Program Review - Natural Sciences

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What are the strengths of your area?: The Natural Science course is a required course for the Liberal Studies Transfer program to Fresno State University. Students who complete the prerequisites for this degree enter Fresno State as juniors in their Teacher’s Preparation Program. Since this is a primarily adjunct faculty staffed class, program issues are generally addressed by the Division Chair and the Dean of the Division. Enrollments in the class have traditionally been strong and pass rates are well within an acceptable range. All adjuncts staffing the course work closely with Dr. Owens and Shirin Sadeh to ensure that the resources of the physics program are available to the instructors of this course. Successful course completion is high in this course (83% in 2010/11, 86% in 2011/12 and 88% in 2012/13) since it meets and exceeds that of the other physical sciences.

What improvements are needed?: The Natural Science course would benefit from a budget that was directly associated with this course. Because the topics covered by natural science are broad and involve a wide range of disciplines, instructors need to scramble to find suitable materials in chemistry and physics. By developing a small budget, the instructor can begin purchasing suitable equipment to better address these disparate topics.

Describe any external opportunities or challenges.: This board and conference gather together all the local community colleges that feed into the Fresno State K-6 teacher’s program. The conference usually brings together all the instructors in the same discipline to discuss teaching strategies, course content and transfer efficacy. Because our instructors are adjuncts we should consider compensating them for participation in the conference and board meeting.

Overall Outcome Achievement: Of the three Learning Outcomes assessed, an average of 57% of the students were able to meet the standard. Students who did not meet the standard did so due to limited mathematics skills. The instructor reports in their improvement plan that they will modify lessons to increase the amount of time dedicated to quantitative problems.

Changes based on outcome achievement: There may need to be some consideration of a mathematics prerequisite for this course.

Outcome cycle evaluation: There is no need to modify this schedule since it allows for regular assessment of at least one Learning Outcome each semester the course is taught.

Action: Establish budget for NSCI

Provide a Budget for Natural Science. Working closely with the Division chair and the Department Dean, identify the needs of the program and agree on an adequate amount to provide equipment and supplies. Set up a meeting between Dr. Owens Ms. Sadeh and Mr. Rizzo to determine the pros and cons of adding a prerequisite to this course, modifying the curriculum to review some math, or keeping the course as is.


Start Date: 12/02/2014
Completion Date: 05/21/2015
Status: New Action

Person(s) Responsible (Name and Position):
Jesse Wilcoxson and Robert Urtecho

Rationale (With supporting data):
Priority: Low
Safety Issue: No
External Mandate: No