PLEASE BRING YOUR AGENDA/HANDOUTS FROM THE 10/25 AND 11/15/94 SENATE MEETINGS. MATERIALS DISTRIBUTED FOR THESE TWO MEETINGS WILL NOT BE DUPLICATED FOR THE 11/22 OR 11/29/94 MEETINGS.

CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, California 93407

ACADEMIC SENATE
Academic Senate Agenda
November 22, 1994
UU 220 3:00-5:00 p.m.

I. Minutes:

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

III. Reports:
   A. Academic Senate Chair:
   B. President's Office:
   C. Vice President for Academic Affairs' Office:
   D. Statewide Senators:
   E. CFA Campus President:
   F. Staff Council Representative:
   G. ASI Representatives:

IV. Consent Agenda:

V. Business Item(s):
   A. Resolution on Change of Grades-Executive Committee, second reading (p. 4 of your 11/15/94 agenda).
   B. The Calendar-Executive Committee, continued first reading (pp. 5-12 of your 11/15/94 agenda. Also, please bring all materials pertaining to calendar which were distributed with the 10/25/94 agenda).

VI. Discussion Item(s):

VII. Adjournment:
TWENTY QUESTIONS ABOUT CALENDARS AND THE CHANGE THEREOF

By Jack Wilson, Chair Academic Senate with approval of
the Executive Committee of the Academic Senate

Q1: Would moving from the quarter calendar to the semester calendar lead to a one-third reduction in the number of faculty required?

A1: No. Let's compare a 192 quarter unit graduation requirement with an equivalent 128 semester unit requirement. Assuming, for the sake of simplicity, that only 3 unit classes are required in both systems, a student would take one-third fewer courses in the semester system. However, a full-time yearly teaching load under the semester system has only two-thirds the weighted teaching units of that of a quarter system (24 versus 36).

Q2: Would the 'effective' teaching load be less under the semester system?

A2: No. While a faculty member would teach fewer weighted units during the year under the semester system, a weighted unit under the semester system equals one and one-half weighted quarter units.

Q3: If the faculty's teaching load would effectively be the same under either system, is there an advantage for faculty of the semester system?

A3: Assuming, for example, that all courses taught were 3 units under either system, a faculty member would teach two-thirds the number of sections under a semester system that she/he would teach under a quarter system. In addition since there would be roughly one-third fewer courses offered under the semester system, a faculty member would have fewer preps during a year.

Q4: Changing calendars would involve a great deal of work by faculty and staff. Will there be release time (called assigned time by the university) available to faculty for them to implement course and curriculum changes?

A4: Ha, ha, ha! Next question. Seriously, at this time it appears that there will be little if any money available to pay faculty for release time.

Q5: Wouldn't a change from quarters to semesters simply involve changing, for example, a three unit quarter course into a three unit semester course?

A5: In most cases the answer is no. Remember that a semester unit is equivalent to one and one-half quarter units, so there must be approximately a one-third reduction in the number of units required for a student to graduate from a particular program under a semester system.

Q6: What would be the effect on courses in going from a quarter to a semester system?

A6: Well first of all there would be about one-third fewer courses offered under the semester system. The most obvious course candidates for elimination are some of the 'specialty courses' which faculty teach but are not specifically required by any program. Other courses would have to be combined. For example, suppose course A and course B are similar in that they address the same general material but one goes into
it in more depth. Or perhaps course A is a prerequisite for B. If both are 3 unit quarter courses, they could be combined into a 4 unit semester course.

Q7: So combining of courses presents the only challenge of redoing the curriculum for implementing a calendar changes?

A7: Not quite. There are others. All academic programs have their courses divided into three categories. Major, support and GE&B. So there will be substantial time spent in coordinating changes that a department makes in its major program of courses with those changes that must be made by the departments teaching the support and GE&B courses. Negotiation would be required since determining where the units are assigned, into major, support and GE&B courses, is based on a zero sum game.

Q8: Will changing the curriculum result in a change in the number of faculty in departments due to changes in the course structure?

A8: Some departments will see a reduction in the number of faculty, some will experience an increase and for some there will be no change. Presumably the changes would be small, but this is not certain.

Q9: Would a semester system result in any changes in faculty workload?

A9: Unless there is a change in the MOU (Memorandum of Understanding) faculty will still be required to teach twelve WTU's per term. Remember that 12 WTU's on a semester system is equivalent to 18 WTU’s on a quarter system. However, the best information we have so far is that faculty would have about 6 fewer work days on a semester system.

Q10: Wouldn't going to a semester system result in the university saving administrative costs since there would be one-third fewer administrative cycles during the academic year?

A10: The information furnished by our administration thus far indicates that the savings would be minimal. Something on the order of $50,000 per year. The university's total budget is about $117 million. However, with fewer administrative cycles, improvement of services for students is envisioned with a semester system. For example 'windows' servicing student needs in the administration building hopefully would be able to be kept open longer. However, this is speculative.

Q11: Will a semester system require larger lecture and lab facilities in terms of numbers of seats or stations? And if so how will the problem be solved?

