

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

FILE COPY

Executive Committee
Academic Senate Agenda
Tuesday, November 29, 1988
UU220 3:00-5:00 p.m.

<u>Member:</u>	<u>Dept:</u>	<u>Member:</u>	<u>Dept:</u>
Andrews, Charles (CH)	Acctg	Murphy, James	IndTech
Borland, James	ConstMgt	Peck, Roxy (Secty)	Stat
Burgunder, Lee	BusAdm	Terry, Raymond	Math
Crabb, A. Charles	Int As Dn, SAGR	Vilkitis, James	NRM
Dobb, Linda	Library	Weatherby, Joseph	PoliSci
Gooden, Reg	PoliSci	Wilson, Malcolm	VPAA
Kersten, Timothy	Econ	Zeuschner, Raymond	SpCom
Lutrin, Sam (VC)	StLf&Actvs	Copies: Warren J. Baker	
Moustafa, Safwat	MechEngr	Bill Rife	
		Howard West	

*11-1-88
minutes
removed*

- I. Minutes: Approval of the November 1, 1988 Executive Committee minutes (pp. 3-6)
- II. Communication(s) and Announcement(s):
 - A. Memo from Bigelow re Fall 1988 Opening Enrollment (pp. 7-10).
 - B. Memo from Moye re Third Annual CSU Student Research Competition and Conference: Announcement (pp. 11-19).
- III. Reports:
 - A. President
 - B. Academic Affairs Office
 - C. Statewide Senators
 - D. Jim Landreth/Rick Ramirez - update report on the CSU budget reduction
 - E. Lark Carter - Status report on the Costa Rica Project
- IV. Consent Agenda:
- V. Business Item(s):
 - A. Resolution to Provide a Generic Set of Operating Procedures for Academic Senate Standing and Ad Hoc Committees-Rogalla, Chair of the Constitution and Bylaws Committee (pp. 20-21).
 - B. Resolution on Promotion of Librarians-Murphy, Chair of the Personnel Policies Committee (pp. 22-27).
 - C. Resolution on Tenure for Librarians-Murphy, Chair of the Personnel Policies Committee (pp. 28-30).
 - D. Resolution in Support of Human Corps and of Service/Learning at Cal Poly-Lutrin, Chair of the Human Corps Task Force (pp. 31-33).
 - E. Resolution on Minor Capital Outlay-Rogers, Chair of the Budget Committee (pp. 34-36).
 - F. Resolution on Computer Integrated Manufacturing (CIM) Plan-Menon, Chair of the Industrial Engineering Department (pp. 37-60).
 - G. Resolution on the Curriculum Review Process-Bailey, Chair of the Curriculum Committee (pp. 61-63).

Continued on page two >>>>>>

- H. Appointment of Estelle Basor to the Affirmative Action Faculty Development Program Review Committee (as replacement for Marylud Baldwin).
- I. Academic Senate and committee vacancies (p. 64).

VI. Discussion Item(s):

- A. Student Senate's resolution on +/- grading (p. 65).
- B. Use of external peer reviewers for the State Faculty Support Grant proposals.
- C. Opportunities for disadvantaged faculty.
- D. Major issues for the Academic Senate to address this year.

VII. Adjournment: time certain 4:55pm

THE CALIFORNIA STATE UNIVERSITY
Office of the Chancellor
400 Golden Shore
Long Beach, California 90802-4275
(213) 590-

RECEIVED

NOV 15 1988

Academic Senate

Code: AS 88-20

Date: October 31, 1988
To: Directors, Institutional Research
California State University
From: Ralph Bigelow *R. Bigelow*
Director
Analytic Studies
Subject: Fall 1988 Opening Enrollment

Opening enrollment reports from the campuses indicate an enrollment of 354,988 individuals and 265,385 full-time equivalent students for fall 1988. Both figures are all-time highs for the California State University.

The increase in individual enrollments of 3.6 percent over fall 1987 enrollments appears to be in accord with early reports from around the nation. See the Chronicle of Higher Education, October 26, 1988, page 1.

For comparative purposes the enrollments reported do not include the CSU summer arts program (424 individuals, 120 term FTE) at Humboldt and the statewide nursing program (estimated 3,250 individuals, 760 FTE) at Dominguez Hills. Data for both programs will, of course, be included in the final accounting for 1988-89.

The data are as reported by the campuses in the opening term enrollment reports responding to AS 88-15 and as updated by final ERSS census files, where available.

Attachments

Distribution:

Presidents
Vice Presidents, Academic Affairs
Vice Presidents, Administration
Vice Presidents/Deans, Student Affairs
Deans/Directors, Admission and Records
Directors, Computer Centers
Directors, Facility Planning
Business Managers
Public Information Officers
Chancellor's Office Staff

RECEIVED

NOV 2 1988

Academic Senate CSU
Chancellor's Office

California State University
Fall 1988 Opening Enrollment
and Comparison with Fall 1987 (a)

ATTACHMENT 1
AS 88-20

	-----Enrollment (Individuals)-----				:	-----Full-Time Equivalent Students-----			
	1987	1988	-----Change-----		:	1987	1988	-----Change-----	
			N	%	:			N	%
Bakersfield	4,642	4,930	288	6.2	:	3,444	3,756	312	9.1
Chico	15,457	16,044	587	3.8	:	13,394	13,875	481	3.6
Dominguez Hills	7,869	8,135	266	3.4	:	5,116	5,253	137	2.7
Fresno	18,364	19,120	756	4.1	:	15,155	15,620	465	3.1
Fullerton	24,317	24,700	383	1.6	:	17,216	17,521	305	1.8
					:				
Hayward	12,388	12,575	187	1.5	:	9,043	9,138	95	1.1
Humboldt	6,252	6,724	472	7.5	:	5,652	6,232	580	10.3
Long Beach	34,926	35,363	437	1.3	:	24,755	25,108	353	1.4
Los Angeles	20,912	20,775	(137)	-0.7	:	13,978	13,848	(130)	-0.9
Northridge	29,718	31,531	1,813	6.1	:	21,191	22,396	1,205	5.7
					:				
Pomona	18,317	18,930	613	3.3	:	14,442	14,888	446	3.1
Sacramento	24,128	25,153	1,025	4.2	:	18,283	18,914	631	3.5
San Bernardino	8,367	9,673	1,306	15.6	:	6,261	7,377	1,116	17.8
San Diego	35,945	35,821	(124)	-0.3	:	26,847	26,684	(163)	-0.6
Calexico	335	372	37	11.0	:	204	227	23	11.3
					:				
San Francisco	26,002	28,132	2,130	8.2	:	19,101	20,515	1,414	7.4
San Jose	27,549	28,415	866	3.1	:	20,047	20,810	763	3.8
San Luis Obispo	16,049	16,638	589	3.7	:	14,521	14,756	235	1.6
Sonoma	6,159	6,675	516	8.4	:	4,629	5,012	383	8.3
Stanislaus	4,971	5,282	311	6.3	:	3,276	3,455	179	5.5
					:				
Totals	342,667	354,988	12,321	3.6	:	256,555	265,385	8,830	3.4

(a) Not included: 424 enrollments (120 term FTE) at Humboldt for Summer Arts; estimated 3,250 enrollments
(760 term FTE) at Dominguez Hills for the Statewide Nursing Program.

Fall Enrollment in the California State University
From 1970

Campus	Fall Terms:						
	1970	1975	1980	1985	1986	1987	1988
Bakersfield	971	3,055	3,153	3,776	4,320	4,642	4,930
Chico	10,110	13,359	13,929	14,667	14,862	15,457	16,044
Dominguez Hills	2,563	6,827	7,883	7,649	7,327	7,869	8,135
Fresno	13,647	15,526	15,553	16,918	17,756	18,364	19,120
Fullerton	14,149	21,809	22,470	23,445	24,277	24,317	24,700
Hayward	11,470	11,771	10,666	12,173	12,373	12,388	12,575
Humboldt	5,479	7,402	7,419	6,220	5,865	6,252	6,724
Long Beach	26,239	32,842	31,239	32,519	33,586	34,926	35,363
Los Angeles	21,704	25,276	21,942	20,525	20,773	20,912	20,775
Northridge	22,721	27,710	28,417	28,871	29,880	29,718	31,531
Pomona	8,562	12,651	15,912	17,207	17,679	18,317	18,930
Sacramento	14,811	20,808	22,190	23,313	23,673	24,128	25,153
San Bernardino	2,269	4,017	4,659	6,513	7,423	8,367	9,673
San Diego	25,536	31,557	33,117	34,014	34,677	35,945	35,821
Calexico	307	442	427	308	333	335	372
San Francisco	17,600	23,801	24,128	25,143	25,871	26,002	28,132
San Jose	24,560	27,705	25,221	25,479	26,507	27,549	28,415
San Luis Obispo	12,386	15,158	16,048	16,140	15,875	16,049	16,638
Sonoma	3,832	6,004	5,567	5,491	5,746	6,159	6,675
Stanislaus	2,643	3,171	3,910	4,255	4,621	4,971	5,282
All campuses	241,559	310,891	313,850	324,626	333,424	342,667	354,988

CSU--Analytic Studies
27-Oct-88 fallsum

ATTACHMENT 3
AS 88-20

Fall Full-time Equivalent Students in the California State University
From 1970

Campus	Fall Terms:						
	1970	1975	1980	1985	1986	1987	1988
Bakersfield	798	2,390	2,388	2,891	3,189	3,444	3,756
Chico	9,768	12,121	12,493	13,017	13,023	13,394	13,875
Dominguez Hills	2,227	5,214	5,503	5,524	5,016	5,116	5,253
Fresno	12,277	13,017	13,032	14,157	14,710	15,155	15,620
Fullerton	10,790	15,076	15,666	16,651	17,008	17,216	17,521
Hayward	9,536	8,730	7,972	8,975	9,069	9,043	9,138
Humboldt	5,176	6,833	6,852	5,808	5,306	5,652	6,232
Long Beach	19,709	22,324	22,012	23,375	23,961	24,755	25,108
Los Angeles	15,822	16,423	14,274	13,919	14,015	13,978	13,848
Northridge	17,975	19,626	20,241	20,755	21,308	21,191	22,396
Pomona	8,051	10,631	13,229	14,136	14,248	14,442	14,888
Sacramento	11,988	16,058	17,375	18,162	18,070	18,283	18,914
San Bernardino	2,040	3,247	3,430	4,909	5,539	6,261	7,377
San Diego	20,804	24,105	25,130	25,957	26,303	26,847	26,684
Callexico	203	277	222	199	209	204	227
San Francisco	14,162	17,590	17,736	18,412	19,013	19,101	20,515
San Jose	19,352	20,112	18,542	18,803	19,375	20,047	20,810
San Luis Obispo	12,371	14,661	14,826	14,650	14,430	14,521	14,756
Sonoma	3,658	5,138	4,334	4,182	4,400	4,629	5,012
Stanislaus	2,419	2,238	2,575	2,816	3,117	3,276	3,455
All campuses	199,126	235,811	237,832	247,298	251,309	256,555	265,385

CSU--Analytic Studies
27-Oct-88 fallsum

THE CALIFORNIA STATE UNIVERSITY
Office of the Chancellor
400 Golden Shore
Long Beach, California 90802-4275
(213) 590- 5975

RECEIVED

NOV 16 1988

Academic Senate

Code: AAR 88-34

Date: November 10, 1988
To: Campus Coordinators, Student
Research Competition and Conference
From: *Anthony J. Moye*
Anthony J. Moye
Deputy Vice Chancellor
Academic Affairs, Resources
Subject: Third Annual CSU Student Research Competition and Conference:
Announcement

The third annual California State University Research Competition and Conference will be held May 5 and 6, 1989, at California State University, Long Beach. We expect this systemwide conference, like the successful events previously hosted by the Fresno and San Jose campuses, to showcase some of the excellent research conducted by CSU undergraduate and graduate students in the full range of academic disciplines offered by the CSU. Student participants will make oral presentations before juries of professional experts from major corporations, foundations, public agencies, and universities in California. Cash prizes will be awarded for the best presentations.

The planning committee's goal is to have at least five student presentations from each CSU campus. Up to ten presentations may be delivered per campus. The California State University, Long Beach steering committee will accept for presentation only those submissions endorsed by you as campus coordinator.

Please feel free to promote the competition, establish a campus selection process, and screen your final submissions in whatever manner you and your campus think best. While the systemwide planning committee has established a few general guidelines and procedures, your creativity in designing a local competition that best meets the needs of your campus is encouraged.

(CONTINUED)

Distribution: Presidents (with attachments)
Vice Presidents for Academic Affairs (with attachments)
Deans of Graduate Studies (with attachments)
Deans of Undergraduate Studies (with attachments)
Chair, Statewide Academic Senate (with attachments)
Chairs, Campus Academic Senates/Councils (with attachments)
CSSA Liaison (with attachments)
Chancellor's Office Staff (without attachments)

Attachment 1 is a sample announcement of the Competition and Conference. Please feel free to copy or adapt this sample and distribute it on your campus. Certain campus-specific information will have to be added, of course: your name and telephone number as campus coordinator, pertinent campus deadlines, local competition dates, etc.

Please note that this year's competition will not allow the submission of a full-length research paper. Students' work will be judged on the basis of five-page, double-spaced papers and the oral presentations based on those papers.

Attachment 2 is a student delegate registration form. One of these forms should be completed by each student selected by your campus as a delegate to the statewide conference. The firm deadline for the submission of the student delegate registration forms, each accompanied by five copies of the student's paper, is March 24, 1989. The forms and abstracts should be sent to:

Dr. Keith Ian Polakoff
Assistant Vice President for Academic Affairs/
Dean of Graduate Studies
California State University, Long Beach
1250 Bellflower Boulevard
Long Beach, California 90840-0118

Attachment 3 lists the campus coordinators at all CSU campuses.

The CSU Student Research Competition and Conference will provide at no cost to the student participants a reception on Friday evening, May 5, and an awards luncheon on Saturday, May 6. An outstanding guest speaker will deliver the keynote address at the luncheon. Information about travel arrangements and lodging will be sent to the campus coordinators later.

Although we have secured financial support for monetary awards to student winners, we do not have sufficient external funds at this time to help defray the travel expenses of student participants or their faculty mentors.

