

CAL POLY

Academic Senate

805.756.1258

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Meeting of the Academic Senate Executive Committee

Tuesday, February 17, 2015

01-409, 3:10 to 5:00pm

- I. **Minutes:** Approval of January 27, 2015 minutes. (pp. 2-3).
- II. **Communication(s) and Announcement(s):**
- III. **Reports:**
 - A. Academic Senate Chair:
 - B. President's Office:
 - C. Provost:
 - D. Statewide Senate:
 - E. CFA:
 - F. ASI:
- IV. **Special Report:**

Report on new contract provisions for awarding assigned time for exceptional service activities by Graham Archer, Bruno Giberti, and Sean Hurley.
- V. **Business Item(s):**
 - A. **[TIME CERTAIN 3:45 PM] Resolution on Changes in Academic Senate Grants Review Committee Membership and Responsibilities:** Jeanine Scaramozzino, chair of Grants Review Committee. (pp. 4-7).
 - B. **Approval of decoupling the General Engineering Program from the Biomedical and General Engineering Department:** Robert Crockett, Director, General Engineering Program. (pp. 8-17).
- VI. **Discussion Item(s):**
 - A. **Response to ASCSU Resolution on Improving Campus Response to Sexual Assault and Sexual Violence.** (pp. 18-20).
 - B. **Definition of General Faculty, Academic Senate membership, and election of part-time academic employee.** (pp. 21-22).
- VII. **Adjournment:**

CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, California 93407
ACADEMIC SENATE

Minutes of the
Academic Senate Executive Committee
Tuesday, January 27, 2015
01-409, 3:10 to 5:00pm

- I. Minutes: M/S/P to approve the executive committee minutes from January 6, 2015.
- II. Communication(s) and Announcement(s): none.
- III. Reports:
- A. **Academic Senate Chair (Laver):** The new city councilman, Dan Rivoire, will be on campus to meet with various groups including the Academic Senate Executive Committee. The nature of the proposed large donation towards a conference center and hospitality program has changed. The donation will likely be smaller to begin and will be used toward exploration of such a program. Per an agreement made last winter with the Senate, Karen Webb, Interim Vice President of Administration and Finance, has released the first in what we hope to be an annual list of the number of MPPs on campus.
- B. **President's Office (Kinsley):** The President had his three-year review with the Board of Trustees and the Chancellor. The California Community College Survey requests feedback from the President, Provost, and Senate as to whether or not their program offerings conflict with CSU programs. The President is holding his quarterly local economic development committee meeting on February 13, 2015, which is open to the Executive Committee.
- C. **Provost:** none.
- D. **Statewide Senate (Foroohar/LoCascio):** Foroohar reported on the resolutions from her meetings from the week of February 9th. The first resolution asks the Chancellor's Office to look at the academic freedom policy from 1971 and revise it. Another resolution that was passed unanimously, asks the campus senates to look at policy and encourage part time faculty to take part in shared governance. HR reported that recruitment numbers are up, but the density of tenure track faculty is still dropping. LoCascio reported on his meeting where he discussed what the definition of an upper division GE course is. Also, it was decided that if California adopts Common Core, the minimum requirement to enter the CSU is the minimum requirement to graduate high school, which requires intermediate algebra.
- E. **CFA Campus President (Archer):** There is an Unconscious Bias Workshop being held on March 6th in building 10, room 225 from 12 to 4:30 PM.
- F. **ASI Representative:** none.
- IV. Business Item(s):
- A. **Appointments to Academic Senate committees for 2014-2016:** M/S/P to approve the appointments of the following to the Academic Senate committees for 2014-2016:
- College of Liberal Arts**
Distinguished Scholarship Awards Committee Christina Firpo, History
- College of Science and Math**
Distinguished Scholarship Awards Committee John Jasbinsek, Physics
- B. **Appointments to University committees for 2014-2015:** M/S/P to approve the appointments of Kevin Taylor, Kinesiology, to the Accommodation Review Board, Candace Winstead,


- Biological Sciences, to the Coordinating Committee on AIDS and HIV infection, Xuan Wang, Industrial & Manufacturing Engineering, to the Intellectual Property Review Committee, and Jessica Fred, University Housing, to the Substance Use and Abuse Advisory Committee.
- C. **Appointments to the Graduate Writing Requirement Task Force:** M/S/P to approve the appointments of Clare Battista, Economics, and Kaila Bussert, Library, to the Graduate Writing Requirement Task Force.
- D. **Approval of Academic Senate Curriculum Appeals Committee Procedural Guidelines:** The procedural guidelines for the Academic Senate Curriculum Appeals Committee were revised and sent back to the Executive Committee for e-vote approval.
- E. **Resolution on Information Request About Contract Ratification Votes:** Manzar Foroohar, Statewide Senator, introduced a resolution to request information from CFA statewide regarding votes on the ratification of the contract. M/S/P to agendize the resolution on information requests about contract ratification votes with the following changes:
- Line 7 WHEREAS, The CFA statewide leadership has refused to respond to repeated requests from the faculty to share information on the recent ratification vote of the new contract; ~~and therefore be it~~
- Line 11 ~~WHEREAS, There is a strong perception among Cal Poly faculty that the union has neglected to consult with, and inform them, of the process of negotiations and the results of contract ratification vote in a timely manner; therefore be it~~
- Like 15 RESOLVED: That the Cal Poly Academic Senate urge the statewide CFA leadership to respond to the faculty requests for detailed information on voting results (i.e. breakdown of votes for each campus and for different categories of faculty such as tenured/tenure track vs. non-tenure); and be it further
- Line 25 RESOLVED: That this resolution be distributed to the ASCSU Executive Committee, campuses 25 senate ~~presidents~~ chairs, CFA statewide Board of Directors, and CFA chapter presidents.
- F. **Resolution on Changes in Academic Grants Review Committee Membership and Responsibilities:** Jeanine Scaramozzino, chair of the Grants Review Committee, introduced a resolution to make changes to the Grants Review Committee's membership and responsibilities to be compliant with current practices. M/S/P to table this item for revisions and return on the February 17th, 2015 Executive Committee meeting.

