Faculty Senate Monthly Packet May 1985

Portland State University Faculty Senate

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portland state university

MEMORANDUM

To: Senators and Ex-officio Members of the Senate

From: Ulrich H. Hardt, Secretary of the Faculty

April 18, 1985

The Faculty Senate will hold its regular meeting on May 6, 1985, at 3:00 p.m. in 150 Cramer Hall.

AGENDA

A. Roll

*B. Approval of the Minutes of the April 8, 1985, Meeting

C. Announcements and Communications from the Floor

D. Question Period
   1. Questions for Administrators
   2. Questions from the Floor for the Chair

E. Reports from the Officers of Administration and Committees
   1. Registration Up-date - Blumel
   *2. Budget Committee, Annual Report -- Blankenship
   *3. University Athletics Board, Annual Report -- Kinnick
   *5. Teacher Education Committee, Annual Report -- Tate

F. Unfinished Business
   *1. University General Education Requirements - Senate Steering Committee
      Bring OAA mailing (Feb. 4, 1985)

G. New Business
   *1. Proposed Revision of Catalog Copy of SYSC Ph.D. Program - Dunbar

H. Adjournment

*The following documents are included with this mailing:

B Minutes of April 8 Meetings
E2 Annual Report, Budget Committee **
E3 Annual Report, University Athletics Board **
E4 Annual Report, University Scholars' Board **
E5 Annual Report, Teacher Education Committee **
F1 University General Education Requirements**
G1 Proposed Revision of Catalog Copy of SYSC Ph.D. Program**

**Mailing to Senators and Ex-officio Members Only.
PORTLAND STATE UNIVERSITY

Minutes: Faculty Senate Meeting, April 8, 1985
Presiding Officer: Nancy Tang
Secretary: Ulrich H. Hardt

Members Present: Beeson, Bennett, Bentley, Bjork, Brenner, Cabelly, Carl, Cogan, Constans, Cooper, Diman, Dunkeld, Edner, Featheringill, Forbes, Harmon, Jackson, A. Johnson, Jones, Kempner, Kimball, Kimbrell, Kosokoff, Kristof, Lall, Mandaville, Martinez, Maynard, Moor, Neklason, Olson, R. Petersen, J. Peterson, Reardon, Reece, Robertson, Rodich, Rufolo, Rose, Scheans, Sheridan, Smeltzer, Solie, Sommerfeldt, Soohoo, Spolek, Stuart, Tang, Tayler, Tracy, Walton, West, White, Williams, Wolk, Wurm, Wyers.

Alternates Present: Cumpston for Grimes, Blankenship for Robertson (part of meeting), Goldman for White (part of meeting), Frost for Wrench.


APPROVAL OF THE MINUTES

The minutes of the March 4 and 11, 1985, Senate meetings were approved as circulated.

QUESTION PERIOD

President BLUMEL responded to the question posed by Mary Constans for Tang regarding faculty involvement in the upcoming PSU accreditation by NASC. He pointed out that accreditation schedules are under the control of the chair of the team who determines whom they want to see and how the team will go about gathering data. PSU has designated a liaison for each team member, and each team member and the chair will set aside some time during which they will be available to faculty. The visitation will take place April 16-18, and the team's chairperson is Dr. Joseph Crowley, President of University of Nevada, Reno.

REPORTS FROM OFFICERS OF ADMINISTRATION AND COMMITTEES

1. BLUMEL announced that Spring term registration was almost identical to last year's. Head count was down .08%; fees paid was up 9%. He predicted that we would perhaps be down .05% in the end.
2. The annual report of the Academic Requirements Committee was accepted.

3. The annual report of the Committee on Effective Teaching was accepted. LOCKWOOD emphasized that there were still funds available which had to be allocated and spent by June 1, 1985. He urged faculty to apply within the next two weeks.

4. The annual report of the General Student Affairs Committee was accepted.

TANG thanked the three committees for their reports and for the year's work those reports represented.

UNFINISHED BUSINESS

The Senate Steering Committee distributed a tentative list of departmental courses to be used to meet the breadth requirements proposed by the General Education Committee. TANG commented that so far only two-thirds of the departments had responded to the request for course listings and announced that another list would be issued for the May meeting. She also emphasized that the list has had no review nor any kind of approval.

TANG invited a discussion of the writing skills portion of the proposals. WOLK moved the ARC proposal, and it was seconded, "That we retain WR 121 and WR 323 as currently required; that we change transfer policy to require an upper-division writing class, either WR 323 or its equivalent; upper-division students who have transferred 6 lower-division credits of composition be permitted to demonstrate ability by passing an examination; and that enrollment in WR 323 be restricted to students with upper-division standing."

MOOR reported that CLAS senators at a special meeting a week ago discussed this matter and agreed that this motion would serve as a stop gap. He served notice that he would offer a motion later in the meeting charging the EPC to explore possibilities of offering a writing-across-the-curriculum program. REECE also supported the Wolk motion. He cited the Kitzhaber report of the 1960's which established through empirical evidence that upper division university students had inferior writing skills to entering freshmen. That report emphasized the importance of multiple exposure to writing courses during the college career, and PSU's vertical composition program was designed to accomplish that. REECE reiterated that the motion on the floor required transfer students bringing in 6 lower-division hours to either take WR 323 at upper division standing or to pass the challenge exam.

KRISTOF spoke against the motion, because it did not include a competency exam. JONES wanted a description of the challenge exam and wondered whether it could serve the purpose. DRESSLER thought it could be the same exam and COOPER agreed that it could be workable.

