College of San Mateo — Program Review Submission

Instructional Program Review

Program Name: **Mathematics**
Program Contact: **Hom, Melvin L.**
Academic Year: **2013-2014**
Status: **Submitted**

1. Description of Program

Provide a brief description of the program and how it supports the college's **College Mission and Diversity Statements**, **Institutional Priorities, 2008-2013**, **5 in 5 College Strategies, Spring 2011**, and other **Institutional Program Planning** as appropriate.

The Mathematics Program is comprised of three types of courses:

A. Non-transferable courses, including basic skills: Math 811, 802, 850, 110, 111, 112, 115, 120, 122, 123;

B. Transferable courses for Liberal Arts and Business majors: Math 125, 145, 147, 200, 241, 242;

C. Transferable courses for Science, Engineering, and Math Majors: Math 130, 222, 251, 252, 253, 268, 270, 275.

Currently, Math 110, 120, 145 and 200 are offered in hybrid format and Math 120 and 200 are offered in on-line format in summer session. We are exploring the possibility of adding an online or hybrid Math 110 beginning in summer 2015.

The program offers two Associate degrees: AS in Mathematics and AA-T in Mathematics.

The department offers student support in the Math Resource Center which is staffed by faculty and student tutors.

The department piloted Supplemental Instruction on the CSM campus. The growing initiative is currently in 10 to 11 sections per semester.

2. Student Learning and Program Data

A. Discuss Student Learning Outcomes Assessment

Reflect on recent SLO assessment results for courses and degrees and certificates offered by the program. Identify trends and discuss areas in need of improvement.

The department maintains a schedule of SLO assessment that has most courses on a 6 year cycle. If an area for improvement is identified then that area is assessed at least annually until the “problem” is resolved. Courses in the algebra sequence (110, 111, 112, 120, 122, 123) are assessed each year, because we are in year three of a focus on areas needing improvement in that sequence. Thus, during Fall 2012 we assessed SLOs in math 111,112,110, 122, 123, 120, 125 (follow-up), 145, 275, and 850. During Fall 2013 we assessed Math 111, 112, 110, 122, 123, 120, 200, 253, and 811.

Trends in Algebra Sequence (111,112,110,122,123,120). The current emphasis on “mastery” of a core of concepts and skills (started in 2010) shows positively in SLO assessment with the number of SLOs across those courses where the standard is met increasing dramatically in five of the six courses, including all three basic skills courses (111,112,110). The anomaly occurred in math 122 showed a decrease in SLOs where criteria was met 2012. We will investigate. Annual assessment will continue in these six courses. Data collected in Fall 2013 is under analysis.

Math 125 was identified as a “problem area” in 2010-11. Inconsistencies in content from instructor to instructor and thus lack of alignment with the course content and the Common Core Instrument was identified as a likely source of the “problem.” A full time faculty member developed a prototype schedule and pacing document which was and will continue to be communicated and followed up on with all current instructors. The results were dramatic. In fall 2012, Math 125 assessment met standards for every objective, and increased the class percentage success on each SLOs questions.

During Fall 2013 Math 811 completed the first semester of a new emphasis that included extended weekly contact hours from 3 to 5 and coordinated efforts of math faculty, counselors, and Supplemental Instruction students. The improvements were dramatic: student success rates increased (up to 59.7% in Fall 2013 from 51.3% in Fall 2012) and success increased on each SLO assessed. The department plans to continue through Spring 2014 and hopes to have the program continue with counselor support and SI included.

Fall Fall 2013 criteria were met for all assessed SLOs in both Math 200 and Math 252.

Overall Trends:

- In major courses, Math 251 and above, standards tend to be met for every objective at each assessment.
- In transfer level courses (non-major courses) a follow up assessment on one SLO (out of 6 to 10 SLOs per course) is not unusual. Faculty awareness of trouble spots and subsequent changes in pedagogy or time-on-task usually leads to a satisfactory assessment within one year.
- At below transfer level and basic skills a “problem area” is almost consistently identified and vary from semester to semester.

B. Student Success Indicators

1. Review **Student Success and Core Program Indicators** and discuss any differences in student success indicators across demographic variables. Also refer to the **College Index** and other relevant sections of the **Educational Master Plan: Update, 2012**, e.g., Student Outcomes and Student Outcomes: Transfer. Basic Skills programs should also refer to **ARCC** data.

