



PROGRAM REVIEW OF LABS AND CENTERS
Pilot Review – Phase I
Approved by the Academic Senate
May 12, 2009

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

Name of Lab or Center: Math Resource Center
Division: Math / Science Division

I. GENERAL PURPOSE OF THE LAB* (*Data resources: CSM Course Catalog; Course Outline of Record; department records*)

*Note: The term "lab" will be used to refer to centers as well as labs in this document.

a. Briefly describe the general purpose of the lab.

The purpose of the Math Resource Center is to help CSM students of all mathematical backgrounds to succeed in their math courses or to learn math topics of interest to the student or in support of other coursework. The Math Resource Center is also a place where students can improve their study and time management skills and reduce their math anxiety. By offering these programs and by measuring students learning outcomes, the Math Resource Center of College of San Mateo serves to improve students' retention in math classes, students' success in other courses as well as students' success in their future lives.

b. List the courses that are linked to this lab.

Math 850 Mathematics Supplement 1 (developmental)
 Math 852 Mathematics Supplement 2 (transfer level)
 Hours-By-Arrangement for all CSM Math courses may be met by participation in MRC activities

II. STUDENT LEARNING OUTCOMES (*Data resources: SLOs listed on Course Outline of Record; records maintained by the department; CSM SLO/Assessment Coordinator; SLO Website – <http://www.collegeofsanmateo.edu/sloac/>; "Student Self-Assessment and Satisfaction Survey"; other lab surveys.*)

a. Briefly describe the Student Learning Outcomes (SLOs) for the lab.

Math 850 Mathematics Supplement I (developmental) – Students will be able to:

- 1) Understand problems verbally, symbolically, numerically and graphically and be able to switch between those representations
- 2) Master specific math skills such as fractions, signed numbers, and basic equations and employ those skills in solving problems
- 3) Communicate solutions clearly
- 4) Use calculators or software appropriately

Math 852 Mathematics Supplement 2 (transfer level) – Students will be able to:

- 1) Self-assess his/her math skills
- 2) Master specific math skills and know when and how to use them
- 3) Understand problems verbally, symbolically, numerically and graphically and be able to switch between those representations
- 4) Communicate solutions clearly
- 5) Use calculators or software appropriately

MRC General SLOS– Students will be able to:

- 1) Succeed in current math course
- 2) Self-assess math skills: i.e. identify strengths and weaknesses or identify the skills on which more work is needed
- 3) Demonstrate mastery of the specific skills for which the student requested assistance.
- 4) Understand verbal problems (word problems)
- 5) Understand problems written symbolically (algebraic or mathematical symbols)
- 6) Understand numerical presentations of problems
- 7) Understand graphical representations of problems
- 8) Switch between or understand relationships between two or more presentations of the same problem (i.e. Verbal, symbolic, numerical, or graphical)
- 9) Clearly communicate solutions in writing (show work in a manner acceptable to instructors)
- 10) Use calculators or software efficiently and appropriately

- b. If an assessment of the lab’s SLOs has been completed, briefly describe this evaluation. Which support services for courses or programs were assessed? How were they assessed? What are the findings of the assessment? Based upon this assessment, what changes to the lab will be considered or implemented in the future?

The Math department has been assessing the general MRC SLOS via a student survey for several years. This Spring, 222 students responded to the new campus wide lab survey which incorporated some of our SLO specific questions. The survey asks for student self report of progress toward each SLO and for anecdotal comments. A summary of the Spring 2009 student response follows:

Question #11: “To what extent did your work in this lab help your academic performance in courses linked to the lab or supported by this lab? (For example, you use the Math Resource Center and are also enrolled in a Math course.)”

(n=231 respondents)

| | Count | Percent |
|------------------|--------------|----------------|
| Very helpful | 116 | 50.2% |
| Somewhat helpful | 97 | 42.0% |
| Not helpful | 18 | 7.8% |
| | | |

| | | |
|---|---|------|
| *I am not enrolled in a course linked to this lab | 2 | 0.9% |
|---|---|------|

*Note: Percentages reported above exclude students who were not enrolled in a linked course

QUESTION #12: “Based on your overall experience in the Math Lab this semester, please indicate the extent to which you have made gains or progress in the following learning objectives identified below:

I can...

| | Major/Moderate Progress | Minor/No Progress |
|--|-------------------------|-------------------|
| a. Express ideas and provide supporting evidence effectively in writing (n= 110) | 69.1% | 30.9% |
| b. Express ideas and provide supporting evidence effectively orally (n=111) | 67.6% | 32.4% |
| c. Comprehend, interpret, and analyze information I read (n=156) | 73.1% | 26.9% |
| d. Comprehend, interpret, and analyze information I hear (n=146) | 69.2% | 30.8% |
| e. Communicate effectively in a group or team situation (n=139) | 66.2% | 33.8% |
| f. Comprehend, interpret, and analyze numerical and or quantitative calculations (n=193) | 72.5% | 27.5% |
| g. Interpret graphical representations of quantitative information (e.g. graphs) (n=185) | 69.2% | 30.8% |
| h. Effectively identify, develop, and evaluate arguments (n=133) | 66.2% | 33.8% |
| i. Effectively assess the legitimacy or adequacy of different types of information (n=146) | 61.6% | 38.4% |
| j. Work effectively with others of diverse backgrounds (n=140) | 70.7% | 29.3% |
| k. Identify ethical issues and evaluate their consequences (n=108) | 70.4% | 29.6% |
| l. Acknowledge the value of diverse opinions and perspectives (n=125) | 69.6% | 30.4% |

During academic year 2008-2009 the MRC worked with a small group of pre-Nursing students to assist in remediation before they re-took the TEAS test. These students enroll in Math 850. After a detailed analysis of their TEAS scores, an individual study plan for each student was developed. The students complete all of the assigned work and at the end of the course take a post- test similar to a math portion of the TEAS. The Fall 08 group performed well on the post-test. A group of 4 are currently in this program during Summer 09. Students who are successful in on re-take of the TEAS enter the Nursing Program at CSM.

Based on this aspect of assessment changes that will be considered or implemented in the future include:

- Sharing of this data and accompanying anecdotal with math faculty for discussion/ brainstorming ways to improve the impact of the MRC on student learning.
- Ask individual faculty to ask students to evaluate their unique HBA assignments designed to facilitate student success in their specific courses and share the outcome with the department.

- c. If SLOs were assessed for courses or programs using the lab, briefly describe this evaluation. What are the findings of the assessment? Based upon this assessment, what changes to the lab will be considered or implemented in the future?

