## Submission Date: 2013-2014

(Based on Criteria for Full-Time Faculty Requests agreed on at the Instructional Administrators Council, with the Dean of Counseling and the Academic Senate President present, 9/25/12)

1. Describe the position being requested (e.g., biology faculty with expertise in anatomy).

Position Request 1 and 2: Mathematics Instructor with experience/interest in working with basic skills mathematics and associated initiatives (e.g. Supplemental Instruction/Math 811 Faculty Group/Reading Apprenticeship) and expertise to teach at all levels of the mathematics curriculum.

2. Explain how the position supports one or more Board of Trustees Core Values, the College of San Mateo Mission and Diversity Statements, the College of San Mateo Institutional Priorities, and college initiatives.

# The position addresses Institutional Planning Priorities, Board Core Values and related documents:

Priority 1, Objective 3: Improve progression beyond basic skills.
Priority 1, Objective 5: Increase student participation in academic support services.
Priority 2, Objective 1: Improve transfer rates, including among at-risk students.
Priority 2, Objective 4: Use the SLO assessment cycle to foster academic excellence.
Priority 2, Objective 6: Improve effectiveness of distance learning program.
Priority 3, Objective 3: Adjust program mix to align with student needs.
Priority 3, Objective 6: Foster Academic excellence throughout the curriculum.
Priority 4, Objective 3: Support decision making in institutional planning that is informed by evidence, research and the use of outcome measures.
Priority 4, Objective 4: Maintain FTES targets as set by Budget Planning Committee.
Priority 4, Objective 5: Increase College LOAD.
Priority 5, Objective 2: Improve campus-wide communication.

Board of Trustees Core Values and Principles, Student – Centered Mission: "...The Board places top priority on our core mission of providing transfer education and workforce training to as many students as possible. Basic skills classes which are focused on preparing our students for our core mission courses as noted above are also necessary and appropriate."

Educational Master Plan: 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, and we can better serve the community with the hiring of more full-time faculty.

The Institutional Planning Committee recently instituted a Task Force to support the math department in identifying ways to : 1. Increasing the success of students in mathematics and 2. Identify engagement strategies for part-time and working students.

### Submission Date: 2013-2014

Increasing the number of full-time faculty actively participating in efforts to improve student success in the basic skills mathematics and developmental algebra sequence is one of the steps needed to increased student persistence toward goal completion, to completion of certificates and AA degrees, and to transfer.

- 3. Discuss how the position will help the department and/or division meet goals and support student learning as described in program review.
  - Section V. Institutional Planning of Program Review, A. Results of Plans and Actions states: Spring 2012 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. Our request for new hires was <u>not successful and is thus carried forward as a</u> <u>2013 request for three new hires.</u>

Section V. Institutional Planning of Program Review, B. Program Vision 3. States:

Faculty: With 5 retirements and 3 hires in the last 6 years we are down two (-2) full time faculty. Three current faculty have stated that they intend to retire in the next five years. We need to hire at least three new faculty now so that new faculty benefit from the institutional memory of the well-seasoned faculty and programs continue without interruption.

- 4. Explain how the position will promote increased student success as described in program review in one or more of the following areas:
  - Transfer: Include discussion of articulated pathways (e.g., UC, CSU, IGETC, SB 1440 transfer degrees, collaborative agreements with other community colleges and/or four-year transfer institutions).
  - Career and Technical Education (CTE): Include evidence of a demand for the next five years (e.g., EMSI data available from the dean, data indicating healthy employment demand, other available environmental scans)
  - o Capacity to move students from basics skills or ESL to transfer or CTE.
  - All transferring students need at least one transfer level mathematics course. In 2011, 52% of new students placed into basic skills mathematics (at least one level below transfer). Dedicated, well-trained faculty, focused on meeting the needs of this cadre of students, is essential to increasing student success and persistence to transfer level work.