The Mathematics Department has had a steady rate of success, retention, and withdrawal rates over the past 3 years, with overall success being about 58%, retention rate about 76%, and withdrawal rate about 24%. Among African-Americans, there was an increase in success rate from 41.2% in 2010-2011 to 49.3% in 2011-2012, but the success rate dropped back to 43.9% in 2012-2013. The success rate among African-Americans is still much lower than other ethnic groups, and hopefully with growth within student success initiatives such as SI, we can bridge the gap in future years. Asians continue to have the highest success rate at about 66%, followed closely by Whites at 61%. There are consistently more males than females taking Math courses (2940 males in '12-'13 compared to 2434 females; similar ratios were seen in prior years), even though college-wide there are more female students than males.

For the past several years the percentage of Math students taking a transferable course has been about 44% for Fall semester and 48% for Spring semesters; the percentage of Math students taking a Degree-Applicable course has been about 20% for both Fall and Spring semesters recently; and the percentage of Math students taking Basic Skills courses has been about 35% for Fall and 31% for Spring.

2. Discuss any differences in student success indicators across modes of delivery (on-campus versus distance education). Refer to **Delivery Mode Course Comparison**.

For Math 200, the success rate was about 61% in both Distance and Traditional modes for 2012-2013. Math 110 and Math 120 continue to be problematic in Distance mode; for the past several years we have had only about 20% success rate for Fall Math 110 hybrid courses, compared to about 62% success in Fall traditional Math 110 courses. For Math 120 hybrid courses, Fall success rates in hybrid courses has been about 35% compared to about 60% success rates in Fall traditional modes. We try to emphasize to students that the onlne/hybrid mode is not for everybody and that some students need to take a traditional, bricks-and-mortar course with face-to-face contact with students; nevertheless, some students enroll, perhaps with the misguided thought that the online course would be "easier" and/or "less challenging", which is not the case.

C. Program Efficiency Indicators. Do we deliver programs efficiently given our resources?

Summarize trends in program efficiency as indicated in the **Student Success and Core Program Indicators** (LOAD, Full-time and Part-time FTEF, etc.)

The LOAD has gone from 593.4 in 2010-2011 to 543.2 in 2011-2012 to 574.3 in 2012-2013, consistently higher than the division and college total. The Full-time FTEF has gone from 23.1 to 2010-2011 to 24.9 in 2011-2012 to 22.1 in 2012-2013. Adjunct FTEF has gone from 25.1 to 2010-2011 to 24.3 in 2011-2012 to 26.6 in 2012-2013. The Percent of Full-time has remained at roughly 50%, from 48.9% in 2010-2011 to 51.7% in 2011-2012 to 46.6% in 2012-2013, consistently lower than the college average. Even with two new hires planned for Spring 2014, we will still be far away from the target of 75% full-time and 25% adjunct.

3. Career Technical Education

D. Additional Career Technical Education Data - CTE programs only. (This information is required by California Ed. Code 78016.)

1. Review the program's **Gainful Employment Disclosure Data**, **External Community**, and other institutional research or labor market data as applicable. Explain how the program meets a documented labor market demand without unnecessary duplication of other training programs in the area. Summarize student outcomes in terms of degrees, certificates, and employment. Identify areas of accomplishment and areas of concern.

2. Review and update the program's Advisory Committee information. Provide the date of most recent advisory committee meeting.

4. Additional Factors

Discuss additional factors as applicable that impact the program, including changes in student populations, state-wide initiatives, transfer requirements, advisory committee recommendations, legal mandates, workforce development and employment opportunities, community needs. See **Institutional Research** as needed.

According to the Educational Master Plan, San Mateo County is projected to have an increase in demand for biological science, physical science, and computer science majors. Math is required in all of these fields.

5. Planning

A. Results of Program Plans and Actions

Describe results, including measurable outcomes, from plans and actions in recent program reviews.

SPRING 2013 SUBMISSION GOAL 1: Increase the number of full-rime faculty. Insufficient full-time faculty was identified as a weakness. We noted that there are not enough full-time faculty to spearhead efforts to improve success in the developmental mathematics sequence, to develop and assess ventures into the on-line/hybrid world of mathematics courses, and to share the heavy “administrative load” of SLO assessment and reporting, updating 25 course outlines, scheduling of courses and the MRC, communicating effectively with a pool of about 30 adjunct faculty members per semester, and active participation in essential division and campus committees. We also noted that our last new hire was accompanied by a retirement so we have had a full-time faculty net gain of 0 and that there are a few other full-timers who have indicated plans to retire in the near future.

