I. Minutes: Approval of minutes for Academic Senate meeting of September 26, 2000 (pp. 3-4).

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

Following the practice implemented last year, summaries of all program and course proposals sent by the Academic Senate Curriculum Committee to the Senate for consideration will be posted on the web. The URL for curriculum proposals is http://www.calpoly.edu/~acadprog/curriculum/curriculum_webdir.html and for general education http://www.calpoly.edu/~acadprog/gened. Every senator is expected to review these proposals as well as the accompanying recommendations of the Curriculum Committee.

REGARDING PROGRAM PROPOSALS: All program proposals will go through the normal first and second reading procedure, with descriptions of the programs and curriculum displays attached as hard copy to this agenda for your review.

REGARDING COURSE PROPOSALS: If any senator wishes to have a particular course brought before the body of the Senate (see postings on the web), then that request must be made in writing or email to the Academic Senate (mcmanuso@calpoly.edu) before November 6. For all such requests, hard copies of the course proposal will be made and distributed to all senators for the November 21 meeting. Even though the course proposals will be listed as a Business Item for first reading on October 24, they will only be posted on the web. At the November 21 meeting, all courses not pulled by request will be on the Consent Agenda; those pulled will be treated as second reading items, i.e., they can be discussed, amended, or voted upon.

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: Frank Lebens - report on status of Common Management Systems (CMS) and PeopleSoft-Student Administration.

IV. Consent Agenda:

V. Business Item(s):
A. Curriculum Proposals: Keesey, chair of the Curriculum Committee, first reading (pp. 5-14) [See information above regarding proposals on line].
B. **Resolution on Academic Program Review**: Morrobel-Sosa, chair of the IALA, first reading (pp. 15-25.) [The “Report on Institutional Accountability: Academic Program Review” is available on the web at [http://www.academics.calpoly.edu/programreview/APRFinal.htm](http://www.academics.calpoly.edu/programreview/APRFinal.htm). Please inform faculty in your area that this document is available for their review and input].

C. **Resolution on Opposition to Proposition 38**: statewide senators, second reading (pp. 26-30).

D. **Resolution on the Graduate Writing Requirement**: Keesey, chair of the Curriculum Committee, second reading (pp. 31-32).

E. **Resolution on 1999/00 Program Review and Improvement Committee Report of Findings and Recommendations**: Stanton, past chair of the Program Review and Improvement Committee, second reading (please bring copy mailed with the 9.26.00 agenda).

VI. Discussion Item(s):

VII. Adjournment:

**PLEASE KEEP THIS AGENDA FOR NOVEMBER 21ST SECOND READING OF BUSINESS ITEMS**
Preparatory: The meeting was opened at 3:16 pm.

I. Minutes: none.

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

III. Reports:

A. Academic Senate Chair: (Hood) The Executive Committee met twice during summer quarter. It reviewed charges for each of the Senate committees for the upcoming year as well as resolutions on senior projects, graduation requirements, and the FMI process. Hood reported that President Baker did not approve a portion of the FAR form submitted by the Senate last year, which would have provided faculty members a choice as to what areas they wished to be evaluated under. Departments are presently in process of determining procedures for FMI submittal.

The PeopleSoft prototypes for Human Resources and Business/Finance are in their implementation stage. Cal Poly is not participating in the pilot program for Student Administration because its current software program has more enhancements. However, DegreeWorks is under consideration.

B. President's Office:

C. Provost's Office: (Conn) Student progress to degree will be emphasized this year. Summer enrollment fell under target this year and fall 2000 enrollment was one percent under target. Other campuses are also experiencing lower enrollments. The Institutional Accountability and Learning Assessment (IALA) task force has submitted its 14-point response to the Trustees. The report is available on the web at www.academics.calpoly.edu.

D. Statewide Senators:
Kersten will be serving on the statewide Governmental Affairs Committee this year. This committee will continue its aggressive approach with the legislature once again. Gooden will be serving on the statewide Academic Affairs Committee. This committee will be responding to a proposed new framework for the CSU. The new Master Plan may include K-12. The Academic Senate CSU is also preparing its response to the proposed Master Plan. Hood will be serving on the statewide Faculty Affairs Committee. This committee is looking at issues of recruitment and retention, including faculty housing and faculty workloads.

E. CFA Campus President: (Fetzer) Fact-finding is presently underway. Regarding FMIs, deans will be able to consult but not direct departments as to how to distribute FMIs. (Foroohar) GSIs will be retroactive.

F. ASI Representatives: Leigh Love, this year’s ASI representative to the Academic Senate, introduced herself and presented some of ASI’s goals for the year: to have 95%
student membership on all university committees and to develop more communication between faculty and students outside the classroom.

G. Other: Frank Mumford, new Director of Foundation, was introduced by the Chair. Two of the Foundation’s goals for this year are to develop financial assistance programs to encourage new faculty and to improve the Foundation’s role and visibility on campus.

IV. Consent Agenda:

V. Business Item(s):

A. Resolution on Opposition to Proposition 38: first reading. M/S/P to move resolution to second reading. M/S/P to table voting on the resolution until October 24.

B. Resolution on Revision of Fairness Board Description and Procedures: first reading. M/S/P to move resolution to second reading. M/S/P to adopt.

C. Resolution on the Graduate Writing Requirement: first reading. This resolution expands the opportunity to fulfill the GWR requirement through General Education courses not just English courses. Moved to second reading at the next Academic Senate meeting.

D. Resolution on 1999/00 Program Review and Improvement Committee Report of Findings and Recommendations: first reading. Moved to second reading at the next Academic Senate meeting.

VI. Discussion Item(s):

VII. Adjournment: Meeting was adjourned at 5:00pm.

Submitted by:

Margaret Camuso
Academic Senate
New Program Proposals 2001-2003 Catalog

College of Agriculture
MS Agriculture,
  Delete Specialization in International Agricultural Development (IAD)
  Add Specialization in Agribusiness (to replace IAD)
  Add Specialization in Crop Science
  Add Specialization in Environmental Horticulture
BS Forestry and Natural Resources,
  Change Commercial/Tourism Management Concentration to Commercial Recreation/Tourism Management Concentration
  Change Wildland Hydrology Concentration to Watershed Hydrology Concentration
BS Nutrition,
  Add Culinary Science and Management in Nutrition Concentration
  Add Dairy Science Minor
  Add Land Rehabilitation Minor
  Add Ornamental Plant Production Minor
  Add Soil Science Minor

College of Architecture and Environmental Design -- no new program proposals

College of Business
  BS Economics,
    Delete Quantitative Economics Concentration

College of Engineering
  Add Multidisciplinary Design Minor (Aerospace Engr Dept)

College of Liberal Arts
  BS Graphic Communication,
    Add Individualized Course of Study (concentration)
  BA Liberal Studies
    Change Credential Track to Elementary Education Concentration
    Change General Track to Individualized Course of Study (concentration)
  Add Blended Program: BS Liberal Studies and Multiple Subject Teaching Credential
  Add Child Development Minor

College of Science and Mathematics
  BS Biological Sciences,
    Add Molecular and Cellular Biology Concentration
  BS Microbiology,
    Add Applied Microbiology and Biotechnology Concentration
    Add General Microbiology Concentration
    Add Medical and Public Health Microbiology Concentration
  BS Biochemistry,
    Add Molecular Biology Concentration
Programs Still Pending Chancellor's Office Approval as of 9/2000, from 2000-01 Program Review Cycle:

Master of Public Policy
MS Accounting
MS Industrial Engineering

College of Agriculture
NEW SPECIALIZATIONS
MS Agriculture, Specialization in AGRIBUSINESS
Designed to enhance the agribusiness management, commodity marketing, and technical skills of graduate students with interests in international and domestic agribusiness. Prerequisites: Bachelor's degree with coursework in macroeconomics, microeconomics, mathematics, and statistics.

