

Adopted: June 9, 1998

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

**AS-504-98/GE
RESOLUTION ON
*GENERAL EDUCATION 2000***

- RESOLVED: That the Academic Senate receive the attached *General Education 2000* as the guiding instrument for review of new general education course proposals; and be it further
- RESOLVED: That Amendments #1 and #2 be sent to Provost/Vice President Zingg to be considered as amendments to the *General Education 2000* document.

Proposed by: General Education Program
Date: May 5, 1998
Revised: May 26, 1998
Revised June 9, 1998

AMENDMENT #1

Add "or Society-and-the-Individual" to page 2 of *General Education 2000* as follows:

TECHNOLOGY ELECTIVE GEELECTIVE

For students in the College of Liberal Arts,
one additional course in Science-and-Mathematics
For all other students, one additional course in
Arts-and-Humanities or Society-and-the-Individual

Rationale: A year ago when the Senate considered alternatives to the proposed template it approved this modification. As you recall, we submitted a series of 14 "alternatives" to the templates. The above modification was known as "Alternative 13" and it was one, along with Alternatives 1 and 4, which were approved by the body. All the others failed. The Senate's recommendation of Alternative 13 was then rejected by the Governance Committee on the basis that the modification would disrupt the "balance" of the proffered template.

Title 5, Section 40404 is a very specific requirement that states:

40404. Requirements in United States History, Constitution and American Ideals:
The purpose of the following requirements is to ensure that students acquire knowledge and skills that will help them to comprehend the workings of American democracy and of the society in which they live to enable them to contribute to the society as responsible and constructive citizens. To this end each campus shall provide for comprehensive study of American history and American government including the historical development of American institutions and ideals, the Constitution of the United States and the operation of representative democratic government under that Constitution, and the processes of state and local government. To qualify for graduation each student shall demonstrate competence by completing courses in the foregoing fields or by passing comprehensive examinations in those fields....

Previously Cal Poly accommodated the 40404 requirement with courses in American history and governments for a total of six units which was the lowest requirement in the CSU. *General Education 2000* has reduced this to either a course in history or political science for four units. 40404 is a state-mandated requirement which was included in the GE package to accommodate the demands of the high-unit majors. I do not expect any support to remove it from the GE category into a stand-alone graduation requirement.

Because of its specific status, however, the 40404 requirement does not technically belong under Area IV. As the language of the requirement states, it is a "skill" to assist students in comprehending "the workings of American democracy...." Therefore, it should be given a separate area in much the same way as the other "skills" in Area I are given. By placing it in Area IV it disrupts the "balance" and gives the impression that Area IV is bursting with 20 units. By contrast, it appears that the remaining areas are starving for units, so why not limit science majors to Area III in an attempt to complement their GE curriculum? In fact, Area IV is acting as a surrogate parent for an orphan that on other CSU campuses would be a bona fide child of the larger extended functional curriculum.

By allowing science-based majors to satisfy their GE ELECTIVE by taking the additional four units in EITHER Area III (Arts and Humanities) OR Area IV (Society and the Individual), we would be providing the students with a more balanced set of options. I urge the support of my amendment.

Submitted by Reg Gooden

AMENDMENT #2

Make the following changes to page 4 of *General Education 2000* as follows:

Cal Poly's Commitment to Gender and Diversity

Cal Poly seeks to provide its students with an education rich in diverse experiences and perspectives. Such an education is intended to provide students with knowledge and perspectives fostering adaptability and flexibility in a changing world, as well as enhancing students' understanding of, and tolerance for, differences among people. The General Education Program affirms the university's commitment to diversity as a value central to the education of Cal Poly students. All GE courses are expected to address issues of gender; ethnicity, and diversity ~~where relevant to~~ the material within the context of the material presented in the course. Effective general education creates an awareness of those figures, male and female, who have made a significant impact on our society or a major contribution to science, mathematics, philosophy, literature, the arts, history, economics, and other areas of human endeavor. Students completing Cal Poly's GE Program should have a clear sense of the intellectual roots creating and contributing to American society and of the ways that various cultures, particularly western culture, and both women and men have contributed to knowledge and civilization and to transforming American society over time.

Submitted by Phil Fetzer

General Education 2000

At Cal Poly, we believe that General Education is central and vital to each student's university experience. After reviewing the GE curriculum which has been in place for the past fifteen years, the Academic Senate spent two years developing recommendations for a revised program to better prepare our students for the challenges of life-long learning and effective, engaged citizenry in the twenty-first century. Following the recommendations of the ad-hoc General Education Committee, the Senate forwarded its recommendations to the President (AS-478-97 and AS-472-97). On April 25, 1997, the President approved the template for the distribution of unit requirements for GE 2000.

Preface

Based upon the charge of the Provost and the approved template, the GE Committee and Area Committees have developed principles and guidelines to prepare for the implementation of GE 2000.

Program Charge

The approved program has four primary objectives:

1. Create a model to accommodate a four-unit standard course;
2. Keep the total required units in the program at 72;
3. Fulfill the conditions of Executive Order 595;
4. Encourage flexibility.