RESULT OF SPRING 2013 SUBMISSION GOAL 1: The department has been granted two new hires for Fall 2014. The hiring process is expected to be completed in April 2014.

Spring 2013 SUBMISSION GOAL 2: Increase the number of courses offered in online or hybrid format. During Fall 2012 Math 145 was successfully offered in hybrid for the first time. It succeeded in that format during Spring 2013 and Fall 2013 but was cancelled during Summer 2013 due to insufficient enrollment.

RESULT OF SPRING 2013 SUBMISSION GOAL 2: The Math 110, 120, 145, and 200 courses continue to enroll well as hybrid courses during Fall and Spring terms. Math 120 and 200 are offered as online courses during the summer. We are exploring the possibility of adding a hybrid or online Math 110 during the summer of 2015.

SPRING 2013 SUBMISSION GOAL 3: Evaluate different flexible scheduling options. The department successfully added a new TTH mid-afternoon section of Math 200 in Spring 2012 and plans to continue with this offering. After coordination with other departments within the division, some STEM math courses will be offered (starting in the fall 2013 semester) with new formats (and at new times to avoid conflicts with science courses that are often concurrent with the mathematics selection). For example, Math 253 will be offered MWF on a 2-2-1 schedule and a Math 130 will be converted to MW on a 2-2 schedule. Math 811 will change from a 3 contact hour format to a 5 contact hour format for Fall 2013 requiring major changes in the configuration of the department schedule and creative scheduling to meet the needs of students who can only be on campus MWF or TTH. For example, Math 811 will be offered on TTHF in a 1.5-1.5-2 configuration and on a TTH in a 2.5-2.5 configuration. Evaluation of new configurations will continue.

RESULTS OF SPRING 2013 SUBMISSION GOAL 3: The new configurations were successful and will remain an option for flexible scheduling within the department. It is especially noted that 5-unit classes have historically had difficulty filling in the afternoon, but when offered on a 2 or 3 day a week schedule they have filled successfully.

SPRING 2013 SUBMISSION GOAL 4: Increase student success in the developmental algebra sequence. As noted above in the SLO section, the departmental focus on more effective communication of course requirements, more coordination among faculty, and focus on work toward mastery of key concepts is showing positive results over the last three years.

RESULTS OF SPRING 2013 SUBMISSION GOAL 4: The department is still collecting and assessing data with the goal of discussion of the three-year data set during Spring 2014 with a goal of submitting making any curriculum or outline changes prior to the deadlines for the Fall 2015 catalog.

SPRING 2013 SUBMISSION GOAL 5: Increase the number of student tutors employed in the Math Resource Center: We identified a weakness in meeting student support needs; there were not enough student tutor hours allotted to the MRC to meet the needs of increased student usage.

RESULTS OF SPRING 2013 SUBMISSION GOAL 5: We were somewhat successful in our quest to increase the number of student tutor hours in the MRC. An additional $3300 was added to the budget for Spring 2012 and the increase ($3300) carried forward for the academic year Fall 2012-2013. Wait time for student service has decreased and student feedback in Spring 2013 was positive. However, the request for a student tutor budget for summer term was not honored. That request will be made again. Also, due to a project increase in the student tutor pay scale, the budget will need further augmentation for academic year 2014-2015. (See the MRC Program Review).

B. Program Vision

What is the program's *vision* for sustaining and improving student learning and success over the next three years? Make connections to the **College Mission and Diversity Statements**, **Institutional Priorities, 2008-2013**, and other **Institutional Program Planning** as appropriate. Address discussion in the Student Learning and Program Data section: SLO assessment results and trends in student success indicators.
[**Note**: Specific plans to be implemented in the next year should be entered in C of the Planning section.
CTE programs must address changes in the context of completion and employment rates, anticipated labor demand, and any overlap with similar programs in the area as noted in D1 and D2 of the Career Technical Education section.]

The mathematics department sees its program as essentially three different but interconnected programs. Since the three programs provide unique challenges, each will be addressed separately in this program vision, then common needs will be discussed.

1. Developmental Math – Developmental Mathematics facilitates success and persistence among students in basic skills and below-transfer level mathematics. The courses support student completion of certificates, AA/AS degrees, and general education requirements.