Required Courses
- AGB 433/435/422 ............................................ 4
- AGB 450 Agricultural Strategy Formulation .............. 4
- AGB 460 Research Methodology in Agribusiness or SS501 Research Planning .................................. 2/4
- AGB 510 International Development and Agribusiness .................................................. 4
- AGB 514 Agribusiness Managerial Leadership and Communication ............................................. 4
- FNR 532 Forestry Applications in Biometrics and Econometrics ................................................... 4
- AGB 543 Agricultural Policy and Program Analysis .......................................................... 4
- AGB 554 Food Systems Marketing .............................. 4
- AGB 555 Technological and Economic Change in Agriculture .............................................................. 4
- AGB 563 International Agribusiness Trade: Cases and Theory ..................................................... 4
- AGB 599 Thesis in Agribusiness .............................. 6

Restricted elective .................................................. 4
Committee approved elective at the 400/500 level 4

Total: 48/50

MS Agriculture, Specialization in CROP SCIENCE
Research currently is focused primarily in postharvest technology, viticulture, and integrated pest management, with additional work being done in other areas, including agronomy, horticulture, and precision farming.

Required Courses
- CRSC/VGSC 521/FRSC 436/PPSC 405 .................. 4
- CRSC 581 Graduate Seminar .................................. 3
- CRSC 599 Theses .................................................. 6
- 400- or 500-level research methods course .............. 3

Restricted electives ............................................. 29
Any 400- and 500-level courses, approved by the student's graduate committee. A minimum of 23 units must be at the 500 level.

Total: 45
MS Agriculture, Specialization in
ENVIRONMENTAL HORTICULTURAL SCIENCE
For students interested in careers in teaching, applied research positions in industry, or to students planning

Required Courses
EHS 500 Individual Study .................................. 3
EHS 570/571 Selected Topics ................................ 3
SS 501 Research Planning .................................. 4
STAT 512 Statistical Methods ................................. 4
EHS 599 Thesis ................................................. 6
Restricted electives ............................................ 25
Any 400- and 500-level courses approved by the
student's graduate committee. A minimum of 3
units must be at the 500 level.

45

NEW CONCENTRATION
BS Nutrition: Culinary Science and Management in Nutrition Concentration
Designed for students wanting to apply a strong science background in one of two areas, foodservice management or food
product development. This concentration serves the growing need for nutritionists who are positioned to make decisions that
require a blend of management training, culinary expertise, and a fundamental science background.

FSN 304 Adv. Culinary Principles and Practice ...... 4
FSN 321 Culinary Mgt: Principles and Practice ...... 4
FSN 341 Wines and Fermented Foods ................. 3
FSN 343 Institutional Foodservice I ...................... 3
FSN 344 Institutional Foodservice II ..................... 3
FSN 364 Food Chemistry .................................. 4
FSN 408 Food Comp. Science/Product Dev. ........ 4
FSN 411 Sensory Evaluation of Food .................... 3
FSN 426 Food Systems Management ..................... 3
AGB 304 Agribusiness Marketing Management .... 4
BUS 212 Accounting ........................................ 4
BUS 381 Industrial Management .......................... 4
Adviser approved electives ............................... 16

59
NEW MINORS
DAIRY SCIENCE MINOR
The purpose of this minor is to help students from other disciplines gain a basic understanding of the terminology and practices used within the field of dairy science. Students may choose to emphasize dairy husbandry or dairy products technology, but the curriculum is flexible enough to accommodate students' individual goals. After completion, dairy husbandry students will have a basic understanding of cattle, dairy nutrition, milk production practices and commercial dairy herd management. Dairy products technology students will have an understanding of dairy food processing and marketing, quality and regulatory control and processing plant management. Specific programs will be designed to reflect the individual students' interest and needs.

The Dairy Science Minor will require two introductory courses. Students must obtain prior program approval from the Dairy Science Minor Coordinator in selecting an additional five courses according to their interests and goals. A minimum of 26 hours is required for the minor, at least half of which must be at the 300 and 400 level.

Required courses
DSCI 121 Elements of Dairying
 or DSCI 230 General Dairy Husbandry .................. 4
DSCI 134 Intro to Dairy Products Technology
 or DSCI 231 General Dairy Manufacturing ............ 4

Courses in area of emphasis .............................. 18
Select five courses from one of the two following areas, with adviser approval:

Dairy Husbandry
DSCI 101 Dairy Feeds and Feeding (4)
DSCI 241 Dairy Cattle Selection, Breeds, Fitting and Showing (4)
DSCI 301 Dairy Cattle Nutrition (4)
DSCI 321 Lactation Physiology (4)
DSCI 330 Artificial Insemination and Embryo Biotechnology (4)
DSCI 333 Dairy Cattle Mgt, Safety and Animal Well-Being (4)
DSCI 422 Breeding/Genetics of Dairy Cattle (4)
DSCI 432 Advanced Dairy Herd Management (4)

Dairy Products Technology
DSCI 202 Dairy Promotion and Marketing (4)
DSCI 223 Frozen Dairy Foods (4)
DSCI 233 Milk Processing and Inspection (4)
DSCI 234 Dairy Foods Evaluation (2)
DSCI 401 Phys/Chem Properties of Dairy Products (4)
DSCI 402 Quality Assurance and Control of Dairy Products (4)
DSCI 433 Dairy Plant Management and Equipment (4)
DSCI 434 Cheese and Fermented Dairy Foods (4)
DSCI 435 Concentration/Fractionation and Butter Technology (4)
DSCI 444 Dairy Microbiology (4)

26
LAND REHABILITATION MINOR

Students completing the minor will gain skills in recognizing, assessing, and treating disturbed lands for numerous purposes, including erosion and sediment control, water quality improvement, habitat restoration, and aesthetic enhancement. They will develop proficiency in plant identification and selection, soil properties and processes, and ecological principles, and also learn to set criteria and judge the feasibility, prudence, efficiency, and effectiveness of rehabilitation efforts.

Before being admitted to the minor, students must have successfully completed the following courses:

- BOT 121 or BIO 114; SS 121; MATH 118

At least one-half of the units must be at the 300-400 level. Generally, courses required for the student's major degree cannot be counted toward the minor, except that courses selected in the required core may count in both the major and minor programs. This and other course exceptions must be approved by the minor coordinator. As a guideline, students should take at least 20 units from outside their major degree program.

Required core courses

- **Plant area (select one course):**
  - BIO 152; BOT 238, 333; EHS 381
  - SS 321 Soil Morphology (4) or SS 440 Forest and Range Soils (4)

- **Soils area:**
  - SS 321 Soil Morphology (4)
  - OR SS 440 Forest and Range Soils (4)

- **Ecological Principles (select one course):**
  - BOT 326; FNR 306; AG 450

- **Project (select one course):**
  - May be selected from Special Problem, Selected Advanced Topic, Senior Project or other course designation approved by the minor coordinator.

Coordinator approved electives ........................................ 12-17

Select 4 courses from the following list.

- ASCI 329; BIO 334; BOT 313, 324;
- BRAE 340, 415; CRSC 221, 327;
- EHS 124, 382; FNR/LA 318;
- FNR 307, 308, 408, 419, 420
- MCRO 436; SS 202, 221

ORNAMENTAL PLANT PRODUCTION MINOR

The Ornamental Plant Production minor gives a student an understanding of the important ornamental crops grown in California, how they are propagated and grown, how we manipulate the environment to control the crop, and how they are harvested and handled after harvest. Ornamental plants are a multibillion dollar part of the agriculture industry in California, and students majoring in Agricultural Business, Crop Science, Fruit Science, and Plant Protection Science may well deal with ornamental plants as crops during their careers.

Required courses

- **EHS 121 Fundamentals of Environmental Horticulture I:**
  - 4
- **EHS 124 Plant Propagation:**
  - 4
- **EHS 210/310/401 Enterprise Project/Field Studies:**
  - 1

Electives ................................................................. 19

Chosen from:

- **EHS 231/232, 324, 327, 340, 341, 342, 424, 425**

28
SOIL SCIENCE MINOR

The minor in Soil Science is intended for students majoring in a scientific field, including agriculture and natural resources, chemistry, and biological sciences.