V. Discussion Item(s):

- A. **New Contract provisions for awarding assigned time for exceptional service activities:** Article 20.37 of the Collective Bargaining Agreement gives every CSU campus the job of giving out assigned time for exceptional levels of service. Graham Archer, Bruno Giberti, and Sean Hurley will serve on a subcommittee to look at existing committees on campus that deal with service, come up with concrete ideas regarding criteria of how to distribute the assigned time, and report back at the next Executive Committee meeting.

VI. Adjournment: 5:00 pm

Submitted by,


Alex Ye
Academic Senate Student Assistant

Adopted:

**ACADEMIC SENATE
of
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, CA**

AS-__-15

**RESOLUTION ON CHANGES IN ACADEMIC SENATE
GRANTS REVIEW COMMITTEE MEMBERSHIP AND RESPONSIBILITIES**

Background:

During fall quarter 2014, the Academic Senate asked the Grants Review Committee to review the Bylaws of the Academic Senate to reflect any revisions or changes to campus policies surrounding the committee and provide any recommendations for change to the Senate office by spring 2015. In response to this charge, the Academic Senate Grants Review Committee has recommended the following modifications in the selection of its membership, the members of the committee, and its responsibilities.

1 WHEREAS, The Chancellor's Office guidelines for their Research, Scholarship, and
2 Creative Activity funds state, that the majority of the committee membership
3 developing the plan for the distribution of funding "shall be elected faculty
4 members elected by the probationary and tenured faculty or who shall be
5 members of an existing elected committee." Current practice does not
6 conflict with this statement; and
7

8 WHEREAS, The Grants Review Committee is the only committee that is listed as
9 following Bylaws section III Voting and Election Procedures for the *election*
10 of committee members. The current practice on campus is the appointment
11 of committee members, like all other standing committees, as outlined in
12 Bylaws section VIII.B: "During spring quarter, each caucus shall convene to
13 nominate candidates from that college or Professional Consultative Services
14 to fill committee vacancies occurring for the next academic year. These
15 nominations shall be taken to a meeting of the Executive Committee before
16 the June regular meeting of the Senate. The Executive Committee shall
17 appoint members to standing committee vacancies from these lists."
18 Additionally, the current practice of the membership since 2008 [AS-671-
19 08] is that the Grants Review Committee shall include one voting General
20 Faculty representative from each college and Professional Consultative
21 Services, and a graduate student ASI representative and the Dean of
22 Research or designee as ex officio members; and
23

24 WHEREAS, The responsibilities have been reworded to allow for the regularly evolving
25 nature of grant programs, grant funding, and the like, and to reflect
26 additional responsibilities that have been given to the committee but are not
27 reflected in the current Bylaws of the Academic Senate, therefore be it
28

29 RESOLVED: That to accurately reflect the practices of the Academic Senate we suggest:
30 The removal of the mention of the Grants Review Committee from Bylaws of
31 the Academic Senate I.B.8.C, III, and IX.A.4, and the rewording of VIII.I.8.a
32 Membership and VIII.I.8.b. Responsibilities AS INDICATED IN THE
33 ATTACHMENT.

Proposed by: Grants Review Committee
Date: February 11, 2015

**ATTACHMENT TO
RESOLUTION ON CHANGE IN ACADEMIC SENATE
GRANTS REVIEW COMMITTEE MEMBERSHIP**

REMOVE

I. INTRODCUTION

B. DEFINITIONS

8. Voter Eligibility

Voting members of the General Faculty as specified in Article I of the constitution are eligible to vote for:

- (a) senators from colleges or Professional Consultative Services.
- (b) CSU academic senators.
- ~~(c) members to the Grants Review Committee.~~
- ~~(d)~~ (c) consultative committees as needed.

III. VOTING AND ELECTION PROCEDURES

Elections shall be held for membership to the Academic Senate, Senate offices, Academic Senate CSU, ~~Grants Review Committee~~, appropriate recall elections for the preceding as per Section IX of these bylaws, and ad hoc committees created to search for such university positions as president, provost, vice presidents, college deans, and similar type administrative positions.

IX. RECALL OF ELECTED REPRESENTATIVES

A. APPLICATION

The procedures for recall shall apply to:

- 1. Elected members of the Academic Senate, California Polytechnic State University;
- 2. Officers of the Academic Senate, California Polytechnic State University;
- 3. Elected representatives to the Academic Senate, California State University; and
- ~~4. Members to the Grants Review Committee.~~

REWORDING

VIII. COMMITTEES

I. COMMITTEE DESCRIPTIONS

8. Grants Review

(a) Membership

- (1) Pursuant to the ~~Chancellor's Office guidelines for the State Faculty Support Grants (SFSG), [AA-2006-25], a majority of the membership shall consist of elected faculty members elected by the probationary and tenured faculty. Pursuant to AS-XXX-15, Resolution on Change in Academic Senate Grants Review Committee Membership Election (Bylaws section VIII.I.8.(a).1) the Academic Senate Executive Committee appoints the voting members of the committee.~~
- (2) Ex officio members shall be the Dean of Research or designee and an ASI representative. The ASI representative must be a graduate student.
- (3) No member of the Grants Review Committee is eligible to apply for any grant, leave, or award program administered by the committee while serving on the committee.