In addition the General Education Committee was charged with

- a. providing at least 12 units of GE at the upper-division level;
- b. ensuring that all courses have a writing component as appropriate;
- c. supporting information competency as an educational goal of the university's curriculum;
- d. pursuing development of interdisciplinary core courses spanning more than one category;
- e. infusing U.S. Cultural Pluralism in the program;
- f. allowing the double counting of GE courses with major or support requirements;
- g. integrating global and international issues appropriately into the program;
- h. implementing the model flexibly and creatively;
- i. addressing issues and understandings that reflect the polytechnic mission of the University.

GE 2000 Template

The approved template calls for the following distribution of courses:

- COMMUNICAnON 12 units
 - Expository Writing 4
 - Oral Communication 4
 - Reasoning, Argumentation, and Writing 4

● SCIENCE AND MATHEMATICS		16 units
● Mathematics or Statistics	8	
● Life Science (4) and Physical Science (4) (one with lab)	8	
● ARTS AND HUMANITIES		16 units
● Literature	4	
● Philosophy	4	
● Arts	4	
● Area elective	4	
● SOCIETY AND THE INDIVIDUAL		20 units
● Title 5, Section 40404 requirement	4	
● Economics	4	
● Psychology/Health	4	
● Social Sciences	4	
● Area elective	4	
● TECHNOLOGY ELECTIVE	4	4 units
● GEELECTIVE	4	4 units
● For students in the College of Liberal Arts, one additional course in Science and Mathematics		
● For all other students, one additional course in Arts and Humanities		

Total: 72 units

GE 2000 Template for Engineering Programs

The approved template calls for the following distribution of courses for qualifying engineering programs:

● COMMUNICATION		12 units
● Expository Writing	4	
● Oral Communication	4	
● Reasoning, Argumentation, and Writing	4	
● SCIENCE AND MATHEMATICS		28 units
● Mathematics/Statistics		
● Physical Science		
● ARTS AND HUMANITIES		16 units
● Literature	4	
● Philosophy	4	
● Arts	4	
● Area elective	4	

- SOCIETY AND THE INDIVIDUAL 16 units
- Title 5, section 40404 requirement 4
- Economics 4
- Psychology/Health 4
- Social Sciences 4

Total: 72 units

Program Design

Within the strictures of the template based on EO 595, Cal Poly's GE Program seeks to promote connections between the various areas so that GE courses will be perceived as interrelated rather than as isolated fragments. By placing basic knowledge in a larger context, each course in the program should provide a vision of how its subject matter is an important component of general education. This might be accomplished, for example, by providing historical perspective **that** includes great achievements in the discipline and their impact and/or by the examination of important contemporary issues and problems from the discipline. Students should understand the value of the discipline being studied as well as its relationship to other disciplines.

Students are encouraged to complete foundational courses as early as possible. Lower-division coursework in Areas I-IV has been designed to give students the knowledge and skills to move to more complex materials. The three-course Communications sequence, for example, provides instruction and practice in the kinds of skills in writing, speaking, and critical thinking that students will need in later courses. Consequently, students are expected to complete this sequence during their freshman year, and by no later than the end of their sophomore year. By the end of the sophomore year, students should also complete lower-division courses in Science and Math, Arts and Humanities, and Society and the Individual. (No General Education course may be remedial or repeat coursework required for CSU admission.)

Interdisciplinary and Linked Courses

All lower-division coursework is considered foundational and is meant to ground students in various disciplines. Consequently, interdisciplinary courses will not ordinarily be offered at the lower-division level. The opportunity for interdisciplinary study will occur primarily at the upper-division level, with lower-division exceptions developing from specific programmatic needs.

Linked courses, however, are strongly encouraged. (Linked courses occur when students concurrently enroll in courses from two areas of the GE curriculum--e.g. a course in composition linked to a course in social science.) Academic disciplines are encouraged to cooperate in designing coursework which, when linked, enhances the study of more than one foundational area. Linkages can be thematic or can contribute to a core curriculum. Linked courses are especially encouraged as a way to provide subject matter for courses in writing and speaking, and for courses which connect the arts and humanities with the social sciences, and the liberal arts/sciences with polytechnic and professional curricula.

Linked courses provide options for students. Because many students fulfill part of their GE requirements at community colleges or other four-year institutions, however, all students

cannot be required to take linked courses. In addition, conflicts in students' course scheduling often prevent them from enrolling in courses taking more than one term to complete. Courses offered for GE must normally allow students to complete a four-unit requirement in a single quarter. The value of a coherent, integrated program is clear, however, and packages of linked courses should, where possible, be developed as alternative tracks to fulfilling GE requirements.

Cal Poly's Commitment to Gender and Diversity

Cal Poly seeks to provide its students with an education rich in diverse experiences and perspectives. Such an education is intended to provide students with knowledge and perspectives fostering adaptability and flexibility in a changing world, as well as enhancing students' understanding of, and tolerance for, differences among people. The General Education Program affirms the university's commitment to diversity as a value central to the education of Cal Poly students. All GE courses are expected to address issues of gender, ethnicity, and diversity where relevant to the material presented in the course. Effective general education creates an awareness of those figures, male and female, who have made a significant impact on our society or a major contribution to science, mathematics, philosophy, literature, the arts, history, economics, and other areas of human endeavor. Students completing Cal Poly's GE Program should have a clear sense of the intellectual roots creating and contributing to American society and of the ways that various cultures, particularly western culture, and both women and men have contributed to knowledge and civilization and to transforming American society over time.