Required courses

SS 121 Introductory Soil Science (B5) .................... 4
SS 202 Soil and Water Conservation .......................... 3
SS 221 Fertilizers and Plant Nutrition or SS 223 Rocks and Minerals .............................................. 4
SS 321 Soil Morphology ........................................ 4

Restricted Electives ............................................... 11/14

SS 310 Urban Soils (4)
SS 322 Soil Fertility (4)
SS 323 Geomorphology (4)
SS 345 Soil Interpretations and Management (4)
SS 422 Soil Microbiology and Biochemistry (4)
SS 423 Soil and Water Chemistry (5)
SS 431 Soil Resource Inventory (4)
SS 432 Soil Physics (5)
SS 433 Land Use Planning (3)
SS 440 Forest and Range Soils (4)
SS 442 Soil Vadose Zone Remediation (4)
SS 453 Tropical Soils (4)

College of Engineering

NEW MINOR

Multidisciplinary Design Minor (Aerospace Engineering Department)

The minor will enhance students' ability to work in multidisciplinary engineering teams. The students will develop an understanding of the design process and the role of systems engineering in product design and development including costs analysis. They will also learn the systems integration process and how different subsystems are interfaced to develop a successful product.

Non-AERO students in the minor will be admitted by permission of the minor coordinator, and not held to the prerequisites for AERO 443/444/445 or AERO 447/448/449, nor IME 418.

Curriculum for Multidisciplinary Design Minor

Introductory courses ............................................. 14
IME 314 Engineering Economics (3)
IME 418 Product-Process Design (4)
BUS 271 Principles of Management (3)
PSY 350 Teamwork (4)

Core courses ..................................................... 16
AERO 360 Creative Problem Solving and Engineering Design (2)
AERO 443/444/445 or AERO 447/448/449 (10)
AERO 450 Aerospace Systems Engineering (4)

30
College of Liberal Arts

NEW CONCENTRATION

BS Graphic Communication: Individualized Course of Study (Concentration)

An opportunity to pursue a course of study that meets a student's individual needs and interests. This concentration consists of 30 units; a minimum of 18 units must be upper division and a minimum of 8 units must be Graphic Communication. The student will select the courses in consultation with the concentration coordinator and department head, and provide written justification for the courses and the way they constitute a cohesive, integrated program of study. The list of courses will serve as a contract between the student and the Graphic Communication Department.

NEW BLENDED PROGRAM

BS Liberal Studies and Multiple Subject Teaching Credential

☐ 60 units upper division
☐ GWR
☐ 2.0 GPA
☐ USCP

* = Satisfies General Education requirement

MAJOR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS 101</td>
<td>Orientation to Liberal Studies</td>
<td>1</td>
</tr>
<tr>
<td>LS 211</td>
<td>The American Enterprise: The Birth of a Nation to 1876 Centennial</td>
<td>4</td>
</tr>
<tr>
<td>LS 212</td>
<td>The American Enterprise: The 1876 Centennial to the 21st Century</td>
<td>4</td>
</tr>
<tr>
<td>LS 230</td>
<td>Community-Based Field Experience or EDUC 300 Intro. to the Teaching Profession</td>
<td>3</td>
</tr>
<tr>
<td>LS 461</td>
<td>Senior Project</td>
<td>2</td>
</tr>
<tr>
<td>BIO 113</td>
<td>Animal Diversity &amp; Ecology (B2/ B4)*</td>
<td>4</td>
</tr>
<tr>
<td>BIO 114</td>
<td>Plant Diversity &amp; Ecology (Area B)*</td>
<td>4</td>
</tr>
<tr>
<td>BIO 115</td>
<td>Human Biology</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 330-352, 355 (C4)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENGL 345/346 (USCP) recommended</td>
<td>Linguistics. Select one: ENGL 290, 390, 391, 395.</td>
<td>4</td>
</tr>
<tr>
<td>BIO 118 Pre-Calculus Algebra (B1)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>BIO 119 Trigonometry or STAT 130/217 (B1)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENGL 330-352, 355 (C4)*</td>
<td>Ethics. Select one: PHIL 331/335/337/338 (PHIL 338 recommended)</td>
<td>4</td>
</tr>
<tr>
<td>MATH 113 Animal Diversity &amp; Ecology (B2/ B4)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 114 Plant Diversity &amp; Ecology (Area B)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 115 Human Biology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENGL 330-352, 355 (C4)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENGL 345/346 (USCP) recommended</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 118 Pre-Calculus Algebra (B1)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 119 Trigonometry or STAT 130/217 (B1)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ETH 101 The Physical Environment: Matter/Energy (B3)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ETH 102 The Physical Environment: Atoms/Molecules</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ETH 103 The Physical Environment: Earth/Universe</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Foreign language 103-level or equivalent</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Courses to complete concentration</td>
<td>58</td>
<td></td>
</tr>
</tbody>
</table>

Total: 120 units

SUPPORT COURSES

In order to take the following courses the student must be admitted to the University Center for Teacher Education Multiple Subject Credential Program. Those students not admitted to this program will complete the BA Liberal Studies.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 428</td>
<td>Teaching Reading in Grades K-3</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 429</td>
<td>Teaching Reading in Grades 4-8</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 431</td>
<td>Teaching Soc. Studies and the Arts</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 432</td>
<td>Teaching Science and Math</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 454</td>
<td>Student Teaching I</td>
<td>7</td>
</tr>
<tr>
<td>EDUC 455</td>
<td>Student Teaching Seminar I</td>
<td>2</td>
</tr>
</tbody>
</table>

Total: 25 units

GENERAL EDUCATION (GE)

72 units required; 24 units are in Major.

*See page 79 for complete GE course listing.

*Minimum of 12 units required at the 300-400 level.
Area A Communication (12 units)
   A1 Expository Writing ............................................ 4
   A2 Oral Communication ............................................ 4
   A3 Reasoning, Argumentation, and Writing.................... 4

Area B Science and Mathematics (no addl units reqd)
   B1 Mathematics/Statistics * 8 in Major..................... 0
   B2 Life Science * 4 in Major ................................. 0
   B3 Physical Science * 4 in Major ......................... 0
   B4 One lab taken with either a B2 or B3 course
   B5 elective
   Area B elective (select one course from B1-B5) *
      4 units in Major ............................................. 0

Area C Arts and Humanities (12 units)
   C1 Literature .......................................................... 4
   C2 Philosophy ........................................................... 4
   C3 Fine/Performing Arts ........................................... 4
   C4 Upper-division elective * 4 in Major ..................... 0

Area D/E Society and the Individual (20 units)
   D1 The American Experience (40404) ....................... 4
   D2 Political Economy ................................................. 4
   D3 Comparative Social Institutions ......................... 4
   D4 Self Development (CSU Area E) .......................... 4
   D5 Upper-division elective ................................. 4

Area F Technology Elective (upper division)
   (4 units) ................................................................. 4

ELECTIVES ................................................................. 4

197

ELEMENTARY EDUCATION CONCENTRATION

*** Pending *** CD/EDUC 301 Intro to Learner's
   Development, Culture, Language and Identity .... 5
   FORL Field Experience in a Bilingual Setting .... 1
   EDUC 308 Effective Teaching/Classrm Mgt G. K-3 2
   EDUC 309 Effective Teaching/Classrm Mgt G. 4-8 2
   EDUC 440 Educating the Exceptional Individual ... 4
   BIO 306 Applications of Biological Concepts or
      PSC 304 Applications of Physical Science or
      PSC 305 Patterns of Change ......................... 4
   MATH 327 Math for Elementary Teaching I ........ 4
   MATH 328 Math for Elementary Teaching II ....... 4
   MATH 329 Mathematical Apps to Elem Teaching . 4
   Arts elective: MU 360/LS 310/TH 380 Music,
      Storytelling or Drama for the Classroom ......... 4
   KINE 250 Health Education ................................. 4
   KINE 310 Concepts in Elementary Physical Ed .... 4
   Area of emphasis .................................................. 16
      At least 8 units must be 300-400 level. LS 461 Senior
      Project will complement emphasis. .......................... 58

1 14 additional post-baccalaureate units required for Multiple Subject Credential. To complete a Preliminary Multiple Subject Credential (Level I), EDUC 456 and EDUC 457 must be taken as a post-baccalaureate graduate student.
NEW MINOR
Child Development Minor
The minor is designed to give students in Liberal Studies and other majors a broad knowledge base in child development. Biological, cognitive, social, and emotional development are examined with opportunities to explore development in the contexts of family and culture. The minor builds upon students' critical thinking skills by stressing the research base of the current knowledge in the field. At the same time, applications of that research, especially as they apply to teaching, are explored. This minor complements one's training in Liberal Studies by its emphasis on approaching child development as a coherent whole and as a scientific area of study.

