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.

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).

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Susan Estes, Vice President of Instruction, estes@smccd.edu
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DEPARTMENT OR PROGRAM: Mathematics

DIVISION: Math-Science

1. **BRIEF DESCRIPTION OF PROGRAM:** The Mathematics Program is comprised of three types of courses; A. Non-transferable courses, including basic skills, such as Math 811, 802, 110, 111, 112, 115, 120, 122, 123; B. Transferable courses for Liberal Arts and Business Majors, such as Math 125, 145, 147, 200, 241, 242; C. Transferable courses for Science, Engineering, and Math Majors, such as 130, 222, 251, 252, 268, 253, 270, 275.

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.

Challenge: Because of the loss of our MRC (Math Resource Center) coordinator, it has been more difficult to keep the Math Resource Center running smoothly. To fill in the gap we have assigned more faculty lab load in the MRC.

Success and Subsequent Challenges: Since more and more students are using our Math Resource Center, it gets very crowded during busy hours and we would like to have a larger space for the center. Additionally, our Math Resource Center needs more student tutors during peak hours. We need more funding for tutors.

Success and Subsequent Challenges: The number of students taking Math courses has steadily increased over the past few years, but, even with the new hire we will have in Fall 2011, we have fewer full-timers than 5 years ago, and we may be losing some full-timers in the near future due to retirement. So, we need additional full-time faculty.

Success: Computer Classrooms. Computers in our Math Stat Classroom have been updated.

Challenge: We would like to have a classroom with 36 computers so that more instructors could do work with computers in their classes. Funds are needed.

Challenge: We would like to expand on the number of online courses that we offer (presently only Math 110 and Math 120 are offered online). Constraints on sections offered have slowed our progress in this area. As courses are added back to the schedule, we would like to develop more online and/or hybrid courses, but not at the expense of "bricks and mortar" classes.

Challenge: We would like to bring back our accelerated math courses, where Math 110 (Elementary Algebra) and Math 120 (Intermediate algebra) are linked together, and Math 130 (Trigonometry) and Math 222 (Precalculus) are linked together, and the two courses could be taken by the same student all in one semester. Again, in the current environment we cannot "risk" these offerings as they do not fill as easily as single courses.

Success: The proposed SI (Supplemental Instruction) program has been funded by BSI (Basic Skills Initiative) for a two-year pilot. The program will be implemented during Fall 2011.

Success: The Math Boost proposal has been funded for two years and will be implemented during Spring 2011.

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.

The Supplemental Instruction (SI) proposal has been completed and funding for a two-year pilot, starting Fall 2011, has been attained. The Math Boost project has been funded and will be implemented this semester. Additional faculty members are being assigned to the MRC (Math Resource Center). We are currently searching for a new full-time faculty member who will focus on BSI, and as such be key in future developments in the MRC and BSI programs. The department still needs additional full-time faculty to share in department work (SLOs, development of online/hybrid courses, MRC hours, SI) and college-wide committee work.

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.).

As stated above, the next year will focus on implementation and assessment of the new BSI SI program and Math Boost. Individual instructors are interested in development of online/hybrid courses.

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

Since we are expecting some retirements in the very near future, it is imperative that we hire more full-time faculty. In addition, the district will likely be saving money, with the new full-time hire very likely to be lower on the salary schedule than the retiring full-time faculty member.

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.

For Spring 2011 thru Spring 2012 the planned activities are:

Math 111, 112, 110, 122, 123, 120 – analysis of data collected Fall 2010, follow-up discussion and implementation of action plan, collection of additional data Fall 2011.

Math 125 – follow-up assessment on objectives 1 and 4.

Math 147 – follow-up assessment of objectives 5 and 6.

Math 222 – Fall 2010 data processed, follow-up assessment on objectives 3, 4, and 6.

Math 241 – Fall 2010 data processed, follow-up assessment needed on objective 5.

Math 251 – Fall 2010 data processed, no follow-up needed.

Math 252 – Fall 2010 data will be collected and processed. Follow-up will take place as needed.

For all courses listed above, multiple SLOs are under evaluation. Discussion of results occurs among the major stakeholders in each course at multiple meetings and among the math faculty at large during flex activities at the start of each semester.

The department has decided to annually assess SLOs for all courses in the algebra sequence (Elementary and Intermediate Algebra). We are currently in the process of revamping the sequence in an effort to increase student success through the sequence and into transfer courses. The annual assessments will provide feedback and assist us in re-focusing our efforts.
For all other courses the department has developed a schedule for a six year cycle of assessment. Approximately $1/6^{th}$ of courses will start a new cycle each year. When a course is in the first year of its first cycle we plan to assess all objectives. For objectives where the "success" criteria are not met, follow up and assessment will occur annually until the "success" criteria are met. Once "success" has been attained for every objective for a course, the course will not be assessed again until the first year of its next scheduled cycle. Thus each year approximately three of these courses will be starting a new six year cycle and an undetermined number of courses will be undergoing follow up and assessment. . Eleven of the 25 courses are currently assessed with criteria met and will cycle back according to the cycle calendar.