As indicated in SLO discussions above and in prioritized plans below, student success and persistence in basic skills mathematics and below transfer level mathematics has long been a departmental concern. However, the current and on-going emphasis on mastery of an identified set of concepts/skills in the algebra sequence seems to be working. We envision a department that will continue to assess progress in student success and persistence in this sequence and who will cooperatively and collaboratively address new challenges as they arise. The Math 811 initiative is an example of this department culture in action. After much discussion and research into what

seems to be working elsewhere the consensus was that math 811 students need more time on task, need counselor intervention when life and/or immaturity block success and need to learn how to be students as much as they need to learn arithmetic. We kept running into obstacles, but finally a plan came together and was launched in Fall 2013. As stated in the SLO section above this collaborative effort shows promise. However, the plan only came together when a group of full-time faculty who do not usually teach Math 811 determined to be core faculty at that level for at least the next year and counseling faculty were identified to be part of the project. The SI program is part of this promising Math 811 collaboration. The SI program is another example of faculty working together to support a program that supports student success. The Math department envisions SI sections available for all below transfer level math courses. The department needs more full time faculty who will dedicate part of their time to taking the lead in developmental mathematics initiatives.

2. Transfer Level Sequence– Transfer level courses meet the needs of students intending to transfer in social science, nursing, and liberal arts programs.

Again, cooperation and collaboration among faculty has led to improved student success at this level. A statistics "team" evolved over time that now includes both full-time and part-time faculty, and rich conversation between those using traditional and non-traditional approaches to teaching statistics. We envision deliberate development of teams of faculty who work together to develop strategies and pedagogies that improve student success and persistence at this level. As indicated in SLO discussions above, such an effort is bringing promising results in Math 125. We envision this type of collaboration and sharing developing around other courses at the Transfer Level. However, the department needs full-time faculty interested in these courses and in taking the lead in the effort to develop a faculty team in support of students at this level.

3. Calculus Sequence–The calculus sequence (and beyond) meets the needs of students who desire to earn an AS or AS-T in Mathematics and students intending to transfer into STEM majors.

As indicated above, SLO success and student success and persistence are highest at this level. These courses are the most mathematically challenging to teach and also, the easiest to teach. Most students arrive with acceptable 'student' skills. Here the challenge is to stretch the students to application in context. The department needs more multi-faceted faculty capable of challenging and being challenged by these students and at the same willing and able to accept the very different challenges of the other two sequences.

Thus we envision an enlarged full-time faculty willing and capable of taking the lead in multiple sequences of the program. We envision a faculty (full-time and adjunct) dedicated to learning and growing as instructors, with the ultimate goal of guiding as many students as possible to success in their educational goals, whether that goal be a certificate, a non-STEM AA, transfer to a non-STEM degree, or transfer to a STEM degree.

1. To guide future faculty and staff development initiatives, describe the professional activities that would be most effective in carrying out the program's vision to improve student learning and success.

Professional development should be relevant and immediately applicable to the classroom. We encourage support for special rate funds that allow adjunct faculty to work more closely with other faculty in learning new strategies/skills, developing and enacting those ideas, and evaluating the impact on student success. We would like to see more presentations by CSM faculty to CSM faculty to encourage growth of Supplemental Instruction, Reading Apprenticeship, and other recognized "best practices" in support of student success.

2. To guide future collaboration across student services, learning support centers, and instructional programs, describe the interactions that would help the program to improve student success.

The faculty leads of the Math Resource Center are active participants in the Learning Support Centers Coordination Committee (LSC3). We will continue to work together to seek ways to best provide student success support while becoming more efficient in how we offer services, seeking to identify and reduce duplications and investigating how by acting as a unit we can employ economies of scale. Last year's endeavors have given us a much better understanding of the roles played by the many centers on campus and lead to discussion of how we might better serve students by consolidation of services at times when our individual labs are not usually open (evenings and weekends). This idea needs further investigation especially with respect to increased funding for staff and faculty assignments and the

logistics of collecting SARS data for TBA requirements when faculty with the appropriate FSA are on duty.

Mathematics faculty have a history of working together with the BSI committee to support and improve success among basic skills students. We would like to see the current Supplemental Instruction program become institutionalized and branch out into other disciplines and know there is some interest elsewhere within our division.

The Math 811 planning group has requested counseling faculty designated to work more closely with developmental mathematics faculty. We have evidence from our learning community experience that this interaction does lead to increased student success. We would like to see such partnerships continued and further developed.