Support Units
PSY 201 or PSY 202 General Psychology (D4) ...... 4
STAT 217 Intro to Statistical Concepts/Methods .... 4
CD/EDUC 301 Introduction to the Learner's Development, Culture, Language and Identity ..... 5

Required core
CD 324 Guiding Children .................................... 4
CD 329 Research Methods in Child Development .. 3
CD 350 Developmental Issues in Education .......... 3

Adviser approved elective ......................................... 4
May be selected from PSY/CD 306, CD 203, 401,
    PSY 419, 420, 421, 456, 460

27

College of Science and Mathematics
NEW CONCENTRATIONS
BS Biological Sciences: Molecular and Cellular Biology Concentration
Designed for students who are interested in the biological sciences with an emphasis on the molecular and cellular level, and to provide preparation for professional or graduate study or jobs in biotechnology.

BIO/CHEM 375 Molecular Biology Laboratory .... 2
CHEM 316 Organic Chemistry I .......................... 5
CHEM 317 Organic Chemistry II ....................... 5
CHEM 371 Biochemistry ..................................... 5
CHEM 372 Metabolism ...................................... 3
CHEM 474 Protein Techniques Laboratory ........ 2
Two of the following: ........................................ 8-10
BOT 450 Plant Biotechnology (5)
MCRO 402 Virology (5)
MCRO 433 Industrial Microbiology and Biotechnology (5)
ZOO 426 Immunology and Serology (4)
or CHEM 473 Immunochemistry (3)

30-32

BS Microbiology: (3 new concentrations)
Applied Microbiology and Biotechnology Concentration
Designed for students interested in the application of microbiology to various fields, such as food microbiology, industrial microbiology, or biotechnology.

MCRO 433 Industrial Microbiology and Biotechnology ............................................. 5
BIO 152 Biology of Plants or BIO 153 Biology of Animals ................................................ 5
BIO/CHEM 375 Molecular Biology Laboratory .... 2
CHEM 317 Organic Chemistry II ....................... 5
CHEM 372 Metabolism ...................................... 3
CHEM 474 Protein Techniques Laboratory ........ 2
SCM 201 Orientation to Biotechnology ................ 1
Adviser approved electives ...................................... 11

34
### General Microbiology Concentration

Designed for students interested in a broad background in microbiology whose goals may include graduate school, professional studies, or post-baccalaureate professional employment.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCRO 421 Food Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>MCRO 404 Microbial Diversity and Evolution</td>
<td>4</td>
</tr>
<tr>
<td>MCRO 436 Microbial Ecology</td>
<td>5</td>
</tr>
<tr>
<td>BIO/CHM 375 Molecular Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 317 Organic Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>Adviser approved electives</td>
<td>14</td>
</tr>
</tbody>
</table>

34 credits

### Medical and Public Health Microbiology Concentration

Designed for students whose goals may include graduate or professional studies, or professional employment, in medical or public health microbiology, epidemiology, or medical laboratory technology.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 153 Biology of Animals</td>
<td>5</td>
</tr>
<tr>
<td>MCRO 421 Food Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Select three of the following courses:</td>
<td>12</td>
</tr>
<tr>
<td>MCRO 342 Sanitary Microbiology (4)</td>
<td></td>
</tr>
<tr>
<td>MCRO 430 Medical Mycology (4)</td>
<td></td>
</tr>
<tr>
<td>ZOO 425 Parasitology (4)</td>
<td></td>
</tr>
<tr>
<td>ZOO 428 Hematology (4)</td>
<td></td>
</tr>
<tr>
<td>Adviser approved electives</td>
<td>13</td>
</tr>
</tbody>
</table>

34 credits

### BS Biochemistry: Molecular Biology Concentration

Offers courses which investigate the chemical nature of biological molecules related to genes and their expressed products. It augments the already strong biochemistry curriculum by emphasizing laboratory techniques in nucleic acid and protein manipulation along with elective courses exploring the fields of bioinformatics, industrial microbiology, pharmacology, and cell biology. Molecular biology is essential for modern applications of biotechnology in the agricultural, pharmaceutical, and medical industries and in pursuing research in all biochemistry related disciplines. It not only prepares students for advanced degrees in biology, microbiology, and biochemistry, but also for the large number of jobs in the biotechnology industry in California.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 377 Drugs and Poisons</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 348 Bioinformatics or BIO 342 Computer</td>
<td></td>
</tr>
<tr>
<td>Applications in Biology</td>
<td>3-4</td>
</tr>
<tr>
<td>BIO 452 Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>SCM 201 Orientation to Biotechnology</td>
<td>1</td>
</tr>
<tr>
<td>Adviser approved electives</td>
<td>12</td>
</tr>
<tr>
<td>(select 12 units from the following)</td>
<td></td>
</tr>
<tr>
<td>CHEM 472 Plant Biochemistry (4)</td>
<td></td>
</tr>
<tr>
<td>CHEM 473 Immunochemistry (3)</td>
<td></td>
</tr>
<tr>
<td>CHEM 477 Biochemical Pharmacology (3)</td>
<td></td>
</tr>
<tr>
<td>BOT 450 Plant Biotechnology (5)</td>
<td></td>
</tr>
<tr>
<td>ENGR 581/582/583 Biochemical Engineering (4)</td>
<td></td>
</tr>
<tr>
<td>MCRO 225 General Microbiology II (5)</td>
<td></td>
</tr>
<tr>
<td>MCRO 404 Microbial Diversity (4)</td>
<td></td>
</tr>
<tr>
<td>MCRO 433 Industrial Microbiology (5)</td>
<td></td>
</tr>
<tr>
<td>SCM 451 Ethics in the Sciences (3)</td>
<td></td>
</tr>
</tbody>
</table>

23-24 credits
REPORT ON INSTITUTIONAL ACCOUNTABILITY: ACADEMIC PROGRAM REVIEW

TASK FORCE ON INSTITUTIONAL ACCOUNTABILITY AND LEARNING ASSESSMENT

Anny Morrobel-Sosa, Chair (Special Assistant to the Provost, Materials Engineering)
Denise Campbell (Special Assistant to the Provost)
W. David Conn (Vice Provost for Academic Programs and Undergraduate Education)
Susan Currier (Associate College Dean, College of Liberal Arts)
James Daly (Statistics)
Myron Hood (Academic Senate Chair, Mathematics)
Steven Kane (Disability Resource Center)
Roxy Peck (Associate College Dean, College of Science and Mathematics)
Thomas Ruehr (Soil Science)

1 This discussion consciously mirrors the CSU Accountability Approach, with system-identified and campus-identified performance areas and measures. However, I think Cal Poly can be more sensitive to real differences among and across programs and departments while still establishing for certain university-wide expectations.
INTRODUCTION

In 1971, the California State University (CSU) Board of Trustees established an academic planning and program review policy (AP 71-32) requiring each campus to establish criteria and procedures for planning and developing new programs and conduct regular reviews of existing programs. CSU Executive Order No. 595 calls for “regular periodic reviews of general education policies and practices in a manner comparable to those of major programs. The review should include an off-campus component.” CSU Executive Order No. 729 also calls for periodic reviews of centers, institutes, and similar organizations. These policies have been reaffirmed in The Cornerstones Report and in the Cornerstones Implementation Plan. In 1992 Cal Poly adopted the Academic Program Review and Improvement Guidelines establishing procedures for the conduct of academic program reviews. These procedures and recommendations for external reviews of programs have since been modified. Currently, the information requested from programs that undergo internal review includes descriptions of educational goals, instructional designs and methods, assessment methods and the data so collected, and the procedures for utilizing the collected information. Thus, there is an increasing interest toward incorporating principles that make individual courses and the general programs in which they reside more accountable for student learning.

