: 3
GEO 5830 - GIS: Building Geodatabases Credits: 3
GEO 5880 - Geospatial Data Models. Credits: 3

Substitution for Equivalent Courses
If students have equivalent courses from their undergraduate degree programs, alternative GISci courses may be taken instead upon approval of the GISci Certificate graduate coordinator.

Courses Applicable Toward a Specific Concurrent or Future Degree Program
Courses in this program may be counted toward an MS in Biological Sciences, PSM in Geographic Information Science, or MA in Economics or History with permission of the graduate student's committee.

Effective Date: Spring 2018

Date approved by the department or school: August 1, 2017
Date approved by the college curriculum committee: September 22, 2017
Date approved by CGS: