Assessment Report

Yuba Community College District

YC - Physics & Astronomy Program Recommendations

Year of Review: 2013-2014

Type of Review: Annual Update

Executive Summary (Include a list of team members): The Physics/Astronomy department is a small, single-fulltime faculty program that primarily provides the background physics education required for engineering and life science majors. The department also offers an introductory Astronomy course that many students take to fulfill general education science requirements. The program has very stable enrollment and staffing requirements. The only significant curriculum issue involves the life science students. For some years now, some schools are requiring calculus-based physics courses for life science majors. The department believes that it is time to study this issue again in collaboration with the biology department. One side of the issue is that the algebra-based courses we now teach reach more students than we would with a calculus-based series. The other side is that we limit the schools to which our students can transfer. This issue will be studied in the coming year(2012/2013).

While, in the long run, the department believes that a part-time laboratory setup/equipment maintenance person is needed, no request will be made in the current budget environment.

The department's long-term goal is to continue to provide first-class preparation for all students who require physics for their majors.

UPDATE 2012/2013:
The study of the transfer status of Algebra/Trigonometry-Based Physics has been completed. The results are included in the Recommendation Status section of Tracdat. Not much has changed since the last survey about 5 years ago. A significant number of University of California campuses do not allow transfer to satisfy Life Science major requirements. The most important (most commonly transferred to) schools, however, continue to accept it. This includes almost all of the California State system schools and the University of California Davis campus. The results of the survey have been disseminated to the Life Science faculty and a final decision will be made after they provide their input.

The department has submitted, through Curricunet, an application for a Transfer Model Curriculum degree for Physics. Upon approval by the Curriculum Committee, the application will be submitted to the state.

Program Description : The Physics/Astronomy department is a small, single-fulltime faculty program that primarily provides the background physics education required for engineering and life science majors. Chemistry, computer science, and mathematics majors may also require physics, but the vast majority of students are engineering and life science. The department also offers an introductory Astronomy course that many students take to fulfill general education science requirements. Yuba College rarely sees Physics majors. Physics is particularly important for engineering students, and the courses taught at Yuba may be the only pure physics courses that they take in the pursuit of an undergraduate degree.

Physics 2A/3A and Physics 2B/3B are the lecture/laboratory course designations for the algebra-based courses that most life science students take. Physics 4A, 4B, and 4C are the designations for the calculus-based courses that engineering students take (no separate laboratory course). Physics 2 series courses are both offered each semester. Physics 4A and 4C are offered only in the spring, and 4B is offered only in the fall. Typically, the 2 series has 20-35 students beginning the series every semester, and the 4 series has 20-35 students beginning the series each spring semester.

The program maintains a considerable inventory of equipment for demonstrations and laboratories. Maintenance of the equipment and the setup of laboratories and demonstrations require considerable time and budget commitment.

The physics program has seen a slow steady growth over the last 5 years that has lead to the department doubling the number of sections of the 2 series. These two courses were previously offered only once a year and are now offered every semester. The size of the class entering the 4 series in Spring 2012 is right at the room capacity.

Curriculum & SLO Assessment Summary : While all the courses offered by the Physics/Astronomy department have been through at least one SLO assessment, no significant problems or issues have surfaced. The department has used the results of the assessments to make minor shifts in emphasis or time devoted to particular subjects.

Industry Trends and Program Data Analysis : TBC

Future Goals and Program Direction: The department's long-term direction is to continue to provide first-class preparation for all students who require physics for their majors.

Course Content and Statistical Analysis: TBC

Are you ready to submit your final program review?: Yes

Goal	Recommendations	Plan of Action & Budgetary Impact / Tasks	Status	Feedback & Follow-Up
YC Goal 5 - The department’s main function and goal is to provide the best possible instruction to assist students in accomplishing the educational background necessary to transfer to a 4-year college.				

Goal	Recommendations	Plan of Action & Budgetary Impact / Tasks	Status	Feedback & Follow-Up
YC Goal 4 - The department seeks to constantly evaluate and improve instruction and course materials.				

Goal	Recommendations	Plan of Action & Budgetary Impact / Tasks	Status	Feedback & Follow-Up
YC Goal 6 - The department always seeks to keep students’ timely completion of requirements foremost in mind.				

Goal	Recommendations	Plan of Action & Budgetary Impact / Tasks	Status	Feedback & Follow-Up
YCCD VS 1 - The department always				

Goal	Recommendations	Plan of Action & Budgetary Impact / Tasks	Status	Feedback & Follow-Up
seeks to “provide a world-class learning environment".				