(b) Responsibilities

- ~~(1) In coordination with the Research, Scholarship and Creative Activities Committee, the Grants Review Committee shall develop and recommend policies and procedures for the review of grant proposals referred to it, including the State Faculty Support Grants (SFSG).~~
- ~~(2) Receive and evaluate requests for State Faculty Support Grants and make recommendations for funding, when appropriate, to the Dean for Research.~~
- ~~(3) Make recommendations concerning the funding of other internal grants when appropriate.~~
- ~~(4) Evaluate requests for special leaves for research or creative activity and, when appropriate, rank order them for consideration and transmit this ranking through the Academic Senate Chair to the President.~~
- (1) The Grants Review Committee shall develop policies and procedures for the review of grant proposals referred to it, including but not limited to those funded through the Chancellor's Research, Scholarship, and Creative Activity allocations.
- (2) The Grants Review Committee will make recommendations concerning the funding of other internal grants when appropriate.
- (3) The Grants Review Committee shall develop policies and procedures for the selection of Cal Poly State University

student delegates to the system-wide CSU Student Research Competition.

- (4) The Grants Review Committee will evaluate both the oral and written presentations of students and select the delegates for the system-wide CSU Student Research Competition.
- (5) The Grants Review Committee will address other responsibilities as assigned by the Academic Senate.

Date: January 9, 2014
To: Engineering Leadership Team
From: Deb Larson
Subject: General Engineering Proposal

As you may know, the General Engineering (GENE) program went through a CSU mandatory program review in the spring of 2013. Our visitors made a number of observations and recommendations, including, but not limited to: separation of GENE from BMED, the establishment of a separate office and identity, and increase administrative time for the director. I asked Bob Crockett to follow-up on this review to which he convened a small working group of faculty during the fall 2013 quarter. This group submitted a proposal to the Dean (and by implication, the College) to establish General Engineering as an independent program at the college level. Please find their proposal as attached to this cover memo.

In the general sense, I support the working group's recommendations. In the general sense, I'd like for GENE to become a more vital and sustainable program than what it is today. However, the short and long-term implications on budget and staffing were not developed by the working group. This memo lines out my thoughts about operationalizing these recommendations. My guiding principle has been: if, we as a college agree to the proposed recommendations, then we should be prepared to provide the program with sufficient immediate resources and a commitment to a longer term staffing plan. Without this, implementation of the working group's proposal will fall short of their goals and then begs the question of what is the right next step(s).

Immediate Resource Needs: A separate program along with the various goals of a revising curriculum, developing an active assessment program, and establishing an advisory council will require separate administrative assistance along with increased attention by the program director. The new costs of these elements on an annual basis are approximated below. The current CBF associated to GENE majors is fully committed and is not a source to fund these additional new net expenses. In that vein, this proposal assumes that GENE CBF's will stay with the GENE program. A vote, if you will, to accept the working group's proposal means an additional distribution to GENE that is funded initially off-the-top for 2014-15. This redistribution then establishes the longer-term budget line for out-years beyond FY 14¹.

Annual Additional Costs

| | |
|---------------------------------|----------|
| Director to 50% from 33% | \$23,422 |
| .67 Admin | \$49,556 |
| Operations & Student Assistants | \$15,000 |
| Total | \$87,987 |

¹ State-side fiscal year designation.

Longer Term Commitment: The potential ABET goal along with the College's interest in GENE becoming a stronger program is dependent upon additional faculty resources being put to the program. I envision that this type of commitment could be facilitated through the concept of "joint" appointments of two to three members of the faculty who each support their discipline and the GENE program. These appointments could be developed anew with new hiring and/or through the partial reallocation of existing positions.

New demands on college resources impact everyone. For this reason as well as the tradition of curricula being a fundamental responsibility of the faculty, I am bringing this situation to you. I would like you to carefully read through the working group's recommendation, the 2013 program review report, and to consider my operational assumptions. I would like your feedback to this proposal. It is possible – if your initial feedback is generally supportive, I would then ask for a vote of the faculty via you as representatives of the various faculty stakeholder groups.

General Engineering Program Description

Flexibility, core competency and self-determination are the keywords for students of the General Engineering Program. The mission of the General Engineering Program is to provide students with the highest quality technical and professional engineering education, with a particular emphasis in new or evolving interdisciplinary areas, while allowing the students to participate in designing their curricula. General Engineering graduates have used this program as a foundation for advanced studies and careers in education, project management, technical sales, law, entrepreneurship, medicine and a hundred other paths defined by their keen intellects and adventuresome spirits.

The primary goal of the General Engineering Program is to provide students with a theoretically rigorous and a laboratory-centered, practice-oriented, hands-on education that allows graduates to immediately participate and to excel in professional environments. The program is underpinned by a rigorous selection of mathematics, science, basic engineering and liberal-arts courses. There are two paths the General Engineering program: the General Engineering Concentration, which provides a broad, but rigorous, undergraduate course of study, and the Individualized Course of Study, in which students, with their advisors, select forty technical elective classes that allow the students to put their own mark on their degrees, ensuring a unique competency with a solid underpinning. General Engineering graduates are ready for immediate entry into the professional engineering field. They demonstrate an ability to satisfy their personal needs for further education, as expressed in their matriculation to graduate or professional schools in many cases, and an interest in life-long learning in all cases. They possess a solid engineering foundation which underpins a successful career. They can become leaders, based on strong communication skills, a capacity to form teams and perform in teams, and an understanding of the economic and social impact of their decisions.

In addition to the abilities expected of all engineering graduates, articulated in the section of this catalog describing the College of Engineering, General Engineering graduates are expected to leave the University with special capabilities pertinent to their own concentrations.