U.S. Cultural Pluralism Requirement

USCP is a university requirement, and faculty are encouraged to develop GE courses which also meet the USCP requirements.

Service Learning

A service-learning component is encouraged in courses where it may be appropriate.

Writing Component

All General Education courses must have an appropriate writing component. In achieving this objective, writing in most courses should be viewed primarily as a tool of learning (rather than a goal in itself as in a composition course), and faculty should determine the appropriate ways to integrate writing into coursework. While the writing component may take different forms according to the subject matter and the purpose of a course, at least 10% of the grade in all GE courses must be based on appropriate written work.

In addition, students must enroll in 24 units of Writing-Intensive courses (20 units for students in engineering programs and eight units for GE-certified transfer students). Writing Intensive courses must include a minimum of 3000 words of writing and base 50% or more of a student's grade on written work. Faculty teaching Writing Intensive courses will provide feedback to students about their writing to help them grasp the effectiveness of their writing in various disciplinary contexts. A significant selection of writing-intensive upper-division courses will be made available.

The GE Program is committed to providing the resources to support both the required writing component and Writing Intensive coursework. The kind and amount of writing will be a

factor in determining class sizes, and a writing-in-general-education program will be established to provide support and training for faculty.

Information Competency

Information Competency is an educational goal of the university curriculum, and the GE Program affirms the goals established by the Information Competence Committee:

According to its Mission Statement, Cal Poly aims to teach students "to discover, integrate, articulate, and apply knowledge" and to provide students "with the unique experience of direct involvement with the actual challenges of their disciplines." To meet these goals, Cal Poly must help students acquire the skills necessary to master the challenges of an information-based society. As the amount of information proliferates and information technology becomes more sophisticated, it is especially imperative that college graduates be "information competent." They must possess the information-management skills necessary for independent and lifelong learning and the tools required being informed and productive citizens.

GE courses are expected to provide relevant guidance in information retrieval, evaluation of information, and appropriate citation of information.

Double-counting

While many lower-division GE courses are necessarily specified as support courses (especially in the sciences), students should be given free choice in selecting upper-division electives in Arts and Humanities, Society and the Individual, and Technology. The upper division electives in these areas are seen as opportunities for students to explore an interest in depth beyond their majors. Because exposure to diverse ideas is central to general education, departments may not specify courses to meet the upper-division GE electives.

Staffing GE Courses

Faculty teaching General Education courses should meet the following minimum qualifications or their equivalent:

1. An understanding and appreciation of the educational objectives of Cal Poly's GE Program;
2. For teaching lower-division courses, a master's degree in a related field (or, for teaching associates, appropriate training and supervision by an expert in the field);
3. For teaching upper-division courses, a doctorate or an appropriate terminal degree in a related field is not required but is strongly expected;
4. A professional commitment to the subject, as demonstrated by teaching experience, scholarly contributions, or continuing professional education.

Missions, Objectives, and Criteria

Cal Poly's General Education mission is to provide students with fundamental knowledge set in a framework that will enhance their understanding of various basic disciplines as well as the

significance of these disciplines in the larger world. To achieve this goal, the structure of the program and the content of its courses are designed to encourage an appreciation of the complexity of all knowledge and of the interrelationships among the various branches of knowledge. Lower-division courses focus on the fundamentals of knowledge provided by foundation disciplines; upper-division courses provide depth while at the same time making clear the connections among the disciplines. All courses are intended to prepare students to appreciate intellectual diversity and to function effectively within the complex cultural environment of society in the twenty-first century.

Program Goals

Consistent with Executive Order 595, Cal Poly's General Education Program is designed to assure graduates have made noteworthy progress toward becoming truly educated persons and to provide means whereby graduates will have

- The ability to think clearly and logically, to find information and examine it critically, to communicate orally and in writing, and to reason quantitatively;
- Appreciable knowledge about their own bodies and minds, about how human society has developed and how it now functions, about the physical world in which they live, about the other forms of life with which they share the world, and about the cultural endeavors and legacies of their civilizations;
- An understanding and appreciation of the principles, methodologies, value systems, and thought processes employed in human inquiries.

In addition, Cal Poly's GE program strives to enhance the ability of graduates to live and work intelligently, responsibly, and cooperatively in a multicultural society and in an increasingly global environment. While anchored in the western intellectual tradition, the curriculum integrates of the contributions to knowledge and civilization made by diverse cultural groups and by both women and men.

Area I: Communication

The three courses in Area I provide a foundation in the skills of clear thinking, speaking, and writing. Courses in this area provide extensive practice in the principles, skills, and art of reasoning in both oral and written communication. Writing and speaking are fundamental modes of expression that rely on the principles of rhetoric and clear reasoning, and instruction in logic is an essential support for these modes. The sequence assumes that the mastery of reasoned communication must be developed and practiced over time and that this mastery is crucial to students' success at the university and beyond. By placing basic skills in a larger context, these courses also provide a vision of why this area is an important component of general education.

Expository Writing

Educational Objectives. After completing the first foundation course in writing, students are expected to have achieved facility in expository writing and should have an enhanced ability to

1. explore and express ideas through writing;
2. understand all aspects of the writing act--including prewriting, drafting, revision, editing, and proofreading--and their relationship to each other;

3. assess the writer's audience and apply the appropriate organizational approaches and language;
4. recognize that writing and rewriting are necessary to the discovery, clarification, and development of a student's ideas;
5. write essays that are clear, unified, coherent at all levels, and free of significant errors in grammar and spelling;
6. read critically to derive rhetorical principles and tactics for the student's own writing;
7. understand the importance of ethics in written communication.

