

College of San Mateo

**ANNUAL UPDATE
PROGRAM REVIEW &
PLANNING**
Form Approved 9/2/2008:
Governing Council
Revised: 2/21/2010

The Program Review process should serve as a mechanism for the assessment of performance that recognizes and acknowledges good performance and academic excellence, improves the quality of instruction and services, updates programs and services, and fosters self-renewal and self-study. Further, it should provide for the identification of weak performance and assist programs in achieving needed improvement. Finally, program review should be seen as a component of campus planning that will not only lead to better utilization of existing resources, but also lead to increased quality of instruction and service. A major function of program review should be to monitor and pursue the congruence between the goals and priorities of the college and the actual practices in the program or service.

~Academic Senate for California Community Colleges

INSTRUCTIONS

This *Annual Update for Program Review and Planning* is due each year that your *Comprehensive Program Review and Planning* report is not due.

(For information about program review cycles, see Instructional and Student Services program review rotation schedules posted online in their respective sections of the program review webpage: http://collegeofsanmateo.edu/prie/program_review/program_review.php)

Resources for Supporting Documentation:

A listing of resources and documents which provide data or information for each section is included at the end of this document, after the final signature page. These resources are posted online and their URLs are listed at the end of this document.

(You may delete this section, when you submit your final program review.)

Next Steps:

All *Annual and Comprehensive Program Review and Planning* reports are due March 25, 2010. This date is aligned with CSM's *Integrated Planning Calendar*.
(See: http://collegeofsanmateo.edu/prie/institutional_documents.php.)

Upon its completion, please email this *Program Review and Planning* report to the Vice President of Instruction, the Vice President of Student Services, the appropriate division dean, the CSM Academic Senate President, and the Dean of Planning, Research, and Institutional Effectiveness (PRIE).

Diana Bennett, Academic Senate President, bennettd@smccd.edu
Susan Estes, Vice President of Instruction, estes@smccd.edu
Jennifer Hughes, Vice President of Student Services, hughesj@smccd.edu
John Sewart, Dean (PRIE), sewart@smccd.edu

DEPARTMENT OR PROGRAM: Physics

DIVISION: Math/Science

1. BRIEF DESCRIPTION OF PROGRAM:

The Physics department at CSM offers 4 sequences for students. Which sequence students take depends on their major and the institution they plan to transfer to.

Physics 100 is a one-sequence course which satisfies the GE requirement of a Physical Science for transfer or AA/AS degree.

The Physics 210-220 sequence is designed for students majoring in some field of letters and science. It is required for students planning to enter Medicine, Dentistry, Pharmacy, Optometry, Agriculture, or Forestry.

The Physics 210-211-220-221 sequence is required by some transfer institutions (mainly UC's) for students majoring in fields listed above.

Physics 250-260-270 constitute a three-semester program designed to give students majoring in Engineering, Physics or Chemistry a thorough foundation in the fundamentals of physics.

The department also offers a preparation course, Physics 150, which is designed to get underprepared students ready for the Physics 210-220 and 250-260-270 sequences.

2. Based on the elements in your *Core Program and Student Success Indicators* (provided by PRIE for each program) and the goals stated in your most recent Program Review, please identify any key successes and challenges.

LOAD in Physics is on the rise. It should be noted that for some of our courses LOAD cannot reach 525. In the Spring, LOAD for Physics 150, 210 and 220 is at most 467 (by enrollment limit). For Physics 211 and 221 in the spring, LOAD is at most 360. These one-unit courses are necessary for our UC bound students majoring in Biological Sciences. These courses can be balanced somewhat by Physics 100 which can have a LOAD of up to 900.

3. Are you on track for meeting the goals/targets that your program identified in its most recent Program Review? If not, please explain possible reasons why. If needed, update your goal/targets based on these reasons.

Yes! The academic calendar for 2010-2011 has only one mid-semester Flex Day. Not ideal, but much better than the five mid-semester Flex Days in the current year's calendar.

Professors Locke and Uchida have made major revisions to the Physics 150 text to better prepare students for Physics 210 and Physics 250.

The 15-week calendar which threatens student success has been tabled for now.