We look forward to an exciting event and thank you in advance for your essential contribution to its success. If you have any questions, please call Dr. Polakoff at 213-985-4128.

Attachments

Attachment 1

Sample Announcement

Third Annual California State University
Student Research Competition and Conference

-14-
A N N O U N C I N G

The Third Annual
CALIFORNIA STATE UNIVERSITY
STUDENT RESEARCH COMPETITION AND CONFERENCE

May 5 and 6, 1989

California State University, Long Beach

Procedures and Guidelines

Purpose. To promote excellence in undergraduate and graduate scholarly research and creative activity by recognizing outstanding student accomplishments throughout the nineteen campuses of The California State University.

Who May Apply. Undergraduate or graduate students currently enrolled on any CSU campus, as well as alumni/alumnae who received their degrees in Spring, Summer, or Fall 1988, are eligible. The research presented should be appropriate to the student's discipline and career goals. Proprietary research is excluded. Presentations from all disciplines are invited.

Students will be expected to specify one of the following categories in which to compete:

Behavioral and Clinical Sciences
Biological and Agricultural Sciences
Business, Economics, and Public Administration
Creative Arts and Design
Education
Engineering and Computer Science
Humanities and Letters
Physical and Mathematical Sciences
Social Sciences

The Long Beach steering committee reserves the right to adjust the categories as numbers of submissions necessitate.

Each CSU campus is encouraged to submit at least five student entries. The maximum number of entries from one campus is ten.

How to Apply. Each CSU campus has appointed a campus coordinator and has developed its own local procedures from selecting its student delegates to the statewide competition. Interested students should contact their campus coordinator for information on how to have their work considered at the campus level. Only those students endorsed by a campus coordinator can enter the statewide competition.

If a student's work has been selected by the local campus for the systemwide competition, the student will submit a student delegate registration form and five copies of the paper, not to exceed five double-spaced pages, through the campus coordinator. Each copy of the paper should include the name of the student and the title of the presentation. The campus coordinator must forward all registration forms and papers to California State University, Long Beach by March 24, 1989. Materials, once submitted, cannot be returned.

Student delegates to the statewide competition will be notified in writing of the time of their presentation, lodging and transportation arrangements, and program details by the Long Beach steering committee.

Competition Site. California State University, Long Beach is centrally located in the Los Angeles Basin within sight of the Pacific Ocean. A wide range of cultural and recreational opportunities can be found a short distance from the campus. Several airports are within an hour's drive, and there is good freeway access. Presentation rooms equipped with a full range of media will be available to the student delegates.

Competition. Students will be expected to present their work orally before a jury and an audience. Students will be competing by discipline category (see the list of categories under "Who May Apply"). Each student will have ten minutes to present his or her work and three minutes to listen and respond to audience questions. Presenters are encouraged to use delivery techniques that promote interaction with the audience.

The jury will judge the quality of the presentations on the basis of the presenter's ability to explain clearly the research conducted (the nature of the problem, methodology, interpretation and significance of the results, etc.); on the quality of the research itself; and on the presenter's ability to stimulate and respond to inquiries.

Awards. Based on the recommendations of the juries, a cash award of \$500 will be granted to the outstanding presenter in each category. The runner-up in each category will receive a cash award of \$200.

Questions. Questions should be directed to the local campus coordinator.

Attachment 2

Student Delegate Registration Form

STUDENT DELEGATE REGISTRATION FORM

THIRD ANNUAL CSU STUDENT RESEARCH COMPETITION AND CONFERENCE
May 5-6, 1989 California State University, Long Beach

1. Please provide the following information:

Name _____

Address _____
Street City State Zip Code

Telephone Number (____) _____

CSU Campus Represented _____

Degree Objective _____ Major _____

Class Standing:
____ Freshman ____ Sophomore ____ Junior ____ Senior ____ Graduate

2. Please provide the following, for use in the printed program:

Title of Presentation _____

Synopsis of Presentation (25 words or less) _____

3. Indicate the discipline category in which you prefer to compete:

____ Behavioral and Clinical Sciences
____ Biological and Agricultural Sciences
____ Business, Economics, and Public Administration
____ Creative Arts and Design
____ Education
____ Engineering and Computer Science
____ Humanities and Letters
____ Physical and Mathematical Sciences
____ Social Sciences

4. Please attach five copies of your paper. The paper must not exceed five double-spaced pages in length. Each copy must include your name and the title of your presentation. (You need not read your presentation directly from this paper.)

CAMPUS COORDINATORS

1988/89 CALIFORNIA STATE UNIVERSITY
STUDENT RESEARCH COMPETITION AND CONFERENCE

Dr. Steven Arvizu Dean of Graduate Studies and Research California State College, Bakersfield	(805) 833-2231
Dr. Elaine Wangberg Vice Provost for Research and Dean of the Graduate School California State University, Chico	(916) 895-5391
Dr. Carol D. Guze Associate Vice President, Academic Affairs and Dean, Graduate Studies California State University, Dominguez Hills	(213) 516-3308
Dr. Vivian Vidoli Dean, Graduate Studies and Research California State University, Fresno	(209) 294-2448
Dr. William Haddad Assistant Vice President for Graduate and International Programs California State University, Fullerton	(714) 773-2618
Dr. Ann Heuer Acting Associate Vice President, Research and Faculty Affairs California State University, Hayward	(415) 881-3022
Dr. John C. Hennessy Dean, Graduate Studies and Research Humboldt State University	(707) 826-3949
Dr. Keith Ian Polakoff Associate Vice President, Academic Affairs and Dean of Graduate Studies California State University, Long Beach	(213) 985-4128
Dr. Theodore J. Crovello Dean, Graduate Studies and Research California State University, Los Angeles	(213) 343-3820
Dr. Mack I. Johnson Associate Vice President for Graduate Studies, Research, and International Programs California State University, Northridge	(818) 885-2138

Campus Coordinators, 1988/89
CSU Student Research Competition and Conference
Page 2

Dr. Raymond A. Fleck Director of Research California State Polytechnic University, Pomona	(714) 869-2966
Dr. Arnold Golub Director of Research and Sponsored Projects California State University, Sacramento	(916) 278-7381
Dr. Julius Kaplan Associate Dean, Graduate Programs California State University, San Bernardino	(714) 887-7755
Dr. Arthur W. (Bill) Schatz Assistant Dean, Graduate Division and Research San Diego State University	(619) 594-4162
Dr. Erwin Seibel Dean of Undergraduate Studies San Francisco State University	(415) 338-2206
Dr. Serena Stanford Associate Academic Vice President, Graduate Studies and Research San Jose State University	(408) 924-2480
Dr. Robert A. Lucas Associate Vice President, Graduate Studies, Research, and Faculty Development California Polytechnic State University, San Luis Obispo	(805) 756-2982
Dr. Ardath Lee Dean, Academic Programs Sonoma State University	(707) 664-2114
Dr. Rodolfo Arevalo Associate Vice President for Academic Affairs and Graduate Dean California State University, Stanislaus	(209) 667-3082

Adopted: _____

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

Background statement: The Academic Senate bylaws specify that each committee shall have written operating procedures on file in the office of the Academic Senate. These are to be reviewed by the Constitution and Bylaws Committee. The Constitution and Bylaws Committee is proposing this set of generic operating procedures to assist committees in meeting this requirement. It could be accepted as a blanket procedure unless a committee prefers to draft its own. This draft was accepted unanimously by the Constitution and Bylaws Committee in January 1988 and affirmed by a vote of 6-0 on October 11, 1988. Vacant membership on the committee included SAED, SSM, and ASI.

AS-____-88/____

**RESOLUTION TO
PROVIDE A GENERIC SET OF OPERATING PROCEDURES FOR
ACADEMIC SENATE STANDING AND AD HOC COMMITTEES**

- WHEREAS, Article VII Section D of the Academic Senate bylaws specify each committee shall have a written set of operating procedures on file in the Senate office; and
- WHEREAS, A generic set of procedures will be acceptable to many committees; and
- WHEREAS, Any committee requiring greater detail and specificity in operation can propose and have them accepted; therefore, be it
- RESOLVED: That the generic operating procedures for Academic Senate committees (attached) be accepted.

Proposed By:
Constitution and Bylaws
Committee
November 1, 1988

**RESOLUTION TO PROVIDE A GENERIC SET OF OPERATING
PROCEDURES FOR ACADEMIC SENATE STANDING AND AD HOC COMMITTEES**

AS-____-88/____

Page Two

OPERATING PROCEDURES FOR ACADEMIC SENATE COMMITTEES

The committees of the Academic Senate, both standing and ad hoc, shall comply with the below listed operating procedures unless the Constitution or Bylaws of the Academic Senate provide otherwise or unless a committee desires to propose specific procedures for that committee.

1. Chairpersons shall be elected by the majority vote of the attending members at the first meeting of the academic year called by the Chair of the Senate. Chairpersons serve until the end of the academic year. In the event that a chairperson must miss a meeting, the chairperson shall appoint a substitute chairperson for that meeting.
2. Meetings shall be called at the discretion of the chairperson except that the chairperson must call a meeting upon the request of three members of the committee.
3. Notice of a meeting must be sent by the chairperson no less than three (3) working days before the meeting date. Nonetheless, decisions made at meetings may not be challenged for lack of proper notice if all members either show up for the meeting or sign written statements waiving the notice requirement.
4. A majority of the voting members shall constitute a quorum for a meeting.
5. Decisions of the committee must be made at meetings in which the attending members are in simultaneous communication with each other.
6. Members may not vote by proxy.
7. A vote by the majority of the members attending a meeting shall be the decision of the committee.
8. Voting shall take place by a show of hands unless one attending member requests a secret ballot. The record shall show the resulting vote.
9. A committee report explaining the decision and noting the vote leading to the decision of the committee shall be filed at the Academic Senate office. Minority reports also may be filed with that office.

State of California

**Academic Senate Office
California Polytechnic State University
San Luis Obispo, California 93407
805/756-1258**

M E M O R A N D U M

To: The Academic Senate
Executive Committee

Date: November 15, 1988

From: Paul Murphy, ^{Chair}
Academic Senate Personnel Policies Committee

Copies:

Subject: Promotion and Tenure for Librarians

The Personnel Policies Committee approved the attached resolutions at its October 17, 1988 meeting:

Resolution on Promotion of Librarians
Resolution on Tenure of Librarians

Attachments

Adopted: _____

**ACADEMIC SENATE
OF
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, California**

AS-____-88/____

**RESOLUTION ON
PROMOTION OF LIBRARIANS**

- WHEREAS, Librarians are members of the Unit 3 bargaining unit; and
- WHEREAS, The CSU-CFA Unit 3 contract specifically mentions librarians in appropriate sections; therefore, be it
- RESOLVED: That CAM 342 be amended as indicated on the attached sheets.

Proposed By:
Personnel Policies Committee
November 29, 1988

342.2 ACADEMIC PROMOTIONS

A. Eligibility

Promotion eligibility shall be governed by the terms of Article 14 of the Memorandum of Understanding (MOU) between the CSU and Unit 3 Faculty. In particular, tenure is required for promotion to professor or librarian. In addition, persons (other than department heads/chairs) whose primary duties are administrative shall not normally be advanced in academic rank without the concurrence of the tenured faculty of higher rank from the appropriate department.

B. Criteria and Procedures (also consult CAM 341.1.D, E and F)

1. Performance reviews for promotion purposes shall be conducted in accordance with Article 15 of the MOU. Additional school (department) criteria and procedures shall be in accordance with the MOU and shall be approved by the Vice President for Academic Affairs.
2. Applicants for promotion shall submit a resume which indicates evidence of promotability. This resume shall include all categories pertinent to promotion consideration: teaching activities and performance, or librarian effectiveness and performance, professional growth and achievement, service to the university and community, and any other activities which indicate professional commitment, service, or contribution to the discipline, department, school, university, or community.

In preparing resumes, applicants are encouraged to employ the Faculty Resume Worksheet (CAM Appendix XII) as a guide.

3. In addition to their carefully documented recommendations, department peer review committees, department heads/chairs, school or library peer review committees, and school deans or the library dean, shall submit a ranking of those promotion applicants who were positively recommended at their respective level.
4. Promotion in rank is not automatic and is granted only in recognition of teaching competency or effectiveness as a librarian, professional performance, and meritorious service during the period in rank. The application of criteria will be more rigorous for promotion to professor or librarian than to associate professor or associate librarian. Recommendations for promotion of individuals are based on the exhibition of merit and ability in each of the following four factors and their subordinate sub-factors:
 - a. Teaching Performance or effectiveness as a librarian and/or Other Professional Performance

Consideration is to be given to such factors as the faculty member's competence in the discipline, ability to communicate ideas effectively, versatility and appropriateness of teaching techniques, organization of courses, relevance of instruction to

course objectives, methods of evaluating student achievement, relationship with students in class, effectiveness of student consultation, and other factors relating to performance as a teacher.

In formulating recommendations on the promotion of teaching faculty, evaluators will place primary emphasis on success in instruction. The results of the Student Evaluation of Faculty program are to be considered in formulating recommendations based on teaching performance.

For librarians, consideration is to be given to such factors as performance effectiveness in terms of quantity and quality; fulfilling responsibilities; furthering the objectives of the library and the university by cooperating with fellow librarians; considering and initiating new ideas, technologies, or procedures; applying bibliographic techniques effectively to the acquisition, development, classification, and organization of library resources; initiating and carrying to conclusion projects within the library; demonstrating versatility, including the ability to work effectively in a range of library functions and subject areas.

In formulating recommendations on the promotion of librarians, evaluators will place primary emphasis on effectiveness as a librarian as evaluated by colleagues and library users.

b. Professional Growth and Achievement

Consideration is to be given to the faculty member's original preparation and further academic training, related work experience and consulting practices, scholarly and creative achievements, participation in professional societies, and publications, and presentation of papers at professional and scholarly meetings.

c. Service to University and Community

Consideration is to be given to the faculty member's participation in academic advisement; placement follow-up; cocurricular activities; department, school, and university committees and individual assignments; systemwide assignments; and service in community affairs directly related to the faculty member's teaching service area, as distinguished from those contributions to more generalized community activities.

d. Other Factors of Consideration

Consideration is to be given to such factors as the faculty member's ability to relate with colleagues, initiative, cooperativeness, and dependability.