The *General Engineering Concentration* is designed to provide the broad foundation of engineering competency in preparation for further graduate/professional studies, engineering careers requiring a breadth of knowledge, and non-engineering careers benefiting from a broad technical background. The *Individualized Course of Study* is designed to allow students the latitude in course selection required to educate themselves either in the classical study of engineering or in new and evolving interdisciplinary technologies. Both the General Engineering Concentration and the Individualized Course of Study are excellent preparation for an applied terminal master's degree in interdisciplinary fields such as the Blended BS+MS program described in the MS Engineering section of this catalog. General Engineering can also accommodate those students who wish to major in engineering but have not presently decided in which specific program their interest is centered. The curriculum builds a sound foundation in the fundamental principles of engineering and engineering systems during the early years of study. During their final quarters of study, students customize their study plan with the help of a faculty advisor and are given the opportunity to focus their education while still at the undergraduate level. The BS degree in General Engineering is, therefore, a direct path to employment in a classic engineering field or in an area of emerging technology. It is also a natural step toward a professional or a graduate degree.

General Engineering students are encouraged to participate in the Blended BS+MS program. This program recognizes that the expertise required of entry level engineers in many fields, particularly new and evolving technological fields, implies that a masters degree is a prerequisite for success. The program allows motivated students to reduce the time necessary to earn both degrees.

All practitioners of engineering must have an understanding of the physical sciences and mathematics. Further, they must have a firm grasp of engineering sciences. The General Engineering curriculum provides the framework for this matrix of understanding, upon which the practitioner may begin to develop a unique area of expertise.

The Individualized Course of Study is available to students who have completed their Sophomore year in any engineering major. This program is for directed, highly motivated students. The technical elective courses are selected to be consistent with a sharply defined career goal. Each student is required to submit a study plan to the coordinator prior to the end of the first quarter of their junior year. Study plans selected in the past have emphasized engineering physics, management of technology, bioengineering, ocean engineering and engineering in unique environments.

MAJOR COURSES (86 Units)

| | | |
|---|--|---|
| IME 144 | Intro to Design and Manufacturing | 4 |
| CE 204 | Mechanics of Materials I | 3 |
| CSC 101 | Fundamentals of Computer Science I | 4 |
| EE 201/EE 251 | Electric Circuit Theory/Laboratory | 4 |
| ENGR 110 | Engineering Science I | 2 |
| IME 314 | Engineering Economics | 3 |
| MATE 210/MATE 215 | Materials Engineering/Laboratory I | 4 |
| ME 211 | Engineering Statics | 3 |
| ME 212 | Engineering Dynamics | 3 |
| ME 302 | Thermodynamics I | 3 |
| ME 341 | Fluid Mechanics I | 3 |
| ME 343 | Heat Transfer | 4 |
| ENGR 459/460/461 | Multidisc. Sr. Design Project I/II/III | 6 |
| Or Sr. Project-appropriate engineering discipline | | |

General Engineering Concentration or Individual Course of Study 40

SUPPORT COURSES (60)

| | | |
|----------------------------|---------------------------------------|---|
| BIO 213 | Life Science for Engineers | 2 |
| ENGR/BRAE 213 | Bioengineering Fundamentals (B2) | 2 |
| CHEM 124/CHEM 125 or | Gen Chem. for Engr. I/II (B3/B4) | |
| CHEM 127/CHEM 128 | General Chemistry I/II (B3/B4) | 8 |
| ENGL 149 | Technical Writing for Engineers (A3) | 4 |
| MATH 141/MATH 142 | Calculus I/II (B1) | 8 |
| MATH 143 | Calculus III (Add'l Area B) | 4 |
| MATH 241 | Calculus IV | 4 |
| MATH 244 | Linear Analysis I | 4 |
| Select from the following: | | 4 |
| MATH 344 | Linear Analysis II | |
| STAT 312 | Statistical Methods for Engineers | |
| STAT 350 | Prob & Random Processes for Engr (B6) | |
| PHYS 141 | General Physics IA (Add'l Area B) | 4 |
| PHYS 132/PHYS 133 | General Physics II/III | 8 |
| and General Physics III | | |

Physical Science Electives

| | | |
|----------------------------|--|---|
| Select from the following: | | 8 |
| CHEM 129 | General Chemistry III | |
| CHEM 216/217 | Organic Chemistry for Life Sciences I/II | |
| CHEM 312 | Survey of Organic Chemistry | |
| CHEM 313 | Survey of Biochemistry and Biotechnology | |
| GEOL 102 | Introduction to Geology | |
| GEOL 201 | Physical Geology | |
| GEOL 205 | Earthquakes | |
| GEOL 241 | Physical Geology Laboratory | |
| GEOL 305 | Fundamentals of Seismology | |
| PHYS 107 | Introduction to Meteorology | |
| PHYS 211/212 | Modern Physics I/II | |
| PHYS 323 | Optics | |
| PHYS 417 | Nonlinear Dynamical Systems | |

GENERAL EDUCATION (40)

Total units 183-185

GENERAL ENGINEERING CONCENTRATION (40 Units)

| | | |
|---------------|-------------------------------------|---|
| CSC 102 | Fundamentals of Computer Science II | 4 |
| CPE 133 | Basic Digital Design | 4 |
| CE 207 | Mechanics of Materials | 3 |
| EE 321/EE 361 | Electronics/Electronics Lab | 4 |
| MATH 451 | Numerical Engineering Analysis | 4 |
| IME 418 | Product-Process Design | 4 |
| IME 356 | Manufacturing Automation | 4 |
| or ME 305 | Introduction to Mechatronics | |
| or EE 329 | Microprocessors and Applications | |

Approved Electives (300-level or higher) 13



California Polytechnic State University
San Luis Obispo, CA 93407-0365

Biomedical & General Engineering Department
805-756-6400

Robert Crockett, Ph.D.
(805) 756-2551
FAX (805) 756-6424
e-mail rcrockett@calpoly.edu

February 13, 2014

TO: Debra Larson
Dean, College of Engineering

FROM: Robert Crockett
Director, General Engineering Program

RE: General Engineering Curriculum and Enrollment Policy Proposal

Dear Dean Larson,

In response to the recommendations of the recent General Engineering program review and after internal discussion among program constituents, the General Engineering Faculty Working Group has developed the following Curriculum and Enrollment Policy proposal. As mentioned in our previous memo (November 5, 2013), our motivation is to create a solid foundation that will both allow for General Engineering growth (if desired), as well as for potential future ABET accreditation (if desired), without eliminating the significant and valuable flexibility provided by the Individualized Course of Study.

