I. Minutes: Approval of the November 18 and December 2, 2003 Academic Senate meeting minutes (pp. 2-5).

II. Communication(s) and Announcement(s):

III. Reports:
   A. Academic Senate Chair:
   B. President's Office:
   C. Provost's Office:
   D. Statewide Senators:
   E. CFA Campus President:
   F. ASI Representatives:
   G. Other: Robert Gregg, Capital Fellowship Programs (Sacramento): student graduate fellowship opportunities for all majors with a strong interest in public policy & administration/government.

IV. Consent Agenda:

V. Business Item(s):
   A. Resolution on Appointment Procedures for Grant-related Instructional Faculty (GRIF) of Exceptional Merit: Forooohar, Chair of the Faculty Mfairs Committee, first reading (pp. 6-8).
   B. Resolution on Proposal for the Establishment of the University Center for Excellence in Science and Mathematics Education: Bailey/Detweiler/Opava, first reading. (pp. 9-20).
   C. Resolution on Free Electives: Hannings; Chair of the Curriculum Committee, first reading (p. 21).

VI. Discussion Item(s):

VII. Adjournment:
I. Minutes: The minutes of the October 28, 2003 Academic Senate meeting were approved without change.

II. Communications and Announcements: (Lewis). Welcomed back Jobo Ashbaugh as the part-time representative to the Academic Senate and announced Bob Detweiler's appointment as the interim Provost.

III. Reports:
   A. Academic Senate Chair: (Lewis) This month's Social Hour is sponsored by the College of Science and Math and will be held this Thursday, November 20, from 4-6 pm at Vista Grande.
   B. President's Office: (Howard-Greene) California has a new Governor as of yesterday who is moving down several paths trying to address our budget situation including long-term debt financing and discussions of a $20-25 billion 30-year bond on the March ballot at the same time as the education bond. There's a possibility of a 15-year $15 billion bond. Higher Education is among the more vulnerable pieces of the budget because it isn't constitutionally protected like K-12 and community colleges. The Trustees' Budget, which will build on the partnership/compact concepts providing for some increase enrollment growth and salary increases will be out this week. The Governor rescinded five trustee appointments that Gray Davis had made in his last hours.
   C. Provost's Office: None.
   D. Statewide Senators: (Hood) the statewide Academic Senate had a three-day meeting in Long Beach last week. The Chancellor's Office is ignoring what the department of finance has suggested they do for a budget and is asking for a $546 million increase, which includes increases in compensation, health cost, etc. Right now, there is a $1,700 per student shortfall between what was promised in the compact over the last 3-4 years and what we are presently getting. The statewide Academic Senate passed a resolution on Enrollment, Budget and Educational Quality in the CSU which states that we should not accept any new students unless there is a new definition of marginal cost funding. The Chancellor promised to cut back the enrollment target if the Governor's budget in January does not cover the cost of current enrollment. (Menon) A resolution on fee policy and guiding principles, which takes into account the problems with marginal cost funding, did pass. Chancellor Reed has met with Arnold Schwarzenegger and views Schwarzenegger as a better Governor for the CSU than Davis because he attended a university similar to the CSU in Wisconsin and is sympathetic to our situation. All the resolutions passed by the Statewide Academic Senate can be found at http://www.calpoly.edu/acad/sen/news.html (Foroohar) The Faculty Affairs Committee met on Thursday and wrote several resolutions, which were all passed by the full Senate. One of the resolutions was in support of the supplemental report language, similar to the resolution passed by our campus, asking for its
implementation on local campuses. Another resolution was on mitigating the effect of the budget crisis on lecturers.

E. CPA Campus President: (Foroohar) Both sides are very close on their proposals since there is no money to fight about. If we settle, the re-opener will include a Golden Handshake program and health subsidies. An issue that is being discussed is the fact that there won't be any raises in the next two years, but they want to increase the parking fee in some campuses as much as 100%. Another session is scheduled for December 8 in Sacramento. One piece of good news is arbitration on year-round operations which states that if faculty teach during summer quarter they should be treated as faculty that teach regular quarters as far as pay and rights go. Even though this won't impact our campus, it does have a significant impact on other campuses.