Criteria. The course proposal and expanded course description must clearly indicate how the course will include at least 4,000 words of original writing for evaluation and provide both instruction and practice in

1. the writing process (including prewriting, drafting, revising, editing, and proofreading);
2. structuring effective paragraphs which focus on a single issue and reflect both unity and coherence;
3. the major organizational approaches to expository writing (e.g. comparison and contrast, process, classification and division);
4. writing expository essays (which incorporate narration and description) that are appropriately adjusted to the writer's audience;
5. precise and concrete usage with the appropriate levels of diction, voice, imagery, and figures of speech adapted to the intended audience;
6. the use of standard grammar and punctuation;
7. close critical reading;
8. critically assessing students' own and others' papers;
9. writing both in- and out-of-class analytic essays (with approximately one-third of the course exercises involving "speeded" writing).

Oral Communication

Educational Objectives. After completing a course in this area, students should have achieved skill in oral communication (including listening, speaking, and critical attention to language use), and have an enhanced ability to

1. hear and understand what is said, formulate relevant responses in complete sentences free of slang, and construct spoken messages in a variety of rhetorical contexts, including brief messages, conversations, group discussions, and oral presentations;
2. understand the place, function, and ethical use of oral communication;
3. evaluate spoken messages critically, especially for their clarity, informative value, and use or abuse of rhetorical devices in oral persuasion;
4. recognize that writing and speaking are closely related, and that each is an effective act of rehearsal for the other;
5. locate, retrieve, evaluate, and incorporate material appropriate to oral presentation, and cite such material accurately;
6. recognize the common fallacies of thinking;
7. practice writing skills related to the subject matter of the course.

Criteria. The course proposal and expanded course outline must clearly indicate how the course will include appropriate writing activities of not less than 2500 words related to the content and the logic of oral presentations, provide an activity environment allowing four or more original

oral presentations of 5-7 minutes (at least one must be a speech to inform and one a speech to persuade), and provide both instruction and practice in

1. applying techniques for attentive listening and accurate comprehension of spoken messages;
2. the skills appropriate for a variety of oral presentations;
3. the principles of outlining appropriate to various speaking situations;
4. using organizational patterns appropriate to various speaking situations;
5. evaluating the uses of language, including the abuses of language, in persuasive speaking;
6. locating, retrieving, reporting, evaluating, integrating, and accurately citing research material;
7. identifying the common fallacies of thinking, and understanding their implications in both written and oral forms.

Reasoning, Argumentation, and Writing

Educational Objectives. After completing this course, students should be able to understand, recognize, and apply principles of reasoning in argumentation to their own and others' written and oral communications; in achieving this objective, students should have an enhanced ability to

1. recognize lines of reasoning and the precise issues they address; determine the relevance of argument to issue and the relevance of premises to conclusion; and evaluate the strength of an argument by accurately applying principles of both formal and informal logic;
2. write out-of-class argumentative essays that are well composed, demonstrating a clear sense of issue and developing cogent lines of reasoning;
3. develop rhetorical awareness that will allow them to adapt their arguments to various audiences;
4. recognize the moral, as well as logical, dimensions of rational discourse;
5. write in-class analytical and argumentative essays typical of the critical-thinking component of "spedeed" standardized graduate or professional-program admissions tests.

Criteria. Because both the Expository Writing and the Oral Communication courses prepare students for this course, enrollment requires satisfactory completion of (or receiving credit by examination in) both Expository Writing and Oral Communication. The course proposal and expanded course outline must clearly indicate how the course will include at least 3,000 words of original writing for evaluation and provide both instruction and practice in

1. the principles of organizing and writing argumentative essays for various rhetorical situations;
2. identifying issues; recognizing, analyzing, evaluating and constructing arguments (including treatment of deductive validity and soundness, inductive argument strength, and common deductive and inductive fallacies);
3. criticizing the written arguments of others;
4. discerning the relevance of premises to conclusions and the relevance of arguments to Issues;
5. recognizing the uses and abuses of language in written argument;
6. finding, evaluating, and incorporating research materials, as well as attributing and documenting them accurately;
7. applying principles of fair-minded argument (including how to identify and respond to bias, emotion, and propaganda);
8. writing both in- and out-of-class argumentative essays.

Area II: Science and Mathematics

Lower-division foundation courses in Area II provide a basic understanding of the nature, scope, and limitations of mathematics, statistics, and the physical and life sciences, as well as an understanding of their breadth of application to other disciplines. Foundation courses in this area teach fundamental concepts in mathematics, science, and statistics, including the scientific method; consequently, these courses should not be interdisciplinary in nature. They also provide a vision of why this area is an important component of general education by placing basic knowledge in a larger context. (This might be accomplished by providing some historical perspective that includes great achievements in the discipline and their impact and/or by the examination of important contemporary issues and problems from the discipline.) Courses in this area should include an appropriate writing component to further students' understanding of basic scientific, mathematical, and statistical concepts.