The Task Force on Institutional Accountability and Learning Assessment was appointed and charged by the Provost “to propose a systematic and coordinated approach to addressing academic (and larger institutional) accountability and assessment issues” consistent with our institutional mission and values. We have used as guiding principles the need to build upon, integrate and implement the perspective and approaches contained in existing (Cal Poly and CSU) documents, and the desire to keep these approaches clear, concise and simple. Establishing consistency, while maintaining flexibility, in internal accountability, external accountability and reporting is crucial. The Task Force has applied this approach in preparing this document, Report on Institutional Accountability: Academic Program Review, and used the following documents as resources:

Cal Poly Mission Statement
Cal Poly Strategic Plan
Commitment to Visionary Pragmatism
Academic Program Reviews (AS-383-92)
Academic Program Review and Improvement Guidelines
Academic Program Review and Improvement Guidelines Change (AS-425-94)
External Review (AS-496-98) and Procedures for External Review (AS-497-98)
Program Efficiency and Flexibility (AS-502-98)
Program Review and Improvement Committee Bylaws Change (AS-523-99)
Cal Poly Plan
Cal Poly’s General Education Program
Cal Poly as a Center of Learning (WASC Self-Study)
Review of the Baccalaureate in the California State University
The Cornerstones Report
Cornerstones Implementation Plan
The CSU Accountability Process
Cal Poly's Response to the CSU Accountability Process
"Best Practices" Documents and Resources from Other Institutions
GUIDING PRINCIPLES AND DEFINITIONS

Academic program review (APR) is a comprehensive and periodic review of academic programs, General Education, and centers and institutes. APR is a function of the Provost, in conjunction with the College Deans and the Academic Senate, and is coordinated by the Vice-Provost for Academic Programs and Undergraduate Education (VP-APUE).

Academic program review has as its primary goal, enhancing the quality of academic programs. Hence, it is an essential component of academic planning, budgeting, and accountability to internal and external audiences. APR is not a review of academic departments or other such administrative units. Each program, department (administrative unit) and college is responsible for their curricular decisions and programmatic offerings within existing resources. All such decisions shall be the purview of the faculty of the program, department (administrative unit) and/or college. Interdisciplinary programs, centers, and institutes also fall within the purview of this policy.

Academic program review of programs subject to professional or specialized accreditation will be coordinated to coincide with the accreditation or re-accreditation review, whenever possible. Although some programs may choose to use the self-study developed for their professional accreditation as one of the elements of the APR, it is important to note that accreditation reviews serve a different purpose than that of institutional academic program reviews.

The following definitions should help in distinguishing terms used throughout this document:

- **Academic program** is a structured grouping of course work designed to meet an educational objective leading to a baccalaureate or post-baccalaureate degree, or to a teaching credential.
- **Centers, institutes and similar organizations** are entities under the aegis of an administrative unit that “offer non-credit instruction, information, or other services beyond the campus community, to public or private agencies or individuals.”
- **Department** is an administrative unit which may manage one or more academic program, center, institute or similar organization.
- The term **program** is used to mean an academic degree program, General Education program, center, institute or similar organizations subject to institutional review.
- The **Program Administrator** is the individual responsible for administrative authority of the Program, and is usually referred to as the Program Head, Chair, or Director.
- The self-study is to be designed and prepared by the Program Administrator and representative Program faculty, referred to in this document as the **Program Representative(s)**.
- The (time) schedule for every academic program review is based on business, not calendar, days.

PURPOSE

The goal of academic program review is to improve the quality and viability of each academic program. Academic program review serves to encourage self-study and planning within programs and to strengthen connections among the strategic plans of the program, the College
and the University. Academic program reviews provide information for curricular and budgetary planning decisions at every administrative level.

### PROCESS SUMMARY

The academic program review process is intended to close the circle of self-inquiry, review and improvement. The basic components of APR are:

- a **self-study** completed by the faculty associated with the Program,
- a **review and site-visit** conducted by a Program Review Team chosen to evaluate the Program, and
- a **response** to the Program Review Team's report, prepared by the Program Representative(s), the Program Administrator, the College Dean and the Provost.

Although details are contained throughout this document, the process can be summarized as follows:

1. The Provost and College Dean select and announce the programs to be reviewed at least one year prior to the review.
2. For each program under review, a Program Review Team (Team) is appointed and a schedule is established for the review. Willingness and availability of the Team members for the entire review process should be secured well in advance. Procedures and charge to the Team must also be communicated and acknowledged by each member of the Team prior to the review.
3. The Program representative(s), Program Administrator, College Dean and Provost negotiate the content or theme of the self-study and establish a schedule for completion of the review. An essential element of the self-study must address student learning.
4. The Program representative(s) conducts the self-study and submits copies to the VP-APUE for distribution to the Team, College Dean and Provost at least 45 days prior to the scheduled site-visit.
5. The Team reviews the self-study, requesting additional materials as needed, and conducts a 1-2 day site-visit of the Program. The site-visit is coordinated by the VP-APUE and should include meetings with the Program faculty, staff, students and administrators.
6. The Team submits a draft report to the VP-APUE within 21 days of the site-visit for distribution to the Program. The Program representative(s) reviews the draft for accuracy and facts of omission.
7. The Team submits the final report (consisting of findings and recommendations) to the VP-APUE for distribution to the Program, College Dean and Provost within 45 days of the site-visit.
8. The Program representative(s) prepares a formal response to the Team report within 21 days and submits it to the VP-APUE for distribution to the College Dean and Provost.
9. The Program representative(s), the Program Administrator, the College Dean and the Provost hold a "follow-up" meeting to discuss final APR report (the Program's self-study, program review Team report, and program response).
10. The College Dean, in collaboration with the Program Administrator, submits to the Provost an action plan consistent with the recommendations of the APR report and how the program fits into the College mission and strategic plan. A copy of the APR report and the action plan will be forwarded to the Academic Senate.
ROLES AND RESPONSIBILITIES

Academic program review is a function of the Provost, in conjunction with the College Dean and the Academic Senate, and is coordinated by the VP-APUE. As required by the CSU Board of Trustees, academic programs “should be reviewed periodically at intervals of from five to ten years.” While past campus practice required that program reviews be undertaken at five year intervals, the inclusion of reviews of centers and institutes suggests that the review cycle be modified. Therefore, all academic programs, including General Education, centers, and institutes will be reviewed on a six-year cycle. This schedule may be accelerated in individual cases either at the discretion of the Provost or College Dean or in compliance with recommendations from prior program reviews. In addition to the selection of reviewers, the Academic Senate will have the opportunity to suggest programs or programmatic areas for review. Wherever possible, APR’s will coincide with specialized accreditation, other mandated reviews, or with reviews for new degree programs. For example, engineering programs are subject to accreditation by ABET on a six-year cycle, whereas business programs are subject to accreditation on a ten-year cycle. Hence, it is appropriate to consider that engineering programs be reviewed every six years, and that business programs be reviewed every five years. Programs in related disciplines or with similar missions should also be reviewed concurrently.

Each academic program review is conducted by a singular Program Review Team. It is expected most reviewers be knowledgeable in the discipline/field of the program under review. The Team will normally be composed of (at least) four members to be selected using the following guidelines:

- One member chosen by the Dean of the college whose program is under review. This person may be either a current Cal Poly faculty member (from a College different than that of the program under review) or an external reviewer.
- One or two current Cal Poly faculty members (from a College different than that of the program under review) chosen by the Academic Senate Executive Committee.
- Two external members representing the discipline of the program under review chosen by the President.

The composition of the Team may change when the academic program review coincides with a specialized accreditation review. In this case, it is incumbent on the individuals chosen by the Academic Senate Executive Committee to provide the necessary institutional review.

The VP-APUE will appoint one of the Team members to be Chair and will coordinate all reviews, in accordance with the established schedule, to ensure that the process is both efficient and fair.

The academic program review process can be summarized in three parts: the self-study, the review and site-visit, and the response (follow-up).