To this end, we are proposing to create a single well-defined concentration ("General Engineering"). This concentration is designed to meet the needs of students interested in a broad, but rigorous, undergraduate course of study. Students will primarily use this degree as preparation for further graduate/professional studies (e.g. engineering, law, business), engineering careers requiring breadth, and non-engineering careers benefiting from a broad technical background (e.g. education, entrepreneurship, non-profit organizations). We propose to maintain the Individualized Course of Study in its current form, but restrict entry into this option until after students have completed their Sophomore year.

By offering the General Engineering Concentration to entering Freshmen, along with a clear catalog description of program goals, it is our expectation that migration out of this concentration will be greatly reduced. It is also our belief that creating a well-defined concentration will allow the other engineering programs to better understand and plan for GENE student enrollment in their courses. We foresee the General Engineering Concentration admitting and graduating nominally 40-50 students per year, with the Individualized Course of Study remaining an unaccredited, boutique program for highly motivated, independent students (~20 graduates per year).

As an additional longer-term goal, we would like to have all General Engineering students participate in the Multidisciplinary Senior Design Project sequence as their culminating experience.

Proposed Curriculum changes are attached to this memo.

Sincerely,

Robert Crockett, Ph.D.

Cc: Andrew Davol
Jordi Puig-Suari
Kurt Colvin
Scott Hazelwood
Lynne Slivovsky
Fred DePiero



California Polytechnic State University
San Luis Obispo, CA 93407-0365

Biomedical & General Engineering Department
805-756-6400

MAJOR COURSES (83-85 Units)

| | | |
|--|---|-----|
| CE 204 | Mechanics of Materials I | 3 |
| CSC 231 | <i>Programming for Engineering Students</i> | |
| or CSC 101 | Fundamentals of Computer Science I | 2-4 |
| EE 201/EE 251 | Electric Circuit Theory/Laboratory | 4 |
| ENGR 110 | Engineering Science I | 2 |
| ENGR 111 | Engineering Science II | 3 |
| IME 314 | Engineering Economics | 3 |
| MATE 210/MATE 215 | Materials Engineering/Laboratory I | 4 |
| ME 211 | Engineering Statics | 3 |
| ME 212 | Engineering Dynamics | 3 |
| ME 302 | Thermodynamics I | 3 |
| ME 341 | Fluid Mechanics I | 3 |
| ME 343 | Heat Transfer | 4 |
| ENGR 459/460/461 | <i>Multidisc. Sr. Design Project I/II/III</i> | 6 |
| Or | | |
| Sr. Project-appropriate engineering discipline | | |

General Engineering Concentration or Individual Course of Study 40

SUPPORT COURSES (60)

| | | |
|----------------------------|---------------------------------------|---|
| BIO 213 | Life Science for Engineers | 2 |
| ENGR/BRAE 213 | Bioengineering Fundamentals (B2) | 2 |
| CHEM 124/CHEM 125 or | Gen Chem. for Engr. I/II (B3/B4) | |
| CHEM 127/CHEM 128 | General Chemistry I/II (B3/B4) | 8 |
| ENGL 149 | Technical Writing for Engineers (A3) | 4 |
| MATH 141/MATH 142 | Calculus I/II (B1) | 8 |
| MATH 143 | Calculus III (Add'l Area B) | 4 |
| MATH 241 | Calculus IV | 4 |
| MATH 244 | Linear Analysis I | 4 |
| Select from the following: | | 4 |
| MATH 344 | Linear Analysis II | |
| STAT 312 | Statistical Methods for Engineers | |
| STAT 321 | Prob & Stat for Engr. and Scientists | |
| STAT 350 | Prob & Random Processes for Engr (B6) | |
| PHYS 141 | General Physics IA (Add'l Area B) | 4 |
| PHYS 132/PHYS 133 | General Physics II/III | 8 |
| and General Physics III | | |

Physical Science Electives

| | | |
|----------------------------|--|---|
| Select from the following: | | 8 |
| CHEM 129 | General Chemistry III | |
| CHEM 216 | Organic Chemistry for Life Sciences I | |
| CHEM 217 | Organic Chemistry for Life Sciences II | |
| CHEM 312 | Survey of Organic Chemistry | |
| CHEM 313 | Survey of Biochemistry and Biotechnology | |
| GEOL 102 | Introduction to Geology | |
| GEOL 201 | Physical Geology | |
| GEOL 205 | Earthquakes | |
| GEOL 241 | Physical Geology Laboratory | |
| GEOL 305 | Fundamentals of Seismology | |
| PHYS 107 | Introduction to Meteorology | |
| PHYS 211 | Modern Physics I | |
| PHYS 212 | Modern Physics II | |
| PHYS 323 | Optics | |
| PHYS 417 | Nonlinear Dynamical Systems | |

GENERAL EDUCATION (40)

