

MEMORANDUM

Physical Sciences, Mathematics, and Engineering

Date: December 1, 2009
To: Christina Espinosa-Pieb, Vice President of Instruction
From: Jerry Rosenberg, Dean, x 8669
Subject: Mandated Reduction Plan for 2010-2011

During the past two months our Division has met several times to discuss college wide mandated budget reductions. Participants in the various discussions have included faculty, staff, students, the PSME Dean, and the Vice President of Instruction who attended a Division meeting devoted to the topic of budget reductions. The general approach to developing our response to the necessary reductions has been to:

- review the current budget situation (from both the college and Division perspective)
- establish an agreed upon core Division mission
- brainstorm ideas and proposals for reducing the Division budget
- cull and prioritize the suggested reductions in light of the degree to which they reflect the core mission

Briefly, it was agreed that the core mission of the Division is (given our limited resources) to provide the best possible quality Math, Science, and Technology education in the following three primary areas:

- Basic Skills
- General Education and Transfer
- Vocational Support

Despite temporary meanderings into how other areas of the college could reduce *their* budgets and the ineptitude of state lawmakers, a surprisingly quick consensus evolved. The consensus reached was identical in meetings of the entire division and in separate meetings of faculty and staff. The secondary result of our consensus is presented as an attached, prioritized list of reductions recommended by our division (PSME 2010_2011 Budget Recommendations.xls).

The primary consensus proffered (with no elicitation on my part) by full and part-time faculty and staff alike was that the College administration and bargaining units should meet as soon as possible to discuss a negotiated settlement to reduce labor costs. The Division staff and faculty felt that a solution reached through a negotiated labor agreement would have far less negative impact on individual employees, on college programs and services, and ultimately on students than would proposed cuts to courses, programs and the support personnel required to maintain a quality educational effort. Almost all agreed that the reluctantly proposed reductions, coming as they are at the end of five years of continuous budget constriction, could only reduce the quantity and quality of educational services, and could be avoided by less harmful and more effective negotiated labor policies.

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Priority	Reduction Description	Rationale	Impact	Est \$	Additional Comments
1	Roll Back Mathematics Offerings by 9 sections (1.5 %) toward the Previous 2008-2009 Enrollment Level. In less than three years we have increased the number of mathematics sections from 507 to 564, an increase of 57 sections (11%). We propose reducing the total number of math sections by 9 (1.5%); including the number of Math 10 (statistics) sections from about 106 per year to 100 per year, the number of Math 1B (Calculus II) from 31 to 29 sections per year, and the number of Math 212 sections from 81 to 80 sections per year.	For the past two and a half years we have continuously increased the number of mathematics section offerings, especially in Math 10 and the developmental math areas. Reducing our offerings by 1.5%, after the 11% increase in the past few years will have a minimal effect on students, and still leave serving far more students than we have in the very recent past. In addition, our division has experienced a more than 10% yearly productivity increase for the past two years, which also mitigates any proposed reduction in sections. Since we currently offer 25 - 30 sections of Math 10 each quarter the reduction of less than 2 sections per quarter will not significantly impact the ability of students to match their scheduling needs. Finally, reducing sections during summer quarter has less impact on our primary population, since we have many students from other institutions who take math classes during the summer, and who are able to take the classes at their home institution.	Minimal negative impact on our ability to serve our primary target populations (see rationale)	\$58,000	Reducing sections can have a drastic effect on a few individual part-time faculty who may rely on these sections for income and health care.
1	Reduce Engineering Program to Maintenance Level. Elimination of all engineering classes except introductory courses which directly focus on and enhance basic skills needed for transfer success; eliminate offerings of Engineering Statics, Properties of Materials, Engineering Drawing	Students can take eliminated courses at transfer institutions. Maintaining only courses that are specifically designed to encourage the success of students wishing to enter engineering (Introduction to Engineering) provides basic support and encouragement for those wishing to enter the engineering profession, maintains a high interest discipline and related course enrollment at a minimum cost, and enhances student success rates.	Requires engineering students to take more engineering courses at transfer institution; reduces De Anza footprint in Silicon Valley technology community reducing opportunities for grants, internships, and students	\$71,000	Reduce yearly Engr sections from 15 to 4 eliminates: 4 sections Engr10, 2 sections Engr 35, 4 sections Engr 37: total of 11 sections