### Submission Date: 2013-2014

- All students seeking an AA degree need to complete Math 120 or its equivalent. Since 52% of new students place below Math 120, again, dedicated, well-trained faculty, focused on meeting the needs of this cadre of students, is essential to increasing student success and persistence to completing an AA degree.
- 5. Identify number of students served by the department.

Fall 2011:2847 studentsSpring 2012:2387 studentsSummer 2012:907 students

 Discuss LOAD (The definition of LOAD is provided in the Educational Master Plan. The Budget Planning Committee sets College of San Mateo's target college-wide LOAD. Contact administration for current LOAD target.)

The LOAD has gone from 595.1 in 2009-2010 to 593.4 in 2010-2011 to 543.2 in 2011-2012, consistently higher than the college total.

- 7. Describe the impact of the following full-time / part-time faculty issues.
  - Full-time and part-time faculty in the department or discipline
  - o Ratio of full-time FTEF (full-time equivalent faculty) to hourly FTEF
  - Headcount of full-time faculty
  - Headcount of part-time faculty
  - Headcount of overload faculty (full-time faculty teaching an overload)

The Full-time FTEF has remained steady, from 23.5 in 2009-2010 to 23.1 to 2010-2011 to 24.9 in 2011-2012. Adjunct FTEF has also remained steady, from 23.5 in 2009-2010 to 25.1 to 2010-2011 to 24.3 in 2011-2012. The Percent of Full-time has remained at roughly 50%, from 50.7% in 2009-2010 to 48.9% in 2010-2011 to 51.7% in 2011-2012, consistently lower than the college average. We are far away from the target of 75% full-time and 25% adjunct, and need to hire more full-time faculty.

Currently there are 11 full time faculty members, one of these on phased in retirement. Adjunct faculty headcount fluctuates around 26-28 per semester.

8. Discuss impact (positive and negative) of full-time to part-time faculty ratio on the program's goals, targets, and program student learning outcomes.

The full time faculty is over whelmed with existing administrative and college obligations.

• The complexities of scheduling and coordinating class schedules with the MRC schedule requires extensive coordination time. The department has 27 distinct

### Submission Date: 2013-2014

courses, which averages out to 5 course outlines a year, to process through COI to stay caught up with the 6 year update cycles. The process of checking articulation agreement changes and of coming to consensus prior to updates is very time-consuming but essential.

- SLO assessment is another time-consuming and essential process. All faculty, adjunct and full-time, participate in data collection, but a full-time leadership is needed to coordinate and facilitate data collection and analysis, and facilitate discussions of strengths, weaknesses, and possible interventions.
- Effective and efficient communication is a challenge. At any time that a departmental policy, or course outline, or course SLO, or textbook is changed, full-time faculty need to insure that adjunct faculty get the necessary information.
- On average the full-time faculty evaluates 4 to 6 adjunct faculty per semester. Currently there are only 10 tenured faculty to participate in this process.
- 9. Recount number of faculty retirements for the past six years

In the past six academic years, the department has lost 5 full-time faculty members to retirement but has only been allowed to hire 3 new full-time faculty members, a loss of two with no decrease in demands on faculty time.

10. Discuss the vitality of the program (e.g., curriculum innovation, involvement in teaching and learning initiatives, faculty participation on committees, faculty participation in professional development).

The mathematics department is very active. In addition to keeping up-to-date on revisions of outlines and in assessment and follow up for SLOs for 25 courses the department actively participates in division and college wide work. The department was among the first on campus to establish a Transfer Degree. Members of the mathematics department faculty are actively engaged in many initiatives and on many committees:

- Math department meetings (usually monthly) most full-time faculty in regular attendance, some adjuncts attend, minutes e-mailed to all full time and part time faculty, often e-mail discussions occur.
- Math League Exams (National community college competition) and Algebra Exam (local competition) offered each semester multiple full-time faculty involved in proctoring and grading.
- Mathematics Seminar Math faculty teaching math faculty about investigations into mathematics, usually meets about once a month. Participation varies, but all faculty are welcome.
- Supplemental Instruction One faculty member coordinated the SI program, funded by BSI. Funding for year three of the program has been approved, with a goal of institutionalizing the program and allowing it to grow into non-math and non-basic skills classes.
- Algebra Sequence Initiative In 2010 the department entered into a new strategy to improve student success in the Algebra Sequence, a phased approach starting with Elementary Algebra. Many faculty, both adjunct and full-time, were involved in over a year of discussion and research that lead to this effort. To evaluate and track

#### Submission Date: 2013-2014

progress the department committed to annual SLO data collection in all sections and to requesting success and persistence data from PRIE after Spring 2013.