Within the Math Science Division a multi-disciplinary group is working together and learning together in Reading Apprenticeship. Currently Reading faculty are working and learning with us with goals of becoming better teachers and increasing student success. We would like to see this interdisciplinary effort continue to grow.

3. To guide the **Institutional Planning Budget Committee** (IPBC) in long-range planning, identify any major changes in resource needs anticipated during the next three years. Examples: faculty retirements, equipment obsolescence, space allocation.

See the Resource Requests section below to enter itemized resource requests for next year.
Leave sections blank if no major changes are anticipated.

Faculty

With 6 retirements and 5 hires in the last 6 years we are down one full time-faculty member. One full-time faculty member has stated an intent to retire in the next year, and another in the next 4 years. Even with two new hires in Spring 2014, we need to hire more new faculty now so that new faculty benefit from the institutional memory of the well-seasoned faculty and programs continue without interruption.

Mathematics supports additional faculty and funding for Counseling, so that their faculty can continue to collaborate with math faculty in the Math 811 project.

Equipment and Technology

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 helping in honing skills for Math 120 (Intermediate Algebra) students. There is a need for a second computer lab/classroom to aid in teaching Basic Skills Mathematics, as the present lab/classroom in 16-111 is fully employed for teaching statistics, and is designed for collaborative work (only 20 computers) is 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.

In 2016, the 21 computers in 16-111, the statistics computer classroom will have reached their life expectancy and should be replaced.

Projectors in building 16 and 18 have been in service for quite a while, so a replacement plan needs to be developed.

Several classrooms used for Mathematics can become unbearably hot because of the dark shades that are in the rooms. We are asking to replace these shades with lighter shades which would reflect, rather than maintain, the heat.

We need another 4 ft x 7 ft whiteboard in the building 15 Math corridor, specific location between 15-127 and 15-129, in order to accommodate the large number of Math students who wish to have board space and work on Math problems near the offices of Math Department instructors. Presently, there are 2 whiteboards in the Math corridor but they are not sufficient for the needs of the Math Department instructors and students.

Instructional Materials

Traditional publishing companies provide copies free to instructors but charge students large amounts to purchase their personal copies of the text. A growing subset of the mathematics faculty are selecting high quality open-source text book that are offered inexpensively to students. The open-source publishers do not provide complementary texts to faculty and to learning centers. Many publishers only make solution manuals available to faculty as e-versions (previously we could get them as free print copies). Funds will be needed to purchase print texts and solutions manuals for faculty who prefer print. (See complete discussion in Math Resource Center Program Review.)

Classified Staff

Classified staff is needed to support the SI program and release the faculty lead from administrative and data collection to spend more time actually teaching. For the current year, we support the increase of classified staff dedicated to the SI program; we recognize that this person will be serving the college as a whole, not just mathematics. The Math Resource Center requests a less than full-time Instructional Aid (see Math Resource Center Program Review).

Facilities

The department is currently seeking replacement shades in mathematics classrooms due to heat absorption issues that make the classrooms overly warm. Some funding was received in 2013-2014 and several classrooms are scheduled for replacement shades. We would like to see the remaining funding during 2014-2015.

Cabling and extension cords in 16-111, the statistics computer classroom, are constantly on the floor. We are looking for solutions to this problem and may make a request of facilities in the future. The department is again requesting an additional computer classroom, preferably adjacent to the current Math Resource center.

The department requests a third white board mounted in the hallway outside our offices in building 15. The hallway has become our extended office space and provides a way for instructors to interact with multiple students simultaneously and for small groups of students to work on problem solving within close proximity of their math faculty.

C. Program Plans and Actions to Improve Student Success

Prioritize the plans to be carried out next year to sustain and improve student success. Briefly describe each plan and how it supports the **Institutional Priorities, 2008-2013**. For each plan, list actions and measurable outcomes. (Plans may extend beyond a single year.)

Plan 1

Title:
Math 811 Development Group

Description
In Fall 2013 CSM implemented a new format for Math 811 Arithmetic Review with Prealgebra. The new format will increase student contact from 3 hours a week to 5 hours a week. The department is committed to continuing to building a team of fulltime and adjunct faculty to collaborate in developing, delivering, and evaluating alternative strategies to increase student

success at this first developmental level and persistence into the algebra sequence. In addition, the department would like to continue to include within the team a dedicated counselor who will get to know the students, provide early intervention, and collaborate with the faculty. Innovation Grants partially funded the program for academic year 2013-2014.