Educational Objectives. After completing the foundation Area II courses, students should have an enhanced ability to

1. understand and appreciate the scientific method and its role in scientific inquiry;
2. understand the abstract logical nature of mathematics, as well as the applications and limitations of mathematics and statistics to other disciplines;
3. analyze problems in a structured way and to develop strategies for solutions using scientific, mathematical, or statistical principles;
4. understand and examine critically the scientific and mathematical aspects of issues and problems which arise in daily life;
5. articulate basic scientific concepts using appropriate vocabulary;
6. articulate basic mathematical and/or statistical concepts using appropriate vocabulary;
7. advance, with the necessary preparatory skills, to study the wider-ranging, cross-disciplinary Area II topics to be presented at the upper-division level.

Criteria. The course proposal and expanded course outline must clearly indicate how the course

1. provides a basic understanding of the nature, scope, and limitations of science, mathematics, or statistics;
2. facilitates the achievement of at least four of the desired educational objectives for Area II;
3. promotes an understanding of the breadth of application of science, mathematics, or statistics to other disciplines;
4. examines great achievements, considers important contemporary issues, or provides a context that establishes the importance of the discipline;
5. develops problem-solving and reasoning skills;
6. incorporates a writing component.

Courses in the Physical and Life Sciences should also

1. emphasize the methods of science, including systematic observation and experimentation;
2. emphasize essential concepts and ideas of one of the physical or life sciences;
3. include techniques and procedures for the design of experiments, data collection, and analysis, if the course incorporates a laboratory.

Courses in Mathematics and Statistics should also

1. emphasize essential concepts, ideas, and problem solving in mathematics or statistics;

2. have significant mathematical or statistical content;
3. promote understanding rather than merely providing instruction in basic computational skills.

Upper-division elective courses in this area must be integrative in nature, requiring application and generalization of basic scientific or mathematical knowledge from foundation Area II courses to new settings and problems. These courses may be interdisciplinary in nature, and could provide a capstone experience in science, mathematics, or statistics for students majoring in the Liberal Arts. Courses in this area also include writing as an integral part of the process of learning and discovery.

Educational Objectives. After completing the upper-division elective, students should have an enhanced ability to

1. integrate the concepts from foundation courses;
2. apply the fundamental scientific, mathematical, or statistical concepts from the foundation courses to solve problems in new or more advanced areas.

Criteria. The course proposal and expanded course outline must clearly indicate that the course is at the 300 level and has one or one or more prerequisites from the Area II foundation courses, as well as how the course

1. integrates concepts from foundation courses;
2. applies fundamental scientific, mathematical, or statistical concepts from the foundation courses to solve problems in new or more advanced area;
3. includes an appropriate writing component.

In addition to the above criteria, the following are strongly encouraged:

1. courses that are interdisciplinary in nature;
2. courses that include a significant writing component;
3. courses that examine contemporary issues in the discipline.

Area III: Arts and Humanities

Lower-division foundation courses in Area III provide a basic understanding of the traditions, values, and achievements found in literature, philosophy, and the fine and performing arts. Courses in this area foster, encourage, and improve students' ability to understand and respond--cognitively and affectively--to cultural achievements in both verbal and non-verbal forms. These foundation courses in the arts and humanities prepare students to see achievements within their broad historical and cultural context. These courses seek to improve and encourage students' ability to read with critical judgment and write with clarity, emphasizing writing as an integral part of the process of learning and discovery. They also cultivate an awareness of language and the arts as forms of expression valuable both in themselves and for developing critical awareness. By placing basic knowledge in a larger context, these courses provide a vision of why this area is an important component of general education.

Educational Objectives. After completing the foundation courses in Area III, students should have an enhanced ability to

- I. understand the possibilities and limitations of language as a symbolic and expressive medium; differentiate between formal and metaphorical language;

2. read with insight, engagement, detachment, and discrimination; sustain an extended line of reasoning through both narrative and thematic development;
3. recognize crucial historical developments within the arts and humanities; appreciate the significance of major literary, philosophic, and artistic works;
4. understand the historical development of issues in the humanities in significant periods prior to and including the twentieth century; understand the ways that historical context can illuminate current problems and concerns;
5. grasp relevant aspects of the relationship of the arts and humanities to science and technology;
6. appreciate non-verbal forms of understanding and expression; appreciate the aesthetic and historical development of one or more of the visual or performing arts; understand the relationship between form and content;
7. understand currently accepted critical standards; understand the advantages and limitations of various schools of reasoning;
8. appreciate the relative cultural significance of canonical and non-canonical works of literature, philosophy, and the arts.

Criteria for Courses **in** Literature. The expanded course proposal and course outline must clearly indicate how the course

1. provides broad historical perspective on several significant literary periods (usually covering two or more centuries);
2. encourages a comprehensive understanding of literary achievements and their relationship to other literary achievements and to the social, cultural, and historical context in which they were written;
3. considers works from more than one genre and provides perspective on literary classification and conventions;
4. develops the skills of reading with insight, engagement, discrimination, and detachment;
5. develops the skills to analyze and evaluate a variety of literary approaches;
6. focuses on significant accomplishments by diverse writers from various world cultures;
7. serves as a Writing Intensive course in GE.

Courses in a language other than English must clearly indicate how the course meets the above criteria as well as

1. cultivates language skills that are advanced rather than basic;
2. emphasizes critical thinking and cultural understanding of a language other than English;
3. includes a significant amount of culture specific to the language being studied;
4. emphasizes an in-depth understanding of language, to include the difference between formal and metaphorical uses of the language being studied;
5. emphasizes a significant amount of literature in the language being studied, and focuses on these literary readings as the primary source of the in-depth, metaphorical understanding of the language being studied.