For librarians, additional factors of consideration include leadership and/or supervision and/or administrative abilities.

5. Possession of the doctorate or other designated terminal degree from an accredited institution is normally required for promotion.
6. Department heads/chairs and deans shall use Form 109 (CAM Appendix I) for evaluation of promotion applicants. Department (school or library) peer review committees will submit their recommendations in a form that is in accordance with their department (school or library) promotion procedures.
7. Normal Promotion
 - a. An application for promotion to associate professor or associate librarian is considered normal if the applicant is eligible and both of the following conditions hold:
 - (i) the applicant is tenured or the applicant is also applying for tenure.
 - (ii) the applicant has received four Merit Salary Adjustments (MSA's) (while an assistant professor or senior assistant librarian) or the applicant has reached the maximum salary for assistant professor or senior assistant librarian.
 - b. Tenure is required for promotion to professor or librarian. An application for promotion to professor or librarian is considered normal if the applicant is eligible and the applicant has received four MSA's (while an associate professor or associate librarian) or the applicant has reached the maximum salary for associate professor or associate librarian.
8. Early Promotion
 - a. An application for promotion to associate professor or associate librarian is considered "early" if the applicant is eligible and one (or both) of the following is (are) true:
 - (i) the applicant is a probationary faculty member who is not also applying for tenure.
 - (ii) the applicant has not received four MSA's (while an assistant professor or senior assistant librarian) and the applicant has not reached the maximum salary for assistant professor or senior assistant librarian.
 - b. Tenure is required for promotion to professor or librarian. An application for promotion to professor or librarian is considered "early" if the applicant is eligible and the applicant has not received four MSA's (while an associate professor or associate librarian) and the applicant has not reached the maximum salary for associate professor or associate librarian.
 - c. Early promotion will be granted only in exceptional cases. The circumstances and record of performance which make the case

exceptional shall be fully documented by the candidate and validated by evaluators. The fact that an applicant meets the performance criteria for promotion does not in itself constitute an exceptional case for early promotion.

Adopted: _____

**ACADEMIC SENATE
OF
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, California**

AS-____-88/____

**RESOLUTION ON
TENURE FOR LIBRARIANS**

- WHEREAS, Librarians are members of the Unit 3 bargaining unit; and
- WHEREAS, The CSU-CFA Unit 3 contract specifically mentions librarians in appropriate sections; therefore, be it
- RESOLVED: That CAM 344 be amended as indicated on the attached sheets.

Proposed By:
Personnel Policies Committee
November 29, 1988

344 TENURE FOR ACADEMIC EMPLOYEES

A. Eligibility

Tenure eligibility shall be governed by the terms of Article 13 of the Memorandum of Understanding (MOU) between CSU and Unit 3 Faculty.

B. Criteria and Procedures (also consult CAM 341.1.D, E and F)

1. Tenure decisions are considered more critical to the university than promotion decisions. The fact that a probationary faculty member has received early promotion (to associate professor or associate librarian or assistant librarian) is not a guarantee of tenure.
2. Performance reviews for the purpose of award of tenure shall be conducted in accordance with Article 15 of the MOU. Additional school (department) or library criteria and procedures shall be in accordance with the MOU and shall be approved by the Vice President for Academic Affairs.
3. Applicants for tenure shall submit a resume which indicates evidence supporting the award of tenure. This resume shall include all categories pertinent to tenure consideration, teaching activities and performance or librarian effectiveness and performance , professional growth and achievement, service to the university and community, and any other activities which indicate professional commitment, service, or contribution to the discipline, department, school or library (in the case of librarians) , university, or community.

In preparing resumes, applicants are encouraged to utilize the Faculty Resume Worksheet (CAM Appendix XII) as a guide.

4. Recommendations for tenure are based on the same factors as for promotion (see CAM 342.2.B.4). In addition, special attention shall be given to the applicant's working relationships with colleagues, potential for further professional achievement, and commitment to the department and university. The award of tenure is a major commitment by the university to the applicant and recommendations should substantiate the fact that such an award is advantageous to the university.
5. Department head/chairs and deans shall use Form 109 (CAM Appendix I) for evaluation of tenure applicants. Department (school or library) peer review committees shall submit their recommendations in a form that is in accordance with department (school or library) tenure procedures.

To be recommended for tenure the employee must be rated during the final probationary year within one of the top two performance categories listed in Section V of the Faculty Evaluation Form.

6. Normal Tenure

A tenure award is considered normal if the award is made after the applicant has credit for six (6) academic years of full-time probationary

service (including any credit for prior service granted at the time of appointment, MOU 13.3, 13.4).

7. Early Tenure

- a. A tenure award is considered "early" if the award is made prior to the applicant's having credit for six (6) academic years of full-time probationary service (including any credit for prior service granted at the time of appointment).
- b. In addition to meeting department (school or library) criteria for normal tenure, an applicant for early tenure must provide evidence of outstanding performance in each of the areas of: teaching or library effectiveness , professional growth and achievement, and service to the university and community.
- c. In order to receive early tenure, an applicant should, at a minimum, receive a favorable majority vote from the department peer review committee.

8. Tenure Upon Appointment

Candidates for appointment with tenure shall normally be tenured professors or tenured librarians at other universities-- exceptions to this provision must be carefully documented. The President may award tenure to any individual, including one whose appointment and assignment is in an administrative position, at the time of appointment. Appointments with tenure shall be made only after an evaluation and recommendation by the appropriate department.

Adopted: _____

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

Background statement:

Evidence is mounting that interest in student participation in community service is growing rapidly throughout the nation.

And California is no exception. In Fall 1987, Assembly Bill 1820 was signed into law, creating the California Human Corps. The Bill mandates that, beginning Fall 1988, all students in the CSU and the UC shall be "strongly encouraged and expected, though not required" to contribute their time and talent to addressing some of the pressing human needs that our communities currently are facing.

Universities in both systems are responsible for developing a wide variety of attractive avenues to service. Students can choose to serve as volunteers, receive academic credit for service/learning, or obtain financial compensation for their work.

By 1993, it is expected that the CSU and UC campuses will significantly increase community service so that participation will approach 100% of students contributing an average of 30 hours for each year they are enrolled.

Both the California State Student Association and the Statewide Academic Senate have endorsed the Bill (while lobbying strongly and successfully against making service a requirement of students). However, no funds have been allocated to implement this Bill. Therefore, the Statewide Academic Senate has expressed great concern that the Bill not add to faculty workload without providing adequate compensation for faculty.

AB 1820 makes some specific requirements of CSU and UC including surveys of levels of participation. The survey will be included as part of the Student Needs And Priorities Survey (SNAPS) in February 1989. Provisions for surveying progress on an ongoing basis have not been developed. At Cal Poly, a survey of academic departments and of student clubs to identify existing service activities was conducted in Fall of 1985. The information is being updated during Fall 1988.

AB 1820 also requires each campus to establish a Human Corps Task Force to spearhead campus efforts. Cal Poly has established a Task Force composed of campus faculty, student and administrative leaders, city and county chief administrative officers, directors of the local United Way/Neighbors Helping Neighbors and of the Private Industry Council, and the Program Director from the County Superintendent of Schools' office.

This Task Force has developed a definition of community service to be used in developing the Human Corps program (see attached) as well as recommended to President Baker a statement of university commitment to the program. Subcommittees are being formed to address several issues and to make recommendations, including the relationship of Cal Poly's academic program to the Human Corps.

Cal Poly has in place a broad-based service program of instructionally-related and of student directed programs. (See attached brochure for details.) They presently involve at least 25% of Cal Poly students. Therefore, to increase participation, the initial approach is to utilize existing opportunities more fully.

Currently, one-half of all Cal Poly academic departments offer senior projects and/or internships or class projects that regularly result in service to the community.

Academic Affairs and Student Affairs have joined to create the Community Action Bureau (CAB), a computerized database of more than 300 community service opportunities. It is used by students to identify needed projects and to obtain referral to appropriate agency staff. Supervising senior projects, internships, or class projects that result in service need not be more time consuming to faculty nor more expensive than other types of senior projects because help in finding projects is available through CAB.

The Cal Poly Student Senate passed Resolution #88-08-Community Service endorsing Human Corps on November 28, 1987.

AS-____-88/____

**RESOLUTION IN
SUPPORT OF HUMAN CORPS AND
OF SERVICE/LEARNING AT CAL POLY**

- WHEREAS, The Academic Senate of Cal Poly, SLO has not gone on record as supporting Human Corps; and
- WHEREAS, No vehicle exists for providing faculty input to the Human Corps program or for providing support to interested faculty through the exchange of ideas, sharing of resources, seeking of grant funds, or development of interdisciplinary service activities of faculty from different schools; and
- WHEREAS, The senior project requirement provides the University a unique opportunity for service/learning; and
- WHEREAS, There is no mechanism for measuring student service on an ongoing basis; therefore, be it
- RESOLVED: That the Academic Senate support student participation in community service that is beneficial to the community AND to the student; and be it further
- RESOLVED: That a faculty network similar to that employed in the Cooperative Education program be formed in support of Human Corps; that is, one individual in each department to be selected annually by his or her colleagues to serve as the Human Corps contact person; and be it further
- RESOLVED: That, from this network, a Human Corps Task Force Academic Issues committee be formed which will identify possibilities for new or interdisciplinary service/learning activities and will seek information and financial resources in support of faculty interested in developing service/learning activities; and be it further

- RESOLVED: That the faculty network and committee described above ask that in every department where it makes academic sense to do so, students be encouraged to conduct senior projects that also provide service to the community; and be it further
- RESOLVED: That the Registrar's Office be asked to develop a way to measure the level of student community service in conjunction with Fall Quarter Registration each Fall beginning Fall 1989.

Proposed By:
Instruction Committee
6-0-1
November 3, 1988

(The brochure referred to in paragraph eight of the background statement is enclosed in the envelope with your agenda. It is entitled "Catch It! It's Catching On!")

RECEIVED

NOV 17 1988

Academic Senate

To: Charles T. Andrews, Chair
Academic Senate

Date: November 17, 1988

From: John C. Rogers, Chair *J.C.R.*
Academic Senate Budget Committee

Subject: Minor Capital Outlay Resolution

Enclosed is a copy of a resolution which was passed at the November 10 meeting of the Academic Senate Budget Committee. This resolution supports the position taken by the Academic Senate of San Jose State University which urges the Chancellor's office to modify its position on the Minor Capital Outlay Budget. It is our feeling that a modification to allow for projects costing less than \$5000 is in the best interest of the California State University System.

MINOR CAPITAL OUTLAY RESOLUTION

- WHEREAS The Academic Senate of San Jose State University approved, on November 23, 1987, a resolution that urged the Chancellor's Office to designate a portion of the Minor Capital Outlay budget to the campuses as a lump sum for small modifications at the campuses' discretion while being accountable for the funds expended, and
- WHEREAS The campus at California Polytechnic State University, as with all other California State University campuses, often require Minor Capital Outlay projects of less than \$5,000, and
- WHEREAS The delays attributed to the formal Minor Capital Outlay process seem unwarranted for projects that cost less than \$5,000, and
- WHEREAS The Chancellor's Office has not yet made the desired adjustment to the Minor Capital Outlay process; therefore be it
- RESOLVED That the Academic Senate support the Minor Capital Outlay Resolution passed by the Academic Senate of San Jose State University on November 23, 1987 and that the Academic Senate recommend to the Chancellor's Office that it is in the best interest of the California State University System to modify the existing policy for Minor Capital Outlay projects.

SS-F87-1

At its meeting of November 23, 1987, the Academic Senate approved the following Sense-of-the-Senate Resolution presented by Peter Buzanski for the Financial and Student Affairs Committee.

WHEREAS Trustee Resolution RA 9-83-057 required the development of a charge-back system for services other than routine maintenance performed by Plant Operations, and

WHEREAS Campuses can no longer divert maintenance funds for teaching facilities modifications, due to the deterioration of the aging plant facilities, and

WHEREAS Trustee Resolution RA 9-83-057 excludes modifying buildings and extending or modifying utility systems from maintenance work, and

WHEREAS The funding of modifications of buildings, etc., is to be funded by Minor Capital Outlay for each project which will cost less than \$200,000 but more than \$5,000, and

WHEREAS The time frame for a Minor Capital Outlay project requires a minimum of three years for completion even if a request for funds is approved, and

WHEREAS Modern teaching facilities frequently require modifications which cost less than \$5,000, and

WHEREAS Departmental budgets for Operating Expenses have not been supplemented to fund teaching facilities modifications since the effective date of Trustee Resolution RA 9-83-057; therefore be it

RESOLVED That the Academic Senate urge the Chancellor's Office to designate a portion of the ~~Minor Capital Outlay budget~~ to the campuses as a lump sum for small modification projects at the campuses' discretion, such funds to be expended on the basis of current minor capital guidelines, with campuses accountable for a post audit of the funds expended on an annual basis.

Adopted: _____

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

AS-____-88/____

RESOLUTION ON
CAL POLY COMPUTER INTEGRATED MANUFACTURING (CIM) PLAN

RESOLVED: That the California Polytechnic State University Academic Senate approve the attached report on Computer Integrated Manufacturing (CIM), Cal Poly CIM Plan dated November 8, 1988.

Proposed By:
Unny Menon, Chair
Industrial Engineering
Department
November 29, 1988

**Computer Integrated Manufacturing (CIM)
Cal Poly CIM Plan
November 8, 1988**

Unny Menon, Chair, IE Department
Archie Cheda, Professor, ET Department
Andrew Young, Director, Northern Telecom

INTRODUCTION

American manufacturers have increasingly encountered stiff international competition in domestic product and service areas where they have previously enjoyed commanding market presence and control. This has also occurred in the international marketplace. As a result, some entire domestic product sectors have disappeared. In addition to competitive pressures, product and production technology is changing very rapidly. In some cases the technology is changing so fast that Industry is having trouble keeping up and its employees are falling behind or even resisting introduction of new technology. Managing technological change can help a company keep up, but it is the influx of new graduates with an up-to-date education that provides one of the major vehicles for introducing and implementing these changes.

WHAT IS CIM?