Total units 183-185



California Polytechnic State University
San Luis Obispo, CA 93407-0365

Biomedical & General Engineering Department
805-756-6400

GENERAL ENGINEERING CONCENTRATION (40 Units)

| | | |
|---------------|------------------------------------|---|
| IME 144 | Intro to Design and Manufacturing | 4 |
| MATE 322 | Leadership & Project Management | 2 |
| IME 418 | Product-Process Design | 4 |
| EE 321/EE 361 | Electronics/Electronics Lab | 4 |
| CSC 341 | Numerical Engineering Analysis | 4 |
| CE 207 | Mechanics of Materials | 3 |
| ME 234 | Philosophy of Design | 3 |
| IME 326 | Engineering Test Design & Analysis | 4 |
| or IME 356 | Manufacturing Automation | |
| or ME 305 | Introduction to Mechatronics | |

Approved Electives (300-level or higher) 12



California Polytechnic State University
San Luis Obispo, CA 93407-0365

Office of the Dean
College of Engineering
(805) 756-2131

June 18, 2014

TO: Kathleen Enz Finken
Provost, Cal Poly

FROM: Debra Larson
Dean, College of Engineering

RE: General Engineering Program Changes

CC: Robert Crockett, Fred DePiero, Rakesh Goel

A handwritten signature in dark ink, appearing to be "Debra Larson", written over the "FROM:" line of the memo.

Dear Provost Enz Finken,

With the endorsement of the General Engineering Program Director, the Faculty of the Biomedical and General Engineering Department, and the Faculty of the College of Engineering as represented by their Department Chairs, I am proposing to decouple the General Engineering Program from the Biomedical and General Engineering Department. Upon this change, the General Engineering Program will exist, again¹, as an independent program residing at the college level, and the Biomedical and General Engineering Department will be renamed the Biomedical Engineering Department. This approach parallels the structure of our Computer Engineering program that has successfully offered an ABET-accredited B.S. degree for over 20 years.

In accordance to AS-715-10 policy, this memo serves as the College's notification of our interest in this non-contentious reorganization. If you are supportive of this decoupling, I would then submit this to the Chair of the Academic Senate this summer so it could be scheduled for review and consideration early in the upcoming academic year.

Moving forward, faculty participating in the General Engineering Program will maintain a home department for the purposes of RPT; our expectation is that the General Engineering faculty will grow over time to nominally 4 rotating positions, each with a 3-year, 50% appointment to support interdisciplinary research initiatives and deliver curricula that has a college-wide scope. The Program Director will serve under a 100% appointment reporting directly to the dean and will maintain program continuity. A standing General Engineering Faculty Working Group comprised of the GENE Director, faculty with appointments in the General Engineering Program, and 4-6 faculty from across the college will serve as the GENE Curriculum Committee and will be responsible for program governance including all Program Review activities. We are in the process of creating a separate program office for GENE in building 13 (1/2 of existing 260 and 260B) in close proximity to the BMED and ME department offices. Our 14-15 budget plans include the director position, an administrative assistant shared with Mechanical

¹ The General Engineering program at Cal Poly evolved from the Engineering Science program, which had been established in 1960. The program name was changed to General Engineering in 1996, and existed at the college level under the direction of an Associate Dean until 2006, when the Biomedical and General Engineering Department was established. In effect, the GENE program served as the incubator for the BMED degree, which was started as a concentration in the existing GENE program.

Engineering (2/3 GENE and 1/3 ME), 10% tech support, and modest pool of student worker funds. The director and administrative assistant will be located in the 260-260B suite.

Per AS-715-10 – *Resolution on the Academic Senate Policy and Procedures for Reorganization of Academic Programs and Academic Units and Suspension of Programs*, a full and open discussion with faculty and staff in the affected academic programs preceded this proposal. The consultative process was as follows:

- The General Engineering Program Director initiated this proposal in the GENE self-study during the last program review; the review team amplified the need for this proposal as part of their site visit recommendations (May 2013).
- A 6-member General Engineering Faculty Working Group was formed during the fall quarter of this academic year; this group was tasked with reviewing the self-study recommendations, revisiting the GENE curriculum, and developing strategic plans for General Engineering. Their recommendations, in the form of a series of memos from the General Engineering Program Director to the Dean's Office, formalized this proposal and elevated the discussion to the College level.
- An initial proposal was presented to the Department Chairs, detailing proposed curricular changes, enrollment strategy, and the projected costs of the proposed changes (January 2014).
- The proposal was presented to the faculty of the College of Engineering at the Winter Conference, along with Q&A.
- A final proposal was discussed by the Department Chairs, and brought to their faculty for department vote. The General Engineering Program Director was available in this process to answer questions at department meetings.
- A final vote of Department Chairs, representing their respective departments, occurred on May 6. Vote was 7 in favor, 2 against.
- A formal vote from the Biomedical and General Engineering faculty, who had been involved in the process from the start, occurred on May 21. The faculty voted unanimously in support of the program separation proposal.

The three main reasons for this proposed change are:

- 1) This move will serve as a vehicle to strengthen interdisciplinary activities within the College of Engineering and across colleges, and will allow GENE to again serve as a test bed and incubator of new curricula including innovation and entrepreneurship.
- 2) This move, along with a revised curriculum and a prioritization of future faculty "joint" hires, will allow for a renewed commitment to GENE; supporting program growth and enrollment stability and facilitating future ABET accreditation.
- 3) This move will reduce the confusion caused by the connection to the Biomedical Engineering Program, which had historic roots but is no longer meaningful.