ELEMENTS OF THE SELF-STUDY

In preparation for the review, the Program will undertake a thorough self-study that is defined and designed by the Program faculty in conjunction with the College Dean and Provost.
establishes the program’s responsibility for its own mission, purpose and curricular planning within the context of the College and University missions. To accomplish this objective the report should consist of two parts:

**Part I** - A inquiry-based, self-study, the content or theme of which is to be proposed by the Program and negotiated with the College Dean and Provost. An important element of the content or theme chosen for the self-study must address student learning. To accomplish this, the self-study should include the following points as appropriate or relevant to the Program mission.
- Statement of purpose, quality, centrality, currency, and uniqueness (where appropriate)
- Principles and processes for student learning outcomes and assessment methods
- Strategic plan for program development, planning and improvement

**Part II** - General information that consists of data appropriate and relevant to the Program mission. (Most of this data is part of that already required for *Cal Poly’s Response to the CSU Accountability Process* and may be obtained with assistance from the office of Institutional Planning and Analysis.)
- Faculty, staff and students engaged in faculty research, scholarship and creative achievement, active learning experiences and academically-related community service or service learning
- Integration of technology in curriculum and instruction
- Evidence of success of graduates (e.g., graduates qualifying for professional licenses & certificates, graduates engaged in teaching, government, or public-service careers)
- Description of adequacy, maintenance and upkeep of facilities (including space and equipment) and other support services (library, and technology infrastructure)
- Alumni satisfaction; employer satisfaction with graduates

The Program will provide copies of the two-part, self-study to the VP-APUE for distribution to the Team, College Dean and Provost.

---

**THE PROGRAM REVIEW TEAM SITE-VISIT AND REPORT**

The Team will receive a copy of the Program’s self-study document at least 45 days prior to a proposed site-visit. All members of the Team should read the self-study and are encouraged to request additional materials as needed. A 1-2 day site-visit will be coordinated by the VP-APUE, but travel arrangements and expenses for external reviewers are the responsibility of the College Dean whose program is under review. These might include travel, lodging, meals, and honorarium, etc.

The Team should also be provided with sufficient time to discuss among themselves how to proceed with the visit. This would preferably occur at the beginning of the site-visit. It is expected that during the site-visit, the Team will have access to faculty, staff, students and administrators, and any additional documentation or appointments deemed necessary for the completion of the review. The Team should also be given the opportunity to meet with the
Program representative(s), the Program Administrator, the College Dean and/or Provost to discuss possible outcomes of the review at the end of the site-visit. It is the responsibility of the chair of the Team to ensure that all members of the Team work together throughout the review and that the final report reflects the recommendations of all reviewers.

Within 21 days of the site-visit, the Team will provide a draft of the report to the VP-APUE for distribution to the Program. The report should address the major issues facing the program and the program’s discipline within the larger context of the College and University mission and strategic plan, and should suggest specific strategies for improvement. The Program representative(s) will then review the draft report solely for accuracy and facts of omission. The final Team report (consisting of findings and recommendations) should be completed within 45 days of the site-visit and forwarded to the VP-APUE for distribution to the Program, the College Dean and the Provost.

**RESPONSE (FOLLOW-UP) TO ACADEMIC PROGRAM REVIEW**

The effectiveness of academic program review depends on the implementation of the appropriate recommendations contained in the APR report. Hence, a follow-up meeting will be scheduled by the VP-APUE, to include the Provost, the Program Administrator, the Program Representative(s), and the College Dean. The purpose of this meeting is to discuss the recommendations of the Team report, the Program’s response, and to develop an action plan for achieving compliance and improvement by the program. The results of this meeting will be summarized in a written document to be prepared by the College Dean and distributed to the Program and the Provost. This document will inform planning and budgeting decisions regarding the Program.

A copy of the APR report and the action plan will be forwarded to the Academic Senate. The Provost will prepare a narrative summary of Cal Poly's academic program review activity for the CSU Chancellor’s Office as part of the annual reporting for the CSU Accountability Process, with a copy to the Academic Senate.
College Deans and the Provost select/announce the programs to be reviewed (at least one year prior to the review) and a timetable is set.

College Deans, Academic Senate Executive Committee and President appoint a Program Review Team.

The Program representative(s), College Dean and Provost negotiate the content or theme of the self-study.

The Program representative(s) conducts the self-study. The self-study is distributed to the Program Review Team, College Dean and Provost at least 45 days prior to the scheduled site-visit.

The Program Review Team conducts a 1-2 day site-visit. The Team is provided access to the Program faculty, staff, students and administrators.

The Program representative(s) reviews draft report from the Program Review Team for accuracy and facts of omission. The Team submits the final program review report for distribution to the Program, College Dean and Provost.

The Program representative(s) prepares a formal response to the Team report for distribution to the College Dean and Provost.

Program Administrator, College Dean, Provost and VP-APUE hold a “follow-up” meeting to discuss APR report and program response.

Program Administrator and College Dean submit to the Provost an action
plan for Program improvement. A copy of the APR report and action plan are forwarded to the Academic Senate.
A CHECKLIST FOR ACADEMIC PROGRAM REVIEW

A sample timetable and checklist for the academic program review process is presented here. Some of these events may occur concurrently.

<table>
<thead>
<tr>
<th>TARGET DATE</th>
<th>ACTIVITY</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>Programs scheduled for review are selected and announced one year prior to the review, and a timetable is set.</td>
<td>College Deans and Provost</td>
</tr>
<tr>
<td>Prior to site-visit</td>
<td>Program Review Team is appointed.</td>
<td>College Deans, Academic Senate Executive Committee, President</td>
</tr>
<tr>
<td>Prior to site-visit</td>
<td>Participation of Team members is confirmed, Chair of Team is appointed</td>
<td>VP-APUE</td>
</tr>
<tr>
<td>Prior to site-visit</td>
<td>Content/theme of self-study is proposed and negotiated.</td>
<td>Program representative(s), College Dean and Provost</td>
</tr>
<tr>
<td>Prior to site-visit</td>
<td>Program representative(s) conducts the self-study.</td>
<td>Program</td>
</tr>
<tr>
<td>At least 45 days prior to site-visit</td>
<td>Self-study document is provided to VP-APUE for distribution to Team, College Dean and Provost.</td>
<td>Program and VP-APUE</td>
</tr>
<tr>
<td>At least 45 days prior to site-visit</td>
<td>Team reviews the Program’s self-study.</td>
<td>Team</td>
</tr>
<tr>
<td>Site-visit</td>
<td>The Team conducts a 1-2 day site-visit and is provided access to the Program faculty, staff, students and administrators.</td>
<td>Team, Program, College Dean, Provost and VP-APUE</td>
</tr>
<tr>
<td>At most 21 days after the site-visit</td>
<td>Team’s draft report is submitted to VP-APUE for distribution to the Program.</td>
<td>VP-APUE</td>
</tr>
<tr>
<td>At most 45 days after the site-visit</td>
<td>Program representative(s) reviews the Team draft report for accuracy and facts of omission.</td>
<td>Program</td>
</tr>
<tr>
<td>At most 45 days after the site-visit</td>
<td>Team submits final program review report to VP-APUE for distribution to Program, College Dean and Provost.</td>
<td>Team and VP-APUE</td>
</tr>
<tr>
<td>At most 60 days after the site visit</td>
<td>Program representative(s) prepares response to the Team Report and submits the response to VP-APUE for</td>
<td>Program and VP-APUE</td>
</tr>
<tr>
<td>Event</td>
<td>Description</td>
<td>Responsible Parties</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Within 90 days after site-visit</td>
<td>Distribution to College Dean and Provost.</td>
<td></td>
</tr>
<tr>
<td>Within 90 days after site-visit</td>
<td>Follow-up meeting to discuss academic program review report.</td>
<td>Program Administrator,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>College Dean, Provost and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VP-APUE</td>
</tr>
<tr>
<td>Within 120 days after site-visit</td>
<td>Action plan for Program improvement is submitted to the Provost and forwarded to the Academic Senate.</td>
<td>Program Administrator and College Dean</td>
</tr>
<tr>
<td>October (of following year)</td>
<td>Programs scheduled for review are selected and announced</td>
<td>College Deans and Provost</td>
</tr>
</tbody>
</table>
WHEREAS, California Polytechnic State University is a public educational institution that is strongly committed to the concept of a viable system of public education; and

WHEREAS, Proposition 38 would significantly alter the present system of financing K-12 education, resulting in large initial costs to the state educational budget with no clear accountability to the people of California; and

WHEREAS, Both initial increased costs and uncertain outcomes make it highly imprudent to initiate such changes to statewide public education; and

WHEREAS, Proposition 38 would impose significant new restrictions on the ability of state and local governments to adopt new laws and regulations affecting public schools; and

WHEREAS, Under Proposition 38, the Legislative Analyst has stated that the costs of educating higher cost pupils—those with special needs—will fall disproportionately upon local public schools, thus greatly increasing average per-pupil costs to those schools; and

WHEREAS, Passage of Proposition 38 would significantly decrease California’s commitment to the long established principle of support for public education; therefore, be it

RESOLVED: That the Academic Senate of California Polytechnic State University oppose the passage of Proposition 38.

