

## Proposal for a Certificate in GIScience Online Option

### **Rationale for option:**

In addition to serving students in the Professional Science Master's (PSM) degree program in Geographic Information Science (GISci), graduate GISci courses at EIU have also appealed to students in several other disciplines including Biology, Business and Political Science. Many of these program areas are increasingly attracting online students, and GISci courses have already been brought online to support these students. The online GISci Certificate will allow us to reach out to students in disciplines without a dedicated GIS certificate or degree option, thus providing a means for Master's students in any online program at EIU to supplement their disciplinary credentials with valued GIS, mapping and spatial analytics skills. It would also allow us to attract career professionals seeking a shorter certificate option to enhance their GIS skills and credentials.

The Department of Geology and Geography at EIU currently has the resources to offer an online GISci Certificate in-load. Three courses required for the certificate have already been developed online, and the remaining three are scheduled for online delivery by Spring 2018. Furthermore, these commitments are already in place to support existing students in the PSM program as well as two other programs being brought online: the MBA with GIS Option and the Public Planning Certificate. No additional online course development would be required to support the online GISci Certificate.

### **Option Description:**

This online course of study would be an option to students in other online Master's degree programs at EIU, as well as students wishing to obtain only the certificate to enhance their career. The GISci Certificate will provide advanced training in Geographic Information Systems (GIS) and Remote Sensing (RS) to augment research and professional careers in a variety of disciplines. The certificate is structured as a rolling program with two intro courses in GIS and RS offered every fall, and advanced courses offered on an alternating basis every semester. Students with no GIS/RS background would thus be required to start in the fall, but students with some GIS/RS background might be able to begin their course of study in the spring. We expect to offer two courses each semester to support the online certificate, allowing students to complete the certificate in two years.

### **Sample Option Schedule:**

GEO 5810 Introduction to GIScience (3 c.h.)	Fa 17
GEO 5820 Remote Sensing I (3 c.h.)	Fa 17
GEO 4910 GIS Programming (4 c.h.)	Sp 18

GEO 5870 Remote Sensing II (3 c.h.)	Sp 18
GEO 5830 Building Geodatabases (3 c.h.)	Fa 18
GEO 5880 Geospatial Data Models (3 c.h.)	Sp 19

### **Rationale for option organization:**

The rolling admissions option provides flexibility and ease of marketing, and allows us to integrate course scheduling with other degree programs. Given limited teaching resources, the rolling admissions also leads to fewer course offerings per semester than would a cohort schedule. However, a low per-semester course load is preferred due to the technical nature of the degree program: a faster pace would likely lead to lower retention. Furthermore, many career professionals prefer to take only 1-2 courses per semester, and students in other degree programs seeking to add the GISci certificate would also be unlikely to take more than one or two GIS courses per semester given their course load in their home discipline.

The coursework to be offered online reflects the primary skills and concepts demanded of GIS professionals in today's job market. The introductory courses (GEO 5810 & 5820) provide fundamental GIS and RS skills, including data management, mapping, editing, and aerial photo/image interpretation. GEO 4910 and 5830 provide additional programming and database skills sought after in the job market, while GEO 5860 and 5880 provide advanced theoretical knowledge that will allow students to develop conceptual solutions to problems encountered in their research and/or professional careers.

### **Catalog Format for Online Option:**

The catalog listing for the GISci Certificate would not need to be modified to accommodate the online option, as the curricular requirements will be the same for online and on-campus students. Indeed, there would be no restriction to prevent a student from taking some courses online and other courses face-to-face.

**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:**