What are the strengths of your area?: The Astronomy 10 course counts as a General Education requirement. It is a transferable course which is typically completed by students as they prepare to transfer out of COS to a four year university. This course is offered to all majors on campus ranging from Liberal arts to Science and Engineering. Enrollments in this course have traditionally been very high and its success rate has been within an acceptable range. There has been a significant increase in the success rate of this course in the past three years. This course shares the Physics/Engineering budget and occasionally benefits from the PASEO grant which have lead to the improvement of this course by providing better opportunities for learning. For example, This course currently offers a laboratory session during which students learn how to build telescopes; this has had a positive impact on the enrollment and success of this course.

What improvements are needed?: The Astronomy course could definitely benefit from a budget allocated directly to it. The topics covered in this course are different from those of a Physics/Engineering course, and should have its own budget without burdening other programs. By developing a budget for this course, the instructor can better plan purchasing suitable equipment to address its specific topics.

Describe any external opportunities or challenges.: It is very important that the instructor of this course stays current with the developments in the field of Astronomy to better serve our students. It is imperative that the instructor of the course is a member of the Astronomical Society and attends its related conferences. Additionally, this course visits the local Pena planetarium every semester to provide our students with further access to current sky events and other observational aspects of astronomy. It has been my understanding that a significant number of the students who enroll in this course do not possess the necessary mathematical skills to meet the needs of this course. An important challenge for me is to study the possibility of modifying the mathematics prerequisites for this course. This could not only improve student learning, but also the success rate for this course.

Overall Outcome Achievement: There were three Learning Outcomes assessed. About 66% of the students in this course were able to meet the standard. Most of the students who did not meet the standard did so because of limited mathematics preparation. I have modified my lessons and time allocations to the related topics in order to further improve student outcomes.

Changes based on outcome achievement:

Outcome cycle evaluation: There is no need to modify the schedule since it allows for regular assessment of all outcomes.

Action: Budget for Astronomy

We need to have a specific budget for Astronomy. I will work closely with our Department Dean, and the Division Chair to identify the specific needs of this course and agree on an adequate amount for equipment and supplies.

Start Date: 12/02/2014
Completion Date: 10/13/2015
Status: New Action

Identify related course/program outcomes: All three course outcomes of Kepler's Third Law, Stellar Luminosity, and Einstein's Equation could be improved once this action is completed. District objectives #1 and #7 are linked to this action.

Person(s) Responsible (Name and Position): Shirin Sadeh, Robert Urtecho, Jesse Wilcoxon

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