Improving Campus Response to Sexual Assault and Sexual Violence

AS-3192-14/FA/AA (Rev)

RESOLVED: That the Academic Senate of the California State University (ASCSU) recognize that the faculty have a crucial role in fostering awareness of sexual violence and supporting students and other members of the campus community impacted by sexual violence; and be it further

RESOLVED: That ASCSU state its support of Title IX and encourage faculty to engage in trainings as well as conversations with students, administrators, staff and local partners to help create a climate that ensures sexual violence is treated with the utmost urgency and sensitivity; and be it further

RESOLVED: That ASCSU call on all campus Presidents and Senates to review current sexual violence policies to guarantee they reflect newly emerging exemplary practices and specify clear reporting structures; and be it further

RESOLVED: That ASCSU call for the Chancellor's Office and campus Presidents to undertake campus climate studies that meet or exceed the new guidelines by the United States White House Task Force to Protect Students from Sexual Assault and that appropriate campus committees be assigned (or established) to regularly review campus climate study findings, make recommendations for campus improvements, and review of sexual violence prevention and education programs; and be it further

RESOLVED: That all committees assigned to review, develop, implement and/or oversee policies, research, and trainings include faculty, staff, and significant representation of students; and be it further

RESOLVED: That the ASCSU distribute this resolution to the CSU Board of Trustees, CSU Chancellor, CSU campus Presidents, CSU campus Senate Chairs, CSU campus Senate Executive Committees, CSU campus Vice Presidents of Student Affairs, CSSA President, CSU Campus ASI Presidents, CSU-ERFA President, and CSU Campus Title IX Coordinators.

RATIONALE: *The Academic Senate of the California State University (ASCSU) honors the courageous work of sexual violence survivors who have bravely spoken out to educate the wider community on the issue of sexual violence. This resolution is written in response to recent national and state attention given to the issue of campus sexual violence. This attention includes recent reports that "One in five women is sexually assaulted while in college....and, although fewer and harder to gauge, college men, too, are victimized"*

(See "Not Alone: The First Report of the White House Taskforce to Protect Students from Sexual Assault" (April 2014), available at:

http://www.whitehouse.gov/sites/default/files/docs/report_0.pdf). Other contexts for the resolutions include the U.S. President's establishment of the White House Task Force to Protect Students from Sexual Assault on January 22, 2014, and emerging court and administrative policy statements that reaffirm Title IX of the Education Amendments of 1972 (Title IX), which states that prevention of sexual violence (including rape, sexual assault, sexual battery, sexual coercion and gender-based harassment) is an important component of equal access to education. And the resolution is also written in

recognition of the California legislature SB 967 which includes assertion of the affirmative consent standard and its wider vision of "victim-centered" sexual assault response policies on California campuses that include comprehensive prevention programs, and requires administration on campus join forces with local rape crisis intervention professionals. The primary goal of this resolution is to encourage faculty and faculty senates to become active partners in creating safer campuses and to assert that faculty consultation (along with representation of student and staff voices) must be honored as campuses work through policies and trainings on these issues.

Any CSU policies and education programs need to draw upon exemplary practices in prevention, education, resource allocation and response. While there are many good sources for understanding these issues, these selected sources that might be of particular interest to faculty in informing their legal and ethical responsibilities on these issues:

- United States Department Of Education Office For Civil Rights April 2014 document "Questions And Answers On Title IX And Sexual Violence." (<http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf>)
- CSU Office the Chancellor Executive Order 1095 "Implementation of Title IX, VAWA/Campus SaVE act, and Related Sex Discrimination, Sexual Harassment, and Sexual Violence Legislations (<http://www.calstate.edu/eo/EO-1095.html>)
- American Association of University Professor's statement "Campus Sexual Assault: Suggested Policies and Procedures." This statement was "approved in October 2012 by the Association's Committee on Women in the Academic Profession and its Subcommittee on Sexual Assault on Campus. It was adopted by the Association's Council in November 2012." (<http://www.aaup.org/report/campus-sexual-assault-suggested-policies-and-procedures>)
- American Association of University Women's "Ending Campus Sexual Assault Tool Kit". Faculty may be particularly interested in the portion of this tool kit entitled "5 Ways Faculty and Staff Can Fight Sexual Violence on Campus" (<http://www.aauw.org/2014/04/14/fight-campus-sexual-violence>)
- Protect Students from Sexual Assault to "provide information for students, schools, and anyone interested in finding resources on how to respond to and prevent sexual assault on college and university campuses and in our schools." This site includes a full range of links to a wide range of organizations working on violence prevention. (<https://www.notalone.gov>)

Committees and campuses should listen seriously to the experience and healing needs of survivors, while also recognizing rights of all parties in any judicial process. The ASCSU appreciates that campuses will need to ensure that, clear guidance to fair campus disciplinary processes are available to all students, inform students of legal avenues and rights, as well as make sure safe, reliably confidential, and non-legalistic resources are available for students to explore concerns and questions regarding sexual violence.

ASCSU further recognizes that particular populations will have unique challenges and needs, and all climate studies, trainings, and policies need clear sensitivity to, and guidance for, undocumented, LGBTQI and international students. Also, information on policies and trainings must be readily available to all students, being sensitive to those with limited English proficiency or disabilities.

The CSU needs to recognize in its policies, unique and different circumstances posed by the diversity of campus settings if it is to truly have an impact on campus sexual violence. Urban campuses, rural campuses, commuter campuses, residential campuses, and campuses with large athletic programs will present different opportunities, needs and challenges in meeting the goal of creating safer environments. While state guidance will be necessary, localized realities must also be acknowledged and incorporated into effective policies, trainings and solutions.

While many types of on-going educational training programs will be needed, educational programs are especially needed that specifically target first year and transfer student orientations. Training should also be incorporated into leadership training for student organizations, and for student athlete leaders. Training for students should incorporate concepts of affirmative consent, bystander intervention, campus health resources, and campus reporting policies.