Mathematics Department Assessments (copied from 2008-2009 Math Program Review)

Developmental mathematics Sequence (Math 811, 110, 111, 112, 115, 120, 122, 123)

- *Observation:* From an analysis of exit exams for MA 120 we found that students' skill level was appropriate for this level, but that students were poor at laying out their work in a logical organized fashion, and that this was especially noticeable when solving application problems and multi-step exercises.
- *Action: Faculty:*
 - Will continue to emphasize and assess (as they have been doing) the basic mathematical skills and concepts of elementary and intermediate algebra.
 - Will strive to make clear to students exactly what is required for "showing work" in an organized, mathematically acceptable format.
 - Agreed upon a basic list of formulas that students are expected to know, understand, and apply at each developmental algebra level. (811, 110, 120)

Math 125

- *Observation:* Students had difficulty in the area of linear programming, Venn diagrams, and the language of probability.
- *Action:* faculty will adjust time scheduling to spend more time on the identified areas of difficulty.

Math 130

- *Observation:* Our experience assessing Trig revealed considerable diversity in the way in which Trigonometry was taught and the standards to which students were held. Our conclusion was that while some diversity in teaching styles and emphasis is good, the amount of variability was too great to be acceptable.
- *Action*
 - As a Department, we worked out a list of Trig Formulas and concepts that we regarded as necessary for all students to know at the end of the semester.
 - These agreed upon topics have been communicated to instructors teaching trig each semester.
 - A revised common core Final Exam has been developed for use each semester.
 - Faculty are encouraged to employ cumulative testing if they are not so doing.
 - Faculty are to dissuade students from the notion that topics that have been tested can be forgotten.

Math 222

- *Observation:* In the semesters in which this course was examined, instructors were using cumulative testing, and that practice (from the evidence gathered) appears to have been successful. To some extent the assessment has been in flux because the testing entry requirements, designed to insure that students enter with some knowledge of trigonometry, have been in flux.
- *Action: Faculty will:*
 - Require student analysis of errors on tests and additional practice of in "failure" areas.
 - Structure course so higher level reasoning skills may be practiced through the entire semester, perhaps by starting 222 with trig and identities.
 - Continue cumulative testing where it is used, otherwise implement cumulative testing.
 - Continue emphasis on graphing and understanding relationships between graph, "signature graphs" and equation and transformed equations.

Math 241

- *Observation:* Work with logarithms arrives late in the semester, and hence there is a big gap between the time that students have been working with logs (perhaps only in Intermediate Algebra) and the time in MA 241 when they are needed. Students find application problems challenging, and will attempt to structure their own trajectory through the course to avoid these.
- *Action:* Instructors teaching the course will take steps to address the observations noted, including:
 - Review the algebra of logs earlier in the semester to help students be more successful when this topic is reached; an HBA assignment can be assigned to be completed in small groups in the MRC with the assistance of tutors if needed.
 - Continue to supply ample practice in challenging areas (multi-step problems, application problems), have students do error analysis, stating in words the error in process so that they recognize patterns of error
 - Structure assignments and quizzes so that "opting-out" of engagement with application questions is not an option. Perhaps, develop HBA assignments for small groups or individuals to work on sets of application problems in the MRC

Calculus Sequence (MA 251, 252, 253)

- *Observation:* Only a preliminary evaluation of typical application problems in MA 251 has been undertaken. The analysis of students' work on these problems revealed the same lack of logical organized development in the exposition of solutions as was noted in the developmental sequence.
- *Action* As a department, in all courses preparatory to Calculus as well as in the Calculus sequence, consistently insist that students draw and label diagrams when appropriate and consistently (and persistently) insist that students present work in a clearly organized manner which demonstrates the flow of their thought.

Math 268

- *Action: Instructors decided to:*
 - Better communicate the instructor expectation that students will be able to applying tools to new kinds of problems
 - Provide more practice in problem solving for which the solution is non-algebraic.
 - Continue to use or implement oral student presentations. The presentations are time consuming, but very effective.

Math 270

- *Action:* Current faculty will meet to review the strengths and weaknesses of students on the analyzed exams and strategies to

help students with conceptual problems and proofs.

MRC history:

During the 2008-2009 academic year a member of the mathematics faculty was scheduled in the MRC during every hour of operation. This new focus on quality, faculty resources in the MRC in addition to one classified staff member and student tutors raised the quality of the resource to a new high and dramatically increased student participation. Also, more faculty are assigning specific HBA activities to be completed in the MRC – test corrections, lab tests, computer based assignments, remedial packets, group projects etc. These assignments take advantage of the availability of faculty, staff, and student tutors for immediate assistance and feedback.

As a result of the current budget crisis, the classified staff position in the MRC has been defunded. As this person interviewed, selected, scheduled, trained and coordinated student tutors in addition to coordinating the activities of the MRC and acting as a “super-tutor,” we are currently scrambling to determine how we can maintain the quality program that we have without classified staff. We will be implementing change; however, the direction of that change is currently unclear.

During the 2008-2009 year, students who enrolled in Math 850 or 852 while not currently enrolled in another math course met with an instructor to develop an individual study plan based on pre-tests and personal goals – a time intensive process. Starting with a pilot program in Summer 09 and continuing through the 2009-2010 academic year, the MRC will be using the MyMathTest program for these students. The program is web based and incorporates pre- and post- testing and study program development. The students will still receive quality faculty assistance, but much less time will be spent on administrative details.

During the Academic Year 2009-2010 students in selected Basic Skills courses will use MyMathTest as a course supplement for their HBA attached to the course. These students will have access to the computers in the MRC as well as elsewhere on campus to facilitate this project.

Based on this aspect of assessment changes that will be considered or implemented in the future include:

- Continued faculty assignment during open hours
- Increased faculty assignment during peak hours
- Request reinstatement of certificated position
- Continue to monitor and assess the MyMathTest program, evaluating student success and persistence and the efficacy of the additional staff dedicated to the Summer 2009 Pilot.