There are many definitions of CIM - probably as many as there are people willing to offer an explanation. This causes confusion as to what CIM really is but most of this confusion is due to our tendency to try to define CIM from our own specialist point of view. For the purposes of this document, CIM is defined as an engineering and management framework directed towards improving manufacturing process productivity through the use of integration programs and integration technologies. This broad definition of CIM will facilitate participation by most disciplines at Cal Poly in CIM activities. (An expanded discussion of the definition of CIM is included as Appendix I to this document.)

CIM: The Industrial context

Computer Integrated Manufacturing has been adopted by industry as one of the important approaches to improve productivity and remain competitive. CIM provides a framework for the integration of engineering and management activities in the enterprise. The main emphasis in CIM is on the attainment of integration using all available means including both computer-based and non-computer-based approaches. The scope of CIM encompasses all activities from initial product concept to final product delivery including all supporting functions required. The development and implementation of CIM is regarded as being a substantial inter-disciplinary endeavor.

CIM: Cal Poly's role

Industry requires graduates who are familiar with CIM and are able to participate effectively in its development and implementation. Cal Poly can respond to this need by providing increased academic coverage in this area. Some elements of CIM are already present in some of our courses, however they are individual courses geared to the needs of a specific major. What is needed is an integration of material representative of CIM into many courses. This can most readily be implemented by faculty and student involvement in CIM research and educational activities that would be coordinated by a CIM Center.

CIM is a inter-disciplinary area which depends primarily on the knowledge base in engineering, computer science, business/management, psychology/sociology, and human factors. Some Cal Poly faculty and students have been involved in applied research to address CIM related problems sponsored by industry. Recent examples include IBM, Northern Telecom, and Digital Equipment Corporation. There is scope for increasing such partnerships with industry to provide the basis for a strong CIM program. Substantial support by industry is an essential requirement for a viable CIM program at Cal Poly and initial investigations show that many companies are interested in participation. The advice of industry is important in influencing the elements of the Cal Poly CIM program. The formation of an Industrial Advisory Board to provide such advice and financial sponsorship is an important element of our CIM plan.

CIM Educational Needs

The development and implementation of CIM in industry requires specialist and non-specialist professionals from several functional areas of the industrial organization. The differing educational needs of these groups will require programs which address such needs and build on their particular strengths. The majority of CIM education required can easily be integrated into existing courses, although a few new courses may be needed to serve those who specialize in technical areas. A different educational need is for current awareness in CIM topics which could be covered in a program of short courses for industry and an invited lecture series to bring distinguished speakers on campus.

OVERALL STRUCTURE FOR CIM AT CAL POLY

Management of CIM Program

The CIM Center will coordinate all aspects of the CIM program at Cal Poly. The center will facilitate sponsored projects and serve as the central contact point for industry, faculty, and students involved in such project activity. CIM Center facilities will include an Integration Laboratory linked by the campus network (SLONET) to CIM related activities on campus.

The Center will be administered by a full-time manager under the direction of a faculty Center Director. The Center Director will have release time and will chair the faculty CIM Center committee. The CIM Center will have support staff including a technician/programmer, secretary, and student assistants.

Host school and department

As an evolutionary structure, the Industrial Engineering department will host the CIM Center. As resources become available, this will lead to a self-supporting CIM Center open to university-wide participation.

CIM is a inter-disciplinary program area which requires active participation by many departments. A multi-discipline CIM matrix is presented on the following two pages, showing some of the existing and possible intersections between the university's academic disciplines and areas of CIM research. The role of the CIM Center is to encourage and facilitate such cooperative activity.

Faculty CIM Committee

In the past, CIM activities were managed by a number of committees consisting of faculty representatives from departments with a major role in the CIM program. These committees will be combined into a single committee with responsibility for CIM Center. Appointed by the President and named the CIM Center Committee, this committee will be limited to seven members and chaired by the Director of the CIM Center.

CIM Center Industrial Membership

CIM, in industry, is seen as a way of improving a company's ability to deliver new products faster and with better quality in a more cost-effective fashion. To achieve these expectations, the emphasis in CIM is on integrating all elements of the product delivery process. To ensure that the CIM Center has strong input from Industry, two industrial groups will be established - the Industrial Advisory Board (IAB) and the Industrial Conference Committee (ICC).

Members of the Industrial Advisory Board have an important role in influencing the directions of the Cal Poly CIM program and facilitating financial sponsorship by industry. A senior executive from a member company currently involved in funding CIM activities will be eligible to serve on the Industrial Advisory Board. Membership of the board will be based on recommendations made to President Baker.

The larger Industrial Conference Committee will consist of all CIM Center members and will be the focus for CIM research activities, conferences, publications, information exchange, short courses, speakers, and faculty liaison. Up to three executives or CIM Center Associates from each company can attend ICC activities

PRODUCT DELIVERY PROCESS:

DISCIPLINES	ENGINEERING	DESIGN	MFG. ENGRG.	PROD. P & C	PRODUCTION
ACCOUNTING	.	.	.	★★	.
ART & DESIGN	.	★★	.	.	.
AG. ENGRG.	★★	★★	★★	★★	★★
BUSINESS	.	.	.	★★	★★
CIVIL ENGRG	★★	★★	★★	.	.
COMPUTER SCIENCE	.	.	.	★★	.
CONSTR. MGMT.	★★	★★	.	★★	.
ENGRG. TECH.	.	★★	★	.	.
ELECT ENGRG	★★	★★	★★★	.	.
FOOD SCIENCE
INDUST ENGRG	.	.	★★★	★★★★	★★★★
INDUST TECH	.	.	.	★★	★★
MANUFACTURING	.	★	★★★	★★★★	★★★★
MANAGEMENT	.	.	.	★★	.
MECH ENGRG	★★	★★	★★	.	.
MET. & MATLS. ENGRG.	★★	★	★★	★	.
PSYCHOLOGY	.	★	★	★★	★★★★

★ = POSSIBLE PARTICIPANT ★★ = FUTURE PARTICIPANT ★★★ = PRESENT PARTICIPANT

MANUFACTURING SUPPORT PROCESSES:

DISCIPLINES:	TRAINING	MANAGEMENT	MARKETING	QUALITY	
ACCOUNTING	.	★	.	.	.
ART & DESIGN	★	.	.	★	.
AG. ENGRG.	.	.	.	★★	.
BUSINESS	★★	★★	★★	★	.
CIVIL ENGRG	.	.	.	★★	.
COMPUTER SCIENCE	.	.	.	★	.
CONSTR. MGMT.	.	★★	★★	★★	.
ENGRG. TECH.	★★	.	.	★★	.
ELECT ENGRG	.	.	.	★★★	.
FOOD SCIENCE	.	.	★	★★	.
INDUST ENGRG	★★	.	.	★★★	.
INDUST TECH	★★	★★	★★	★★	.
MANUFACTURING	★★	.	.	★★★	.
MANAGEMENT	.	★★	★★	.	.
MECH ENGRG	.	.	.	★	.
MET. & MATLS. ENGRG.	.	.	.	★★	.
PSYCHOLOGY	★★★	★★★★	.	★★	.

★ = POSSIBLE PARTICIPANT ★★ = FUTURE PARTICIPANT ★★★ = PRESENT PARTICIPANT

and more will be permitted if the additional administration costs are covered by the member company. Membership in the ICC will be managed by the CIM Center Manager, with approval of the CIM Center Director.

Both the IAB and the ICC will play an important role in providing advice to Cal Poly on our CIM programs. They will also assist in identifying research opportunities, facilitate equipment donations, and initiate sponsored projects. These sponsored research projects can be proprietary although the preference is for public domain activities so that the research results can be published and shared with other CIM Center members. In addition, it is expected that the research will be of an applied nature, and that both undergraduate and graduate students will work closely with the faculty investigator in the Integration Laboratory or in the other distributed laboratories.

Another major element of CIM Center activities will be information exchange between the Industrial community and academia. This will be accomplished through a number of means such as publications, informal meetings between CIM Center Associates and faculty as well as CIM Center Conferences. These conferences will be held once or twice a year and will include presentations from CIM Center faculty researchers, speakers from Member companies, industry representatives, and well known speakers on CIM topics. The conference will also allow time for attendees to share information and their experiences on CIM.

Membership in the CIM Center will be beneficial to those companies that join. Despite the fact that Industry is implementing CIM for improved productivity, there is no solid academic basis for many CIM concepts and few of the major concepts have been fully tested. CIM Center membership will provide a company with an opportunity to easily investigate many of their own ideas before making major commitments. In addition, there will be access to students and faculty which could be turned into student hiring and faculty professional development activities.

CIM Center membership will complement rather than replace existing School affiliation programs. The Industrial Affiliates program of the School of Engineering and the Corporate Sponsors program of the School of Business offer additional benefits to companies beyond those the CIM Center will offer. These funding programs and CIM Center memberships will need to be coordinated to avoid confusing companies that need and want a range of services and benefits from Cal Poly and to ensure that all of these programs are adequately funded.

CIM Academic Program

Involvement of faculty and students in as broad a range of interdisciplinary activities as those planned for the CIM Center will certainly stimulate activity in the development of curricula. The most important result will be the permeation of CIM concepts into many courses and majors. This would also promote interdisciplinary approaches to integration. This will result in many Cal Poly graduates hired by

industry having some exposure to CIM concepts. The different educational needs of specialists and non-specialists associated with CIM developments can be addressed through interdisciplinary programs at three levels: minors, majors, and graduate programs.

The following descriptions of academic program proposals are intended to be indicative of the overall possibilities only. Actual courses and programs will have to be developed by the faculty and considered by all levels in the normal approval process for new academic programs. The development of each program is also conditional on the availability of adequate faculty resources.

CIM minors: The needs of students who only require familiarity with CIM concepts can be met within the 24 to 30 course units of a CIM minor. There is scope for offering two types of minors. One minor for engineering majors and a second minor for non-engineering majors. The curriculum in each of these minors will be geared towards the different needs and backgrounds of the two groups, who have different roles in CIM developments. A curriculum for each of these minors could be based on existing courses and a limited number of new courses. Existing courses applicable to the CIM minor include CAD/CAM, Robotics, Production Control, Quality Control, Human Factors, Psychology of Technological Change, and other supporting electives. New courses providing introductions to the CIM framework for integration, Data communications and System Design will be needed for this minor.

Manufacturing Systems Engineering Major: The systems integration focus of our current Industrial Engineering program and the Manufacturing Option of our Engineering Technology program provide a strong foundation for developing a new major in Manufacturing Systems. This new major would be based on a curriculum which concentrates on CIM subject areas and enable career opportunities as specialists in CIM developments.

Manufacturing Management Major: CIM is as much a Business methodology as it is an Engineering discipline. A number of recent studies of business education have strongly urged that business schools place greater emphasis on manufacturing - both as a core subject in all business programs and as a specialization. As a major polytechnic university, Cal Poly should play a leadership role in establishing an undergraduate concentration in manufacturing management. The Business School concentration in manufacturing management will have a more managerial emphasis than the engineering major in manufacturing systems. Both programs, though, will draw upon courses from both schools, will be interdisciplinary and will be focused on the issues of integration in a competitive business environment.

Senior Projects: In all of the above programs, the senior project will often serve as the primary means for interdisciplinary work in CIM. Funded research have already generated such projects.

Graduate Programs: The needs of a graduate level education in CIM can be addressed within the existing graduate programs in engineering and business. Both the specializations in Industrial Engineering and the proposed joint program in Engineering Management include courses covering important elements of CIM. The development of additional elective courses which broaden the coverage of CIM topics would enable a graduate program concentration in CIM. The objective of developing a strong CIM focus within graduate programs in the School of Engineering and the School of Business can be achieved by the the introduction of additional CIM-oriented courses and CIM-based theses or internships in the respective programs.

The selection of an appropriate CIM topic for the thesis research activity would enable graduate students from several disciplines to gain CIM experience in a specialized topic. Graduate internships sponsored by industry could be the means of attracting students to carry out such research. Students in the current MS programs in CSC, EL/EE, IE, and ME, and the MBA program could be encouraged to focus on a CIM topic which builds on their particular expertise to address a suitable applied research problem. For example a Computer Science student may focus on the integration problems with respect to manufacturing databases in a company. An EL/EE student could address problems associated with image processing and pattern recognition for manufacturing automation. An IE student might develop a prototype for computer-aided process planning needed for CIM in circuit board manufacture. An ME student may focus on design methodologies for concurrent engineering. In each of these examples, the problem may be addressed from a single discipline viewpoint or in partnership with the other disciplines in some specialized aspect of CIM of interest to the sponsor.

The CIM thesis option enables students on existing graduate programs to gain insight into this inter-disciplinary area and be attracted to specialized career opportunities in CIM which require their particular discipline. The model described here is equally applicable to graduate programs in other schools, notably the MBA program where the internship in industry could have a CIM topic as the primary focus.

The current MS specialization in IE and the proposed joint program (Engineering and Business School) in Engineering Management include a required course in CIM. Other courses in each of these programs provide the basis for developing the integration expertise required in CIM. Existing courses in Simulation, Knowledge Based Systems, Operations Research, Information Systems, and Reliability Engineering are applicable to CIM. The development of new courses in Integration Technologies and Network Communications, and the choice of a CIM thesis topic would enable the desired CIM focus within our existing graduate program. The development of a strong CIM focus within the MS program in the School of Engineering and the MBA program in the School of Business will be addressed as an important element of the ongoing joint effort by the two schools in developing a viable structure for the Engineering Management Program.

Just-In-Time
Quality improvement
Productivity management

THE CIM CENTER

Purpose: The CIM Center will serve as the administrative unit supporting all aspects of the CIM program at Cal Poly. The center will facilitate sponsored projects and serve as the central contact point for industry, faculty, and students involved in such project activity. The center will include an Integration Laboratory where CIM computer based and non-computer based concepts can be demonstrated by establishing links with design laboratories, manufacturing laboratories, and the range of computing resources on campus. The center will also include space for appropriate CIM sponsored projects. The center will assist faculty in organizing CIM seminars and short courses for industry. The center will provide support to the academic departments associated with CIM programs. Administrative support for the faculty CIM committee and the Advisory Board will be provided.