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2	<p>Eliminate Evening Chemistry Program. Of total 34 yearly evening sections, 20 would be eliminated and 14 would be moved to afternoon.</p>	<p>Eliminates relatively expensive sub-program with associated technician and student support + chemical & hazardous materials costs; moving some of the most critical courses to late afternoon allows day technician to support all classes; all evening classes are offered during the day so students would still have limited availability to the courses. An analysis of enrollment data shows that many of the evening students represent overflow from the day, and would in fact prefer day classes.</p>	<p>Reduces accessibility to traditional evening (working) population; additional support burden on day technician and instructors. Reduces support for other academic and vocational programs requiring chemistry. Reduces opportunities for students choice of laboratory sciences.</p>	<p>\$165,000</p>	<p>Reduce current 34 yearly evening sections to 14 afternoon sections; elimination of 20 sections (~\$130,000), evening technician & student tech support (~\$20,000) & chem & haz-mat costs (~\$15,000)</p>
2	<p>Partial Transfer Astronomy Technician Costs to Self-Support Program. The cost of technical support for the planetarium is currently shared between PSME and Community Education, with PSME paying about 70% of the cost. An additional 15% of the total cost would be transferred to Community Education.</p>	<p>Technical support for the planetarium is necessary for both academic astronomy courses and the use of the planetarium for community programs. Community Education is able to support a slightly increased share of the burden.</p>	<p>The general difficult economic environment has had a serious effect on community education programs. As school districts and the general public fall under increased financial pressures, they reduce their expenditures on field trips and outside activities, including planetarium visits. It becomes harder for self-supporting programs that rely on those customers to support increased costs.</p>	<p>\$12,000</p>	

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3	<p>Reduction of Physics Technical Support to 1/2 Time</p>	<p>Although laboratory support in physics has been outstanding and provided much needed assistance in specifying, purchasing, maintaining, and managing laboratory equipment, the physics department has, in the not so distant past, operated without this support. The physics department offers a minimal summer laboratory program. The physics department could continue to operate, although in a significantly less effective manner, with 1/2 time laboratory support.</p>	<p>The current laboratory technician provides outstanding support in specifying, purchasing, repairing and maintaining, and managing all physics laboratory equipment. It would be very difficult to provide the same level of classroom laboratory education without a full-time technician. The technician also supports students outside of class such as providing assistance with student clubs and activities such as robotics and solar energy projects. Reduction in these services would have a significant impact on the quality of physics education we can deliver.</p>	<p>\$40,000</p>	
4	<p>Partial Transfer of Division Assistant to Alternative Duties: One of our Division Assistants currently provides extensive support to basic skills students in mathematics. This support includes directing basic skills students to appropriate college resources, assisting with the recruitment, registration, scheduling, and record keeping for basic skills programs such as Math Performance Success, EnableMath, and Title III Projects. The support also includes screening and notifying candidates for special mathematics programs, and acting as a liaison between math faculty, counselors, Title III administrators, and the PSME Dean in order to ensure the smooth functioning of basic skills mathematics programs. We propose that 1/3 of the current division assistant time be transferred to an alternate position with basic skills funding.</p>	<p>The PSME Division has identified basic skills as part of its primary core mission. Currently, one of our Division Assistants provides extensive support for our critical basic skills efforts. The support has been particularly effective in enabling the division to maintain its special basic skills programs, especially in light of extensive reductions in support by other areas of the college (such as counseling and Admissions and Records) as they respond to severe budget cuts in their areas. It seems appropriate and effective use of college basic skills grant funding to assist in providing these necessary functions. The many math courses and programs enabled by this administrative support form the basis for basic skills funding from state and federal sources.</p>	<p>We see few negative impacts associated with this reduction in division assistance, <i>provided that an alternative mechanism is found to provide the critical support needed to sustain our very successful basic skills efforts</i> . Since our Division Assistant is currently performing the described critical tasks, and the proposal would only shift funding to a more appropriate and available source. PSME basic skills efforts such as Math Performance Success (MPS), EnableMath, and Title III Mathematics Projects are all well documented, highly effective means of delivering basic skills education, and funding meant to encourage and maintain such efforts could hardly find a more appropriate use.</p>	<p>\$26,000</p>	