F. ASI Representatives: None.

G. Other: None.

IV. Consent Agenda: None.

V. Business Item(s):

Resolution on Endorsement of Central Coast Center for Arts Education: Susan Duffy, Liberal Studies. First reading. This resolution endorses a proposal to create the Central Coast Center for Arts Education with the backing of the College of Liberal Arts, the Deans' Council (conceptual approval), the Office of Research and Graduate Programs, and the University Center for Teacher Education. The center will not utilize general funds from the University because it is completely reliant on grants received, therefore, the activities of the center will increase, or decrease based on the amount of grants. M/SIP to suspend rules and move to a second reading. Second reading. M/SIP adopt resolution.

VI. Discussion Item(s): None.

VII. Meeting adjourned at 3:45 pm.

Submitted by,

[Signature]
Gladys Gregory
Academic Senate
I. Minutes: None.

II. Communications and Announcements: (Hood) requested that the body suspend the rules in order to consider a special resolution of commendation for Provost Zingg M/S/P to suspend rules. MIS to approve resolution by acclamation.

m. Reports:
   A. Academic Senate Chair: None.
   B. President's Office: (Baker) Budget - The Governor intends to make a statewide mid-year cut of $3 billion with the CSU's portion being just under $24 million for the remainder of the fiscal year of which $11.3 million is unallocated. The impact of this cut on our campus would be in the range of $700,000 to $750,000 for the current year and about $1.5 million for next year, therefore, if this is all we receive for next year, the news is good since the state is looking at a significant deficit for the coming year. Contingency plans will be in place in order to avoid being caught in a situation that could have been eased with some planning. The next indication of what will happen to our budget will occur when the January budget is released. The Board of Trustees has put forward a budget, which identifies the needs of the CSU and is based on the historic compact and partnership agreement with past governors. Among other things, it requests a 4% increase in faculty/staff compensation, a 3% enrollment increase and funds to backfill current-year budget cuts. The budget calls for a net increase of about $550 million.
   Enrollment - While the budget provides for 3% enrollment growth, the CSU is currently planning for flat enrollment systemwide, and that could go down slightly if there are further reductions. Cal Poly is close to the revised enrollment target and the plan is for flat enrollment or a little below target given the fact that the budget is likely to be reduced again. Capital Bond - Proposition 55 was approved for piacemill on the March 2004 ballot by the legislature. This bond will provide capital funding to construct a new building for College of Architecture and Environmental Design and will set the stage for the planning and development of the Science and Mathematics building as well. It's important to explain to all of Cal Poly the meaning of this bond to our campus. Sustainability/LEEDS - A response, endorsing the principles presented by the Academic Senate on the LEED certification resolution for Student Housing North, is in the works. The concept of sustainability is something that needs to be adopted within the university as a working principle on all projects in order to achieve sustainability at the highest feasible level in each case, applying standards such as those contained in LEED certification. Our previous Governor had stated the creation of statewide principles for life cycle cost on construction projects as a priority but not much has been done to enable their implementation. There are things that can be done up front with capital funding that would avoid long term operating cost. Would like to use our campus expertise to assist in LEED certification; particularly in the College of Architecture and Environmental Design. This will give us the ability to do our own work and some of our own certification in house since we have professionally registered people on campus. Would like to have the Senate organize a caucus for the faculty members who are already involved in various committees. That group
should periodically report to the Senate as well. Many of these faculty have specialized expertise with respect to sustainability and we would like to see us use these expertise to do our own certification. Facilities planning is addressing alternative transportation issues thru a detailed supplement to the circulation element of the master plan. One short-range issue being addressed by facilities planning includes the loss of H2 parking lot for construction of Engineering 4 building in the summer. **Faculty and Staff Housing** - There have been court actions on the first phase of faculty and staff housing due to challenges to the final project EIR by the neighbors. In a supplement to the final project EIR, Cal Poly has responded to several issues raised by the neighbors’ suit that the judge deemed to have merit. The Trustees have approved the supplement to Cal Poly’s EIR and we are awaiting final ruling on it by the Court. We have been working with the city of San Luis to ensure that adequate wastewater capacity exists for the long term Master Plan for Cal Poly. Construction of faculty and staff housing will begin during winter quarter with 72 units available in the first phase and about 140 available in the second phase. We want to have G, E & B on a solid financial basis, so it’s particularly important to identify line item funding so that gaps can be closed. We want to, focus on a better way of allocating funds to each college so that they have the ability to meet their needs. **Centennial campaign** - Cal Poly has reached the $210 million mark out of the goal of $225 million with unannounced gifts in the amount of $19 million that have been received in the last couple of months. Last year over 28,000 gifts were received and $37 million in pledges raised. There is no doubt that we will exceed our goal. The next step is to sustain the momentum and look at the needs of the university and how we put them together for the next program.