Center staffing: The center staff will include the Manager (reporting to the Director), a Secretary, a Technician/Programmer, and student assistants. The Center Manager will administer all CIMC activities, coordinate CIM programs, facilitate sponsored projects, and assist faculty in CIM program activities. The Center Secretary will carry out all clerical duties, assist in administering sponsored projects, provide support services for industrial sponsors and faculty involved in CIM programs. The Center Technician will maintain equipment and develop procedures for CIM based telecommunications on campus networks for data transfer. Student assistants will be required to monitor and help instructional users of the laboratory.

The Integration Laboratory

Some computing and manufacturing laboratory facilities for CIM at Cal Poly exist within academic departments and within Information Systems. This distributed CIM environment includes CAD laboratories in ME, CE, CAPC, and ET, manufacturing systems laboratories in ET and IE, as well as computing laboratories in the business school. SLONET provides a campus-wide data network with local networks in some departments. Given this distributed configuration of CIM resources and a campus network there is scope for examining the problems of integration using our distributed network. The purpose of the Integration Lab is to provide a central location where the links between the different nodes and the information transfers required to attain integration can be examined. This would require a demonstration environment with a representative workstation or manufacturing resource from each of the laboratories at this central location. The Integration lab will be used for instructional and research purposes to examine the problems arising in systems integration. This would enable CIM oriented

considerations to be examined in the Integration Lab and discipline-specific activities would continue in the respective laboratories, although some discipline-specific sponsored projects would be administered by the CIM Center in order to bring faculty and industrial members together for future multi-disciplinary research.

The Integration Laboratory should also include demonstration facilities for non-computer based integration technologies. Some of these approaches to integration include flow lines, just-in-time, total quality commitment, and concurrent engineering approaches all of which are important in attaining integration within the enterprise. The demonstration area should include either scale model prototypes or simulation models of these approaches for instructional and research purposes.

Space for CIM sponsored projects is also required in the Integration Lab. This project area should include facilities for rapidly installing equipment on loan from the sponsor companies retained in the lab for the project duration. A portion of the R & D area floorspace is shown as a Automatic Storage/Retrieval System (AS/RS) based Flexible Manufacturing System (FMS). This linear array of automated and non-automated workcells would provide for real-scale physical simulation of many of the issues that need to be investigated for applied research in CIM. These range from process-related manufacturing issues through technical communication and physical integration issues to psychological and sociological issues. For example: ME and EL/EE students could participate in redesign of a product for automated manufacture, Manufacturing students could perform the development of the process, all students could participate as "workers" in a production run monitored by Psychology and Human Factors investigators.

MANUFACTURING CONSORTIUM (CIDME) PARTICIPATION

Cal Poly is one of 30 U.S. Universities that have pooled resources to form the Consortium for Integrated Design and Manufacturing Education (CIDME). CIDME activities are coordinated by Dean Bollinger, College of Engineering, University of Wisconsin-Madison. The purpose of CIDME is to develop and share curriculum materials which enable an integrated approach to teaching design and manufacture. The CIM Center will promote Cal Poly participation in CIDME sponsored developments and assist faculty in submitting requests to CIDME for funding specific projects.

IMPLEMENTATION PLAN

CIM Center Implementation

The initial implementation of a CIM Center operation hosted by Industrial Engineering can commence as additional resources are made available. Phase 1 implementation will concentrate on the communications links between the Computer-Aided Productivity Center (CAPC), the CAD laboratories in other departments, and the Integration Lab.

The second phase of the CIM Center implementation will depend on the scope for expanding the proposed Manufacturing Building adjacent to Engineering 13 (to house ET, IE, and MET) with support from industry, not only for academic departments but also for an expanded CIM Center. The resource requirements for this larger center would depend on the level of increasing industrial sponsorship and the initial success of the proposed academic programs which cannot be predicted accurately at this time. The goal is to have a center of excellence with resources and funding levels comparable to a NSF Engineering Research Center.

CIM CENTER FACILITIES AND EQUIPMENT

The following describes the facilities and equipment the CIM Center expects to have in place for Phase 2. In addition, interim facilities and equipment for Phase 1 are proposed, and a migration path between these two points in time is explored.

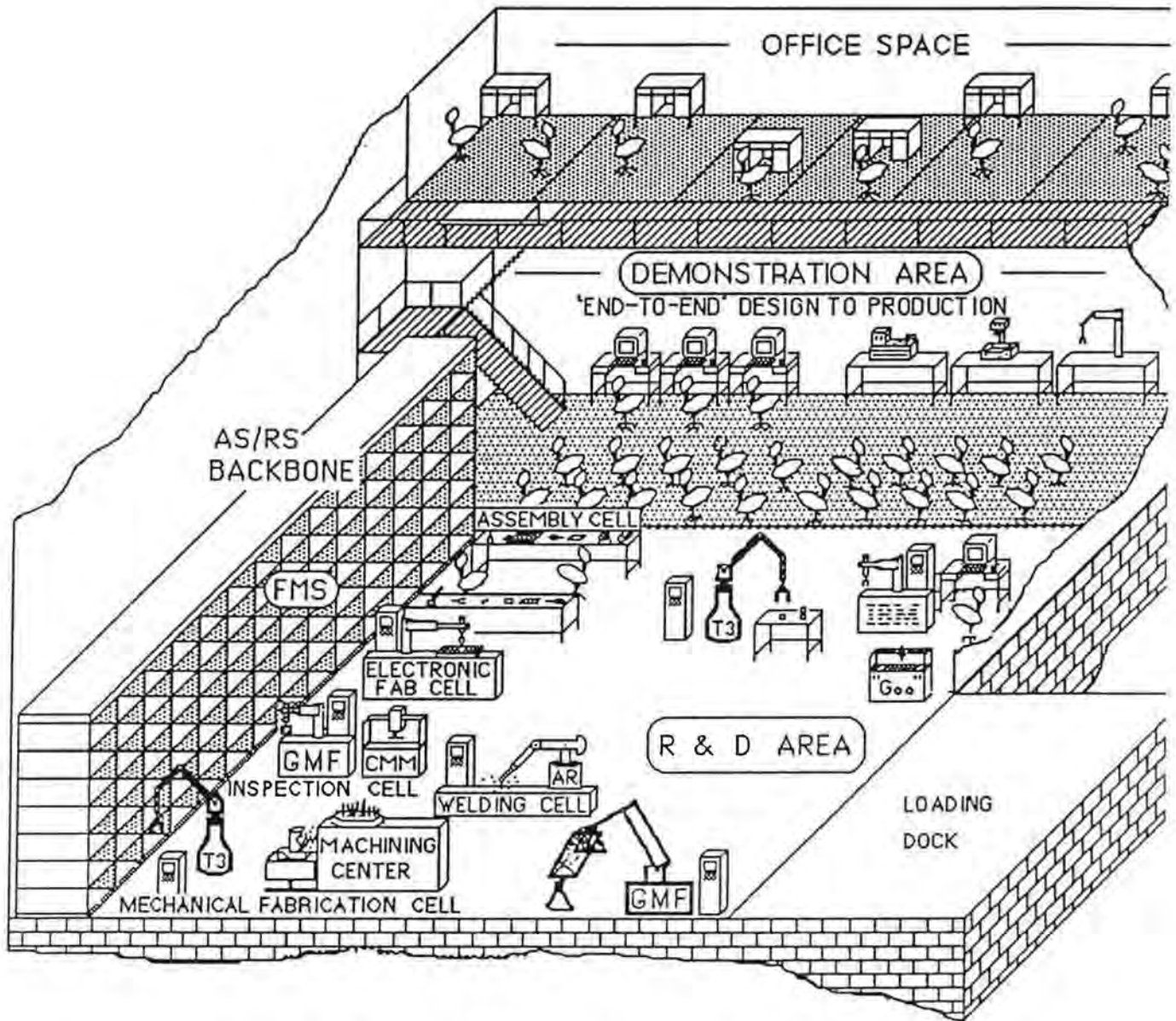
CIM Computing Equipment

The following equipment is required to support CIM at Cal Poly:

- a network (SLONET)
- communication standards (ISO, Map, TOP)
- access to a data base machine (IBM)
- distributed application processors
- workstations
- selected manufacturing equipment (basically test-bed type equipment that is connected into the network and uses the established communication standards)
- a specific set of software applications, operating systems, and languages that can be used for teaching and research

Phase 2 Facilities

The major facility to be managed by the CIM Center will be the Integration Laboratory. (Other CIM facilities will exist but these will be distributed in other locations and will be managed by the responsible department.) The Integration Laboratory is expected to be in the proposed new Manufacturing Building. A sketch of the CIM center's portion of the proposed building is shown overleaf. The machines shown all exist on campus and are currently available for the CIM center with the exception of the Automatic Storage/Retrieval System(AS/RS). The AS/RS forms the "back-bone" of a Flexible Manufacturing System(FMS) and is planned to be designed and fabricated as a joint project across the departments of the School of Engineering. The research projects shown are past projects performed by the IE and ET departments. There is a need for a central housing and support for such projects.



CAL POLY CIM CENTER
INTEGRATION LABORATORY
in proposed
MANUFACTURING BUILDING

The Integration Laboratory is expected to have a floor area of 5000 square feet and will be divided into an office area and two laboratories of approximately 2000 square feet each. The first laboratory - the Demo Area - will be used for CIM demonstrations and will be used by students and faculty for CIM systems development as well as computer based and non-computer based integration concept testing across the available networks, equipment, and other facilities. This laboratory will have a medium height ceiling and will have an office environment. The equipment placed in the Demo Area will be computer workstations, application processors, and small scale desktop manufacturing equipment. It is expected that the Demo Area will be carpeted and that there will be a windowed partition between it and the adjacent R & D area. Access between the two areas will be easy; students and faculty are expected to use both rooms as part of their work activities.

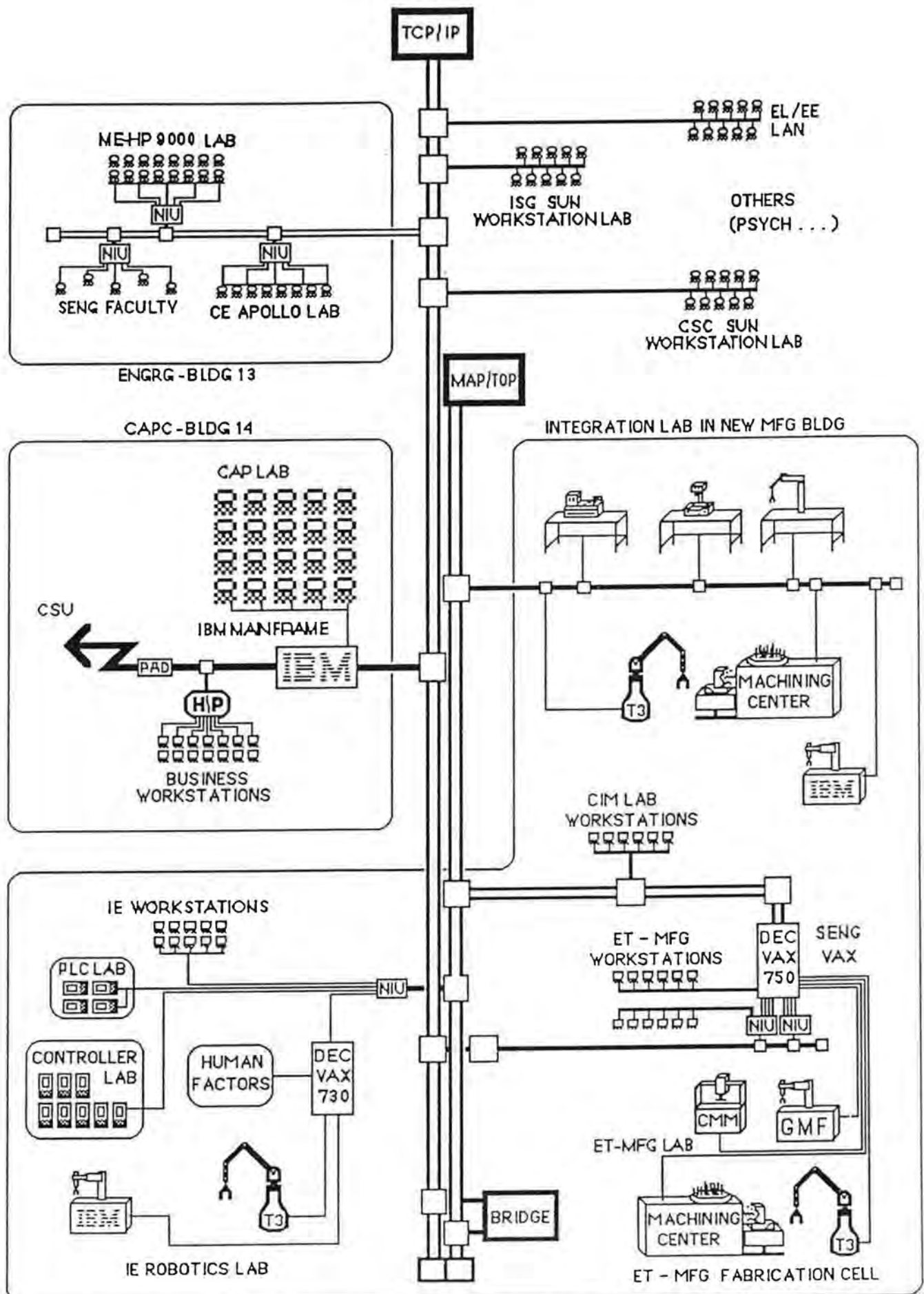
The second laboratory - the R&D Area - will be used for applied CIM research on funded industrial problems as well as for teaching purposes. The equipment installed in this lab will be real size manufacturing equipment (as appropriate) belonging to the University or on temporary loan for the duration of a research contract. This equipment will also be used to test CIM concepts and integration issues as well as provide a feel of the real world for the students. The R&D Area will have a high ceiling and a gantry type crane to assist in the frequent movement of heavy manufacturing equipment. Examples of typical machinery which will be installed are machining centers, robots, automated inspection and assembly equipment, electronic fabrication, assembly, and test equipment, manual assembly, inspection, and finishing work cells.

CIM related facilities in other parts of the campus will be an integral part of the department using the equipment. This is consistent with distributed CIM as experienced in industry and is therefore appropriate to Cal Poly. These distributed facilities are in CE, EL/EE, ME, IE, ET-Mfg, BUS, PSYCH, IT, AgE, and some elements of CAPC and will be integrated vis-a-vis information via SLONET. A network diagram is shown on the following page.