- d. **Using the results from the “Student Self-Assessment and Satisfaction Survey,” summarize the findings in the grid below on how students rated their progress on general education Student Learning Outcomes.**

The column headings identify the GE-SLOs. The first row headings indicate the matrix/scale students used to self-assess progress.

| GE SLOs→ | Effective Communication | Quantitative Skills | Critical Thinking | Social Awareness and Diversity | Ethical Responsibility |
|---------------|-------------------------|---------------------|-------------------|--------------------------------|------------------------|
| Matrix/Scale: | Combination of | Combination of | Combination | Combination of | 12:k |

| | | | | | |
|---------------------------|----------|--------|---------------|--------|-----|
| | 12:a,b,e | 12:f,g | of 12:c,d,h,i | 12:j,l | |
| Major / moderate Progress | 68% | 71% | 68% | 70% | 70% |
| Minor/ Progress | 32% | 29% | 32% | 30% | 30% |

- e. If general education Student Learning Outcomes have been measured using another type of assessment, such as student surveys, summarize the findings in the grid below on how students rated their progress on these Student Learning Outcomes. (Please identify data sources.)

| GE SLOs→ | Effective Communication | Quantitative Skills | Critical Thinking | Social Awareness and Diversity | Ethical Responsibility |
|-----------------------|-------------------------|---------------------|-------------------|--------------------------------|------------------------|
| Matrix/Scale: | | | | | |
| Major Progress | | | | | |
| Moderate Progress | | | | | |
| Minor Progress | | | | | |
| No Progress | | | | | |
| Does Not Apply to Lab | | | | | |

Deliberately left blank: No other assessment GE-SLOs completed

III. **DATA EVALUATION** (Data resources: "Student Self-Assessment and Satisfaction Survey"; other lab surveys; "Student Profile Data for Labs, Spring 2009"; "Core Program and Student Success Indicators" for department(s) using lab obtained from the Office of Planning, Research, and Institutional Effectiveness – see website at http://www.smccd.net/accounts/csmresearch/prie/program_review.html.)

- a. Referring to all lab usage data available, evaluate the proportion of students using the facility versus the potential population of users. If data is available, indicate the number of users and specify whether this is a duplicated or unduplicated count. If applicable, discuss programmatic, course offering or scheduling changes being considered as a result of lab usage projections? Will any major changes being implemented in the program (e.g. changes in prerequisites, hours by arrangement, lab components) require significant adjustments to lab operations?

The following data is excerpted from the MRC semester report, compiled every semester by Lena Feinman.
Attendance
 1258 (53.52%) students enrolled in a math course attended the MRC in Spring 2009 with total number of hours 16780. In spite of the fact that the number of students was almost the same as in Fall 08, in Spring 09 students attendance increased.

Fall08vsSpring09

| | semester | number_of_hours | visits | unduplicated_visits |
|---|-----------|-----------------|--------|---------------------|
| 1 | Fall 08 | 13716 | 15060 | 1247 |
| 2 | Spring 09 | 16364 | 16780 | 1258 |

Hours in the MRC

This semester students accumulated 16364 hours, about 2648 hours more than in Fall 08. The maximum number of visits occurred during week #6; the maximum number of hours during week #17. On average, students accumulated 192.5 hours per day (159.5 hours per day in Fall 08) with 197 visits per day (153 visits per day in Fall 08). See the tables below.

weekssp09

| | week | time | visits | undvisits |
|----|--------------|--------|--------|-----------|
| 1 | 6(Feb 23) | 1134.0 | 1233 | 587 |
| 2 | 2(Jan 26) | 989.0 | 1126 | 490 |
| 3 | 7(March 2) | 1135.0 | 1118 | 554 |
| 4 | 17(May 1...) | 1246.0 | 1095 | 455 |
| 5 | 9(mar 16) | 1005.0 | 1036 | 514 |
| 6 | 4(Feb 9) | 862.0 | 976 | 498 |
| 7 | 14(Apr 27) | 978.0 | 956 | 468 |
| 8 | 5(Feb 17) | 896.6 | 954 | 799 |
| 9 | 8(March 9) | 887.9 | 918 | 486 |
| 10 | 10(Mar 23) | 844.0 | 896 | 479 |
| 11 | 11(Mar 30) | 862.0 | 894 | 460 |
| 12 | 16(May 1...) | 958.0 | 884 | 420 |
| 13 | 15(May 4) | 865.0 | 841 | 416 |
| 14 | 12(Apr 13) | 844.5 | 840 | 432 |
| 15 | 13(Apr 20) | 772.0 | 832 | 420 |
| 16 | 3(Feb 2) | 1063.0 | 811 | 453 |
| 17 | 1(Jan20) | 607.5 | 579 | 352 |
| 18 | 18(May 2...) | 514.0 | 355 | 188 |

Fall08

| | week | time | visits | undvisits |
|----|-------------|---------|--------|-----------|
| 1 | 1(aug18) | 355.70 | 448 | 257 |
| 2 | 2(aug 25) | 685.60 | 807 | 405 |
| 3 | 3(sep 02) | 726.50 | 811 | 453 |
| 4 | 4(sep 08) | 983.50 | 1084 | 540 |
| 5 | 5(sep 15) | 960.50 | 1068 | 563 |
| 6 | 6(sep 22) | 976.50 | 1056 | 546 |
| 7 | 7(sep29) | 856.80 | 968 | 514 |
| 8 | 8(oct 6) | 879.50 | 954 | 516 |
| 9 | 9(oct13) | 773.00 | 847 | 467 |
| 10 | 10(oct20) | 799.00 | 877 | 474 |
| 11 | 11(oct27) | 737.00 | 1714 | 649 |
| 12 | 12(nov3) | 772.00 | 865 | 470 |
| 13 | 13(nov11) | 652.50 | 714 | 434 |
| 14 | 14(nov 17) | 782.00 | 858 | 455 |
| 15 | 15(nov 24) | 431.50 | 473 | 305 |
| 16 | 16(dec1) | 875.50 | 952 | 454 |
| 17 | 17(dec8) | 1070.50 | 1068 | 455 |
| 18 | 18(dec15) | 356.60 | 312 | 190 |
| 19 | Sun(dec...) | 85.50 | 46 | 40 |

Hours per each course

The students' hours distribution per each section is shown in the table below.