Criteria for Courses **in** Philosophy. The course proposal and expanded course outline must clearly indicate how the course

1. provides broad historical perspective on philosophy (including at least one ancient or medieval work, at least one modern work, and no more than one work from the twentieth century);
2. encourages an expansive understanding of philosophic achievements and their relationship to other philosophic achievements;
3. provides perspective on the implications of holding a particular philosophical position;

4. develops relies the skills of reading with insight, engagement, discrimination, and detachment;
5. develops the skills to analyze and evaluate a variety of philosophical positions;
6. relies upon primary texts for readings;
7. focuses primarily on major, recognized accomplishments in philosophy;
8. serves as a Writing Intensive course in GE.

Criteria for Courses in Fine and Performing Arts. The course proposal and expanded course outline must clearly indicate how the course

1. provides broad historical perspective on one or more of the fine or performing arts;
2. applies critical standards to the aesthetic appreciation of art;
3. includes critical analysis in the evaluation of the artistic endeavor;
4. presents the ways in which the art form has had an impact on cultural development;
5. applies appropriate learning strategies to the understanding of art forms;
6. provides perspective on the relationship of technology to the arts;
7. incorporates a significant amount of material from world cultural achievements;
8. provides practice in a specific art form, if the course includes an activity or a laboratory in studio or performance art;
9. provides assignments in writing that will form at least 25% of the students' total grade.

Upper-division elective courses in this area must be integrative in nature, requiring the application and generalization of knowledge and/or understanding from foundation Area III courses (as appropriate) to the advanced study of a subject or to new, but related, areas of inquiry within the arts and humanities. These courses may be interdisciplinary in nature, and should focus on achieving depth rather than breadth. Courses in this area also emphasize writing as an integral part of the process of learning and discovery. Attention to relevant issues of gender and diversity is encouraged.

Educational Objectives. After completing an upper-division course in the arts or the humanities, students should have an enhanced ability to

1. apply knowledge and understanding acquired in lower-division coursework in the arts or the humanities to the advanced study of a subject or to new, but related, areas of inquiry;
2. respond in depth to the kinds of arts-or-humanities issues approached in lower-division study;
3. appreciate the implications of a focused area of study;
4. appreciate the way in which relationships between one area of study and another provide perspective on knowledge.

Criteria. The course proposal and expanded course outline must clearly indicate that the course is at the 300 level, and have as prerequisites the completion of Area I and at least one or more foundation courses from Area III. The course proposal and expanded course outline should also clearly indicate how the course

1. explores in depth a subject in the arts or humanities;
2. provides perspective on the subject's relationship to other cultural achievements and to relevant issues of gender and diversity;
3. serves as a Writing Intensive course in GE.

Area IV: Society and the Individual

Lower-division foundation courses in Area IV provide students with a basic understanding of humans, their institutions, and their social achievements in both contemporary and historical contexts. Courses in this area prepare a student for the demanding tasks of civic participation, life-long learning, the understanding of self and of the human community, and the achievement of perspective in time, space, and human diversity. Consequently, courses in this area should encourage students to see themselves in context with others, and to see the human experience as something that is both uniquely individual and communally comparable. By placing basic knowledge in a larger context, these courses provide a vision of why this area is an important component of general education. Courses in this area also emphasize writing as an integral part of the process of learning and discovery.

Educational Objectives. After completing the foundation courses in Area IV, students should have an enhanced ability to understand

1. physiological, psychological, and social influences on thinking and behavior; how the mind and body work in concert; issues of "nature" versus "nurture"; personal development; and the importance of maintaining physical and mental health;
2. how human beings act in concert; historically how communities have grouped together; basic interpersonal relationships (social, economic, political, and legal); the constant interplay in human society between the protection and elevation of the individual and the welfare of the community; how individual actions affect the whole;
3. organizations of public order, of commerce and labor, and of society (family, education, government, religion, and economy) and their origins; how humans create institutions and what they expect from them; and how institutions function to first reflect then shape human society;
4. the impact of history on the present and the future; how history affects the study of history; the importance of mythology; historical development in multidisciplinary terms (economic, political, sociological, institutional, intellectual, legal, and scientific); and the development of both western and non-western cultures;
5. how the environment affects human behavior; the human impact on the environment; the importance of geographic and environmental factors on the historical evolution of human society and economy; the interconnectedness of the planet, its natural resources, and its population;
6. the human experience in comparative terms by examining the diversity of experience from both individual and group perspectives with special attention to the issues of gender, ethnicity, and racial diversity on our planet;
7. the importance of empirical information and appropriate methodologies.

Criteria for Courses in Comparative Social Institutions. The course proposal and expanded course outline must clearly indicate how the course

1. provides an understanding of basic human social institutions in the context of the present and the past: family, government, economy, education, and religion, including their origins, structures, functions, patterns of change, and integration;
2. includes western and non-western societies in a cross-cultural, global perspective, and recognizes the growing interdependence of the global community and its environmental/geographic context;
3. develops an appreciation of cultural and social diversity, both domestically and globally, which includes an understanding of ethnic, gender, and class inequality;
4. introduces students to relevant methodologies;
5. includes an appropriate writing component.