C. Provost’s Office: None.
D. Statewide Senators: None.
E. CFA Campus President: None.
F. ASI Representatives: None.
G. Other: Susan Opava, Dean of Research and Graduate Programs and Michael Manchak, Project Manager for Research and Graduate Programs, presenters on the Cal Poly Technology Park Initiative. This is a plan to establish a home on campus for private technology-based companies, for the purpose of deriving mutual benefit from this co-location and affiliation. One of the requirements of the project is that state funding will not be used; all moneys needed would be raised. A brief history: It originated as a grass roots effort in 1997 from a group that called itself the California Central Coast Research Partnership with two Cal Poly representatives and representatives from the private sector, Cuesta College, and local government. The presentation can be viewed by clicking on [http://www.calpoly.edu/-acadsen/documents/c3pr.pdf](http://www.calpoly.edu/-acadsen/documents/c3pr.pdf).

IV. Consent Agenda: None.
V. Business Item(s): None.
VI. Discussion Item(s): None.
VII. Meeting adjourned at 4:45 pm.
RESOLUTION ON

APPOINTMENT PROCEDURES FOR

GRANT-RELATED INSTRUCTIONAL FACULTY (GRIF)

OF EXCEPTIONAL MERIT

Background: Grant-related instructional faculty (GRIF) is a classification for faculty receiving compensation from grants that permits such compensation to be processed through the University so that it becomes part of one’s base pay (up to 25% of normal pay).

When the GRIF classification was established in 1975, campuses were asked to establish procedures for selection of appointees. While many campuses established such procedures, Cal Poly did not. As a result, selection of GRIF appointees has been ad hoc. The following resolution proposed by the Academic Senate Faculty Affairs Committee remedies the omission.

WHEREAS, Grant-related Instructional Faculty (GRIF) is a classification for faculty whose work involves grants and grantor institutions; and

WHEREAS, Cal Poly has faculty classified as GRIF, but there is no set criteria or procedures for nomination and appointment—college deans currently administer the process; and

WHEREAS, Since the work of faculty is in the framework of academic programs, the process should be regulated through shared governance (i.e., the Academic Senate) with the exception of contractual provisions (i.e., salary and benefits) that take precedence over local policy; therefore, be it

RESOLVED: That the attached Appointment Procedures for Grant-related Instructional Faculty of Exceptional Merit be approved by the Academic Senate of Cal Poly and forwarded to the President for his approval.

Proposed by: Academic Senate Faculty Affairs Committee
Date: November 20, 2003
Revised: January 6, 2004
APPOINTMENT PROCEDURES FOR GRANT-RELATED INSTRUCTIONAL FACULTY OF EXCEPTIONAL MERIT

I. Definition.

As a result of action taken by the CSU Board of Trustees, instructional faculty members meeting specified criteria may be appointed to two classes (10-month and 12-month); each provides for compensation from grants, individual gifts or bequests, or foundation allocations at a 5-25% differential above the salary for their regular rank and step.