hours per course Sp 09

| | course | total_visits | undvisits | number_of_se... | visits_per_section |
|----|----------|--------------|-----------|-----------------|--------------------|
| 1 | MATH 120 | 2749 | 228 | 11 | 20.7273 |
| 2 | MATH 200 | 2555 | 198 | 9 | 22 |
| 3 | MATH 110 | 1591 | 138 | 7 | 19.7143 |
| 4 | MATH 253 | 1315 | 34 | 1 | 34 |
| 5 | MATH 251 | 1252 | 77 | 3 | 25.6667 |
| 6 | MATH 241 | 1205 | 55 | 2 | 27.5 |
| 7 | MATH 252 | 760 | 52 | 3 | 17.3333 |
| 8 | MATH 222 | 727 | 45 | 2 | 22.5 |
| 9 | MATH 112 | 702 | 64 | 5 | 12.8 |
| 10 | MATH 811 | 634 | 76 | 5 | 15.2 |
| 11 | MATH 130 | 567 | 55 | 4 | 13.75 |
| 12 | MATH 802 | 534 | 27 | 1 | 27 |
| 13 | MATH 125 | 520 | 38 | 3 | 12.6667 |
| 14 | MATH 122 | 405 | 43 | 3 | 14.3333 |
| 15 | MATH 111 | 376 | 56 | 5 | 11.2 |
| 16 | MATH 123 | 229 | 32 | 3 | 10.6667 |
| 17 | MATH 145 | 151 | 17 | 1 | 17 |
| 18 | MATH 270 | 144 | 14 | 1 | 14 |
| 19 | MATH 242 | 114 | 9 | 1 | 9 |
| 20 | MATH 268 | 103 | 14 | 1 | 14 |
| 21 | MATH 275 | 86 | 10 | 1 | 10 |

This semester 41 students accumulated more than 41 hours with a combined total number of 1223.5 hours. An additional 394 students accumulated more than 17 hours with the total number of 4263.45 hours. This semester we had two people enrolled in Math 852 and four people enrolled in Math 850 who

were otherwise not enrolled in a math course and who completed their plan of study.

Student participation in the MRC varies widely by instructor and the type of "HBA" assignments the instructor makes. At least anecdotally, instructors who assign test corrections and/or remedial exercises note increased success among students who comply.

Participation in the MRC has increased dramatically over time, almost doubling since fall 2007 while student enrollment only increased by approximately 50%.

MRC History of use

| | semester | total_ho... | MRC_students... | hrs_above_HBA | students_above_HBA | mathstudents_at_census | above_4... | <new: |
|----|-------------|-------------|-----------------|---------------|--------------------|------------------------|------------|-------|
| 1 | SPRING 2003 | 4995.00 | 396 | 1904.70 | 88 | | | |
| 2 | SPRING 2004 | 5605.00 | 500 | 2034.36 | 110 | | | |
| 3 | FALL 2004 | 5402.20 | 507 | 1818.88 | 110 | | | |
| 4 | SPRING 2005 | 5230.50 | 570 | 169.54 | 108 | | | |
| 5 | FALL 2005 | 4112.02 | 363 | 1392.68 | 94 | | | |
| 6 | SPRING 2006 | 7225.56 | 613 | 2721.02 | 133 | | | |
| 7 | FALL 2006 | 7672.10 | 515 | 3156.20 | 150 | | | |
| 8 | SPRING 2007 | 7993.00 | 613 | 3330.23 | 166 | 1626 | | |
| 9 | SUMMER 2007 | 820.10 | 115 | 276.00 | 13 | 693 | | |
| 10 | Fall 2007 | 8973.25 | 795 | 2437.81 | 130 | 2361 | | |
| 11 | Spring 2008 | 10023.90 | 973 | 1411.02 | 238 | 2164 | | |
| 12 | summer 2008 | 3489.60 | 307 | 703.00 | 72 | 806 | | |
| 13 | Fall 2008 | 13716.20 | 1247 | 1794.00 | 278 | 1880 (at drop date) | | |
| 14 | Spring 09 | 16780.00 | 1258 | 4263.45 | 394 | 2418 | 1223.5 | |

During the 2008-2009 academic year faculty were scheduled in the MRC every open hour. This contributed to an increase in student traffic which we expect will continue to grow. During peak hours 10-12 daily, we were severely understaffed, as noted in student comments. These are also peak class hours and multiple student tutors are hard to schedule during these times.

There are no major changes in course offerings or HBA that are expected to impact the MRC in the next year. The re-classification of Math 110, 111, and 112 as Basic Skills is not expected to impact the number of students enrolled in those courses and thus seeking assistance in the MRC.

Based on this aspect of assessment changes that will be considered or implemented in the future include:

- Continued faculty assignment during open hours
- Increased faculty assignment during peak hours
- Request reinstatement of certificated position
- Funding for student tutors and tutor training at least at the 2008-2009 level.

- b. Discuss staffing of the lab. Obtain FTE data for classified and certificated personnel assigned to staff the lab (available from division deans). Evaluate the current data and departmental projections as indicated on the "Core Program and Student Success Indicators." If applicable, how does the full-time and part-time FTE affect program action steps and outcomes? What programmatic changes do trends in this area suggest? If student assistants work in the lab, discuss hours of employment, job duties, and how they support program services and scheduling.

FTE Data for classified and certificated personnel assigned to staff the lab for the 2008-2009 academic year:

| | |
|------------------|-----------------------------------|
| Classified Staff | 1 position – full time, 12 months |
|------------------|-----------------------------------|

| Faculty | Full Time FTE Total | Full time FTE in MRC | Adjunct FTE Total | Adjunct FTE in MRC | Total FTE | Total FTE in MRC | Overall Full time to adjunct Ratio (desired ratio 75:25) |
|-------------|---------------------|----------------------|-------------------|--------------------|-----------|------------------|--|
| Fall 2009 | 11.55 | 0.23 | 14.25 | 2.25 | 25.8 | 2.48 | 20:25 |
| Spring 2009 | 11.58 | 0.46 | 10.66 | 1.74 | 22.24 | 2.2 | 27:25 |

Dramatic growth in student participation since the onset of blanket faculty coverage and Title 5 requirements demand that certificated staffing be maintained at least at current level. Additional certificated staffing would be appropriate during peak usage. To simplify scheduling and provide consistency in staffing the Full Time FTE in the MRC is scheduled to increase in Fall 09.

The departmental Full-time to Adjunct ratio is consistently lower than the 75:25 standard. The department continues to request additional full time faculty positions in every program review.

Student assistants in the lab for the 2008-2009 academic year:

| | FALL # | Total FALL HOURS | SPRING # | Total SPRING HOURS |
|------------------|--------|------------------|----------|--------------------|
| TUTORS | 5 | 609.5 | 7 | 571 |
| FRONT DESK ASST. | 3 | 259.5 | 4 | 223.5 |
| SUPP. INST. | 2 | 80 | 3 | 243 |

JOB DESCRIPTIONS for student assistants are:

- TUTORs – Tutor students in all math subjects. Assist in test/quiz corrections.
- FRONT DESK ASSISTANTS – Check out/in textbooks and calculators, monitor student sign-in/out, file add-forms, and handle copying, printing and money for both.
- SUPPLEMENTAL INSTRUCTORS – Attends class to which assigned, assists instructor during class as needed, tutor students from assigned class in the Math Resource Center outside of class time.