Criteria for Courses in Political Economy. The course proposal and expanded course outline must clearly indicate how the course

1. focuses on resources, production, consumption, and market exchange, seen in the context of one another and of other forms of human activity over time and space; and gives a broad view of economic activity without specialized attention to only one aspect;
2. is comparative in nature, putting economic institutions in the context of the other four basic social institutions (family, government, religion, and education); stresses broad aggregates of economic activity rather than one particular sector; and discusses more than one single economic system;
3. covers international, including non-western, as well as domestic economic issues;
4. uses primary source material as appropriate;
5. blends the theoretical and the practical to make the material relevant to current issues;
6. includes an appropriate writing component.

Criteria for Courses in Self Development. The course proposal and expanded course outline must clearly indicate how the course

1. provides an understanding and appreciation of the self as an integrated physiological, psychological, and social being; and addresses issues relevant to the physical, emotional, intellectual, and social aspects of well-being;
2. presents the theories and methodologies used to examine the self, their contexts, and their advantages and disadvantages;
3. provides an understanding of the commonalties and individual differences among humans, and how these are expressed across the human life span and in a social or cultural context;
4. provides an opportunity for students to see practical application of classroom material for enhancing their own personal development;
5. includes an appropriate writing component.

Criteria for Courses in The American Experience. The course proposal and expanded course outline must clearly indicate how the course

1. meets the requirements for Title 5 Section 40404 which provides for the comprehensive study of American history and American Government;
2. outlines the impact of social, political, legal, and economic forces and events in the historical development of the US;
3. considers the rights and obligations of citizens in the political and legal system established by the US Constitution;
4. defines the political philosophies of the framers of the Constitution, the nature and operation of American political institutions and processes, and the system of jurisprudence which operate under that Constitution, as amended and interpreted;
5. explores the complex issue of gender in the United States;
6. explores the complex issues of race and ethnic diversity in the United States;
7. outlines the relationship between and among such factors as geography, history, religion, economics, cultural diversity, politics, and the rule of law in the development of the American nation;
8. covers the principles and practices of the political process, including political parties, interest groups, legislative politics, campaign practices, and the interrelationship between the executive, legislative, and judicial branches of the US government, over time;
9. encourages the fundamental assumption of the responsibilities of citizenship;
10. makes use of primary source material;
11. includes an appropriate writing component.

Upper-division elective courses in this area must be integrative in nature, requiring application and generalization of knowledge and understanding from foundation Area IV courses to the advanced study of a subject or to new, but related, areas of inquiry. These courses may be interdisciplinary in nature, and should focus on achieving depth rather than breadth. Courses in this area also emphasize writing as an integral part of the process of learning and discovery. Attention to issues of gender and diversity is encouraged.

Educational Objectives. After completing an upper-division course in this area, students should have an enhanced ability to

1. apply knowledge and understanding acquired in lower-division coursework in the area to the advanced study of a subject or to new, but related, areas of inquiry;
2. respond in depth to the kinds of issues approached in lower-division study in the area;
3. appreciate the implications of knowledge in a focused area of study;
4. appreciate the way in which relationships between one area of study and another provide perspective on knowledge.

Criteria. The course proposal and expanded course outline must clearly indicate that the course is at the 300 level and has two or more prerequisites from the Area IV foundation courses. (Although some courses may require specific prerequisites, most courses should require only the completion of coursework in two or more of the four sub-areas.) The course proposal and expanded course outline should also clearly indicate how the course

1. draws upon and utilizes the perspective of one or more of the multiple fields in the social and behavioral sciences and human life development;
2. makes an explicit connection between the perspectives of two or more of the Foundation Courses in Area IV;
3. serves as a Writing Intensive course in GE.

In addition, upper-division courses should, where appropriate,

1. include consideration, both past and present, of the social, economic, political, legal, and commercial institutions and behavior that are inextricably interwoven in either the US or international contexts;
2. cover the social, political, legal, and economic forces that influence the creation, development, evolution, and implementation of practical public policies in the American or international contexts;
3. examine the psychological, physiological, and social influences on the development of the self that influence and determine the quality of one's life as related to one's environment.

Area V: Technology

The technology elective should be integrative in nature, requiring the application and generalization of basic scientific and mathematical knowledge from foundation Area II courses. This elective should integrate the study of particular technologies with the critical examination of technology from multiple perspectives, which may include ethical, social, ecological, political, or economic viewpoints. By placing knowledge in a larger context, these courses provide a vision of why this area is an important component of general education. Faculty from all Colleges are encouraged to participate in this area. Courses satisfying the technology elective must include an applied component and cannot be entirely theoretical. Courses in this area also emphasize writing as an integral part of the process of learning and discovery.

Educational Objectives. After completing the technology elective students should have an enhanced ability to

1. understand the relationship between technology and its scientific basis;
2. understand and be able to articulate the considerations (which may include scientific, mathematical, technical, economic, commercial, and social) that are necessary for making rational, ethical, and humane technological decisions.