Proposed by: Academic Senate CSU
Senators Myron Hood, Reg Gooden, and Tim Kersten
Date: September 18, 2000
SCHOOL VOUCHERS. STATE-FUNDED PRIVATE AND RELIGIOUS EDUCATION. PUBLIC SCHOOL FUNDING.
Initiative Constitutional Amendment.

Official Title and Summary Prepared by the Attorney General

SCHOOL VOUCHERS. STATE-FUNDED PRIVATE AND RELIGIOUS EDUCATION. PUBLIC SCHOOL FUNDING.
Initiative Constitutional Amendment.

- Authorizes annual state payments of at least $4,000 per pupil for private and religious schools phased in over four years.

- Restricts state and local authority to require private schools to meet standards, including state academic requirements.

- Limits future health, safety, zoning, building restrictions on private schools.

- Requires release of composite test scores of voucher pupils.

- Permits Legislature to replace current voter-enacted constitutional funding priority for public schools (Proposition 98) with minimum formula based on national per-pupil average, as defined by terms of this measure.

Summary of Legislative Analyst’s Estimate of Net State and Local Government Fiscal Impact:

- Short-term (first several years) state costs averaging between zero and $1.1 billion annually.

- Longer-term (within five years to ten years) net fiscal effect on state funding of K-12 schools is largely unknown. Annual impact likely to range from costs of about $2 billion to savings of over $3 billion, depending on the number of pupils who shift from public schools to private schools.

- Debt service savings to the state and school districts potentially in excess of $100 million annually after 10 years to 20 years, resulting from reduced need for construction of public schools.

- Potential loss of federal funds in the hundreds of millions of dollars annually.
PROPOSAL

This proposition, which amends the State's Constitution, makes major changes in public funding for K-12 education. These changes are described below.

Scholarships (Vouchers) for School-Age Children

Currently, about six million pupils attend kindergarten through 12th grade (K-12) in California public schools. In addition, about 650,000 pupils are enrolled in K-12 grades in various private schools that are not part of the public school system. The state and local school districts generally do not provide funding for pupils attending K-12 private schools. (The only exception is for a small number of children with physical, mental, or learning disabilities who are placed in certain private schools.)

This proposition requires the state to offer an annual scholarship (also known as a voucher) to every school-age child in California. The scholarships are grants of aid to parents on behalf of their children. Scholarship checks would be made out to parents, but sent to private schools selected by the parents. These checks could only be cashed to pay tuition and other educational fees at schools which have chosen to become "scholarship-redeeming" schools. The scholarships would not be considered income for state tax purposes.

In order to redeem scholarships, a private school cannot "advocate unlawful behavior" or discriminate on the basis of race, ethnicity, color, or national origin. The proposition does not prohibit a private school from restricting admission on other bases, including sex, religion, ability, and disability.

Each year the scholarship amount would be the greater of:

- $4,000 per pupil; or
- One-half of national average spending per pupil in public schools (as defined by the proposition); or
- One-half of California's spending per public school pupil (as defined by the proposition).

We estimate, using the proposition's definition of spending per pupil, that currently both California and national spending per pupil is somewhat less than $8,000. As a result, the scholarship level initially would be set at the $4,000 level. Our review indicates that the scholarship level would rise above $4,000 within the near future.

Starting with the first year the proposition would be in effect (the 2001-02 school year), all pupils who were previously in public schools and all children entering kindergarten would be eligible for scholarships. For students who were previously in private schools, the proposition phases in eligibility over a four-year period (see Figure 1).

<table>
<thead>
<tr>
<th>School Year</th>
<th>Private School Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>Kindergarten</td>
</tr>
<tr>
<td>2002-03</td>
<td>Kindergarten – 2nd Grade</td>
</tr>
<tr>
<td>2003-04</td>
<td>Kindergarten – 8th Grade</td>
</tr>
<tr>
<td>2004-05</td>
<td>Kindergarten – 12th Grade</td>
</tr>
</tbody>
</table>

Regulations Affecting Private Schools

Under current law, private schools generally operate under laws and regulations that are significantly less restrictive than those applied to public schools. The Legislature and local governments may change these private school laws and regulations—in most cases by a majority vote of the state or local legislative body.

This proposition affects the regulation of private schools in two main ways. First, all state laws that applied to private schools as of January 1, 1999—and all local laws that are in effect as of the November 2000 general election—would remain in effect. Second, the proposition imposes significant new restrictions on the ability of government to adopt new laws and regulations affecting private schools. Any new state laws would require a three-fourths vote of the Legislature. Local governments could impose new health, safety, or land use regulations on private schools only upon a two-thirds vote by the local governing body and a majority vote in an election held in the affected area.

Testing

This proposition requires scholarship-redeeming schools to administer the same standardized tests required of public schools for measuring academic achievement relative to pupils nationally. Test results for each grade would be released to the public. Individual pupil results would be released only to a parent or guardian.

Changes in Minimum Funding Level for Public Schools

Currently, Proposition 98, approved by the voters in 1988, establishes a minimum funding level for public schools and community colleges (K-14 education). Proposition 98 permits the state to spend more, or under specified circumstances less, than this minimum level. The current minimum funding level for K-14 education is $42 billion. This minimum funding level increases each year generally with changes in public school attendance and growth in the state's economy. (K-14 education also receives additional funds from sources that are "outside" of Proposition 98, such as federal funds and lottery funds.)

This proposition creates an alternative minimum funding level for California's public K-12 schools that would be based on a national average of per-pupil funding of public schools. In the first fiscal year that per-pupil funding provided to California's public schools equals or exceeds the national average, this alternative

Analysis by the Legislative Analyst

If the tuition and fees at a private school are less than the amount of the scholarship, the state would put the difference in an account to be held in trust for the pupil's future tuition and fee expenses at any scholarship-redeeming school as well as any college or university. A student would be eligible to use the trust account until his or her 21st birthday (if not enrolled in school at that time) or else through completion of an undergraduate degree.
guarantee would permanently replace the Proposition 98 guarantee. These per-pupil numbers would be calculated each year by the state's Department of Finance, based on definitions of funding specified in this proposition.

This proposition's national average funding guarantee does not include funds for community colleges, adult education, or most child care programs, which currently are funded under the Proposition 98 guarantee. Thus, under the national average funding guarantee, these programs would have to compete for funding with state programs generally, rather than against K-12 education programs. It is not known how this would affect funding over time for community colleges, adult education, or child care programs.

FISCAL EFFECT

This proposition would have major fiscal impacts on the state and local school districts. The size of these fiscal impacts would depend on legal interpretations of the proposition and such factors as:

- How people respond to the availability of scholarships. For example, the fiscal effect would depend on how many parents choose to send their children to scholarship-redeeming schools, how much room existing private schools make for new scholarship pupils, and to what extent new scholarship-redeeming schools are established.
- What actions the Legislature takes in response to the proposition. For example, the fiscal effect would depend on the amount of funding provided to K-12 public schools (which, in turn, could affect the scholarship level under the terms of this proposition).
- What actions local school districts take in response to the proposition. For example, the fiscal effect would depend on actions school districts take to maintain public school enrollments, such as the formation of charter public schools as an alternative to private schools or other education reforms.

Below we discuss the significant fiscal impacts of the proposition.

State Impacts

The primary effects of the proposition on the state involve (1) costs for providing scholarships to pupils who would have attended private schools regardless of this proposition and (2) net savings related to pupils who move from public schools to scholarship-redeeming private schools.

- Costs for Existing Private School Pupils. We assume that the initial scholarship amount would be $4,000 and the vast majority of existing private schools would become scholarship-redeeming schools. Thus, once all existing private school pupils are eligible (beginning in the proposition's fourth year), the state would have costs of at least $4,000 per child for almost 650,000 children who would have attended private school anyway.
- Net Savings From Public School Departures. A children move from public schools to scholarship redeeming schools, the state will save money that would have been spent on them in public schools. We estimate that the state would have saved almost $7,000 for each pupil leaving the system. (As noted below, there are other savings, namely capital outlay savings, that would not be on a per-pupil basis and therefore, are not reflected in this estimate.) Thus the net savings would be almost $3,000 for each departing pupil (nearly $7,000 in savings less $4,000 in scholarship costs). Each of these amounts would grow over time with inflation and economic growth.

