

Short Progress Report

January 31, 2017

- 1. Reporting Institution:** Eastern Illinois University
- 2. Reporting Program:** Post-Baccalaureate Certificate for GISci for the Environmental Life Sciences
- 3. Date:** June 2017
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5. Overview

The Certificate for GISci for the Environmental Life Sciences offers specialized training for students training for careers in the environmental life sciences. Students in environmental life science learn skill to collect, process and interpret spatial data. With these skills, they can engage in projects such as hydrological assessment, pollutant risk assessment, home range analyses, land use change analyses, and agricultural impact assessments that affect the health of the environment.

All courses for the Certificate of GISci also support other degree programs, including the Professional Science Master's (PSM) degree in GISci, the MBA with GIS option (MBA_GIS) and the Public Planning Certificate (PPC). Among these, the PSM is the most rigorous program in GISci theory and technology, while the Certificate of GISci offers specialized training for students training for careers in the environmental life sciences. Thus, students in the certificate program take many of the same courses as PSM, MBA_GIS and PPC courses, but generally apply their skills to biology-related research projects.

As of January 2017, one student (Lauren Solomon) has completed the certificate program and another (Joe Boise) is nearing completion. They have both done well academically in the Certificate in GISci. Both students also have used GIS to conduct research projects with faculty members, including Dr. Jill Deppe in the Department of Biology (Lauren Solomon) and Dr. David Viertel in the Department of Geology and Geography (Joe Boise).

6. Objective Alignment:

The goal of this Certificate Program is to provide students with specialized skills in the analysis and manipulation of spatial data. All courses require students to complete high levels of reading and original research projects and professional projects. As stated in the proposal for this Certificate, upon completion, students will be able to:

1. Explain the fundamental methodologies and applications of GISci in the life sciences
2. Acquire and process spatial and tabular data
3. Analyze geospatial data for environmental research and problem solving.

7. Participation:

As stated above, only one student has completed the program with another student nearing completion. Because of this, there is not yet sufficient data on demographics, completion rates or student satisfaction to be meaningful.

8. Assessment

Program assessment evaluates students' ability to organize and analyze spatial and tabular data, compare and contrast the varying GISci methodologies, and evaluate the outcomes of geo-processing techniques, all within a life sciences framework. This is assessed through course maps, graphs, charts and written reports. Both students in the program have amply demonstrated these abilities through both coursework and independent research projects, as attested to by individual faculty members.

9. Conclusion

While only a very small number of students have participated in the program, it has served them well. Also, because all of the coursework is offered as part of other degree programs, there are no marginal costs associated with this Certificate program. Nevertheless, the program director has consulted faculty and students to evaluate the strengths and weaknesses of the certificate program. Based on this feedback, changes are being made to incorporate open source technologies, increase opportunities for independent project work, and expand the marketing focus to include a broader base of students. This should help expand the number of student participating in the coming years.

10. Outcome

10.1 Decision:

- Program in Good Standing
- Program flagged for Priority Review
- Program Enrollment Suspended

10.2 Explanation:

The Certificate in GISci for the Environmental Life Sciences is focused on appropriated goals for a post-baccalaureate program. Because there have been only two student participants, meaningful assessment has not really occurred. Ordinarily, a program

with so few students completing it would be subject to elimination or, at least, reviewed for possible elimination. However, with all of the coursework offered for students in other programs, continuing it imposes no additional expense. The reflection that the faculty members are undertaking to broaden the marketing focus is certainly wise. The next scheduled review will need to examine progress on this effort.