Each appointment to one or the other class is to be made, as appropriate, for one academic year or 12-month period only, subject to additional appointments by the President after faculty consultation/positive recommendation and within the limits of the grant support. Appointment to either class does not constitute a promotion, nor does termination of an appointment without renewal constitute a demotion.

II. Minimum Qualifications.

1. In addition to the education and experience normally required for the academic rank to which they are to be appointed, the candidates must have exceptional professional merit in scholarship and teaching as evidenced by regional or national recognition.
2. The faculty member must be involved in the instructional program through classroom/laboratory teaching and/or mentoring students in training, research or creative activities.
3. The faculty member’s grant and contract activity must clearly contribute to the regular responsibilities of the university.

III. Appointment Procedures.

Appointment procedures for these classes shall be developed as follows:

1. Particular qualifications for positions shall be identified either by the fund grantor, subject to the approval of the appropriate department, college, or university committees and administrators; or, by consultation among the appropriate committees and administrators. Normally, department recruitment committees, department chairs, and college deans should be consulted, with final approval from the Academic Vice President and the President.
2. Procedures for selection of recipients of particular grants shall be developed by a similar process of consultation. Procedures will necessarily vary because of differences in the nature and terms of funding arrangements, but should include specific provisions relating to recruitment of candidates (whether by national search; nomination by grantor, university faculty, university administrators, etc.) and the final selection. Whenever possible, normal university procedures for the recruitment and selection of faculty should be used. No appointment may be made without the recommendation of the appropriate faculty committee(s) and administrator(s) in the unit to which the appointment is made, and without the approval of the Academic Vice President and the President. The recommendations should address whether the GRIP applicant is a distinguished faculty member who also meets criteria II.2 and II.3.

3. Faculty members who have been awarded a sabbatical or difference-in-pay leave are not eligible for a GRIP appointment for the duration of the sabbatical or difference-in-pay.

IV. Remuneration

1. Appointees to these classifications will receive compensation comprising the base salary pertaining to their normal faculty appointment plus a 5% to 25% differential above such base salary. Minimally, the differential portion, including related employee benefits, of the total compensation to each appointee of these positions will be reimbursed from funds furnished to the campus for that purpose by the grant, from individual bequests, and by foundation allocation.

2. The letter of appointment shall state the amount of the differential.

3. When the appointment to a grant-related instructional position is concluded, the individual shall revert back to the salary of his/her prior faculty position, if any, as determined by the amount of the differential stated in the letter of appointment.

Pertinent provisions of the collective bargaining agreements (current or future) supersede this policy.
Background: Cal Poly is unique among universities in the long-established relationships among teacher education, the academic disciplines, and K-12 education. First, over a decade ago, the university chose to support education as an autonomous unit by creating the University Center for Teacher Education. The "center" name and concept were important in that professional education faculty and educators in academic departments came together as UCTE faculty to plan and deliver instructional programs, create policies and procedures for the unit, and participate in leadership, personnel, and budgetary matters. In particular, programs with a mathematics and/or science focus include the blended multiple subject/liberal studies program and single subject programs in mathematics, kinesiology, life science (biology), and physical science (chemistry, physics).

Second, in addition to UCTE programs, the campus has long supported a wide range activities involving K-12. These have been sponsored by Academic Affairs and Student Affairs and have focused on preparing preservice teachers, providing professional development for inservice teachers, and motivating, mentoring, and tutoring K-12 students. In terms of mathematics and science, examples of these activities include:

- CSM projects: California Science, Math, and Physical Education Subject Matter Projects (professional development)
- UCTE special project initiatives: PAD (middle school reading and math tutoring), CAPI (high school reading and math professional development), TRP (teacher recruitment in math, science, and other areas), EAAPP (high school reading and math professional development), SMART (CSM/UCTE sponsored activities for middle school students).
- UCTE and CSM program initiatives: Teachers in Residence (elementary math/science, physics education)
- Cal Poly and K-12 collaboratives: offering Teaching with Technology Institute, alignment of technology standards for preservice and inservice teachers, UCTE representative on SLOCOE Education Council
- Cal Poly and Community College collaboratives: grant with Hancock College to train tutors, align technology requirements, and provide early field experience articulation
- Cal Poly coordinating meeting (at request of Provost Zingg): representatives with K-12 activities from CAGR, CAED, CENG, CLA, CSM, UCTE, Continuing Education, Provost's Office (honors program, university writing lab)
Thus, the proposal to establish a University Center for Excellence in Science and Mathematics Education emerges from the long-term relationships among UCTE, the academic departments, and K-12, the wide range of K-12 initiatives offered across campus, and the President’s new emphasis on professional education.

