BUDGET NEEDS ASSESSMENT APPLICATION

Name of Person Submitting Request:	**Vanessa Engstrom and Todd Heibel**
Program or Service Area:	**Geography, GIS, and Geology**
Division:	**Science**
Date of Last Program Efficacy:	**Fall 2011**
What rating was given?	**continuation**
Amount Requested:	**$8000**
Strategic Initiatives Addressed:	Access, Student Success and Institutional Effectiveness

Replacement ☐   Growth ☐x

1. Provide a rationale for your request.

This budget request consists of three components: (1) $3,000 for Geography ($1,500) and Geology ($1,500) field trips, (2) $4,000 for GIS tutors, and (3) $1,000 for image processing software for Geography and GIS. The Geography and Geology departments currently have enough money to fund one full day field trip per department twice a year. We are requesting funding ($1500 for geography and $1500 for geology) for an additional field trip per department per academic year. Field trips are an integral part of geography and geology disciplines. Experiencing the landscape firsthand enriches student experience and sets the context for the analysis. Over the past 4 years, we have regularly filled existing field trip buses and have had several students take their own transportation. The requested funds would be used to expand the field trip option for additional physical geography and geology lab sections and/or fund cultural and world regional field trips. Also, it would allow students without cars, including disabled students, to participate in field trips. Employing a professional bus driver also increases safety.

In addition to expanding our field trip offerings, we are requesting funds ($4000) to hire GIS tutors. Currently students can work on GIS labs during select class periods. While they have the option of using the library computers to complete the labs, no one in the library is trained to answer technical questions. Having tutors open the lab and provide support will increase student access and success.

Lastly, we are requesting $1000 to purchase image processing software. As we continue to grow our GIS certificate program, we would like to offer a Remote Sensing class; thus enabling students to learn how to use this specialized software and make them more marketable in the work force. Additionally, remotely sensed data can be used to support interdepartmental research.

2. Indicate how the content of the latest Program Efficacy Report and current EMP data support this request. How is the request tied to program planning? *(Reference the page number(s) where the information can be found on Program Efficacy.)*

The current Geography EMP report states that a program goal is to "increase the number of funded field trips and maintain laboratories with equipment and supplies needed for quality education." Page ten of the Geography and GIS Program Efficacy document, fall 2011, states that "Recruitment of additional geography majors, especially from our over- and

underrepresented cohorts, would greatly benefit our students with additional transfer and career options." In addition, one of the missions of our geography department is to, "allow students to more fully comprehend real-world, everyday cultural and environmental phenomena."

The requested $4000 for GIS tutors is in direct alignment with our program goal to "raise funds for GIS tutors to extend lab hours", as stated in our current EMP treport. Students need time to work and rework labs in order to better grasp the technical and nontechnical concepts within GIS. Page fifteen of the Geography and GIS Program Efficacy document states, "both programs endeavor to increase success and retention via establishment of prerequisites, development of grants to support tutoring and student success workshops". Students will be better prepared to enter the geospatial workforce, if they are given tools which support success.

The request for monies to purchase image processing software is supported by our current GIS EMP report, stating "Update GIS curriculum to align with the proposed California Community College model certificate for geospatial technologies." The model certificate program proposed a Remote Sensing course as an elective to the GIS certificate. Until a standalone Remote Sensing course is offered, image progressing software can be utilized in our spatial analysis course as well as our weather and climate courses. In addition, procuring image processing software is in alignment with preparing our students for trends in the GIS and Geography related industries as stated on page 20 of the Program Efficacy document "Related mapping technologies, including GIS, GPS, and remote sensing, specifically job growth within the mapping sciences within the Inland Empire".

3. Indicate if there is additional information you wish the committee to consider *(for example: regulatory information, compliance, updated efficiency, student success data, or planning, etc.)*.

Student success in GIS fell during the 2011-12 academic year, which may in part connected to decreased funding for GIS tutors. Geology success and retention rates declined in the 2012-13 academic year. Increasing the field trip budget has the potential to increase these rates.

4. Evaluation of initial cost, as well as related costs (including any ongoing maintenance or updates) and identification of any alternative or ongoing funding sources (for example Department Budget or Perkins).

There are no on-going maintenance costs for our requested funds. One of the GIS program goals as stated in the EMP is to "raise funds for GIS tutors to extend lab hours via grants, Perkins Funds, etc." Appling for Perkins funding is a potential future funding source.

5. What are the consequences of not funding this budget request?

Field trips are an integral part of our disciplines. Failure to fund additional field trips will result in more self-guided field trips, which pose safety concerns, as well as limit access to underrepresented low-income students. Failure to fund tutors will result in our students being underprepared in the geospatial workforce. Finally failure to fund the cost of image processing software will reduce program enrichment and career preparedness.