Student staffing needs to be maintained at least at the Spring 2008 level. Identification and training of new student tutors (to fill attrition due to transfer and scheduling conflicts) is an ongoing task that has historically been coordinated by the certificated staff assistant. We are currently unsure how this important task will be completed during the 2009-2010 academic year. During 2008-2009, BSI was a source for funding for supplemental instructors, this funding may not be available for future semesters.

- c. Report on student satisfaction as indicated in the “Student Self-Assessment and Satisfaction Survey” and, if applicable, as indicated in other student surveys.

Question #2: “Overall, how would you rate the quality of the lab services you received?”

(n=231 respondents)

| | Count | Percent |
|-----------|-------|---------|
| Excellent | 56 | 24.2% |
| Very Good | 81 | 35.1% |
| Good | 68 | 29.4% |
| Fair | 14 | 6.1% |

| | | |
|------|----|------|
| Poor | 12 | 5.2% |
|------|----|------|

Question #3: “ Overall, was the lab staff helpful?”

(n=232 respondents)

| | Count | Percent |
|-----|-------|---------|
| Yes | 216 | 93.1% |
| No | 16 | 6.9% |

Question #4: “Were the procedures for using the lab clear and easy to follow?”

(n=231 respondents)

| | Count | Percent |
|-----|-------|---------|
| Yes | 221 | 95.7% |
| No | 10 | 4.3% |

Question #5: “Did you understand what lab activities were expected of you?”

(n=232 respondents)

| | Count | Percent |
|-----|-------|---------|
| Yes | 213 | 91.8% |
| No | 19 | 8.2% |

Question #6: “Was the lab available when you needed it?”

(n=229 respondents)

| | Count | Percent |
|------------------|-------|---------|
| Always | 133 | 57.3% |
| Most of the time | 68 | 29.3% |
| Sometimes | 21 | 9.1% |
| Rarely | 7 | 3.0% |
| Never | 3 | 1.3% |

Question #7: “Were you able to get help when you needed it in this lab?”

(n=216 respondents)

| | Count | Percent |
|------------------|-------|---------|
| Always | 82 | 37.3% |
| Most of the time | 83 | 37.7% |
| Sometimes | 39 | 17.7% |
| Rarely | 12 | 5.5% |
| Never | 4 | 1.8% |
| *Does not apply | 9 | 3.9% |

*Note: Percentages reported above exclude students who responded “Does not apply”

Question #8: “If applicable, were individual meetings with faculty helpful?”

(n=108 respondents)

| | Count | Percent |
|-------------------------------------|-------|---------|
| Very helpful | 60 | 55.6% |
| Somewhat helpful | 43 | 39.8% |
| Not helpful | 5 | 4.6% |
| *I did not have individual meetings | 125 | 53.6% |

*Note: Percentages reported above exclude students who did not have individual meetings

Question #9: “Were the learning resources (e.g., workbooks, course materials) you needed to co
(n=152 respondents)

| | Count | Percent |
|------------------|-------|---------|
| Always | 89 | 58.6% |
| Most of the time | 42 | 27.6% |
| Sometimes | 16 | 10.5% |
| Rarely | 4 | 2.6% |
| Never | 1 | 0.7% |
| | | |
| *Does not apply | 80 | 34.5% |

*Note: Percentages reported above exclude students who responded “Does not apply”

Question #10: “Were the learning resources (e.g., workbooks, course materials) you needed to complete your lab activities or classroom assignments readily available?”

(n=173 respondents)

| | Count | Percent |
|------------------|-------|---------|
| Always | 111 | 64.2% |
| Most of the time | 49 | 28.3% |
| Sometimes | 8 | 4.6% |
| Rarely | 4 | 2.3% |
| Never | 1 | 0.6% |
| | | |
| *Does not apply | 62 | 26.4% |

*Note: Percentages reported above exclude students who responded “Does not apply”

Anecdotal comments by students were generally very positive, however several themes for future improvement/change emerged, all of which we were already aware:

1. More staff is needed during peak hours.
2. More space is needed during peak hours.
3. Additional staff training and planning needs to occur so that:
 - a. A balance may be achieved between the needs of some students for quiet for individual study and a place to talk within study groups.
 - b. A system for requesting help during peak hours is developed so that “shy” students receive help in a timely manner.

IV. **STUDENT SUCCESS EVALUATION AND ANALYSIS** (Data resources: “Student Self-Assessment and Satisfaction Survey”; other lab surveys; “Student Profile Data for Labs, Spring 2009”; “Educational Master Plan, 2008” – see website at http://www.smccd.net/accounts/csmresearch/prie/institutional_documents.html; student success data from departmental “Core Program and Student Success Indicators” – see website at http://www.smccd.net/accounts/csmresearch/prie/program_review.html; previous Program Review and Planning reports; other department records.)

- a. Based on findings from the “Student Self-Assessment and Satisfaction Survey” and other student surveys administered by the lab, briefly describe how effectively the lab addresses students’ needs relative to overall college student success rates. If applicable, identify unmet student needs related to student success and describe programmatic changes or other measures the department will consider or

implement in order to improve student success. (Note that item IV b, below, specifically addresses equity, diversity, age, and gender.)

Please identify the survey instruments used and the number of respondents.

The MRC is a highly successful resource. Most students reported positively on the “Student Self-Assessment and Satisfaction survey.” Data provided by PRIE in the chart titled *CSM Lab & Learning Center: Student Profile Spring 2009*, indicates that among the 222 voluntary respondents to the MRC survey, success and retention rates were consistently higher than for their campus wide counterparts, by ethnicity, gender, and age. It is noted that formal statistical analysis of the significance of these difference is not undertaken due to the non-randomness of sampling.

