

Division of Academic Affairs
Technology Fee – Project Proposal
2015

Proposal Deadline: Wednesday, January 21, 2015

Project Proposal Type

Instructional Technology Enhancement Project (ITEP)

Focused projects proposed by an individual or small team with the intention of exploring new applications of instructional technology. ITEPs will typically be led by a faculty “principal investigator.” ITEPs are time-limited projects (up to two years in length) and allocations of Technology Fee funds to these projects are non-recurring.

Project Title

Apple Ipad for Enhancing Contents of GIS Courses: ArcGIS Software for IOS Customized Application

Total Amount of Funding Requested

\$730.00

Primary Project Coordinator

Zhiyong Hu

PhD and Associate Professor

Department of Environmental Studies

Division of Academic Affairs
Instructional Technology Enhancement Project (ITEP) Proposals Template
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ITEP proposals must provide the following information:

1. Project description.

This project requests funding for an Apple Ipad Air 2 to enhance contents of GIS courses and provide students with rich learning experience in the era of Web, cloud and mobile computing. The Ipad will be used to develop and test course modules about mobile GIS IOS application and customization and assess student coursework directly from IOS GIS apps.

GIS (Geographic Information Systems) is a system of computer hardware, software, and procedures that capture, store, edit, manipulate, analyze, and visualize geo-referenced data. GIS capabilities go beyond mapping. GIS offers a rich set of analytical functions. The emergence of Web GIS is unlocking the power of GIS to a wider audience. The UWF campus licensed GIS software package ArcGIS is used in all GIS classes, but current teaching and learning focus on desktop and are limited in mobile GIS components. ArcGIS provides mobile solutions (Apple iOS, Google Android) to retrieve data, view maps, use analytical GIS models, post geospatial data. GIS application developers can create rich Web GIS applications with the use of ArcGIS APIs for JavaScript, Flex, IOS and Silverlight.

The project will use Apple Ipad to enhance GIS course content. The objectives are: 1) develop and deploy a course module – Mobile GIS: UArcGIS for IOS Customized Applications - for courses GIS4930/5935 (Special Topics in GIS: Web GIS); and 2) teach and demonstrate the use of mobile GIS for other GIS courses (Intro GIS, GIS Applications, GIS Programming, GIS Internship, Directed Study, and Advanced GIS Topics).

2. Description of project alignment with UWF Strategic Plan.

The project is in line with UWF's Strategic Direction "Enhanced Student Access, Progression, and Learning and Development" and UWF's mission to "provide students with access to high-quality, relevant, and affordable undergraduate and graduate learning experiences".

The project principal investigator regularly teaches GIS courses for undergraduate, graduate and GIS certificate programs. All GIS courses are technology courses. Geospatial science and technology is a highly in-demand STEM discipline that is used extensively in a very wide range of fields.

3. Description of benefits provided:

Students will learn the concepts and techniques of Web GIS and get direct experience of using, developing, and customizing mobile GIS by completing the course content enhanced by the IOS device. Students can have access to existing IOS apps, and develop and publish their own mobile GIS services. Instructor can assess student coursework by directly examining maps, GIS services developed and published by students on the IOS platform. GIS internship and directed study students will learn how to collect, transmit, and manage GIS data and create collaborative web GIS applications for GIS data and service sharing. The rich user/developer experience gained by students will prepare them well in the GIS job market – most current GIS job positions in industry, government, and academics require that students possess web and mobile GIS knowledge, techniques and experiences.

On UWF campus, GIS classes have students from environmental, archeology, anthropology, biology, health, business, government, history, communication arts, and other academic majors. Our GIS certificate programs attracts students from the local and regional community. Familiarity with of geospatial technology would be beneficial to the educational and professional success of many UWF students.

4. Description of how the initiative has a potential scope within and beyond that of the proposing unit.

Several GIS courses are required degree programs courses of the Environmental Studies Department and elective in many other programs. GIS classes have students from over 10 academic majors. Units that use GIS on campus also include Archeology, CEDB, HAAS Center, and Facilities. They all use mobile and Web GIS and frequently hire intern students who have experiences of mobile GIS.

5. How will success be measured? Provide metrics.

The success will be measured by:

- 1) GIS course content modules/exercises.
- 2) Number of students involved.
- 3) Real mobile GIS data collection and organization and application showcase on Ipad.

6. Description of resources for the project and projected ongoing resource needs (total cost of ownership for the life of the project) including:

Apple Ipad Air 2 64 GB wifi -- \$730 (total cost includes Ipad Air 2 case and tax).

7. Provide the proposed timeline for the project with major milestones and project end dates.

Spring and summer 2015:

Purchase of Ipad,

Teach use of ArcGIS for IOS for summer internship and directed study students

Fall 2015

Teach use of ArcGIS for IOS for intro GIS, internship, and GIS Apps classes,
Develop course content module ArcGIS for IOS Customized Application.

Spring 2016

Teach ArcGIS for IOS Customized Application for Special GIS Topics(Web-GIS) classes.

Fall 2016 – Spring 2017

Repeat the previous academic year's activities
Improvement of content developed in the previous year.

8. Include a plan for sustainability of the project beyond the initial project period if applicable.

The course content will be used beyond the initial period of the project.

9. Provide any resource matching which might be provided by organizations with appropriate commitment authority documentation.

None.

10. Indicate which individual or group will implement the project (to help determine any additional costs and resource restraints).

The GIS instructor and his GIS classes. No additional costs and resources are needed.

11. Indicate a lead person (“Principal Investigator”) for the project for all communications and overall responsibility for reporting and fund utilization.

Zhiyong Hu
PhD and Associate Professor
Department of Environmental Studies

12. Project proposals should be succinct and submitted to the Technology Fee Committee by the deadline with a notice of submission to the chair and the dean or appropriately designated leadership in the unit (Center Director, etc.).