RESOLVED: That the attached *Proposal to Establish the University Center for Excellence in Science and Mathematics Education* be approved by the Academic Senate of Cal Poly and forwarded to the President for his approval.

Proposed by: Philip Bailey, Robert Detweiler, and Susan Opava
Date: November 14, 2003
Revised: January 12, 2004
To: George Lewis, Chair
   Academic Senate

From: Paul J. Provost and Vice President for Academic Affairs.

Date: November 14, 2003

Copies: Robert Detweiler
        Susan Opava
        Dan Howard-Greene
        Philip Bailey

Subject: Request for Academic Senate Review of the Proposal for the Establishment of the University Center for Excellence in Science and Mathematics Education

Attached is a copy of a preliminary proposal to establish a University Center for Excellence in Science and Mathematics Education. In accordance with campus Administrative Bulletin 87-3 (Guidelines for the Establishment of Centers and Institutes), this proposal will receive a preliminary review by the Academic Deans' Council at its meeting on November 17, 2003. I would now appreciate the Academic Senate to review this proposal prior to the close of Fall Quarter 2003. Please feel free to contact Dr. Susan Opava, Dean of Research and Graduate Programs, and Dr. Robert Detweiler, author of the proposal, should you have any questions or would like them to make a presentation to the Academic Senate. As you will note in the proposal, "The Center is not dependent on outside sources of funding for its modest initial operation. If it uses grants or donations to expand operations, however, and later these sources are no longer available then the Center must be pared back. The purpose of the Center is to aid existing academic programs to expand their work in K-12 science and mathematics education; it will not drain resources from academic units or programs."

Thank you, and if you have any questions, please do not hesitate to contact my office.

Enclosure
November 17, 2003

TO:  Paul Zingg  
     Provost

: Susan Opava  
: Dean, Research and Graduate Programs

FROM:  Robert Detweiler  
       Special Assistant to the President

SUBJECT: Proposal to Establish the "University Center for Excellence in Science and Mathematics Education"

President Warren Baker has asked the University to expand its efforts to support K-12 science and mathematics education. He and the members of the President's Cabinet want Cal Poly to do more to strengthen the quality of science and mathematics education in the K-12 schools in order to help ensure that more California students are prepared to follow pathways to careers in science, technology, mathematics and engineering. Specifically, President Baker has urged that Cal Poly (a) produce more high-quality K-12 science and mathematics teachers, (b) support and strengthen the skills of current K-12 science and mathematics teachers, (c) encourage more K-12 students to become interested in science and mathematics, (d) enlist the aid of industry to support improvement of K-12 science and mathematics education, and (e) raise the level of scientific and technological "literacy" more generally for our students and citizenry.

Provost Paul Zingg is coordinating the effort to achieve these objectives. He is working in concert with appropriate faculty and staff, particularly those in the College of Science and Mathematics, the College of Liberal Arts (Liberal Studies), and the University Center for Teacher Education. He has called for the establishment of a center on campus to coordinate and foster the effort. The proposed University Center for Excellence in Science and Mathematics Education would bring together key Cal Poly faculty and staff, representatives from K-12 schools, and representatives from industry who would focus exclusively on strengthening K-12 science and mathematics education. The proposed Center would not replicate, conflict with, or draw resources from any Cal Poly instructional programs. Its role would be to stimulate greater student interest in science and mathematics teaching careers, expand Cal Poly's production of K-12 science and mathematics teachers, build linkages with industry and the K-12 community, aid
in obtaining external support of University and K-12 faculty, provide a clearinghouse of information regarding K-12 science and mathematics education, and support a key curricular goal to foster scientific and technological "literacy."