| Demographic Variable | Count | Column % | Respondent Percentage | | | Collegewide Percentage | | |
|----------------------|------------|------------|-----------------------|-------------|-------------|------------------------|-------------|-------------|
| | | | Success | Non-success | Retention | Success | Non-success | Retention |
| Ethnicity | | | | | | | | |
| Asian | 164 | 18.9 | 82.9 | 17.1 | 87.2 | 73.7 | 26.3 | 84 |
| African American | 52 | 6 | 61.5 | 38.5 | 82.7 | 58.3 | 41.7 | 80.2 |
| Filipino | 77 | 8.9 | 75.3 | 24.7 | 87 | 67.2 | 32.8 | 80 |
| Hispanic | 116 | 13.3 | 83.6 | 16.4 | 93.1 | 67.2 | 38.7 | 78.2 |
| Native American | 4 | 0.5 | 100 | 0 | 100 | 64.3 | 35.7 | 82.2 |
| Pacific Islander | 9 | 1 | 55.6 | 44.4 | 88.9 | 61.1 | 38.9 | 81 |
| White | 331 | 38.1 | 80.4 | 19.6 | 89.7 | 71.3 | 28.7 | 83.5 |
| Other | 0 | 0 | 0 | 0 | 0 | 73.7 | 26.3 | 89.5 |
| Unrecorded | 116 | 13.3 | 81.9 | 18.1 | 92.2 | 70.6 | 29.4 | 83.7 |
| Total | 869 | 100 | 79.7 | 20.3 | 89.4 | 68.4 | 31.6 | 82.1 |
| Gender | | | | | | | | |
| Female | 480 | 55.2 | 82.1 | 17.9 | 89.8 | 70 | 30 | 82.8 |
| Male | 354 | 40.7 | 76.6 | 23.4 | 88.1 | 66.1 | 33.9 | 81 |
| Unrecorded | 35 | 4 | 80 | 23.4 | 97.1 | 74.5 | 25.5 | 85.3 |
| Total | 869 | 100 | 79.7 | 20.3 | 89.4 | 68.4 | 31.6 | 82.1 |
| Age | | | | | | | | |
| 19 or less | 395 | 45.5 | 77 | 23 | 88.4 | 64.3 | 35.7 | 81.4 |
| 20-24 | 268 | 30.8 | 79.1 | 20.9 | 89.2 | 63.7 | 36.3 | 79.2 |
| 25-29 | 81 | 9.3 | 85.2 | 14.8 | 90.1 | 69.6 | 30.4 | 81.4 |
| 30-34 | 21 | 2.4 | 90.5 | 9.5 | 100 | 72.7 | 27.3 | 82.4 |
| 35-39 | 30 | 3.5 | 90 | 10 | 90 | 72.9 | 27.1 | 83.1 |
| 40-49 | 39 | 4.5 | 84.6 | 15.4 | 94.9 | 77.8 | 22.2 | 87.7 |
| 50+ | 15 | 1.7 | 73.3 | 26.7 | 73.3 | 80 | 20 | 88.3 |
| Unrecorded | 20 | 2.3 | 90 | 10 | 100 | 79.1 | 20.9 | 88.3 |
| Total | 869 | 100 | 79.7 | 20.3 | 89.4 | 68.4 | 31.6 | 82.1 |

- b. Briefly discuss how effectively the lab addresses students' needs specifically relative to equity, diversity, age, and gender. If applicable, identify unmet student needs and describe programmatic changes or other measures that will be considered or implemented in order to improve student success with specific regard to equity, diversity, age, and gender.

The following chart was provided by PRIE. The respondents to the survey have similar ratios of ethnicities and gender as the campus. The population of students who attend the MRC, is on the average younger than the campus average age, however all age groups are represented.

CSM Lab & Learning Center: Student Profile Spring 2009

| Math Lab/Total Number of Respondents: 222 | | | |
|---|------------|------------|-----------------|
| Demographic Variable | Count | % of Total | Collegewide (%) |
| Ethnicity | | | |
| Asian | 42 | 18.9 | 15.2 |
| African American | 11 | 5 | 3.8 |
| Filipino | 19 | 8.6 | 5.8 |
| Hispanic | 35 | 15.8 | 19.4 |
| Native American | 1 | 0.5 | 0.6 |
| Pacific Islander | 3 | 1.4 | 2.3 |
| White | 82 | 36.9 | 37.1 |
| Other | 0 | 0 | 0.1 |
| Unrecorded | 29 | 13.1 | 15.8 |
| Total | 222 | 100 | 100 |
| Gender | | | |
| Female | 122 | 55 | 47.6 |
| Male | 92 | 41.4 | 47.3 |
| Unrecorded | 8 | 3.6 | 5.1 |
| Total | 222 | 100 | 100 |
| Age | | | |
| 19 or less | 91 | 41 | 20 |
| 20-24 | 73 | 32.9 | 27.4 |
| 25-29 | 21 | 9.5 | 12.5 |
| 30-34 | 6 | 2.7 | 8.2 |
| 35-39 | 9 | 4.1 | 6.2 |
| 40-49 | 12 | 5.4 | 10.4 |
| 50+ | 5 | 2.3 | 12.4 |
| Unrecorded | 5 | 2.3 | 2.9 |
| Total | 222 | 100 | 100 |
| Enrollment Profile | | | |
| Total Number of Courses Enrolled | | | |
| 1 | 12 | 5.4 | 48.6 |
| 2 | 18 | 8.1 | 17.5 |
| 3 | 48 | 21.6 | 12 |
| 4 | 75 | 33.8 | 11.2 |
| 5 | 44 | 19.8 | 6.7 |
| 6 | 20 | 9 | 2.8 |
| 7 | 3 | 1.4 | 0.9 |
| 8 | 2 | 0.9 | 0.3 |
| 8+ | 0 | 0.0 | 0 |
| Total | 222 | 100 | 100 |
| Total Units Enrolled | | | |
| 0.5 – 3.0 | 1 | 0.5 | 44.3 |
| 3.5 – 6.0 | 15 | 6.8 | 18.2 |
| 6.5 – 12.0 | 70 | 31.5 | 23.1 |
| 12.5+ | 136 | 61.3 | 14.4 |
| Total | 222 | 100 | 100 |
| Day/Evening Course Enrollments* | | | |
| Day Courses | | 91.4 | 67.7 |
| Evening Courses | | 8.6 | 32 |
| Total | | 100 | 100 |

V. REFLECTIVE ASSESSMENT OF INTERNAL AND EXTERNAL FACTORS AND PROGRAM/STUDENT SUCCESS (Data Resources: "Student Self-Assessment and Satisfaction Survey"; other lab surveys; "Student Profile Data for Labs, Spring 2009"; "Educational Master Plan, 2008"; "2008-2013 College of San Mateo Strategic Plan" – see website at http://www.smccd.net/accounts/csmresearch/prie/institutional_documents.html; student success data from departmental "Core Program and Student Success Indicators" – see website at http://www.smccd.net/accounts/csmresearch/prie/program_review.html; previous Program Review and Planning reports; department records; other environmental scan data.)

