



Santiago Canyon College

DEPARTMENT PLANNING PORTFOLIO

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DEPARTMENT PLANNING PORTFOLIO
 DEPARTMENT: Physics and Engineering
 DIVISION: Mathematics and Sciences
 ACADEMIC YEAR: 2012-2013

Department's Vision:

The Physics and Engineering Department envisions a comprehensive general education and transfer program for students in chemistry, physics, and engineering. The courses offered encourage students to pursue lifelong learning and interest in the physical universe, engineering, and, technology.

Department's Mission:

The mission is to help students understand and appreciate the physical universe by promoting scientific literacy and encouraging curiosity, involvement, and enthusiasm in science and to apply that knowledge to future technology.

GOALS/TASKS/ACTIVITIES	WHO'S RESPONSIBLE	ESTIMATED TIMELINE/COMPLETION	RESOURCES NEEDED	PROGRESS
Improve the problem solving skills of physics students.				
1. Create new example problems to be solved by students during lecture, in pairs, on the tablet computers.	rutan_craig	Ongoing	None	In Progress
2. Integrate the use of tablet computers into course lectures.	rutan_craig	Ongoing	None	In Progress
3. Create additional directed learning activities (DLAs) for all physics courses.	rutan_craig, swift_cynthia	Ongoing	Continued funding of STAR Center.	In Progress
4. Create additional workshops for all physics courses.	rutan_craig, swift_cynthia	Ongoing	Compensation for instructors to lead the workshop.	In Progress

Improve efficiency of physics labs.

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1. Hire lab technician or science laboratory coordinator for the Physics program. Currently the physics faculty are responsible for setting up all labs, putting all lab equipment away, maintaining lab equipment, and ordering all equipment and supplies. This situation is not ideal and will become more problematic as the program grows and the proposed engineering program begins at SCC.	rutan_craig, swift_cynthia	unknown	\$60000 annually	In Progress
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Improve student performance in laboratory courses.

1. Create new laboratory activity using current balances.	rutan_craig	Fall 2014	None	In Progress
2. Create new laboratory activity on the photoelectric effect.	rutan_craig	Spring 2014	None	In Progress
3. Modify laboratory experiments to ensure students are mastering the desired skills.	rutan_craig, swift_cynthia	Ongoing	None	In Progress
4. Modify laboratory assessment activities to ensure they are accurately measuring student understanding.	rutan_craig, swift_cynthia	Ongoing	None	In Progress

Improve the transfer rates of engineering majors at SCC.

1. Offer supplemental instruction to Physics 250A students to increase their chances of success.	swift_cynthia	Ongoing	Continued funding of SI after Title V grant is completed.	In Progress
2. Create additional directed learning activities (DLAs) for Physics 227/250B and 237/250C to be completed in the STAR Center.	rutan_craig	Ongoing	Continued funding of the STAR Center after the completion of the Title V grant.	In Progress
3. Create new courses needed for students transferring into an engineering major. These will include statics, dynamics, materials science, and network analysis.	rutan_craig	Summer 2012	None	Completed
4. Begin offering new engineering courses.	rutan_craig	Spring 2014	Adjunct instructors to teach the courses and the ability to offer the course no matter how many students are enrolled.	In Progress

Number of active session(s): 2