This is to request review of the proposal for the establishment of the center under the University's "Guidelines for the Establishment of Centers and Institutes" (Administrative Bulletin 87-3). The attached information (answers to the questions identified in the "Guidelines") is presented to support this request. Of course, I will provide any additional information or explanation that you may require; please call at your convenience (6-6585).

Thank you for your consideration.
As a polytechnic university with a national reputation and highly selective admissions, Cal Poly has the opportunity to become a leader in science and mathematics education. In collaboration with the local public school systems and community colleges, Cal Poly is developing the University Center for Excellence in Science and Mathematics Education to address serious California and national issues associated with curriculum, pedagogy, and teacher education and the important need to produce science, mathematics, engineering, and technology educated graduates vital to the economy of the state and nation. California is not producing sufficient graduates in these disciplines and, because disparity exists in earning these degrees among racial and ethnic groups, this becomes an important social issue as well.

The vision of the University Center for Science and Mathematics Teacher Education has two major components:

• **Best Practices in Science and Mathematics Teacher Education:** The foundation of a polytechnic university is science and mathematics and this certainly is the case as Cal Poly. Because of our strong programs and the exceptional quality of our students, Cal Poly produces some of the best science and mathematics teachers in the state and nation. Through initiatives in the University Center for Excellence in Science and Mathematics Education, the University intends to develop model programs and demonstrate best practices in both K-12 pre-service and in-service teacher education. Cal Poly is embarking on plans to significantly increase the number of graduates prepared for careers in teaching and also its participation in in-service professional development.

• **Research and Development in Curriculum and Pedagogy:** Cal Poly has a tradition of innovative programs in curriculum and pedagogy. Through the University Center for Excellence in Science and Mathematics Education, the University will conduct research in development and assessment of curricular and pedagogical approaches to science and mathematics education at all levels.

A new science and mathematics building, the Center for Science and Mathematics, is on the California State University capital outlay priority list. Funding for architectural work is part of the education bond initiative to be considered by voters in March, 2004. The Center for Science and Mathematics will be the largest science and mathematics building in the CSU; the largest university system in the nation. It will house the departments of Chemistry and
Biochemistry, Mathematics, Physics, Statistics, and Earth and Soil Sciences and the Environmental Biotechnology Institute and Western Coatings Technology Center. Dedicated facilities for the University Center for Excellence in Science and Mathematics Education are planned as a part of this project and will be enhanced by facilities and programs in the disciplines housed in this transforming facility.
Proposal to establish the University Center for Excellence in Science and Mathematics Education

Background and purpose:

California and the nation have a critical need for an effective educational system that produces the scientists and engineers that are essential to our economy.

- California's continued economic vitality depends upon its ability to develop and apply scientific and technological innovations.
- Among the state's new, increasingly diverse generation of students, however, rates of high school and college program completion, particularly in science, technology, engineering, and mathematics (STEM) disciplines, lag behind many other states. (See, for example, the California Council for Science and Technology's 2002 "Critical Path Analysis of California's Science and Technology Education System.")
- Early exposure to and success in science and mathematics is key to successful participation in STEM disciplines and careers.
- Competent, inspired K-12 science and mathematics teaching is perhaps the single most important variable influencing student participation and success in STEM disciplines, but a significant percentage of California K-12 science and mathematics teachers are not well qualified.

Cal Poly, through the strength of its academic programs, makes an important contribution as one of the nation's leading educators of high-quality polytechnic graduates. Cal Poly also recognizes the need to strengthen the quality of science and mathematics education in California's K-12 schools in order to help ensure that California students are prepared to pursue further study leading to careers in science and technology fields. Through its support for the CCST Critical Path Analysis and initiatives at the national level, including an emerging Business Higher Education Forum K-12 science and mathematics initiative, Cal Poly has advocated greater attention to the early preparation in science and mathematics of the nation's diverse student population. Cal Poly's Centennial Celebration, the Inaugural Baker Forum and the ongoing deliberations of the Cal Poly President's Cabinet all have given a place of prominence to this issue.