    b.   Student services areas: TBD

       N/A

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.
One position to begin in Fall 2012	The new faculty person will -Increase the number of fine faculty who teach from a perspective of deep involvement with the department and teach a great variety of the Math courses. This should lead to an improvement in the SLO assessment process and student success and retention rates. -Increase the number of faculty who lend a hand to other department, division, and college work, such as participation in faculty evaluation, revising curriculum outlines, choosing course textbooks, screening in the hiring process, shared governance, committee work, and development of online/hybrid courses. If the new person is not granted, then it will be difficult to increase department efforts in pursuit of the above listed tasks. Also there will be continue to be 25 adjunct Math faculty each semester who cannot participate fully in the department or in assessment for lack of time and lack of compensation to do so. In addition, work on assessment adds to the load of the already overburdened full-time faculty.	The new faculty person will be one more person who will work directly with fellow faculty on SLO development and their assessment.

Classified Positions Requested	Expected Outcomes if Granted and Expected Impact if Not Granted	If applicable, **briefly** indicate how the requested resources will link to achieving department action steps based on SLO assessment.
Math Resource Center Coordinator	The Math Resource Center (MRC) coordinator whom we had last year was able to streamline all the workings of the MRC, including tutoring, scheduling, checking out of math books within the lab, checking to make sure students log in and log out of the lab, handling print and copy jobs and their payments, answering the phone in the lab, helping proctor makeup exams of instructors, making sure the MRC is properly stocked with necessary equipment, giving instructors midterm and final reports on lab attendance, and making sure the computers in the lab are properly running. If the position is not granted then it means all of the duties listed above will continue to be done juggled by student aides, instructors and tutors.	The coordinator would be able to give us data about student attendance and the effectiveness of the tutors, which we can then try to relate to the actual final grade each student user earns in his or her math course.

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 <u>instruction</u> (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, **briefly** indicate how the requested resources will link to achieving department action steps based

		on SLO assessment.
Item: Desktop Computers for BSI Lab (Dell Optiplex 380 DT) **Number:** 38 **Vendor:** Dell **Unit price:** $724.50 **Total Cost:** $27,530.94 (NOTE: this cost is for the computers only. Refurbishing costs may be $100,000-$200,000) **Status*:** New	Computers are useful in helping to increase arithmetic and algebraic skills for students in Math 811, 110, 111, and 112 (i.e. Basic Skills courses). Computers are also helpful in honing skills for Math 120 (Intermediate Algebra) students. There is a need for a second computer lab to aid in teaching Basic Skills mathematics, as the present lab in 16-111 is fully employed in teaching statistics, and is probably not large enough for the estimated demand. Optimal location for this additional classroom will be adjacent to the Math Resource Center with a connecting door and large windows in the wall so that the room may double as an extension to the MRC when classes are not in session. Cost of such modifications: unknown.	SLO assessment can be greatly aided by having students do problems on a computer, since the computer can quickly assign randomly-generated homework assignments, quizzes, and exams, and grade them quickly and accurately, so that instructors can focus their energy on teaching, rather than making, correcting, and recording homework, assignments, quizzes, and exams.
Item: Camtasia for PC **Number:** 5 **Vendor:** TechSmith **Unit price:** $179.00 **Total Cost:** $895.00 **Status*:** New	This software makes possible for use screen capture with voice-over for mp or QuickTime movies. This software might be shared with the Biology Department.	Aids instructor in developing materials for online/hybrid courses.
Item: Dell Computers OptiPlex FX160 FLX Dual Core Tiny Desktop **Number:** 10 **Vendor:** Dell Computer Corportation **Unit price:** $1008.28 + tx **Total Cost:** $10,922.76 **Status*:** New	The aging laptops that we have are starting to fail and age beyond what is supportable. We will not be able to maintain the level of service currently available to students without replacing them in the near future. The OptiPlex system is the direction CSM is going for all labs; it can be linked to a server and all updating and	These computers support student access to materials needed for success in SLOs in all mathematics courses, and access to remedial materials in support of MRC SLOs.

Item: Data Jacks **Number:** 20 **Vendor:** Atlas Pellizzari Electric **Unit price:** $300 per jack **Total Cost: $6000.00** **Status*:** New	software repairs are done remotely. We would like to do a phased-in transition, with ten in the near future and ten more within the next two years. The data jacks are necessary when we receive the computers asked for above.	Without the data jacks the computers that we purchase mentioned above won't function optimally.

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

8.   PROGRAM REVIEW PARTICIPANTS AND SIGNATURES

Date of this *Annual Update for Program Review and Planning* evaluation: March 25, 2010

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

Primary program contact person: Melvin Hom
Phone and email address: 650-574-6622; homm@smccd.edu
Full-time faculty: Melvin Hom, Cheryl Gregory, Lloyd Davis
Part-time faculty:
Administrators:
Classified staff:
Students:

Primary Program Contact Person's Signature   *Date*

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