Phase 2 Equipment

The equipment in all CIM related locations will be treated as part of the whole CIM environment and will be connected by SLONET between facilities and, in some cases, within facilities. Connectivity between these CIM facilities will be transparent to the network user. In the Demo Area TOP will tend to be the standard; from the Demo Area to the R&D Area, and within the R&D Area, MAP will be the standard. It should be noted though, that the Integration Laboratory will be able to work with any type of network or form of connection since hardware and system connectivity will be one of the most significant areas of research.

It is difficult to predict, with any degree of certainty, the type of CIM equipment that will be necessary for the CIM Center in the future. The following, is an appropriate



subset of what might be necessary and represents a reasonable view of the type of functionality required in the Center.

The Demo Area will contain the following new equipment:

- workstations and terminals:

HP 9000,
VAX Station,
SUN,
Appolo,
IBM 3279,
VT3xx,
IBM 5080 (over a 56 KBS line), and
PC's (IBM, HP, Apple)
NeXT

- hardware:

DEC VAX (medium to large size)
HP Spectrum (medium to large size)
IBM (access to the IS mainframe via SLONET)
desktop manufacturing units (mill, lathe, robots, etc)

- software:

ANVIL 5000,
SCICARDS
CIMTELLIGENCE (Computer-Aided Process Planning),
MSA Manufacturing Resource Planning (MRP),
Arthur Anderson (MRP),
IP Sharp or Consillium (Shop Floor Control)

(This is in addition to the CIM related software already available on the campus such as CBDS, CATIA, CADAM, CAEDS, CADKEY, APT, and Quicksilver as well as the software planned for the Business Speciality Center.)

- networks:

SLONET
TOP to MAP for the equipment in the R&D Area
Any other form of network or protocol required to investigate the issues involved in integrating the elements of CIM.

The R&D Area will have the following type of equipment:

- manufacturing systems:

- machine tools for discrete and continuous production
- FMS, robots, and other automated work cells
- material handling equipment
- advanced process technologies
- manual work centers
- people-based integration systems (flow lines, Kanban, etc)

Phase 1 Facilities and Equipment:

The CIM Center does not need to start with the sort of space detailed for Phase 2 nor does it need, immediately, all the equipment defined above. There is, though, a minimum subset required to start the Center.

- facilities:

1200 square feet of clean, comfortable office type space for the Demo Area.

1200 square feet of manufacturing type space for the R&D Area. This space would be used for installation of the manufacturing equipment used as the end effectors to the CIM systems environment. (Note that Building 40 is not ideal because of the major refurbishing costs involved to make it usable for the manufacturing equipment and that it is not recommended, in its current condition, to be used for the Demo Area).

- equipment:

- HP 9000 workstation and supporting CAD/CAM software
- DEC VAXStation and supporting CAD/CAM software
- APPLE and IBM PC networks
- Desktop manufacturing equipment to include a mill, a lathe, and a robot
- SLONET access

In addition to the above new equipment, the CIM Center will use the SENG VAX, some VT 100 terminals from ET-Mfg, and robots already at Cal Poly.

Migration Plan

The proposed facilities and equipment for the CIM Center are not available today but, in order to be seen to be in the CIM business, Cal Poly must have a reasonable subset in place as soon as possible. The proposed new Engineering building is not yet part of the Master Plan for the campus. In the short term, then, an appropriate place must be found to house a subset CIM Center to be used as a

showcase to start the flow of funds. Then the CIM Center can move to its new location when it becomes available. In addition, the initial subset of equipment installed would need to be enhanced to achieve the full capability of the proposed Center.

The proposed project plan for initial installation and migration is as follows:

Phase 1:

- select an office type space for a Demo Area. A good example of such a space is the University lecture room 26-104. Building 26 has the appropriate environment for startup purposes.
- select manufacturing type space for the R&D Area. As has been mentioned before, Building 40 is not appropriate unless the building is substantially refurbished.
- acquire the workstations and manufacturing demonstration units.
- hold the first meeting of the Industrial Advisory Board and the Industrial Conference Committee

Phase 2:

- confirm the space in the new Engineering Building for the CIM Center.
- increase the amount of income to the CIM Center in order to provide a cash contribution to the new Engineering Building.
- planning for full scale CIM Center
- transition to the new CIM Center facilities.

**Computer Integrated Manufacturing (CIM)
Cal Poly CIM Plan
November 9, 1988**

Unny Menon, Chair IE Department
Archie Cheda, Professor ET Department
Andrew Young, Director Northern Telecom

APPENDIX: WHAT IS CIM?

There are many definitions of CIM - probably as many as there are people willing to offer an explanation. This causes confusion as to what CIM really is but most of this confusion is due to our tendency to try to define CIM from our own specialist point of view. An analogy can be made between trying to present an overall or integrated view of a building when confined to one of the rooms. Under these conditions, the building would be described in terms of the size and shape of the room and any information which could be gained from looking out the windows and doors. Each description from any of the rooms would be correct as far as it went but it would not be a good description of the whole building nor would all of the descriptions, when combined, provide an integrated view. To obtain an overall view of the building, the relationship of all the rooms and the integrating elements between the rooms, rather than the rooms themselves, would need to be described.

For the purposes of this document, **CIM is defined as** an engineering and management framework directed towards improving manufacturing process productivity through the use of integration programs and integration technologies.

- an integration program is any program that improves manufacturing productivity through the control, integration, and automation of data flows between manufacturing process steps or activities. These programs will tend to use computer based integration technologies.

- integration technology is any tool, system, method, technique or applied science used or developed for manufacturing process integration. Integration technologies can be computer based or non-computer based.

- the term computer is used to mean any form of computing device or use of that device in an application or as part of another machine. In this sense, a computer can be running a CAD/CAM or MRP (Manufacturing Requirements Planning) application, working as a shop floor cell controller, or in a robot, etc. An implied and necessary capability of computers is the ability to communicate.

- manufacturing is used in the broadest possible sense of the word, i.e. all of the activities and disciplines required for product creation and design through production to satisfied customer and post installation monitoring. Sales, marketing, and financial activities are also included because they significantly impact the manufacturing process. (Manufacturing could be described as the product delivery process but this phrase is even less well known than the broad definition of manufacturing proposed above.)

- a process is the combination of a series of discrete steps and/or activities performed individually towards an end result. Processes can be almost any combination of steps and activities. For instance the new product introduction process combines all the actions required to create, develop, produce, and deliver a new product, whereas the education process combines all of the actions required to teach and learn.

- a product is the result of a process. A product in this case can be physical goods, a service or other end result of a process. (Examples include cars, computers, and financial services but other end results such as construction and refining are also included even though they are not as obvious - the definition is meant to be as broad as possible.) A process generally has many steps and activities, each of which produces a product which is generally used as input to the next step or activity in the process

- productivity is defined as improving the ability of a process to produce a product. This can be done by increasing the throughput and/or reducing the cost and duration of the process. Improving productivity also implies better quality and satisfied customers.

- integration includes the processes for, and the activities of, combining individual components or process steps into a more significant whole. In manufacturing, each process step or activity can be extremely large so integration in this environment does not generally obliterate individual identities.

BYLAWS OF THE CAL POLY
COMPUTER INTEGRATED MANUFACTURING CENTER (CIMC)

California Polytechnic State University, San Luis Obispo

These bylaws are applicable within the authorization established by the Board of Trustees of The California State University and the California Polytechnic State University, San Luis Obispo.

ARTICLE I - NAME

The name of this organization shall be the Computer Integrated Manufacturing Center (CIMC), referred to in these bylaws as the CIMC or the Center.

ARTICLE II - PURPOSE AND POLICIES

Section 1 - Purpose

The primary purpose of CIMC will be to support the multi-disciplinary needs for CIM education and applied research. The Center will foster interaction between the University and industry, consistent with the overall goals of Cal Poly.

Center members are faculty and students who have a declared interest in CIM related activities at Cal Poly.

CIMC will serve as a vehicle for securing industrial sponsorship and support to sustain CIM oriented projects at the Center.

Section 2 - Policies

The policies of this Center shall be in harmony with the policies of The California State University, the California Polytechnic State University, San Luis Obispo, and the California Polytechnic State University Foundation.

Section 3 - Dissolution

In the event the Center is dissolved, financial assets remaining after payment of or provision of, all debts and liabilities shall be distributed to the California Polytechnic State University Foundation in trust for Cal Poly.

ARTICLE III - MEMBERSHIP

Section 1 - Class of Membership

Only faculty, students, and staff of the California Polytechnic State University, San Luis Obispo, faculty-selected industrial members, and industrial associates shall be members of the Center. The membership is defined as follows:

a. - Faculty

Faculty members are those persons appointed by the University to faculty rank.

b. - Staff

Staff members are those persons serving the University in either an instructional or non-instructional capacity. Staff members have University affiliation.

c. - Student

Student members are those persons engaged in study at the University on either a full-time or part-time basis.

d. - Industrial Members

Industrial members are those persons affiliated with the University through demonstrated commitment to the purposes of the Center. Typically, they will be members of the Industrial Advisory Board and/or the Industrial Conference Committee.

Section 2 - Admission to Membership

a. - Eligibility

All interested people in eligible categories can be associated with the Center if so desired.

b. - Proposal of Members

Any faculty member engaged in a Center program may propose candidates for membership for some duration of service in one or more programs.

c. - Acknowledgement of Membership

The Director of the Center shall acknowledge members.

Section 3 - Terms

Terms of members shall be determined by the Director.

Section 4 - Fees and Dues

There shall be no fees or dues paid by University members. Industrial members will normally be charged fees in accordance with the policies governing membership on industrial support boards and committees.

Section 5 - Role of Members

Members are encouraged to participate in the activities of the

Center. They may propose programs to be implemented by the Center. If approved, these programs will receive Center support as necessary and possible. The membership will have priority consideration in Center activities and interaction with industry.

Members are expected to provide support to the programs of the Center and assist the Director in program development.

ARTICLE IV - ADMINISTRATION

Section 1 - Director

The Center will be administered by a Director, appointed by the Dean of the School of Engineering, with the approval of the Vice President for Academic Affairs. The nominal term of appointment is five (5) years. The appointment may be renewed at the discretion of the dean and Vice President for Academic Affairs.

The Director will be supported by a manager and technical and clerical staff. The Director will serve on a released time or overload basis. The amount of time will vary from quarter to quarter and will depend on available funds and anticipated work load for the particular quarter. The Director will report to the Dean of the School of Engineering.

The Director will submit an annual report to the Vice President for Academic Affairs, the Dean of the School of Engineering, financial supporters, the Associate Vice President for Graduate Studies, Research, and Faculty Development, and members of the Advisory Committee. The report will include a summary of:

- (a) what was done
- (b) who did it
- (c) how it was financed
- (d) future plans

ARTICLE V - ADVISORY COMMITTEES

Section 1 - Advisory Committees

The Center shall have two advisory committees: the Faculty CIM Committee and the Industrial Advisory Board.

Section 2 - Faculty CIM Committee

The Faculty CIM Committee shall be limited to seven members. It shall be appointed by the president based on recommendations made by the Director in consultation with the membership. The committee is responsible for recommending policy and encouraging the developing of academic programs, research and training activities. It will advise the director on the management of the

CIM center.

Section 3 - Industrial Advisory Board

The Industrial Advisory Board has an important role in influencing the direction the Center. Membership will be limited to selected members who are senior executives with companies that are supporting the activities of the Center through major grants and contracts. Members will be nominated by the Director and recommended to the President for approval.

Section 4 - Meetings

The Advisory Committee will meet at least once a year to review Center programs and to provide general direction to the Center. The Committee may elect to meet for special purposes at any other times upon agreement of a majority of Committee members.

Section 5 - Number Constituting a Quorum

A majority of members shall constitute a quorum.

ARTICLE VI - FISCAL POLICIES

Section 1 - Fiscal Year

The fiscal year shall correspond to that of the Cal Poly Foundation.

Section 2 - Accounts and Audit

The books and accounts of the Center shall be kept by the Cal Poly Foundation in accordance with sound accounting practices, and shall be audited annually in accordance with Foundation policies.

Section 3 - Funding

Funding for the Center shall come from private solicited sources, gifts, grants, overhead sharings, industrial membership fees, and fees from Center generated short courses, conferences, and publications.

ARTICLE VII - AMENDMENTS

The bylaws may be amended by a two thirds vote of the members voting at any meeting of the Center, provided that each member had received an advance notification of the proposed amendment. They may also be amended on recommendations of the Director and approved by the Dean and Vice President for Academic Affairs.

61
ACADEMIC SENATE
OF
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, California

Background Statement:

The existing process and deadlines for the review of curricula for the catalog have become cumbersome. Due to the tremendous volume of materials submitted during a very short time span, major program proposals may not be receiving the consideration they deserve while minor alterations in course descriptions may consume more time than necessary. To add to the logjam of committee work, other curricula items must be tabled until catalog materials are cleared. In response to this problem noted by a general consensus of past Curriculum Committee members and representatives of the office of Academic Affairs, an altered timeline is being proposed along with a diagrammatic clarification of the flow of information during the curriculum review process.