At the April 2003 Plenary Session of the Cal Poly President's Cabinet, the Cabinet urged Cal Poly to strengthen and expand its direct efforts to support K-12 science and mathematics education and in particular its efforts to prepare and support K-12 science and mathematics teachers. On behalf of the University, President Warren Baker accepted that challenge. The University Center for Excellence in Science and Mathematics Education is to be dedicated to that purpose.

Mission:

The Center's mission is to build upon and strengthen cooperative relationships with K-12 schools and private industry in order to pursue three important purposes:
• Scholarships for "partner" school graduates who go into science and mathematics education programs at Cal Poly.
• Support for science and mathematics teachers in selected schools who would like to help recruit K-12 students into the science and mathematics "pathway."
• A part-time grant writer to assist with specific grant applications.
• Establish a Cai Poly website to aid and support K-12 science and mathematics teachers through dissemination of information on curricular innovations, pedagogy, learning assessment, etc.
• Form an advisory group of K-12 science and mathematics teachers to help guide the work of Cal Poly and the Center.
• Host K-12 science and mathematics teachers annually at Cal Poly to review their needs, to consider ways to strengthen STEM pathways, and to identify ways to improve teacher retention.
• Form a corporate advisory group to provide advice and to assist with targeted fund raising that will help accomplish the goals of the University and Center.

Proposed longer-term objectives:

(1) Provide a summer institute to enhance the competency and teaching skills of K-12 science and mathematics teachers.
(2) Provide on-line instruction to support K-12 science and mathematics teachers.
(3) Provide professional development and support for science and mathematics teachers at "partner" schools.
(4) Provide corporate internships or summer employment for K-12 science and mathematics teachers to encourage and support their interest in remaining in the teaching profession.
(5) Establish a school-within-a school in a selected K-12 district or districts to direct elementary and secondary school students into careers as science and mathematics teachers (future teacher academy concept).
(6) Organize Cal Poly administrators, faculty, and students to work with K-12 representatives and corporate leaders to influence public policy concerning K-12 science and mathematics teaching and educational "pathways."
(7) Expand the teacher-in-residence program.
(8) Explore ways to recruit targeted retirees into K-12 science math teaching as a "second career."
(9) Explore ways to expand "blended" programs for K-12 science and mathematics teacher education students.
(10) Form a "Future Science and Mathematics Teachers Club" at one or more targeted K-12 schools.
(11) Provide a mobile wet lab to aid K-6 teachers introduce students to and excite their interest in discovery.

Need for a new organizational structure:

The Center is intended to work within the present Cal Poly organizational structure (particularly the College of Science and Mathematics, the University Center for Teacher Education, and the
College of Liberal Arts) to focus on expanding the University's commitment in the area of K-12 science and mathematics education. It will not alter the current academic structure, but will draw upon and support key faculty and staff within that structure as they seek to achieve the goals outlined above. In brief, the Center will attempt to stimulate and coordinate efforts by faculty and staff from diverse Cal Poly units, from K-12 schools, and from industry. It will seek resources and provide encouragement to faculty and staff who are committed to enhancing K-12 science and mathematics teaching. The Center is needed to help Cal Poly achieve a substantial expansion of its involvement with K-12 science and mathematics education and promotion of pathways to careers in science and technology for K-12 students.

Relationship to the instructional program:

The Center is intended to support and assist Cal Poly instructional programs, particularly the science and mathematics teacher preparation programs and master's degree programs in the College of Science and Mathematics, the Liberal Studies Program in the College of Liberal Arts, and the teacher credentialing programs in the University Center for Teacher Education. It will draw upon faculty and staff from these Cal Poly instructional programs to serve on the Center Advisory Council, and it will remain in close communication with these programs and support them. The Center will not provide instructional programs independent of existing academic entities, yet its work will help foster a broader awareness of science and technology issues and "literacy."