The administration has been slow to act on the Title V violations mentioned in last year's Program Review quoted here:

Course content presented in Skyline's Physics 250 is not aligned with the Physics 250 Course Outline. Students who take Physics 250 at Skyline are not prepared for Physics 260, because they have not seen simple harmonic motion or mechanical waves. Students who take Physics 250 at Skyline are not prepared for Physics 270, because they have not seen simple harmonic motion, fluids or mechanical waves. The department hopes that the district will take up this Title V violation and make sure that course content for courses with the same course number aligns across the district.

4. Have you identified any new goals or projects for the program to focus on during this next year? Please explain (grants, stipends, initiatives, etc.).

Lab Manuals are continually updated. With the work of Professors Locke and Uchida during the Spring 2008 and 2009 semesters, major revisions to lab manuals and the texts for Physics 211, 221, and 150 have been completed. Minor revisions will continue to be completed.

5. Are there any critical issues you expect to face in the coming year? How will you address those challenges?

Students in Physics 250 are severely lacking in Calculus preparation. This needs to be investigated with the math departments at the 3 colleges in the district. A solution may require adding a short course to run the first week or two of each semester to get students up to where they should be at the end of Math 251.

Students in both Physics 210 and 250 are lacking in problem solving skills they should enter the class with. The department is hoping that the revisions that have been done for the Physics 150 course will better develop students' problem solving skills. The department also needs to make sure that students who need to take Physics 150 do.

6. STUDENT LEARNING OUTCOMES (SLOs) AND ASSESSMENT FOCUS FOR THIS YEAR:

- a. Academic areas: Identify at least one course SLO on which to focus. Describe the assessment strategies you will use and your method of reflection and documentation for this cycle.

Documentation will be done in Tracdat. We have identified one course SLO that we did not meet our success criteria for. Upon successful completion of Physics 260, students should be able to "Identify problems that should be solved with Coulomb's Law and correctly solve them." For the Fall 2009 semester, not as many students were able to "correctly solve" the Coulomb's Law problem on the final (the assessment method). Though it is used throughout the semester, Coulomb's Law is the first topic of the course. Students may benefit from more review of this topic during the last week or two of the semester. Our "action step" is to do more review of Coulomb's Law at the end of the course. It should be noted that the assessment was done for a single section. Further action may be required if similar assessment occurs in multiple semesters.

- b. Student services areas: TBD

7. **SUMMARY OF RESOURCES NEEDED TO REACH PROGRAM ACTION STEPS**

(Data resources: Educational Master Plan, 2008, Institutional Priorities, 2008-2011, College Index, 2009-2010, GE-SLOs, SLOs; department records; Core Program and Student Success Indicators; previous Program Review and Planning reports)

- a. In the matrices below, itemize the resources needed to reach program action steps and describe the expected outcomes for program improvement.* Specifically, describe the potential outcomes of receiving these resources and the programmatic impact if the requested resources cannot be granted.

*Note: Whenever possible, requests should stem from assessment of SLOs and the resulting program changes or plans. Ideally, SLOs are assessed, the assessments lead to planning, and the resources requested link directly to those plans.

Full-Time Faculty Positions Requested	Expected Outcomes if Granted and Expected Impact if Not Granted	If applicable, <u>briefly</u> indicate how the requested resources will link to achieving department action steps based on SLO assessment.
Two full-time faculty members will likely retire within the next 5 years. We will likely need to hire one full-time faculty member in two or three years and another in four or five years.	Full-time faculty are essential for student access to faculty outside of class hours. Part-time faculty have limited availability due to commitments to additional employment in industry or in other community college districts. It is essential for student success for there to be access to instructors over more hours of the week.	

Classified Positions Requested	Expected Outcomes if Granted and Expected Impact if Not Granted	If applicable, <u>briefly</u> indicate how the requested resources will link to achieving department action steps based on SLO assessment.
None requested at this time.		

- b. For instructional resources including equipment and materials, please list the exact items you want to acquire and the total costs, including tax, shipping, and handling. Include items used for instruction (such as computers, furniture for labs and centers) and all materials designed for use by students and instructors as a learning resource (such as lab equipment, books, CDs, technology-based materials, educational software, tests, non-printed materials). Add rows to the tables as necessary. If you have questions as to the specificity required, please consult with your division dean. Please list by priority.