AS-__-88/__

Resolution on the Curriculum Review Process

Whereas, The current catalog cycle allows for faculty review at the university level for approximately two months and this presents a formidable burden to all those involved in the review process; and

Whereas, Curriculum review should be a consistent, ongoing process; and

Whereas, Some confusion may exist as to the flow of information during the curriculum review process; be it

Resolved: That the catalog cycle be refined beginning with the plans for the 1992-1994 version such that the first portion of the review process be concerned with program changes and proposals (proposals of new, or substantial changes in existing, minors, majors, concentrations, specializations, or programs) while the second part focuses on individual course changes; and be it further

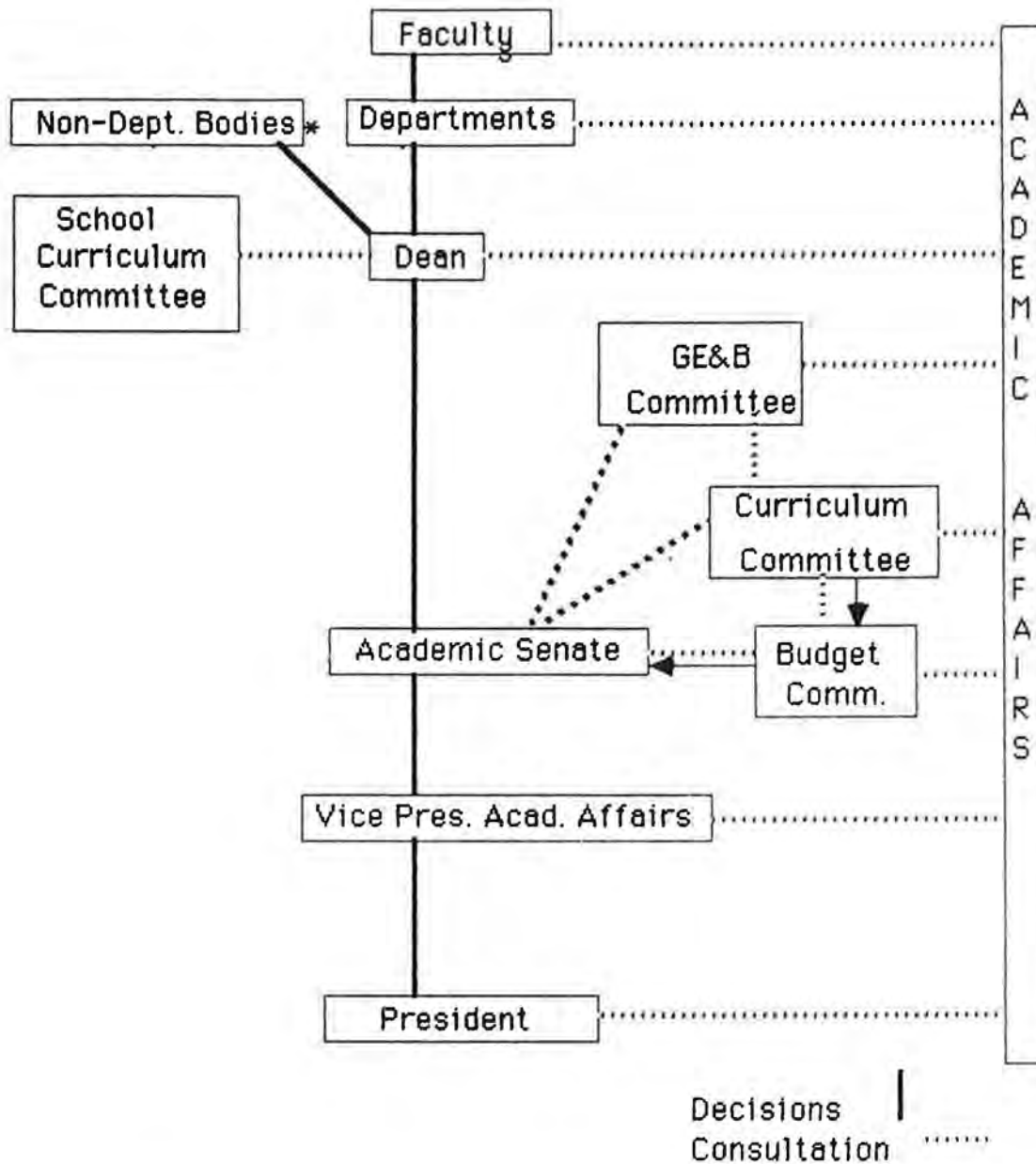
Resolved: That the program proposals for the 1992-1994 catalog be submitted to the Academic Senate during the Fall 1989 and Winter 1990 quarters and that the individual course changes be submitted to the Academic Senate during the Fall 1990 and Winter 1991 quarters, and that this pattern be established for ensuing catalog cycles; and be it further

Resolved: That the accompanying diagram be used to not only clarify the flow of information for all curricula considerations but also to stress the degree of cooperation and responsibility expected at all levels of review.

proposed October 13, 1988
Curriculum Committee

approved 11/10/88

The Curriculum Review Process



*Examples-Library, Student Academic Services, COOP

November 29, 1988

ACADEMIC SENATE COMMITTEE VACANCIES

School of Architecture and Environmental Design

Constitution & Bylaws	VACANCY
Curriculum	VACANCY
Elections	VACANCY

School of Liberal Arts

One-year Senate replacement for Alurista	VACANCY
---	---------

School of Professional Studies and Education

Elections	VACANCY
Long-Range Planning	VACANCY
Personnel Policies	VACANCY

School of Science and Mathematics

Constitution & Bylaws	VACANCY
Status of Women	VACANCY

Vacancies on university-wide committees:

Academic Council on International Programs	(Donald Floyd, incumbent)
AIDS Task Force	(several faculty are requested)
Registration & Scheduling	(winter & spring replacement for Dianne Long)
Public Safety Advisory	(one-year replacement for Zahir Khan)

Other Vacancies

Part-time faculty representative to the Academic Senate	(James Howland, fall quarter) (winter and spring quarters vacancy)
Student Services representative to the Fairness Board	(two-year term)

RECEIVED

NOV 17 1988

Resolution #89-04
Postponement Of Plus Minus Grading **Academic Senate**

WHEREAS: The Academic Senate has addressed the issue of plus/minus grading and the ASI Student Senate, through Resolution #82-05, and #88-12, opposed the implementation of plus/minus grading.

WHEREAS: The Oasis registration system which is to be implemented at Cal Poly has the capability to handle plus/minus grading.

WHEREAS: Due to the following reasons, it has been found that plus/minus grading would not be a fair grading system:
(1)The resolution passed by the Academic Senate places a 1.7 grade point value on the grade of C-. C- is said to be a passing grade, but a 1.7 grade point average is grounds for academic probation and/or possible dismissal from the university, thus preventing a student from graduating. (2)A student using the CR-NC grading system in a course can contradict the previous mentioned item (1). (3)The Academic Senate's resolution does not allow for an A+, but does allow for an A-, thus exhibiting an inconsistency within the distribution of grade points. (4)A student receiving a C- in a course could not retake the course even though a 1.7 is below the satisfactory grade point standard of a 2.0. (5)Minimum requirements for clubs and sports - 2.0 GPA. (6)In conflict with GWR minimum requirement of a "C" average.

WHEREAS: The current grading system(allowing for plus/minus grading) is unsatisfactory in meeting the needs for both students and the faculties.

WHEREAS: The current student population had no input to the fairness of the grading system.

WHEREAS: This current system can be of detrimental effect to student's grades and transcripts this fall quarter of 1988.

THEREFORE
BE IT
RESOLVED: That the Student Senate strongly recommends that the administration immediately postpone implementation of plus/minus grading system until both Student Senate and Academic Senate have had an ample opportunity to fully evaluate it's merits and differences.

Memorandum

Interim Exec Comm 11/29/88

CAL POLY
SAN LUIS OBISPO
CA 93407

To : Members of the WASC Steering Committee
Members of the WASC Subcommittees
W. Baker, M. Whiteford, M. Wilson, A. Yang

Date : November 29, 1988

File No.:

Copies :

William Rife
William Rife

From : Interim Associate Vice President
for Academic Programs (2246)

Subject: Memberships of the WASC Committees

Committee	Member	University Area
Steering Committee	Philip S. Bailey, Jr. Lee S. Burgunder Charles Crabb Robert Lucas William Rife, Chair Hazel Scott Harry Sharp Roger Swanson	School of Science and Mathematics Business Administration Department School of Agriculture Graduate Studies, Research and Faculty Development Academic Programs Student Affairs School of Liberal Arts Enrollment Support Services
Subcommittee 1: Institutional Integrity	Laurence Houlgate Dane Jones, Chair James Landreth W. Mike Martin Kerry Yamada	Philosophy Chemistry Business Affairs Architecture Counseling & Testing
Subcommittee 2: Institutional Purposes, Planning, and Effectiveness	Dan Bertozzi Sarah Burroughs Arthur Cary Linda Dalton, Chair Walter Mark Richard Zweifel	Business Administration Food Science & Nutrition Physics City and Regional Planning Institutional Studies School of Architecture and Environmental Design
Subcommittee 3: Governance and Administration	Charles Andrews, Chair Day Ding Reginald Gooden Ralph Jacobson Timothy Kersten Zane Motteler Kathleen Ryan John Sweeney	Accounting Department School of Architecture and Environmental Design Political Science Chemistry Economics Computer Science Psychology and Human Development Student Trustee, ASI

Subcommittee 4: Educational Programs	Christina Bailey, Chair Harold Cota Susan Duffy John Harrigan Glenn Irvin Lynn Jamieson Glenda Keil George Lewis Paula Ringer ✓ Richard Saenz	Chemistry Civil and Environmental Engineering Speech Communication Architecture School of Liberal Arts Physical Recreation and Recreation Administration Student Academic Services Mathematics Evaluations Physics
Subcommittee 5: Faculty and Staff	Del Dingus Donald Grinde Paul Murphy, Chair Pamela Parsons Janet Pieper Neil Webre	Soil Science History Mathematics School of Science and Mathematics Personel and Employee Relations Computer Science
Subcommittee 6: Library, Computing, and Other Information and Learning Resources	Mark Appel Robert Heidersbach Dwight Heirendt Euel Kennedy, Chair Dennis Nulman Ilene Rockman Richard Shaffer Patricia Stewart	Recreation Sports Metallurgical and Materials Engineering Academic Computing Services Mathematics School of Professional Studies and Education Library Social Sciences Learning Center
Subcommittee 7: Student Services and the Co-Curricular Learning Environment	David Cantu Harriet Clendenen Willi Coleman Richard Equinoa, Chair Laurie Heckathorn Patricia (Sam) Lutrin Marilyn McNeil Joe Sabol Sheri Lynn Schmidt	Minority Engineering Program Disabled Student Services Student Life and Activities Placement Recreation Sports Student Life and Activities Athletics School of Agriculture ASI Business Office
Subcommittee 8: Physical Resources	Douglas Genereux Douglas Gerard, Chair James Neelands Kenneth Riener Leonard Wall	Agricultural Management Facilities Administration School of Science and Mathematics School of Business Physics
Subcommittee 9: Financial Resources	Alfred Amaral James Conway Frank Lebens Harold Miller, Chair Vicki Stover	Foundation Speech Communication Academic Affairs Accounting Budget Planning and Administration

Imp - Exec Cor 11/29/88

California Polytechnic State University--San Luis Obispo 11/21/88 RMR

FY 1988/89 GENERAL FUND
CSU UNIDENTIFIED BUDGET REDUCTIONS AND RESTORATIONS

CSU UNIDENTIFIED REDUCTIONS:

NON-FACULTY MSAs	\$-16,823,483	
3.3% UNIDENTIFIED REDUCTION	\$-50,033,000	

TOTAL UNIDENTIFIED REDUCTIONS		\$-66,856,483

PARTIAL BUDGET RESTORATIONS:

GOVERNOR'S "SET-ASIDE" IN THE BUDGET ACT ITEM FOR FACULTY COMPENSATION INCREASES	\$6,623,000	
LEGISLATIVE RESTORATION BILL*	\$18,345,000	

TOTAL BUDGET RESTORATIONS		\$24,968,000

REVISED CSU UNIDENTIFIED REDUCTION		\$-41,888,483
------------------------------------	--	---------------

* THE LEGISLATIVE RESTORATION RESULTED IN A \$4,357,620 DECREASE IN THE PORTION OF THE REDUCTION THAT WAS PRORATED TO THE CAMPUSES. THE REDUCTION PRORATED TO THE CAMPUSES DECLINED FROM \$9,615,620 TO \$5,258,000. CAL POLY'S 6.5% PRO-RATA REDUCTION DECLINED FROM \$625,279 TO \$283,365.

California Polytechnic State University - San Luis Obispo 11/21/88 RMR
 FY 1988/89 GENERAL FUND, REVISED BUDGET REDUCTION PLAN (BP 88-60)
 REVISED REDUCTION PLANS SUBMITTED BY PROGRAM ADMINISTRATORS

	Position Fraction*	Salaries & Wages	Staff Benefits	Personal Services	Oper Exp & Equip.	Totals
Academic Programs	1.0	\$46,840		\$46,840		\$46,840
Instruct'l Reserve				\$0	\$73,699	\$73,699
Instructional Schools	5.6	\$44,991		\$44,991	\$0	\$44,991
Library				\$0	\$38,049	\$38,049
College Farm				\$0	\$13,297	\$13,297
Academic Affairs	6.6	\$91,831	\$0	\$91,831	\$125,045	\$216,876
Student Affairs	1.0	\$16,781	\$0	\$16,781	\$1,926	\$18,707
Information Systems	.8	\$12,396	\$0	\$12,396	\$0	\$12,396
University Relations	.0	\$0	\$0	\$0	\$329	\$329
Pers. & Employee Rel	.0	\$0	\$0	\$0	\$705	\$705
Facilities Admin.	1.0	\$19,058	\$597	\$19,655	\$0	\$19,655
President's Staff	.0	\$0	\$0	\$0	\$2,187	\$2,187
Business Affairs	.0	\$0	\$0	\$0	\$12,510	\$12,510
Totals, General Fund	9.4	\$140,066	\$597	\$140,663	\$142,702	\$283,365

* Faculty positions were not reduced to make this budget cut.

