

IBHE PROGRAM REVIEW REPORT

Graduate Certificate in GIScience

- 1. Reporting Institution:** Eastern Illinois University
- 2. Program Reviewed:** Graduate Certificate in GIScience (CIP: 45.0702)
- 3. Date:** January 20, 2021
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5. Overview

The GIScience Graduate Certificate Program is intended to provide the skills for proficiency in GIScience to students who already hold a Bachelors degrees in Biological Sciences, History, Economics, Political Science, Business, or related disciplines. The program looks to expand spatial database management and analysis skills to individuals engaged in other fields of study that might benefit from being well-versed in GIScience. Specifically, the certificate seeks to enhance job market competitiveness for recipients.

The certificate can serve as an entry point for those without a background in GIScience seeking further Masters-level study in the field. Additionally, numerous EIU graduate students from other disciplines (Technology, Political Science, and Biological Sciences for instance), have chosen to pursue this certificate in concert with their EIU graduate studies.

Originally known as the GISci Certificate for the Environmental Life Sciences, the certificate moved from the Biological Sciences Department to Geology/Geography mid-decade as affiliated BIO faculty left the university. The program was overhauled to be broadly applicable to any Post-Baccalaureate who might have an interest.

The certificate consists of a straightforward, systematic sequence of classes featuring practical skills. The nineteen hours featured introduce students to GIS, Remote Sensing, Programming, and Database Management. This provides the necessary technical background for those in the professional world who may find themselves utilizing GIS as part of their day-to-day job.

While utilized by only five individuals in the past eight years, it should be noted this program has no overhead, and all classes are components of the PSM in GIScience as well as other graduate degree programs. It provides a certain benefit to specific students while taking only the negligible time to advise and certify completion for the coordinators. Additionally, each of the five students in question is now in a position where they utilize GIS on a daily basis (in the urban planning and environmental management fields). One individual, for instance, now serves as the GIS point professional for campus facilities at the University of Illinois in Urbana-Champaign. Two others are now pursuing Ph.D. degrees in the Environmental Sciences.

6. Major Findings and Recommendations

a. Description and assessment of major changes in the program/disciplinary context

As previously mentioned, the departure of key faculty from the Biological Sciences who were centrally involved in the certificate precipitated a move to the Geology/Geography department. At this time, the decision was taken to broaden the appeal and create a certificate applicable to any Post-Baccalaureate or Graduate Student interested in developing core GIS skills. The name was changed to more properly reflect the broader potential audience.

With this change, the required courses were revised to better reflect the expanded purpose. Course work was updated to reflect changes of focus within the GIScience discipline. A more conscious outreach to graduate departments across campus was adopted.

b. Description of major findings and recommendations for program improvement

While in terms of efficiency there is little cost to this program (most students pursue this certificate as a minimum number of add-on courses to other degrees at EIU), the profile of the certificate could certainly be enhanced. Many departments and most students have little awareness this certificate program is available. As a consequence, better marketing and outreach is needed.

c. Description of actions taken since the last review

A complete overhaul of the curriculum was taken in 2017 in concert with changes to the PSM in GIScience. Necessary courses such as GIS Programming and Geospatial Data Models were added, while courses like GPS were removed. The resulting nineteen credit hours creates a focused introduction to GIS, methods of data acquisition (remote sensing, lidar, etc.), geospatial database management, and programming for GIS automation. These course offerings provide certificate students the experience and confidence necessary to engage with professional GIScience work.

The change of names has served to clarify the purpose of this certificate and serves as a more marketable appellation than the previous name. The current name makes clear a general, well-rounded, professional GIS experience can be expected of one holding this certificate.

d. Description of actions to be taken as a result of this review

This review has occasioned the coordinators to take notice of the lack of publicity surrounding the certificate. A strong outreach effort to all potential graduate departments is planned, as well as informing undergraduates of the potential to improve workforce credentials with a minimum number of extra classes.

As the PSM in GIScience moves online in Fall 2021, a wider number of course offerings will also be available for the certificate, allowing online students in other disciplines to consider this certificate as a possible add-on. A concerted marketing effort is called for.

7. Responses to Institution-Assigned Issues – N/A

8. Outcome

Dean's Comment:

The Graduate Certificate in GISci remains a viable option for post-baccalaureate students who wish to enhance their understanding of the GISciences and add to their credentials in this area. While only five individuals have completed the program since its inception, there is essentially no additional cost to the program since students enroll in courses that also serve the Professional Science Masters (PSM) in GISci program. Moving forward, we encourage the program to improve outreach and marketing in an effort to increase student awareness and participation.

We recommend a decision of **Program in Good Standing**.

8.1 Academic Affairs Decision:

Program in Good Standing

Program flagged for Priority Review

Program Enrollment Suspended

8.2 Explanation

I would refer the department and contributing faculty to the PSM summary comments from Academic Affairs. As this program utilizes the PSM curriculum, I have no concerns about quality or deliverability. Indeed, all costs are embedded within the PSM program. I would encourage enhanced marketing of the certificate; particularly when the PSM goes 100% online. I would also consider ways in which the GISci certificate and planning certificate might more closely collaborate (possibly even creating a new concentration within the PSM or a pathway towards completion of a PSM degree). The program is in "good standing".

Jay D. Gatrell
Provost & VPAA