Resources Requested	Expected Outcomes if Granted and Expected Impact if Not Granted	If applicable, <u>briefly</u> indicate how the requested resources will link to achieving department action steps based on SLO assessment.
<p>Item: Supplies budget Number: Vendor: Unit price: Total Cost: \$2000.00 Status*: Repair and maintenance of existing lab and demo equipment; replacement of consumable items used in laboratory experiments.</p>	<p>If we have money to maintain our current laboratory and demonstration equipment we will be able to continue to meet course requirements and SLOs.</p>	
<p>Item: Student Spectrometer Number: 10 Vendor: PASCO (SP-9268A) Unit price: \$999.00 Total Cost: \$11,320.00 Status*: Replacement</p>	<p>Spectrometers currently used are reaching the end of their serviceable life. These need to be replaced with quality spectrometers to continue to meet course requirements and SLOs.</p>	

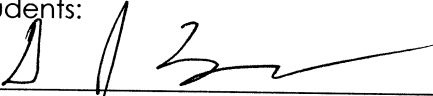
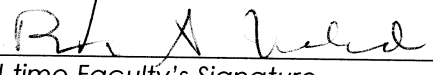
*Status = New, Upgrade, Replacement, Maintenance or Repair.

8. PROGRAM REVIEW PARTICIPANTS AND SIGNATURES

Date of this Annual Update for Program Review and Planning evaluation:

Please list the department's Annual Update for Program Review and Planning report team as appropriate:

Primary program contact person: David Locke
Phone and email address: 650-574-6624 locke@smccd.edu
Full-time faculty: David Locke, Barbara Uchida
Part-time faculty:
Administrators:
Classified staff:
Students:

	<u>25 Mar 2010</u>
Primary Program Contact Person's Signature	Date
	<u>3/25/10</u>
Full-time Faculty's Signature	Date
Part-time Faculty's Signature	Date
(as appropriate)	
Administrator's Signature	Date
(as appropriate)	
Classified Staff Person's Signature	Date
(as appropriate)	
Student's Signature	Date
(as appropriate)	
Dean's Signature	Date

**Annual Program Review
RESOURCES FOR SUPPORTING DOCUMENTATION**

This section contains a listing of sources for data and key documents referred to in this Annual Update along with other resources. Contact information for relevant people is also included.

Academic Senate

<http://www.collegeofsanmateo.edu/academicsenate/>

Contact: csmacademicsenate@smccd.edu

Diana Bennett, President, bennettd@smccd.edu, (650) 358-6769

College Catalogs and College Class Schedules are archived online:

<http://collegeofsanmateo.edu/schedule/archive.asp>

Course Outlines are found at:

<http://collegeofsanmateo.edu/articulation/outlines.asp>

Committee on Instruction

<http://www.smccd.net/accounts/csmcoi>

Contact: Laura Demsetz, Chair, demsetz@smccd.edu, (650) 574-6617.

Program Review Resources (includes forms, data, and completed program reviews for both instructional and student services program review)

Core Program and Student Success Indicators (see links for "Quantitative Data for Instructional Programs")

Distance Education Program Review Data

Glossary of Terms for Program Review

Listing of Programs Receiving Program Review Data from PRIE

Rotation Schedule for Instructional Program Review, 2008-2014

http://collegeofsanmateo.edu/prie/program_review/program_review.php

Office of Planning, Research, and Institutional Effectiveness (PRIE)

<http://collegeofsanmateo.edu/prie/>

Contact: John Sewart, Dean, sewart@smccd.edu, (650) 574-6196

Contact: Milla McConnell-Tuite, Coordinator, mcconnell@smccd.edu, (650) 574-6699

At PRIE Website:

College Index, 2009-2010, http://collegeofsanmateo.edu/prie/institutional_documents.php

Comprehensive Listing of Indicators and Measures, 2009-2010

http://collegeofsanmateo.edu/prie/institutional_documents.php

Division/Department Workplans, Spring 2009 (only)

http://collegeofsanmateo.edu/prie/institutional_documents.php

Educational Master Plan, 2008, <http://collegeofsanmateo.edu/prie/emp.php>

Institutional Priorities, 2008-2011

http://collegeofsanmateo.edu/prie/institutional_documents.php

Student Learning Outcomes (SLOs) website:

<http://www.collegeofsanmateo.edu/sloac/>

Contact: Frederick Gaines, Interim SLO Coordinator, gainesf@smccd.edu, (650) 574-6183