- Math 811 Development Group In Fall 2013 CSM will implement a new format for Math 811 Arithmetic Review with Pre-algebra. The new format will increase student contact from 3 hours a week to 5 hours a week. A team of full-time faculty and adjunct faculty has formed to collaboratively develop, deliver, and evaluate alternative strategies to increase student success at this first developmental level and persistence into the algebra sequence. In addition, the department would like to include within the team a dedicated counselor who will get to know the students, provide early intervention, and collaborate with the faculty. A grant application for Fall 2013-spring 2014 (Measure G) was submitted. BSI has provided funds for adjunct stipends for the planning group in Spring 2013.
- Math 200 Group this group started as two full-time and one adjunct working together to develop shared materials and discuss pedagogy of statistics: The group now has written its own text (The NOTES) provided free to students as an e-text, developed shared web-access materials, developed an online version of the course, and grown to include 3 full-time faculty and three adjunct faculty. The team leads also converse with instructors teaching from other texts, and at the start of each assessment cycle develop a common final exam to assess SLOs in student learning in both types of courses, which naturally leads to conversations about how we might better teach certain topics.
- Development of Online and Hybrid format courses The department has instituted hybrid or online courses in Math 110, 120, 145, 200. One faculty has completed STOT I and II, one has applied, others are self-taught.
- Reading Apprenticeship 2 full-time faculty members are active in the Reading Apprenticeship (RA) Initiative, including participation in multiple professional development events.
  - Several other faculty members have attended RA workshops
- Summer Bridge After a three year experiment with Math Boost, that format was deemed ineffective and costly. The department is coordinating with the Summer Bridge to provide instructor for the mathematics portion of that newly revised initiative.
- Participation on Committees Full-time faculty are active participants on:
  - BSI Committee,
  - Committee on Instruction,
  - o IPC Task,
  - o several Standards committees,
  - Program Review Revision (Academic Senate)
  - Division Technology Committee.
- Multiple faculty members have and are working with Honors Students.
- One faculty member in a developmental course participated in the California Community Colleges Smart Pen Project for two semesters. Some SI leaders have integrated usage of the smart pen to make and post notes for their sections.
- Four faculty members actively participate in WebWorks. They have contributed to the national problem base, taught workshops on the TECH language to CSM faculty and Canada faculty, and use the free homework system in their classes.

Submission Date: 2013-2014

- One faculty member is an active participant in *Bay Area Colleges Math Leadership Forum* and alerts other faculty when an interesting webinar is scheduled.
- One faculty member attends, on a monthly basis, The San Mateo County Math meeting of Cal-PASS. This faculty member serves as CSM's representative to this consortium of High School insturctors.
- Other recent Participation in Professional Development include:
  - Each year many faculty members attend CMC3 (California Mathematics Council Community Colleges),
  - 1 full time faculty member is on the CMC3 board
  - 1 full time faculty member writes regularly for the CMC3 newsletter
  - Several faculty members have attended multiple 3CNC (California Community Colleges' Success Network) conferences relative to developmental mathematics, statistics, BSI, and RA.
- 11. Discuss any mandates and regulations affecting the position.

NONE

12. Provide any additional reasons for filling this position as determined by the department or discipline and the division including need and impact on the community at large (beyond CSM).

The department expects one full- time retirement in the next two years and at least two more within 5 years. To facilitate transfer of "departmental knowledge" and mentor new faculty hires need to be made prior to any further reduction in the current number of full-time mathematics faculty.