- a. Using the matrix provided below and reflecting on the lab relative to students' needs, briefly analyze the lab's strengths and weaknesses and identify opportunities for and possible threats to the lab (SWOT). Consider both external and internal factors. For example, if applicable, consider changes in our community and beyond (demographic, educational, social, economic, workforce, and, perhaps, global trends); look at the demand for the lab; review program links to other campus and District programs and services; look at similar labs at other area colleges; and investigate auxiliary funding.

Note: Please indicate the source of the data that was used to complete this section.

Student Survey and Faculty Anecdotal comments are the sources for these responses.

| | INTERNAL FACTORS | EXTERNAL FACTORS |
|---------------|--|--|
| Strengths | Faculty and Staff, support of Division Dean | |
| Weaknesses | Not all faculty participate directly or indirectly in MRC activities. Inability to hire new full-time faculty to share in the work load. | Under-staffing: State Budget – funding of classified position, student tutors, faculty load |
| Opportunities | Encourage increased direct faculty participation. Encourage increased number of faculty office hours voluntarily scheduled in MRC. | |
| Threats | Full time faculty are overloaded with campus/division/department committee work, thus “volunteer” time in the MRC is severely restricted. Adjunct faculty are scrambling to teach on multiple campuses, thus hours of availability for assignment to the MRC are restricted. Aging computers. | Loss of Staff: State Budget – funding of classified position, student tutors, faculty load; State definition of HBA and associated rules |

- b. If applicable, discuss how new positions, other resources, and equipment granted in previous years have contributed towards reaching program action steps and towards overall programmatic health (you might also reflect on data from Core Program and Student Success Indicators). If new positions have been requested but not granted, discuss how this has impacted overall programmatic health (you might also reflect on data from Core Program and Student Success Indicators).

As previously stated in answer to IId:

During the 2008-2009 academic year a member of the mathematics faculty was scheduled in the MRC during every hour of operation. This new focus on quality, faculty resources in the MRC in addition to one classified staff member and student tutors raised the quality of the resource to a new high and dramatically increased student participation. Also, more faculty now assign specific HBA activities to be completed in the MRC – test corrections, lab tests, computer based assignments, remedial packets, group projects etc. These assignments take advantage of the availability of faculty, staff, and student tutors for immediate assistance and feedback.

As a result of the current budget crisis, the classified staff position in the MRC has been defunded. As this person interviewed, selected, scheduled, trained and coordinated student tutors in addition to coordinating the activities of the MRC and acting as a “super-tutor,” we are currently scrambling to determine how we can maintain the quality program that we have without classified staff. We will be implementing change, however, the direction of that change is currently unclear.

During the 2008-2009 year, students who enrolled in Math 850 or 852 while not currently enrolled in another math course met with an instructor to develop an individual study plan based on pre-tests and personal goals – a time intensive process. Starting with a pilot program in Summer 09 and continuing through the 2009-2010 academic year, the MRC will be using the MyMathTest program for these students. The program is web based and incorporates pre- and post- testing and study program development. The students will still receive quality faculty assistance, but with the implementation of this

program much less time will be spent on administrative details.

During the Academic Year 2009-2010 students in selected Basic Skills courses will use MyMathTest as a course supplement for their HBA attached to the course. These students will have access to the computers in the MRC as well as elsewhere on campus to facilitate this project. Basic skills funds were used to purchase student identification codes for this pilot project. Once the supply is depleted we will either need funds to purchase another large group of access codes or will need to require that students purchase the code individually (current cost to students is \$10 for 16 weeks of access).

To facilitate use of textbook based web-programs, instructor generated web-based programs, MyMathTest, and student access to "free" online tutorials, the MRC provides 16 laptops and a computer for printing of student work/assignments. These computers are quite busy and are aging. This year we started "borrowing" computers from the Math PC Computer Cart to replace MRC computers that died. Unfortunately the computers on the cart are as old as the oldest ones in the lab so this form of replacement is at best "stop gap." An additional 3 computers are used for student tracking, 2 in the building 18 MRC location and 1 in the Satellite Statistic MRC. The accompanying equipment request is to implement a systematic way to replace the laptops so that expense is spread evenly over time.

An additional 18 computers located in the Math Mac lab are used by statistics and in the Satellite Statistics MRC (open 9 hours a week). These computers have also reached life expectancy and the Math Department has requested their replacement as part of their 2008 Program Review. Funds have not yet been granted.

VI. **Action Steps and Outcomes** (*Data Resources: "Student Self-Assessment and Satisfaction Survey"; other lab surveys; "Student Profile Data for Labs, Spring 2009"; "Educational Master Plan, 2008"; "2008-2013 College of San Mateo Strategic Plan" – see website at http://www.smccd.net/accounts/csmresearch/prie/institutional_documents.html; student success data from departmental "Core Program and Student Success Indicators" – see website at http://www.smccd.net/accounts/csmresearch/prie/program_review.html; previous Program Review and Planning reports; department records; other environmental scan data.*)

- a. Identify the lab's action steps. Action steps should be broad issues and concerns that incorporate some sort of measurable action and should connect to the "Educational Master Plan, 2008"; "2008-2013 College of San Mateo Strategic Plan"; the Division work plan; and GE- or certificate SLOs.

1. Continue and assess pilot program using MMT and continue to evaluate student feedback/usage every semester
2. Create a more balanced environment that meets the needs of students desiring quiet and students needing to work with groups.
3. Increase staff at peak hours
4. Increase unduplicated student participation, focusing on developmental sections.

- b. Briefly explain, specifically, how the lab's action steps relate to the Educational Master Plan.

The above address aspects of the following College Goals as stated in the Educational Master Plan (October 2008, v. 2):

| | |
|--|---|
| Action 1,2,3,4 address changing delivery to meet the needs and expectations of students. | Goal 1: Program and Services – CSM will match its programs and services – and the manner in which they are delivered – to the evolving needs and expectations of our students. |
| Action 1,2,3,4 support student learning and thus retention. | Goal 2: Enrollment Management - CSM will develop and implement a comprehensive research-based enrollment management initiative that addresses all the states of enrollment management, including marketing, outreach, recruitment, and retention. |
| Action 2 promotes respecting the needs of other students in the learning environment | Goal 3: Diversity – CSM will promote a diverse learning and working environment that encourages tolerance, mutual respect, and the free exchange of ideas. |
| Action 1 facilitates continuous assessment based improvement. | Goal 4: Assessment – CSM will ensure continuous quality improvement by integrating and promoting evidence-based assessment throughout the institution. |

- c. Identify and explain the lab’s outcomes, the measurable “mileposts” which will allow you to determine when the action steps are reached.