Campuses should include, in consultations at all stages on these issues, offices and organizations that have been long term leaders and advocates on these topics. Many campuses have a wealth of faculty and staff experts on this topic. This includes those who have played historic and on-going leadership and who have been aiding survivors, responding to incidents, and raising general awareness about the issues of sexual violence on campus, such as campus student affairs professionals, Women's, Gender, and Sexuality Resource Centers, campus sexual assault prevention teams and centers, along with psychological counseling faculty. Further, ASCSU encourages campuses to partner with local experts on sexual violence, asserting the important role of working closely with local sexual assault/rape crisis/domestic violence organizations and centers in campus discussions.

Approved Without Dissent– November 7, 2014

CONSTITUTION OF THE FACULTY

ARTICLE I. MEMBERSHIP OF THE GENERAL FACULTY

Voting members of the General Faculty of Cal Poly shall consist of those persons who are employed at Cal Poly and belong to at least one of the following entities: (1) full-time academic employees holding faculty rank whose principal duty is within an academic department, unit, or program (??); (2) faculty members in the Pre-Retirement Reduction in Time Base Program and Faculty Early Retirement Program; (3) full-time probationary and/or permanent employees in Professional Consultative Services as defined in Article III.1.b of this constitution; (4) full-time coaches holding a current faculty appointment of at least one year; (5) lecturers holding full-time appointments of at least one year in one or more academic departments, units, or programs; or (6) lecturers with a current assignment of 15 WTUs for at least three consecutive quarters; (7) lecturers holding part-time appointments for at least six consecutive years.

Members of the General Faculty, including department chairs/heads, shall not cease to be members because of any assigned time allotted to them for the carrying out of duties consistent with their employment at Cal Poly. "Visiting Personnel" shall not be members of the General Faculty. Members of the General Faculty who are on leave for at least one year shall not be voting members during their leave.

Nonvoting membership in the General Faculty shall consist of all academic personnel not included in the voting membership.

ARTICLE II. RIGHTS, RESPONSIBILITIES, AND POWERS OF THE GENERAL FACULTY

Section I. Rights of the General Faculty

The right of academic freedom is necessary for the pursuit and dissemination of truth and the maintenance of a free society. It is the obligation of the General Faculty to insure the preservation of an academic community with full freedom of inquiry and expression and insulation from political influence. (??)

ARTICLE III. THE ACADEMIC SENATE

Section I. Membership

- (a) Colleges with fewer than 30 faculty members shall elect two senators. All other colleges shall elect three senators, plus one senator for each 30 faculty members or major fraction thereof.
- (b) Designated personnel in Professional Consultative Services (excepting directors) shall be represented in the Academic Senate by the formula of one senator per each fifteen FTEF (Full Time Equivalent Faculty) members or major fraction thereof:

- (1) Full-time probationary or permanent Librarians; and
- (2) Full-time probationary or permanent (a) counselors; (b) student services professionals [SSP]: SSP I-academically related, SSP II-academically related, and SSP III-academically related; (c) SSPs III and IV; (d) Cooperative Education lecturers; and (e) physicians.
- (3) Full-time coaches holding a current faculty appointment of at least one year.
- (4) Part-time Librarians, counselors, student services professionals [SSP]: SSP I-academically related, SSP II-academically related, and SSP III-academically related; (c) SSPs III and IV; (d) Cooperative education lecturers; and (e) physicians, (f) coaches holding a current faculty appointment of at least six years.

~~(e) — Part time lecturers in an academic department/teaching area and part-time employees in Professional Consultative Services, other than those who are members of the General Faculty as defined in Article I, will be represented by one voting member in the Senate.~~

BYLAWS OF THE ACADEMIC SENATE

I. INTRODUCTION

B. DEFINITIONS

4. Part-time Academic Employees

Part-time lecturers in academic departments/teaching areas in the University and part-time employees in Professional Consultative Services (Professional Consultative Services classifications: librarians, counselors, student service professionals I-, II-, III-academically related, student service professionals III and IV, Cooperative Education lecturers, physicians, and coaches) who are not who hold appointments for six consecutive years are members of the General Faculty as defined in Article I of the *Constitution of the Faculty*.

II. MEMBERSHIP OF THE ACADEMIC SENATE

A. ELIGIBILITY

1. Elected Members

Elected members shall be full-time members of the General Faculty, or part-time members of the General Faculty holding appointments for at least six consecutive years, who have been nominated and elected in accordance with Article III of these bylaws.

2. Ex Officio Members

Ex officio members are specified in Article III.1.e of the constitution.

3. ~~Representative of Part-time Academic Employees~~

~~A voting member of the Academic Senate representing part-time academic employees shall be elected by vote of all university part-time academic employees during fall quarter of each academic year. Such representative must have an academic year appointment in order to serve in this position.~~

B. TERMS OF OFFICE

1. Terms of office for senators: the elected term of office for senators shall be two years. A senator can serve a maximum of two consecutive, elected terms and shall not again be eligible for election until one year has elapsed. A senator appointed to fill a temporary vacancy for an elected position shall serve until the completion of that term or until the senator being temporarily replaced returns, whichever occurs first. If this temporary appointment is for one year or less, it shall not be counted as part of the two-term maximum for elected senators. ~~The representative for part-time academic employees shall serve a one-year term with a maximum of four consecutive one-year terms.~~

III. VOTING AND ELECTION PROCEDURES

B. ELECTION CALENDAR

8. ~~Election of representative for part-time academic employees:~~

- ~~(a) during the first weeks of fall quarter, the Academic Senate office shall solicit nominations for the position of Academic Senate representative for part-time academic employees.~~
- ~~(b) after nominations have been received, election to this position shall be conducted. A runoff election, if needed, shall be conducted the week following the conclusion of the election. Said position shall be elected by vote of all university part-time academic employees unless only one nomination to this position is received, in which case the Executive Committee of the Academic Senate shall have the authority to appoint said nominee to the position.~~
- ~~(c) the elected member shall serve until the end of the academic year.~~