

FULL-TIME FACULTY POSITION REQUEST FORM

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).

Physics faculty

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.

Board of Trustee Core Values

- Student Centered Mission: “The Board places top priority on our core mission of providing transfer education and work force training to as many students as possible”. Physics is an essential prerequisite for students seeking transfer to 4-year institutions to pursue a bachelor degree in science or engineering.

College of San Mateo Mission

- “*College of San Mateo fosters a culture of excellence and success that engages and challenges students through a comprehensive curriculum of basic skills, career and technical programs, and transfer preparation.*” (Emphasis Added) As mentioned above, Physics is an essential prerequisite for students seeking transfer to 4-year institutions to pursue a bachelor degree in science or engineering.

Institutional Planning Priorities

- Priority 1: Improve Student Success. This includes improving the success of all students, promoting student engagement and increasing student participation in academic support services. The Physics faculty have planned to approach improving student success by supplementing on campus courses with online supplemental materials. Development and revision of materials will be impeded by a reduction in the number of full-time faculty teaching. Promoting student engagement and participation in academic support services is something that full-time faculty are better equipped to facilitate than adjuncts teaching at several institutions.
- Priority 2: Promote Academic Excellence. This includes improving transfer rates. One full time faculty member retired at the end of fall 2012 and a second plans to retire at the end of summer 2014. This means that to continue offering a full complement of courses, remaining full time faculty will have to carry a high level of overload. This will put stress on their other professional obligations and diminish their availability to individual students in their classes.
- Priority 3: Promote Relevant, High-Quality Programs and Services. This includes fostering academic excellence and increasing participation by all College constituents. Currently, the full-time faculty are involved with the Honors Project. A loss in a faculty member will mean fewer opportunities for students in Physics to participate in the Honors Project. Without replacing retiring faculty, the remaining faculty will not have time to participate on College committees.
- Priority 4: Promote Integrated Planning, Fiscal Stability, and the Efficient Use of Resources. This includes maintaining FTES targets, increasing College load and

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maintaining appropriate staffing levels. Without the replacement of retiring faculty in Physics, it will be difficult to offer sufficient sections without significant overload for faculty. It is difficult to find qualified physics adjuncts.

- Priority 5: Enhance Institutional Dialog. This includes increasing and diversifying faculty participation in shared governance activities. As mentioned above, without replacing retiring faculty, Physics faculty will have gravely limited time for participating in the shared governance process.

Educational Master Plan

According to the Educational Master Plan, San Mateo County is projected to have an increase in the demand for biological science, physical science and computer science majors. Physics is a physical science and a prerequisite to a major in biological sciences, other physical sciences and computer science. An additional faculty member will allow the department to maintain its high quality offerings.

3. Discuss how the position will help the department and/or division meet goals and support student learning as described in program review.

The Physics Department's Vision as outlined in Program Review is to (1) continue offering quality education to students preparing to transfer to 4-year institutions pursuing bachelor degrees in the sciences and engineering and (2) increase success and retention.

These goals together with ensuring continuous quality improvement of student learning require coordination of the department by full-time faculty. Full-time faculty help promote success and retention by their increased availability to students. Part-time instructors are often limited by the need to teach at multiple campuses.

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)
 - Capacity to move students from basics skills or ESL to transfer or CTE.

Physics classes are taken by transfer students in the science and engineering fields, with the largest groups being in the biological sciences and engineering. Physics courses are prerequisites for many engineering courses. Without adequate staffing of the department, course offerings may have to decrease which would lower the transfer rate from CSM to CSUs and UCs in these fields.

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5. Identify number of students served by the department.

Fall 2011: 238
Spring 2012: 210
Summer 2012: 60

6. 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.)

Fall 2011: 435.4
Spring 2012: 426.9
Summer 2012: 754.4

Physics is a relatively small program to have 4 courses which greatly limit its maximum LOAD. Physics 126, 127 and 128 have a maximum combined enrollment of 6. Physics 329 has had enrollments of a dozen or less. Fall and spring LOAD are approximately 80% of the maximum LOAD (max LOAD Fall ~ 550, Spring ~ 540).

Physics has taken steps to increase LOAD in its advanced classes by offering more sections of the first semester courses, Physics 210 and 250. The department's top plan in Program Review is to increase student success in these two courses specifically. Success in these courses is the key to both improving LOAD for the department and for increasing the transfer rate of science and engineering students to 4-year institutions.

Physics 210 and 250 are offered both in the fall and spring (and 250 also in the summer) with multiple 24-student lab sections meeting for a common lecture to increase efficiency.

7. Describe the impact of the following full-time / part-time faculty issues.

- Full-time and part-time faculty in the department or discipline
- 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)

Beginning in spring 2011, one full-time faculty member has 40% of his load as the SLO Coordinator. That will continue through spring 2014. In fall 2012, there were 3 full-time faculty and two part-time faculty. In spring 2013, there are 2 full-time faculty (with a combined 1.03 FTEF overload) and 3 part-time faculty. In fall 2013, there will be 2 full-time faculty and (hopefully) 4 adjunct faculty.

For spring 2012, regular full-time FTEF was 2.6 out of 3.2 for a ratio of 81.3% to 18.7%. For spring 2013, regular full-time FTEF is 1.6 out of 4.12 for a ratio of 38.8% to 61.2%. For spring 2014, the ratio is likely to be the same as spring 2013. For spring 2015, if another full-time instructor retires and no new full-time instructor is hired, regular full-time FTEF will be 1.0 perhaps still out of 4.12 for a ratio of 24.3% to 75.7%.

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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.

Meeting the department goals and continuing to improve student learning through the student learning outcome assessment cycle will be greatly impacted by the reduction of regular full-time faculty FTEF.

The Physics, Math, Engineering, Biology, and Chemistry departments recently coordinated and agreed to a schedule to be used for three years that will allow students in science or engineering fields to complete the courses required for transfer in a timely manner. This schedule will be difficult for Physics to stick to if the majority of courses are taught by part-time instructors who may have limited availability or if full-time faculty take drastic overloads.

Keeping course outlines, lab manuals and other course materials up-to-date will be difficult to impossible without additional full-time faculty support.

Mentoring and evaluating faculty will be difficult to impossible if there is only one full-time faculty and that instructor is teaching at the same time as new adjuncts.

9. Recount number of faculty retirements for the past six years

There has been one retirement in the past 6 years. One more is planned at the end of the 2013-14 or 2014-15 academic year. The last full-time hire was 12 years ago.

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).

In the past three years, physics faculty have participated in the following activities/committees:

- College Assessment Committee
- College Council
- Integrated Planning Committee
- Accreditation Oversight Committee
- Academic Senate Governing Council
- Committee on Instruction
- Hiring Committees
- Library Committee
- Tenure Review Committees
- District STOT Training
- Attend professional conferences
- Data collection, evaluation, input and update for SLO outcomes assessment
- Update course outlines
- Accreditation Standards Committee
- Teaching in the Honors Program
- Family Science Day
- Connect to College

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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 Physics Department serves students in all of the sciences and in engineering with the greatest number of transfer students occurring in the biological sciences and engineering fields. Finding qualified adjunct instructors can be extremely difficult. Going back two years in the district applicant pool has yielded only one new adjunct for fall 2013, another is still needed. Allowing the number of full-time faculty in the department to drop to one would most likely lead to cancelling sections which would result in a decrease in the transfer rates for science and engineering students to UC and CSU.