Action(s)	Completion Date	Measurable Outcome(s)
Implement plans as described in grant application and submit report	Fall 2013	Mid-year report completed February 2014
Follow up as indicated in Grant	Summer 2014	End of year report completed
Share results with Department	August 2014	Flex meeting or email
Continue for academic year 2014-2015		Mid-year and end of year SLO and student success reports.

Plan 2

Title:
Algebra Sequence Focus (year 3)

Description
As a result of multiple years of discouraging assessment results, the faculty again discussed the problems in depth during monthly math meetings and in email discussion in 2010-11 and committed to a three year emphasis on improved mastery of identified sub-objectives (started in 2011-12).

Action(s)	Completion Date	Measurable Outcome(s)
Fall and Spring informational emails distributed to faculty, follow up with new faculty	Fall 2013/ Spring 2014	Emails sent
Fall SLO analysis completed and tracked	Spring 2014	Report distributed to faculty and posted in TracDat
Get new success and persistence data from PRIE	Spring 2014	Report completed, sent to math faculty for discussion
Make curricular decisions before outline updates due	Fall 2015	Revised course outlines submitted to COI

in Fall 2014 for Fall 2015 catalog.		

Plan 3

Title:
Supplemental Instruction

Description
Supplemental Instruction is institutionalized beginning Fall 2014 with a minimum of 11 SI leaders in mathematics Fall and Spring. The department desires growth to include the below transfer level algebra courses in the SI program.

Action(s)	Completion Date	Measurable Outcome(s)
Determination of Funding for 2014-2015	Spring 2014	Commitment needed from IPBC
Collaborate with identified college lead to hire and train Math SI students	Spring 2014	Students hired and trained
SI implemented in Fall 2014	Spring 2015	Reports submitted to campus lead
SI implemented in Spring 2015	Summer 2015	Reports submitted to campus lead

For additional plans, cut/paste from above and insert here. Or add an additional page. Number your additional plans accordingly.

6. Resource Requests

Itemized Resource Requests

List the resources needed for ongoing program operation.

Faculty
NOTE: To make a faculty position request, complete **Full-time Faculty Position Request Form, AY 2013-2014** and email to your Dean. This request is separate from the program review.

Full-time faculty requests	Number of positions
Mathematics Instructor	1

Equipment and Technology

Description	Cost
New Computer Classroom (computer costs only - HP Thin Clients with monitors or current recommended configuration)	$25,000

Instructional Material

Classified Staff

Description	Cost

Facilities

For immediate or routine facilities requests, submit a CSM Facility Project Request Form.

Description	Cost
Refit of classroom to support computer classroom	$50,000-$100,000
Furniture for refitted classroom - tables and chairs for 40 students (assuming existing instructor table, podium, projector would remain)	$12,000-$15,000
Replacement blinds, building 16 and 18 rooms	$15,000
Whiteboard, 4ft x 7ft, in Math corridor of building 15, specifically between 15-127 and 15-129, for students to work with instructors on Math problems	$300-$500

7. Program Maintenance

A. Course Outline Updates

Review the **course outline update record**. List the courses that will be updated in the next academic year. For each course that will be updated, provide a faculty contact and the planned submission month. See the **Committee on Instruction website** for **course submission instructions**. Contact your division's **COI representatives** if you have questions about submission deadlines.

Career and Technical Education courses must be updated every two years.

Courses to be updated	Faculty contact	Submission month
Math 110	Ken Brown	Spring 2014
Math 111	Ken Brown	Spring 2014
Math 112	Ken Brown	Spring 2014
Math 122	Ken Brown	Fall 2014
Math 123	Ken Brown	Fall 2014
Math 850	Ken Brown	Fall 2014

B. Website Review

Review the program's website(s) annually and update as needed.

Faculty contact(s)	Date of next review/update
Robert Hasson	Fall 2014
Lena Feinman (MRC pages)	Fall 2014

C. SLO Assessment Contacts

Faculty contact(s)	Date of next review/update
Harry Nishanian	Fall 2014

In transfer level courses (non-major courses) a follow-up assessment on one SLO (out of 6 to 10 SLOs per course) is not unusual. Faculty awareness of trouble spots and subsequent changes in pedagogy or time-on-task usually leads to a satisfactory assessment within one year.

At below transfer level and basic skills a "problem area" is almost consistently identified and vary from semester to semester.