There are likely to be net costs to the state for the first several years. This is because the state would have to pay for scholarships for almost 650,000 existing private school pupils. As described above, the proposition phases in scholarships for pupils already in private schools over a four-year period. At the same time, however, savings to the state would start at a relatively low level and increase as the number of pupils shifting from public to scholarship-redeeming school increases. While we cannot predict what these net state costs would be, they are likely to average as high as $1.1 billion annually for the first several years (if few pupils leave the public schools) to essentially no costs (if many pupils leave).

Long-Term Effects. Within five to ten years, we believe most people and schools will have responded to this proposition. That is, existing private schools will have decided whether to become scholarship-redeeming schools and whether to serve additional pupils, people will have decided whether to start scholarship redeeming schools, and parents will have decided on the placement of their children in schools.

Figure 2 summarizes our estimates of the potential long-term state impacts of the proposition. In estimating these impacts, the single most important assumption is the proportion of public school pupils who shift to scholarship-redeeming schools. While it is impossible to predict this number, we believe a reasonable range in the long run would be between 5 percent and 25 percent. As the figure shows, the annual savings resulting from these shifts could range from $1.3 billion to $6.7 billion. The figure also shows that in all cases the state would have costs of about $3.3 billion each year to provide scholarships to existing private school pupils. Figure 2 shows the net state impact under different assumptions about the shift of pupils from public to private schools. It indicates that:

- With a 5 percent shift, there are net state costs of about $2 billion annually.
• With a 15 percent shift, on the other hand, the state would realize net savings of almost $700 million annually.
• With a 25 percent shift, the state would realize net savings of over $3 billion annually.

![Figure 2](image)

**Net Fiscal Impact on the State—Long Term Under Different Assumptions About Pupil Shifts From Public to Private Schools**

<table>
<thead>
<tr>
<th>Level of Shift From Public Schools</th>
<th>Percent of Shift</th>
<th>Number of Pupils Shifting</th>
<th>Savings Front Private School</th>
<th>Costs for Existing Pupils</th>
<th>Net Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low end of range</td>
<td>5%</td>
<td>300,000</td>
<td>$1.3 billion</td>
<td>$3.3 billion</td>
<td>$2 billion</td>
</tr>
<tr>
<td>Middle range</td>
<td>15</td>
<td>900,000</td>
<td>4.0 billion</td>
<td>3.3 billion</td>
<td>$700 million</td>
</tr>
<tr>
<td>High end of range</td>
<td>25</td>
<td>1,500,000</td>
<td>6.7 billion</td>
<td>3.3 billion</td>
<td>$1.4 billion</td>
</tr>
</tbody>
</table>

**Other State Fiscal Impacts.** In addition to the primary costs and savings identified above, the proposition would have the following impacts:

- **Impact of the New National Average Guarantee.** Our review indicates that the national average minimum funding guarantee proposed by this proposition would soon replace the Proposition 98 minimum funding guarantee. Over time, the national average guarantee could require the state to spend either more or less per pupil than under Proposition 98, depending generally on how California’s economy performs relative to the other states.

- **Capital Outlay Savings.** In addition to funding school operating costs, the state provides money to local school districts (through the issuance of state general obligation bonds) to build and renovate facilities. By shifting students from public schools, this proposition would reduce local demand for this state funding. As a result, the state would realize significant future savings in bond debt service costs. The amount of these savings is unknown, but could be in excess of $100 million annually in about 10 years to 20 years.

- **Administrative Costs.** The state would have annual costs of about $10 million to administer the scholarship program and the trust accounts (for scholarship amounts in excess of tuition). An unknown portion of these costs could be paid from interest earnings on the trust accounts.

**Local Impacts**

Local school districts would also be affected by the shift of public school students to scholarship-redeeming schools. The impact would depend primarily on the extent to which the loss of state funding resulting from fewer pupils is matched by offsetting cost reductions. We estimate that school districts would lose, on average, almost $7,000 in state funding for every pupil who transfers to a scholarship-redeeming school. (The actual amount per pupil would vary from district to district.) Generally, district cost reductions would offset most or all of these funding reductions. However, the amounts by which districts could reduce costs as a result of having to teach fewer pupils would vary significantly from district to district. For example, the proportion of higher-cost pupils—those with certain disabilities or other special needs—probably will increase in some districts as a result of the transfer of large numbers of lower-cost pupils to scholarship-redeeming schools, resulting in higher average per-pupil costs. This would require those school districts either to reduce costs by finding new efficiencies, reduce programs, or find new sources of funding.

**Capital Outlay Savings.** As with the state, local school districts provide money (through the issuance of bonds and the use of various other funding sources) to build and renovate facilities. By shifting students from public schools, this proposition would reduce the demand for this funding. As a result, districts would realize significant future savings in bond debt service and other costs. The amount of these savings is unknown, but could be in excess of $100 million annually statewide in about 10 years to 20 years.

**Loss of Federal Funds.** Each year California receives almost $4 billion from the federal government to support a variety of public school programs. For many of these programs, the amount received by the state depends on the number of enrolled public school pupils. Thus, this proposition would cause the state and local school districts to lose federal funds, to the extent the proposition leads to fewer pupils in the public schools. This potential revenue loss is unknown but could be in the hundreds of millions of dollars annually.

**County Administrative Costs.** We estimate that county offices of education would have costs of several million dollars annually (statewide total) to administer reporting requirements under this proposition.
WHEREAS, Executive Order 665 of Title V requires that students fulfill the Graduation Writing Requirement (GWR); and

WHEREAS, Students may currently elect to meet the GWR through either the Writing Proficiency Examination (WPE) or approved upper-division coursework offered by the English Department; and

WHEREAS, Students should continue to have the option to meet the GWR through either the WPE or coursework in order to help them speed progress toward the degree; and

WHEREAS, Current policy allows students to be certified through coursework by receiving a grade of C or better and being certified as writing-proficient based on an in-class essay; and

WHEREAS, The new General Education (GE) Program, which takes effect in Fall 2001, provides an opportunity for enlarging the course options for meeting the GWR beyond those currently offered; and

WHEREAS, Many upper-division, writing-intensive GE classes can (at the discretion of faculty members offering the classes) provide opportunities appropriate for meeting the GWR; and

WHEREAS, Students should be encouraged to attempt the GWR early in their junior year, in order to identify writing problems and improve writing skills so as not to delay graduation; therefore, be it

RESOLVED: That students be allowed to satisfy the GWR either by passing the Writing Proficiency Exam (WPE) or by being certified writing-proficient on a GWR essay and getting at least a C as a course grade in a designated upper-division, writing-intensive GE course; and be it further

RESOLVED: That the Writing Skills Committee collaborate with the GE Committee to work out the specifics of how GWR essays will be administered and scored in upper-division, writing-intensive GE classes, and to explore ways to increase the effectiveness of advising that will encourage students to attempt the GWR early in their junior year.

Proposed by: The Academic Senate Curriculum Committee (Endorsed by the Writing Skills Committee and the General Education Committee)
Date: May 29, 2000
RESOLUTION ON JUNIOR LEVEL WRITING CERTIFICATION

WHEREAS, Each campus of the CSUC system has been directed to certify that students are proficient at the junior level in their writing abilities upon graduation; and

WHEREAS, It has been proposed that a Junior Level Writing Test be administered to all students; and

WHEREAS, Many students are already required to take and pass a 300-level English course with an emphasis on composition, for whom an additional test would be superfluous and unnecessary; and

WHEREAS, The Student Senate unanimously adopted, on April 18, 1979, a resolution supporting at least two methods of fulfilling the requirement of Junior Level Writing ability; therefore be it

RESOLVED: That the Academic Senate recommend that a one year only procedure be implemented whereby students are given the option of obtaining certification either through the Junior Level Writing Test or through specified 300-level English courses with a grade of C or better. The specified courses must focus primarily on developing composition skills.

APPROVED MAY 22, 1979