A11: In general no. Let's assume for both the quarter and semester calendars that: (1) there are the same total number of students each taking an average load of 15 units, (2) all the courses are three units each and (3) class sizes are the same in both systems. Thus each student would take 5 courses during a term so the total number of courses and their sections that must be offered during a quarter or semester to satisfy student demand would be the same.

In the case of labs there could well be problems. For example the enrollment in a chemistry lab here is presently limited to 24 because of the number of stations, the room size and safety. If the one unit labs now associated with Chemistry 124 and 125 were converted into one unit semester labs, there would be no way to accommodate student demand unless the number of stations in the lab were increased (which would be very costly if it could be done at all because of safety and room size limitations) or the number of sections would have to be increased to accommodate student demand. This applies to many of the lab classes on campus.
Q12: Which system is better for learning; quarters or semesters?

A12: There is no quantifiable evidence indicating the superiority of one over the other. Some faculty favor semesters because they can go into more depth in a course and perhaps move through the material at a slower pace. Thus, a student's retention of the material should be better. However, where courses such as mathematics, physics and chemistry are prerequisites for courses in the polytechnic programs, a certain fixed amount of material in courses such as calculus must be covered during a year's time under either system.

Cal Poly's paradigm for the quarter system is perhaps unique among other quarter based universities in the U.S.. In most quarter systems, four unit courses are more common. In some there are five unit courses. Here, the preponderance of courses are three units. In addition Cal Poly's heavy emphasis on laboratories means that if students in some polytechnic programs took a full load of courses, as spelled out in their curriculum, they could have as many as eight different instructors to deal with during a quarter if the lab instructors are different from the ones teaching the lecture part of the class.

However, labs are an essential part of the polytechnic programs and one of the keys, if not the key, to the reputation that Cal Poly enjoys with companies that recruit our graduates.

Q13: Getting students through the university in a timely manner is a major concern of taxpayers and thus the legislature. There is great pressure on the CSU and thus Cal Poly to increase 'student throughput'. Which system, quarters or semesters, would be best for that?

A13: The jury is out on that one although the results of a survey conducted of about 1000 Cal Poly students during the 93-94 academic year by the ad hoc Student Throughput Committee indicated that the calendar system was not the culprit in student throughput which is a problem here as elsewhere. Keep in mind that one of the reasons the quarter system was developed is because it does lend itself to year round operation. Short summer sessions could be offered, with a semester system, whereby the course material is covered in a more intense manner. So year around operation is possible with both. However, year round operation is really academic (no pun intended) given the fact that decreasing state support has already reduced our summer quarter to a shadow of its former self.

Q14: How would a change in calendar effect those students in attendance during the switch who matriculated here under the quarter system?

A14: Michigan State University changed from quarters to semesters about three years ago. They gave two options to their students. First, the students could choose to graduate under the quarter system. For those students choosing that option, 'equivalent' semester courses could substitute for the quarter course. The second option was that students could choose to finish their program (graduation requirements) under the semester system. In this case courses already taken under the quarter system had to be converted to semester courses.

Q15: Were students disadvantaged as a result?

A15: Michigan State's motto for the calendar change was "No student shall be disadvantaged". Dr. Tom Burkhardt was one of the five faculty members that 'steered' the change. He said the motto should have been "Every student shall be disadvantaged". The reason for this is obvious. There is no simple and clean
way to convert quarter to semester units and vice versa. Thus most students end up losing at a few units during the switch.

Q16: How much time does a calendar change require?

A16: Based on the experience of Michigan State and other universities, the absolute minimum time is three years. Thus fall 1998 would be the earliest possible time if the president decides this year to make the change.

Q17: What is the driving energy behind a calendar change?

A17: Change in general. We all realize the U.S. is in a period of great and even profound change. The nation and California can no longer afford to do all the things they once did without question. Thus, even while U.S. higher education is the envy of the world, and Cal Poly has been called the best undergraduate polytechnic university in the U.S. by none other than former U.C. President Clark Kerr, higher education in California and elsewhere is competing for fewer state dollars with other constituencies whose needs are increasing. And this is occurring at a time when the state expects the number of college eligible students to increase by about 800,000 by the year 2005. The CSU's 'share' of that 800,000 is estimated to be 200,000. That's equivalent to about 7 or 8 new campuses. The state does not have the money to build enough new campuses to accommodate these projected increased enrollments. In fact they don't have enough money to build any. Thus the answer is increasing the efficiency of moving students through the universities. A change in calendar with the accompanying change in curriculum it would foster could lead to more 'efficiency'.

Q18: Doesn't the word efficiency smack of simply moving students through the university without caring about quality?

A18: Certainly. Most faculty came to Cal Poly because they enjoy teaching undergraduates and the small classes which provide a way for faculty and students to better interact. Some of us like to refer to the 'learn by doing principle' as central to Cal Poly's reputation. In fact every program on campus practices learning by doing. It's not limited to the polytechnic programs. Writing cannot be learned without substantial practice in writing. Public speaking is learned by practice. That is what occurs here. That kind of learning best occurs in small classes because there is more opportunity for student-faculty interaction. If moving students through the system is the primary concern, that can be accomplished using large classes accomplished through the use of the technological tools which now exist.