1. Completion of end of semester reports.
2. Decrease in negative feedback on “noise” in student comments on Survey at the end of the semester.
3. Increase in student satisfaction, survey questions 2,3,and 7.
4. End of Semester Report, tracking student usage by course, increased visits per class.

VII. SUMMARY OF RESOURCES NEEDED TO REACH LAB ACTION STEPS (Data Resources: “Student Self-Assessment and Satisfaction Survey”; other lab surveys; “Student Profile Data for Labs, Spring 2009”; “Educational Master Plan, 2008”; “2008-2013 College of San Mateo Strategic Plan” – see website at http://www.smccd.net/accounts/csmresearch/prie/institutional_documents.html ; student success data from departmental “Core Program and Student Success Indicators” – see website at http://www.smccd.net/accounts/csmresearch/prie/program_review.html ; previous Program Review and Planning reports; department records; other environmental scan data.)

- a. In the matrices below, itemize the resources needed to reach lab 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 lab changes or plans. Ideally, SLOs are assessed, the assessments lead to planning, and the resources requested link directly to those plans.

| Faculty Time 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 lab action steps based on SLO assessment. |
|--|---|---|
| <p>Minimum: Maintain the current level of faculty involvement – one faculty member assigned to work directly with for every hour open. Requested increase – Add one additional faculty member during peak hours (add 10 to 15 faculty hours per week)</p> <p>Non-Instructional Faculty: 5 hours per week educational research (data collection, reports, tracking), curriculum development, curriculum specific tutor training and assessment.</p> | <p>Expected outcomes include:</p> <ol style="list-style-type: none"> 1. Shorter waiting time for students during peak hours – improved student service 2. Higher number of faculty actively participating in the MRC – more students seeking their instructor and then discovering the support services available there 3. Increased student success and student satisfaction. <p>Expected outcomes include:</p> <ol style="list-style-type: none"> 1. Semester reports 2. Tutor training – for the benefit of the students 3. Curriculum development | <p>The items link directly. See Expected outcomes.</p> |

| 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 lab action steps based on SLO assessment. |
|--|---|--|
| <p>1 Classified Staff person (retain the one we had during the 2008-2009 year)</p> | <p>Maintain/improve the current level of student service, coordinate lab activities, coordinate student tutor/assistant hiring, training, monitoring etc, ordering of lab copies of current text books and ancillary materials, ordering of supplies, maintain and up-date student web resources.</p> <p>If not granted, other division will have to pick up essential aspects related to staffing and supplying the lab. The one</p> | <p>As seen in student feedback, we were understaffed during peak hours – students had to wait too long for assistance, the crowded lab sometimes got noisy, If this position is not maintained the faculty will be struggling to maintain the level of service from 2008-2009 and will not have a coordinator to facilitate a consistent level of service throughout the day and to facilitate the proposed changes noted in section IIIc.</p> |

| | | |
|--|---|--|
| | consistent person to whom students go first will no longer exist. The quality of student service will be negatively impacted. | |
|--|---|--|

- 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 lab action steps based on SLO assessment. |
|--|--|--|
| <p>Item: PC laptop w/5yr warranty Latitude E6400 Number: 4 per year Vendor: Dell Unit price: \$1728.10 Total Cost: \$6812.38. per year Status: replacement.</p> <p>Note: The plan is designed to replace 4 computers a year so that at the end of a 5 year cycle all computers have been replaces and it is time to restart the cycle. If this plan is followed computers will never go out of warranty – expensive, unpredictable, out of warranty repairs are thus avoided.</p> | <p>Of the 19 computers used to directly support the MRC program 4 have already outlived their life expectancy by 2 years, 10 will reach life expectancy in 2011 and 5 will reach life expectancy in 2012.</p> <p>If we do not start systematically replacing the old (and very slow) computers students have to wait longer for access and will be frustrated by “crashes.”</p> <p>If we do systematically replace the oldest computers, the quality of service in the MRC will be maintained.</p> | <p>To facilitate use of textbook based web-programs, instructor generated web-based programs, MyMathTest, and student access to “free” online tutorials, the MRC provides 16 laptops and a computer for printing of student work/assignments. These computers are quite busy and are aging. This year we started “borrowing” computers from the Math PC Computer Cart to replace MRC computers that died. Unfortunately the computers on the cart are as old as the oldest ones in the lab so this form of replacement is at best “stop gap.” An additional 3 computers are used for student tracking, 2 in the building 18 MRC location and 1 in the Satellite Statistic MRC.</p> |

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

VIII. **Course Outlines – for labs that are discrete courses** (*Data Resources: department records; Committee On Instruction website; Office of the Vice President of Instruction; Division Dean*)

- a. If applicable to the lab, list by course number (e.g. CHEM 210) all department or program courses included in the most recent college catalog, the date of the current Course Outline for each course, and the due date of each course's next update.

| Course Number | Last Updated | Six-year Update Due |
|----------------------|---------------------|----------------------------|
| Math 811 | 2006 | 2012 |
| Math 802 | 2007 | 2013 |
| Math 850/852 | 2007 | 2013 |
| Math 110 | 2008 | 2014 |
| Math 111 | 2008 | 2014 |
| Math 112 | 2008 | 2014 |
| Math 115 | 2004 | 2010 |
| Math 120 | 2004 | 2010 |
| Math 122 | 2008 | 2014 |
| Math 123 | 2008 | 2014 |
| Math 125 | 2005 | 2011 |
| Math 130 | 2005 | 2011 |
| Math 145 | 2004 | 2010 |
| Math 147 | 2008 | 2014 |
| Math 200 | 2005 | 2011 |
| Math 222 | 2005 | 2011 |
| Math 231 | 2005 | Banked 2008 |
| Math 241 | 2005 | 2011 |
| Math 242 | 2005 | 2011 |
| Math 251 | 2005 | 2011 |
| Math 252 | 2005 | 2011 |
| Math 253 | 2005 | 2011 |
| Math 268 | 2007 | 2013 |
| Math 270 | 2007 | 2013 |
| Math 275 | 2007 | 2013 |

Upon its completion, please email this Program Review of Labs and Centers report to the Vice President of Instruction, the appropriate division dean, and the CSM Academic Senate President.

Date of evaluation: July 2009

Please list the department's Program Review of Labs and Centers report team:

Primary program contact person: Cheryl Gregory
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 Part-time faculty: Lena Feinman
 Administrators: Charlene Frontiera
 Classified staff: Caryn Goldman

Students:

Faculty's signatures

Date

Dean's signature

Date