Founding members and their expertise:

Provost Paul Zingg has taken the lead in forming the Center. He formed a steering committee to initiate the Center's structure, goals, and objectives; this group includes Dean Philip Bailey of the College of Science and Mathematics, Dean Bonnie Konopak of the University Center for Teacher Education, Dean Harry Hellenbrand of the College of Liberal Arts, and Dan Howard-Greene and Robert Detweiler from the President's office. The Center will draw upon the expertise of Cal Poly faculty and staff who work with K-12 science and mathematics education, local K-12 teachers and administrators, and representatives from industry.

Effect of the unit on academic departments:

The Center will seek to support faculty and staff who are committed to K-12 science and mathematics education. It will foster growth of their academic programs, seek grants and contributions to assist their enterprises, and provide a means for communication and cooperation. This unit will serve as an advocate for and aid to Cal Poly faculty and staff who are working to graduate more K-12 science and mathematics teachers; it will seek to aid K-12 teachers who are currently in the field; and it will support activities that encourage K-12 students to pursue careers in science and technology.

Organizational structure of the unit:
The Center will report to the Provost. It will be guided by a Center director and a Board of Directors. Board members and the Board Chair shall be appointed by the University President and shall include:

- Provost
- Dean, College of Science and Mathematics
- Dean, College of Liberal Arts
- Dean, University Center for Teacher Education
- One (1) representative from the Center's corporate advisory group.
- Five (5) representatives from K-12 education, at least three of whom will be science or mathematics teachers.
- Three (3) Cal Poly science and mathematics education faculty
- One (1) Cal Poly science and mathematics education student
- One (1) representative from University Advancement
- Executive Assistant to the President

The Director of the Center will organize Board meetings and support the Board Chair in convening the Board. Board meetings will take place at least once each quarter during the regular academic year, or more often as needed.

Bylaws and more formal operating procedures will be developed by the Center Director and Board.

*Fiscal and administrative support and facilities:*

The Center will draw on existing Cal Poly staff and volunteer Advisory Board members so as to require minimal resources. Dr. Philip Bailey, Dean of the College of Science and Mathematics, and Dr. Bonnie Konopak, Dean of the University Center for Teacher Education, are serving as the Center's founding co-directors and will meet the Center's initial day-to-day administrative support requirements through the existing resources of their respective offices.

The Center will seek grants and donations to help faculty and staff achieve Cal Poly's goals of enhancing K-12 science and mathematics education, particularly those efforts that involve K-12 teachers and students directly. The Center itself will require minimal funds to operate, inasmuch as it draws upon existing staff and resources. On the other hand, it will cost a substantial amount to expand Cal Poly's teacher education programs, to support K-12 teachers, and to encourage K-12 students to study science and technology. The rate of achieving these objectives will depend on expansion of State support, winning grants and donations, and engaging corporate and other partners.

The Center is not dependent on outside sources of funding for its modest initial operation. If it uses grants or donations to expand operations, however, and later those sources are no longer available then the Center must be pared back. The purpose of the Center is to aid existing academic programs to expand their work in K-12 science and mathematics education; it will not drain resources from academic units or programs.
WHEREAS, Current campus policy per Academic Senate Resolution AS-234, section 411.1 require each program at Cal Poly to include 9 free electives, or supply justification why they cannot as part of their curriculum proposals each cycle; and

WHEREAS, The CSU Board of Trustees have reduced the minimum number of units for a Bachelor's degree to 180 quarter units with the expectation that programs will assume that level unless there is significant justification for a higher number of units; and

WHEREAS, Current CSU policy favors graduating students in a timely manner, which means within four years for a four-year degree; and

WHEREAS, Previous Academic Senate resolutions have encouraged departments to make their curricula more flexible; therefore, be it

RESOLVED: That programs may reduce their required free electives below the currently required 9 units if the units are used to reduce the total number of units required for the degree; and be it further

RESOLVED: That programs allow their students as much flexibility as possible in meeting major, support, and General Education requirements.

Proposed by: Academic Senate Curriculum Committee
Date: November 18, 2003
Revised: January 6, 2004