II. SERVICE AND OTHER PROFESSIONAL ACTIVITIES

Committee Memberships

Digital Technologies Committee

As a member of the ad-hoc Digital Technologies Committee, I have worked on the following projects.

- Updating the New Maps Plus website with Rich Donohue and Jeff Levy.
- Promoting New Maps Plus with a "map of maps." Over the years, students have completed many incredible final projects in New Maps Plus that only they and their instructor see. To both promote the program and generate enthusiasm among students to publish, I created a mechanism by which students can publish their final projects to a collective map. This map can both inspire students as they complete their final projects and recruit new students. [EXHIBIT C - promoting New Maps Plus]
- Created a New Maps Plus map of alums (Joined with EXHIBIT C).
- Made four presentations that discuss my mapping interests and to promote the GIS and Mapping minor around campus and specifically GEO 409. [EXHIBIT D - Presentations]
- Maintaining a repository https://uky-gis.github.io that showcases the courses offered and a selected list of student achievements. This ongoing project will hopefully collect works from other classes and teachers for promoting our mapping and GIS capabilities.

Other committee service

Support for the Undergraduate Committee

In support of Geography Awareness Week, I created a Geocache for mobile devices using 1907 Sanborn maps for UK's campus. Students had to walk across campus to feature and photograph it. Only students that completed the geocache know the solution so that we can use it for 2020. [EXHIBIT E - Geocache instructions]

Support for External Relations Committee

While I am now on the External Relations Committee, I was not during this FMER period. However, I contributed the following support to the committee.

- During Summer 2018, the committee asked if I could support the 75th Anniversary of the department by principally doing archival research for photographs, maps, and other materials to promote the event. A slideshow was published for the 2019 Semple Day event. [EXHIBIT F - completed slideshow]
- In anticipation of Fall 2019 events in Miller Hall, I designed new signs and branding for Miller Hall and the Cartography Lab. New vinyl signs were cut and applied to three doors in Miller Hall. [Exhibit G - New branding for cartography assets]
- I've been trying to raise awareness of our mapping and GIS capabilities for grants and contract work. It is my understanding that any money raised from mapping projects would become the department's funds. [EXHIBIT H - Pauer Center contract work]
- In October 2018, I represented New Maps Plus at North American Cartographic Information Society annual conference by networking and handing out our new brochures announcing the Master's degree program. In October 2019, I attended the North American Cartographic Information Society and the Kentucky Association of Mapping Professionals annual conferences, both promoting New Maps Plus and the Department of Geography. The activities and presentations will be available in the next FMER period.

III. TEACHING AND ADVISING

Basic Goals and Objectives

One of my guiding principles in teaching (and I remind myself of this before entering each classroom) is that the time in class is not about me but the student. This simple thought helps me focus on my responsibilities to provide proper instruction to all students. I believe in intervention to help students succeed. If a student is struggling, I will reach out and try to schedule time outside of class to help when they cannot access office hours. If we cannot meet in person, I use screen-sharing platforms common in online courses to attend remotely. This blend of teaching techniques used in GEO (traditional) and MAP (online) courses, I think, can make a traditional class more inclusive and flexible.

To learn the many dimensions of making a map, I promote mapping where we live. As data and tools become more easily obtained, we need a critical awareness of their integrity and utility. Mapping what we know is a powerful filter to understand new data and tools. Each course has a field trip where we evaluate data in the place that it depicts. It is also essential to foster student creativity so that they can best navigate a rapidly evolving technological landscape. If students create maps and experiment with

mapmaking technology, they are developing a skill set to solve future challenges when the tools and techniques are different.

Classroom Practices

The courses taught between July 2018 and June 2019 include MAP 671, MAP 672, and GEO 409. Each course was taught twice. I think the New Maps Plus courses (MAP 671 and 672) have been the most successful. For example, all seven students from MAP 671 summer term moved on to MAP 672 fall term. I attribute that success to two goals on which I have focused.

1. I have prioritized responding rapidly to student mapping and coding issues. Because student projects are synchronized in the cloud, I can quickly view their issues and make suggestions. That helps the student feel like they are not online alone when they have a question.

2. I continue writing new lessons and recording videos to keep documentation up-to-date in the fast pace of evolution in open source technology. Over the past year, I have created 12 new videos for MAP 671 and 5 videos for MAP 672. [EXHIBIT A - Examples of instructional videos created].

The course that I will focus on enhancing is GEO 409, a residential course filled mostly with students who are close to graduating and thinking of employment using their new GIS and mapping skills. I introduced Python programming language in the Fall 2018 course. Python is desired in many GIS workflows and especially popular in processing and analyzing large datasets. For most students, this course is their first exposure to any programming language, and, for some, it can produce a great deal of anxiety. For Spring 2020, I will reorganize the course to allow for a more playful approach to learning Python. During this FMER period I have recorded ten new instructional videos and students have published 21 individual final projects. [EXHIBIT B - GEO 409 final projects]

The course that I think expanded its inclusiveness is MAP 671. Many different types of students enter this course with many different expectations. The challenge has been creating coursework that is relevant to these different interests while maintaining our program's standards. I rewrote the lessons to help manage a variety of student skill levels. A significant change was making lessons more "elastic" to accommodate students with previous mapping backgrounds. Most lessons now have optional advanced topics for those students that desire them and plan to apply to the Master's program.