California Polytechnic State University - San Luis Obispo 11/21/88 RMR

FY 1988/89 FINAL BUDGET (Excludes Pending Salary & Benefit Increases)

CAMPUS PRORATION MODEL: CSU UNIDENTIFIED REDUCTIONS -- REVISED (BP 88-60)

A D J U S T M E N T S									
	Gross Person- Years	Personal Services	Operating Exp & Equip	Totals Dollars	See Exclusns.	S & S Realloc.	Adjusted Base for Pro-Ration	Amounts as % of Base	PRO- RATED REDUCTION
1 Instruction	1254.2	\$66,937,524	\$2,223,653	\$69,161,177	\$-64,544	\$180,162	\$69,276,795	.28%	\$-195,675 1
2 Library	83.1	\$3,158,360	\$1,582,746	\$4,741,106	\$-1,214,018	\$0	\$3,527,088	.28%	\$-9,962 2
3 AV Services	24.8	\$972,757	\$130,794	\$1,103,551		\$-26,071	\$1,077,480	.28%	\$-3,043 3
4 TV Services	1.0	\$37,351	\$13,843	\$51,194		\$0	\$51,194	.28%	\$-145 4
5 Computing Support	40.4	\$1,659,023	\$1,086,540	\$2,745,563	\$-172,224	\$-9,502	\$2,563,837	.28%	\$-7,242 5
6 College Farm	36.6	\$1,348,291	\$221,439	\$1,569,730		\$0	\$1,569,730	.28%	\$-4,434 6
7 CAP Lab	8.3	\$249,145	\$447,341	\$696,486		\$0	\$696,486	.28%	\$-1,967 7
8 Academic Support	194.2	\$7,424,927	\$3,482,703	\$10,907,630	\$-1,386,242	\$-35,573	\$9,485,815		\$-26,793 8
9 Social & Cult Dev	10.4	\$474,696	\$9,208	\$483,904		\$0	\$483,904	.28%	\$-1,367 9
10 EOP	15.8	\$578,318	\$312,992	\$891,310	\$-307,475	\$0	\$583,835	.28%	\$-1,649 10
11 Counseling	16.0	\$913,135	\$17,951	\$931,086		\$0	\$931,086	.28%	\$-2,630 11
12 Testing	5.1	\$195,773	\$4,977	\$200,750		\$0	\$200,750	.28%	\$-567 12
13 Placement	13.4	\$517,974	\$17,584	\$535,558		\$0	\$535,558	.28%	\$-1,513 13
14 Financial Aid	30.3	\$1,484,156	\$857,421	\$2,341,577	\$-1,153,552	\$0	\$1,188,025	.28%	\$-3,356 14
15 Health Services	42.8	\$2,025,044	\$113,389	\$2,138,433		\$0	\$2,138,433	.28%	\$-6,040 15
16 Housing Services	4.5	\$185,828	\$12,038	\$197,866		\$0	\$197,866	.28%	\$-559 16
17 Disabled Students	9.3	\$268,924	\$36,049	\$304,973	\$-6,997	\$0	\$297,976	.28%	\$-842 17
18 Student Service	147.6	\$6,643,848	\$1,381,609	\$8,025,457	\$-1,468,024	\$0	\$6,557,433		\$-18,522 18
19 Executive Management	24.0	\$1,441,416	\$161,558	\$1,602,974	\$-812,982	\$-15,915	\$774,077	.28%	\$-2,186 19
20 Financial Opns	49.7	\$1,790,762	\$60,141	\$1,850,903		\$-10,733	\$1,840,170	.28%	\$-5,198 20
21 Student Admiss & Rec.	82.5	\$2,647,818	\$118,276	\$2,766,094		\$-42,983	\$2,723,111	.28%	\$-7,692 21
22 Student Affirm. Action	2.0	\$63,702	\$1,626	\$65,328		\$0	\$65,328	.28%	\$-185 22
23 Empl. Personnel & Rec.	10.5	\$459,519	\$153,413	\$610,102	\$-354,566	\$-5,993	\$249,543	.28%	\$-705 23
24 Employee Affirm Action	1.0	\$51,365	\$0	\$51,365	\$-54,195	\$0	\$0	N/A	\$0 24
25 Support Opns	36.4	\$1,174,961	\$1,272,931	\$2,447,892	\$-994,201	\$-44,099	\$1,409,592	.28%	\$-3,981 25
26 Public Safety	26.3	\$1,089,077	\$107,486	\$1,196,563		\$-17,079	\$1,179,484	.28%	\$-3,331 26
27 Plant Operations	206.7	\$6,101,579	\$3,026,967	\$9,128,546	\$-2,483,719	\$0	\$6,644,827	.28%	\$-18,769 27
28 Community Relations	2.5	\$84,298	\$100,565	\$184,863	\$-60,500	\$-7,787	\$116,576	.28%	\$-329 28
29 Instit'l Support	441.6	\$14,904,497	\$5,002,963	\$19,907,460	\$-4,760,163	\$-144,589	\$15,002,708		\$-42,376 29
30 CSU Proration of Unidentified Reductions									\$283,365 30
31 Totals, General Fund	2037.6	\$95,910,796	\$12,090,928	\$108,001,724	\$-7,678,973	\$0	\$100,322,751		\$0

California Polytechnic State University - S L O 07/26/88 RMR

FY 1988/89 General Fund, Final Budget (Does not include Salary & Benefit Increases)

BUDGET ALLOTMENTS EXCLUDED FROM THE BUDGET BASE FOR PRO-RATION

Excluded Allotments	Instruction	Academic Support	Student Service	Institutional Support	Totals
Instructionally Related Act.	\$36,511				\$36,511
Employee Affirm. Action (CA III)	\$28,033				\$28,033
Library Books		\$667,710			\$667,710
Library Periodicals		\$388,486			\$388,486
Library Serials		\$157,822			\$157,822
Student EDP Workstations-Support		\$172,224			\$172,224
Student EDP Workstations-Equipment		\$0			\$0
College Workstudy Student Assistants			\$320,608		\$320,608
State Educ. Oppor. Grants			\$307,475		\$307,475
State University Grants			\$832,944		\$832,944
Disabled Students Equipment			\$6,997		\$6,997
Executive Management (50%)				\$774,077	\$774,077
Accreditation				\$33,145	\$33,145
Housing & Entertainment Allowance				\$5,760	\$5,760
Employee Personnel & Records (50%)				\$249,543	\$249,543
Employee Affirm. Action (Admin II)				\$54,195	\$54,195
Faculty Recruitment				\$71,148	\$71,148
Physical Examinations				\$33,875	\$33,875
Telephone & Telegraph				\$704,036	\$704,036
Postage				\$290,165	\$290,165
Utilities				\$2,483,719	\$2,483,719
Printing-Catalogs				\$60,500	\$60,500
Totals	\$64,544	\$1,386,242	\$1,468,024	\$4,760,163	\$7,678,973

+/- grading

STUDENT ISSUES

1. C- HAS A GPA VALUE OF 1.7, PASSING GRADE, BUT BELOW ACADEMIC PROBATION LEVEL OF 2.0.
2. CR/NC GRADING AWARDS 2.0 GPA VALUE, EVEN THOUGH THE COURSE GRADE WAS A C-.
3. C- COURSE GRADES MAY NOT BE RETAKEN AS A REPEAT COURSE FOR GRADE IMPROVEMENT.
4. GWR REQUIRES A 2.0 GRADE (C). IF STUDENT RECEIVES A C- THERE IS NO REPEATING THE COURSE FOR IMPROVEMENT.
5. THERE IS NO A+ GRADE
6. 2.0 GPA IS REQUIRED FOR CLUBS, SPORTS, AND ASI.

ACADEMIC SENATE OPTIONS ON THE CURRENT DISCUSSIONS BY ASI.

1. Reaffirm the previous action this quarter to proceed with implementation this quarter.
2. Recommend a moratorium for this quarter and remand the issue to the Instruction Committee for a recommendation.
3. Direct the appropriate committee(s) to review the issue of C- grades as related to GWR and repeating of courses. (Fine tuning the current policy)
4. Recommend abandonment of the +/- policy.

BACKGROUND

Student issues 1, 3, and 5 were issues raised in a resolution on November 17, 1981. The Academic Senate did not change the policy.

Student issue 3 was addressed. In the original resolution, CR was to be a C-. Subsequently on November 30, 1982 the Academic Senate passed a resolution to the C- in CR/NC grading to be awarded 2 progress points.

Issue 1 and 6 pertain to academic standards of performance. The issue of +/-grading would appear to be separate from a required level of academic performance for participation in certain activities.

Issue 4 also pertains to level of academic performance. Should a graduate from Cal Poly be considered adequately competent in writing with a C- grade. The student has the option and opportunity to take the proficiency exam if they receive a C- in the course work. Currently students may receive a C in the

minus 11-29-88

CAL POLY

CALIFORNIA POLYTECHNIC STATE UNIVERSITY
SAN LUIS OBISPO, CA 93407

ACADEMIC SENATE
(805) 756-1258

November 29, 1988

Clay Anderson
1025 Southwood Drive
Apartment V
San Luis Obispo, CA 93401

Dear Mr. Anderson:

Thank you for taking the time to write a letter discussing the issue of plus/minus grading.

You request that I do everything I can to withhold implementation of the new grading policy. The only course I have is to take the issue to the Executive Committee of the Academic Senate at our meeting on November 29, 1988. (I realize that meeting will be held prior to your receipt of this letter.) This will be the second time I have put the issue before this body this quarter. It is up to the Executive Committee to take any action. The Chair of the Academic Senate has no authority to make decisions on such issues.

I do not believe it is likely that the Executive Committee will support a delay. It is my goal to attempt to address the explicit issues raised by the students that were not previously considered or did not exist. Hopefully, these two or three issues will be resolved so they are acceptable to the students.

Again, I appreciate your expression of concern.

Sincerely,

Charles Andrews
Chair of the Academic Senate

cc: Warren J. Baker
Tom Lebens
John Moons
Ricardo Echeverria
Mike Gomes

RECEIVED

NOV 28 1988

Academic Senate

Clay Anderson
1025 Southwood Drive
Apartment V
San Luis Obispo, CA 93401

November 21, 1988

Charlie Andrews
Chair, Academic Senate
Modoc Hall, #14
Cal Poly, San Luis Obispo
California, 93407

Dear Dr. Andrews,

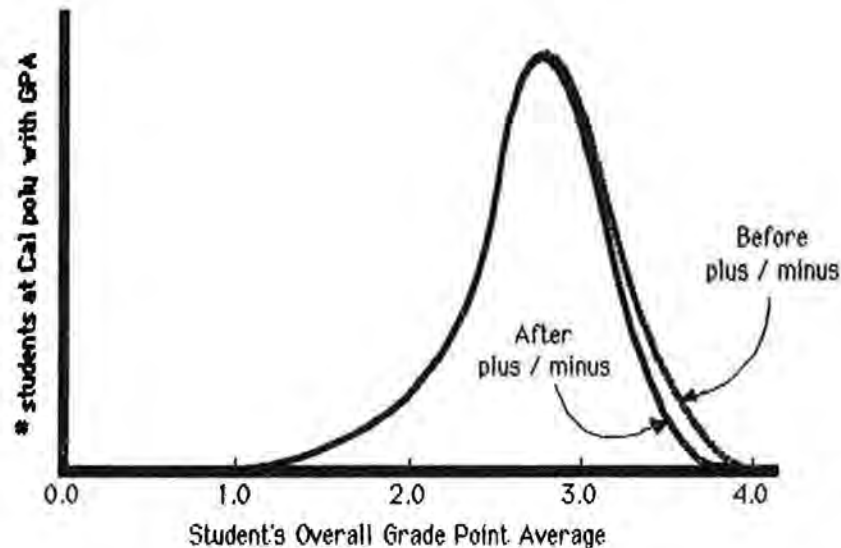
I feel that it is important for all those who are involved in the decision about the implementation of plus / minus grading at Cal Poly to be informed about the feelings of everyone who will be affected by such a policy. As a student I am a member of the largest group of people to be affected. I am writing you in order to assure you that many students feel very strongly about this issue. It would be highly irresponsible for you to consider this decision lightly. The aforementioned policy directly affects a large segment of the student population more than any other single decision made on this campus in several years.

This is an issue which will affect not only the present lives of many students but also their futures. When I first learned that plus / minus grading would be implemented in its current form, I was only relieved not to be a freshman who's entire GPA will suffer from this policy. Those of us who have already accumulated a majority of our units before this system is implemented will be penalized proportionately less than those who may be forced to contend with it for five or more years.

The current plus / minus system, as outlined in the class schedule, has many questionable "features." Many of the problems have been outlined in recent articles in the paper and I am sure you are aware that they exist. The most important of these problems is the fact that the new 'A-' grade will statistically lower the overall GPA of this university.

Some of the most important goals of an educational system and this university are to increase awareness and sensitivity to issues, increase knowledge, promote open mindedness, teach skills, and promote effective thinking. The students who try hardest to benefit from their education and achieve these goals have, in the past, received recognition by our grading system. The new system, with its 'A-', reduces the level of recognition these students will receive.

Many of these students fluctuate between 90 and 100 percentile in their classes. Under the new system someone who is in the low nineties in a particular class and the high nineties in another class will receive a 3.7 and a 4.0 for an average of 3.85. Under the old system this person would receive a 4.0 in both classes for an average of 4.0. This is the simplest example. Actually anyone who is ever in the 97-100 percentile in any class will have a lower GPA because of this system. This is because low A's are recognized while high A's are not. The overall effect of this is that the high end of the universities grade curve will be pushed down while the rest of the curve is unaffected.



While it is sometimes argued that grades don't mean all that much anyway, our GPAs do directly affect us in many ways. The GPA is one major factor that is considered when applying for scholarships. The GPA is a large determining factor when it comes to admission to graduate school. The GPA is also taken into consideration when students are looking for their first job. The plus / minus policy we have now will result in fewer of our students receiving the financial aid they need to complete their education. Fewer will be accepted to graduate programs. Fewer will be able to find first jobs comparable to those past Cal Poly graduates have found. Admittedly, these reductions in opportunities for Cal Poly's highest achievers may not be catastrophic but these reductions are very significant when they affect such a large group of people.

I do not oppose plus / minus grading per se. I only oppose the current implementation of it. I feel that plus / minus grading has the potential to make our grading system more precise and more equitable. Until we have devised such a system it is aberrant to hastily institute the current policy. The simplest remedy to the problem I have described above is to eliminate the 'A-' grade, while leaving the remainder of the scale unchanged. There are many other ways that the system could be modified to eliminate its problems. Until these modifications are made the old "non plus / minus" system should be used, including Fall quarter 1988.

When you are contributing your opinion on this matter please keep in mind that we are not talking about something trivial here. The students who oppose the current policy are not doing so for cursory or superficial reasons. We are doing so because it is an unjust policy which will be detrimental to this university. I genuinely hope that you will do everything you can to withhold implementation of the new grading system until these difficulties have been resolved.

Sincerely,

A handwritten signature in cursive script, appearing to read "Clay Anderson".

Clay Anderson
Electronic Engineering

cc: President Warren Baker
Tom Lebens
John Moon
Ricardo Echeverria
Mike Gomes