Criteria. Since courses satisfying the technology elective are integrative in nature and build on an Area II foundation, they must be upper-division and, as a minimum, require junior standing and have as a prerequisite the completion of Area II. If necessary, specific Area II foundation courses (e.g. Math 141, BIG 151, etc.) may be listed as prerequisites. Since GE technology elective courses should be designed to be accessible to a wide range of students, the prerequisites may not be overly restrictive. The course proposal and expanded course outline must clearly indicate how the course is accessible to a broad audience, as well as how the course

1. builds on the Area II foundation;
2. will instruct students about one or more areas of technology;
3. develops an awareness of how basic scientific and mathematical knowledge is used to solve technical problems;
4. develops an awareness of the methods used and difficulties inherent in applying technology to solve social, economic, scientific, mathematical, artistic, and/or commercial problems;
5. addresses the ethical implications of technology;
6. includes critical examination of technology from multiple perspectives;
7. provides students with an historical, contemporary, and future-looking perspective of the technology;
7. incorporates a writing component.

In addition to the above criteria, the following are strongly encouraged:

1. courses that are interdisciplinary in nature;
2. courses that examine local or current issues;
3. courses that address how new and emerging technologies impact society.

State of California
Memorandum

CAL POLY

To: John Harrington, Director
General Education and Breadth Program

Date: September 1, 1998

From: Warren J. Baker
President

Cc: Harvey Greenwald
Myron Hood

Paul J. Zingg
Provost and Vice President for Academic Affairs

Subject: GE Standards

We are responding to your memo of June 24, 1998, regarding the establishment of the template, principles, and standards for the new General Education Program. We expect that you will transmit this memo to the faculty with other communications you will provide relative to the next steps for achieving GE 2001.

We are particularly pleased to note the strong Academic Senate endorsement of the work of your committee. The overwhelming Senate vote (38-2) in support of the document not only underscored the quality of the document but also affirmed the need for a new approach to General Education that it represents. Our comments speak both to the document and the fresh perspective on General Education at Cal Poly that it provides.

We have four specific responses, followed with more general observations, to the Senate review in May and the content of the document.

First, we accept the changes in wording that the Senate endorsed for the section "Cal Poly's Commitment to Gender and Diversity." These changes appropriately underscore the expectation that GE courses will address, where relevant and within the context of subject material, issues of gender and racial/ethnic diversity. We encourage both the GE Committee and academic departments as they develop courses for the new GE Program to pay particular attention to the Resolutions on diversity which the Senate also passed in the spring. These Resolutions speak to the educational value of diversity, and this understanding should clearly be manifest in the curriculum.

Second, we continue to agree with the GE Committee in not supporting so-called "Amendment Alt 13," which would have allowed both Area C and D courses for non-science electives. We support the GE Committee's position that a full review of the GE Program should take place two years after implementation (scheduled for Fall, 2001) and that no changes should be made in the template until then. Essentially, we agree with the GE Committee that the proposed 20 units for Area IV (Society and the Individual) in the new template provides appropriate curricular choice and flexibility.

Third, we believe strongly that a Life Science learning experience should be a part of every Cal Poly student's undergraduate educational program. Such an experience recognizes our society's demand for engaged citizens and effective workers who possess a basic understanding of the life sciences, as well as the

John Harrington
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physical sciences, mathematics, and technology. That knowledge is valuable in its own right, but engagement with the disciplines that provide it also involve students with the kind of hands-on, inquiry-based learning that is at the heart of scientific methodology. Moreover, this approach echoes the central educational philosophy of Cal Poly -- "learn by doing." It also recognizes that persons who are capable of complex abstractions and disciplined inquiry will always be valuable in the workforce. Accordingly, then, we require that all students (including those pursuing engineering programs) complete 4 units of study, or equivalence, in Life Science to satisfy the educational objectives for this area.

Fourth, we accept the GE Committee's reasoning and recommendation for a modified calendar that will initiate the new GE Program in Fall, 2001. We agree that this should provide needed time to effect transition to the new Program.

Finally, we would like to make a few general observations about the challenge and opportunity that the University has to develop a truly distinctive, integrated and rigorous GE Program. These qualities are essential to a GE Program of high quality and integrity. The GE Committee has clearly recognized this, for it has developed a curricular design that reflects the best thinking about both the forms and purposes of general education and it has considered them within the context of Cal Poly.

Two aspects of the GE Committee's work particularly underscore these points: its focus on educational objectives (that is, learning outcomes) as the critical element of course design; and its attention to overarching characteristics of an educated person that the GE Program should seek to cultivate.

Both of these emphases provide critical guidance and flexibility to academic departments as they design GE courses. The former invites the development of courses that can address and satisfy some Program requirements from a variety of disciplinary bases, not necessarily the domain of a single department. Make no mistake about it, though, we agree that a strong GE Program must introduce students to a variety of disciplines for each has its own set of lenses through which to examine and evaluate evidence and to provide the perspectives needed to reason and arrive at considered judgments.

The latter recognizes that GE is a shared institutional responsibility for its objective is the intellectual formation of graduates who will reflect the values of the entire University. As academic departments develop GE courses in partnership with other departments, they will reinforce the notion of the University as a connected enterprise with this shared central purpose.

We encourage academic departments to recognize the invitation they have from the GE Committee to think creatively about the design of courses to meet the GE standards. We expect that the GE Committee will be responsive to such thinking.

We look forward to the good, hard work that is ahead for the University's faculty as they take up this challenge and opportunity. We are confident that what will emerge is something that will add further distinction to the University and, most important, greater strength to the preparation of our students for a lifetime of learning and achievement.