One of the items being discussed by the Budget Committee of the Academic Senate is how an academic department can be more efficient in the use of its limited resources to meet the growing student demand for classes. One possible solution being discussed is converting some faculty positions into graduate student positions to leverage the money. Does this sound familiar? Before you condemn the Budget Committee, consider the fact that they don't necessarily like the idea either. They are simply dealing with the economic reality facing the campus.

We have already changed substantially in the past four years. It is almost certain that we will change even more during the next four or five. Faculty and staff are working harder than ever to deliver programs of quality, programs which most universities gave up trying to deliver thirty and even forty years ago because they are expensive of faculty time and resources. But how long can they be expected to simply pick up more load? Already many faculty are beginning to experience burn out.
Q19: Change drives change. Hasn't that always been true?

A19: Yes, but the changes that have occurred in the world of business, industry and finance in this country over the past five years are radical ones. For example an entirely new paradigm for employment of all workers, blue and white collar, is emerging. The social contract between companies and their employees that was common from the end of WWII until recently has been greatly weakened. It is no longer realistic to expect a company to offer career long employment to most of its employees. Many, if not most, companies use 'contract' workers, including engineers, mid-level managers and other professionals, for specific tasks. The companies don't have the overhead associated with benefits, and when business gets slow they can simply tell these employees that their job is over. The implications of the bulk of U.S. professional workers moving from job to job, perhaps not even in the same locale, are mind boggling and sobering. A recent article in SPECTRUM, the magazine of the Institute of Electrical and Electronic Engineers paints a sobering picture concerning engineering employment. And the same model can be extended to almost all professionals.

The implications are many and serious. And if we in academe think we are exempted from the results of these changes, we are kidding ourselves. One of the reasons that California's income has actually dropped over the past two years is the down sizing that has occurred in the defense industry. Most of those workers in that industry who have lost their jobs, and the jobs were very well paying, have had to settle for much lower paying jobs, many in the service industry. Thus the tax base decreases and we have seen the results of that here.

Q20: In the final analysis the quality of our programs is the essential issue. How does this tie into the discussion on calendar?

A20: Program quality is extremely important to students, faculty, staff and our campus administration. The reason for its importance to students is obvious. Perhaps less obvious to some outside of the academy is the reason for its importance to the other three groups. However, it is simple. People want to do quality work. We all want to be part of an institution where quality services are being performed. If we loose the battle to maintain quality education here, faculty, staff and administration morale will suffer. Where does the public stand on this? A summer 1993 poll taken of Californians indicated that access to higher education was a much high priority for them than was academic program quality. Thus in the final analysis, maintaining quality will remain a challenge for primarily our students, faculty, staff and administration. Obviously our alumni and the companies which recruit here are concerned about maintaining quality education.

Can we find more creative solutions to education at Cal Poly which will preserve a major part of the quality of our program's and enable us to survive into the next millennium? It seems obvious that we must

For example there is a new model for R,P,T in some of our colleges. Newer faculty are being pressured to bring in funded research in addition to their heavy teaching loads, serving on committees, developing courses and labs and engaging in campus and community service. Is it realistic to expect them to balance all of these requirements over the long hall? How will it affect our ability to attract new faculty?

In terms of the quality of the programs which we offer here, Cal Poly has operated more like a private university than a public one. There is no secret as to the reason for our success. We begin with very good students and add to that a substantial 'extra' effort by faculty, staff and administration. For example labs are expensive of faculty and staff time. That's why most public universities have so few of them. And yet they are critical to the success of our polytechnic programs.

But, it is obvious that we cannot expect to continue to deliver the same programs in the same old ways. Some will protest that these ways are tried and proven. They have proven to be successful up to now. But,
if program quality is to be maintained, if faculty are to survive, new models for delivering these programs must be tried and implemented. It is difficult to see how this can occur without campus wide curricular change.
WHEREAS: ASI is the recognized student voice of the students, and

WHEREAS: As per the ASI Mission Statement, ASI will be aware and responsive to the present and future need of the university population, and

WHEREAS: The quarter system provides Cal Poly with a variety of classes, and

WHEREAS: Cal Poly was recently highlighted as one of the countries top universities by U.S. News and World Report, and

WHEREAS: Students are recruited nationwide by industries because of the quality of education received at Cal Poly, and

WHEREAS: The quarter system caters to professors who specialize in distinct areas, and

WHEREAS: The ASI has found through research and broad student input that the quarter system is most responsive to the present and future needs of the university population, and

WHEREAS: ASI passed Resolution # 94-06 Endorsement For The Quarter System in Winter Quarter 1994, and

WHEREAS: Eighty-seven percent of the voting students were in favor of the quarter system in Spring Quarter 1994, and

THEREFORE
BE IT
RESOLVED: That the ASI endorses the quarter system.

CERTIFIED as true and correct copy in witness whereof, I have set my hand and seal of the Associated Students, Inc. on this day of November, 1994.

Michael A. Frazzini
ASI Secretary

Sponsored by: James Huffman, ASI Board of Directors, College of Engineering
Scott Buswell, ASI Board of Directors, College of Engineering