The present exam is given to students who have registered for WR 323 but who want to challenge the course. The exam requires students to write an
essay which is read and holistically scored by two readers. Grades 1 to 4 are possible; a score of 4 demonstrates competence, 3 suggests competence, 2 suggests incompetence, and 1 demonstrates incompetence. If there is a discrepancy of more than one point between the two readers, the essay is read by a third reader. For those passing the challenge exam, grades for WR 323 are assigned on the basis of the score. For example, two 4's earn an "A." COOPER added that the majority of students challenging WR 323 do not pass the exam. Those who do are given a grade and do not need to attend the course.

SMELTZER moved to substitute "completion of two required courses at the freshman level and satisfactory performance on a junior-level examination of competence in standard written English." The motion was seconded. He reported that the GEC had discussed this option at great length and felt that beginning university students need writing skills early in their career. At the same time, the GEC was convinced that there needed to be a check before matriculation to make sure that PSU graduates were still able to write at a passing standard. He said that the assumption in his motion was that writing is an all-university responsibility and the competence exam appropriately took writing out of the English department. REECE countered that the GEC motion only took the evaluation of writing, not the teaching of writing, out of the English department. He favored adding a course of writing across the curriculum but also argued in favor of maintaining WR 323, because it has been proven that writing improved incrementally through longer exposure to writing.

RUFOLO and KRISTOF still were convinced that the competence exam would provide incentive for students to improve or maintain their writing ability. BRENNER, however, pointed out that the ARC proposal already was an effective screen which made an exit exam unnecessary. WR 323 with a prerequisite of a previous composition class was enough, but she supported the idea of a course in writing across the curriculum. MOOR warned that a sieve was a screen too. Jean Peterson pointed out that a grade of "D" in WR 323 still meant that students passed the course; thus for her the WR 323 criteria were not adequate. KIMBRELL called for the question and the motion to substitute the GEC proposal for the ARC was defeated 13 to 37.

The discussion of the ARC motion continued. OLSON wanted to know if two terms of freshmen composition and requiring WR 323 would be possible. MANDAVILLE observed that three terms of composition had been a PSU requirement at one time. SMELTZER said the GEC discussed requiring three terms of writing but thought that funding would be a problem.

BJORK argued that WR 323 with a "D" is a problem and asked if the English department could require a minimum of "C." Speaking as one member of the department, COOPER said he had no problem with that. A. JOHNSON moved to amend the motion that a minimum grade of "C" be required for passing WR 323. CRESSLER asked why we should not trust the English department and let them determine what "passing" WR 323 was. BRENNER said it had nothing to do with trust but rather was a level of competency. DOBSON reported that a study of PSU P/NP grading practice had shown mixed agreement on whether C
or D constituted passing. WHITE observed that the University had definitions of grades A-F and warned that it would be difficult to create different criteria for some courses. JONES asked if "D" meant minimal competency; if it is not minimal, then students should receive an "F." TANG replied that "D" is below average but above failing. WOLK questioned the logic of requiring students to be average or better to pass a course.

The amendment to require a minimum of "C" for WR 323 was passed 30 to 21.

MOOR then moved that "the Faculty Senate instruct the Educational Policies Committee, in consultation with the Dean of Undergraduate Studies, to submit to the Senate at its first meeting in the Fall of 1985, a proposal for a writing-across-the-curriculum program to be included in the composition component of the University's general education requirement." The motion had general support from several Senators. WOLK applauded such integrated writing instruction and quoted from a Wyoming study. TANG quoted from the charge of the EPC to show that this was the appropriate committee to deal with the issue. It was questioned who served on the EPC and was qualified to work on this proposal. REARDON pointed out that the EPC would consult the appropriate people.

WYERS, chair of the EPC, pleaded for more time to develop the proposal, and the motion was amended "to instruct the EPC to present a process for instituting a writing-across-the-curriculum program at the October 1985 Senate meeting and to present the program proposal by January 1986." The amendment was passed.

There were questions about what writing across the curriculum was, who would teach it, who would do the grading, and whether that course would eventually take the place of WR 323. COOPER said that those courses would probably be taught in the departments across campus by faculty from various disciplines who had undergone a training program through the English department. SMELTZER was very supportive of this program and talked about the success of something similar at the University of Washington where the entire university participates. CABELLY was uncomfortable about teaching writing. He has been taught to teach courses in management; though he can recognize good writing, he has not been taught to teach writing. MOOR pointed out that people opposing the idea could vote against the EPC motion when it was presented. BEESON inquired about the cost. TANG also deferred that discussion until October.

NEKLASON moved "to accept the ARC proposal to use HPE 298 or its equivalent to fulfill the HPE requirement."

The motion was passed unanimously.

TANG then raised the question whether a part of the 54 credits of breadth requirements should be upper division. If so, how many? BJORK thought the Senate should first consider what portion should be taken at PSU and moved
"that part of the 54 credits of breadth requirements be taken at PSU." The motion was defeated 26 to 16, with 2 abstentions. Concerns were raised by MANDAVILLE about not allowing UO transfers, for instance, and by BLUMEL regarding precluding PSU's participation in the block transfer program. RODICHI Feld strongly that some breadth requirements should be fulfilled at PSU, the degree-granting institution. DIMAN described the predicament of some community college transfers who already come in with up to 54 credits in lower-division foreign language.

WEST moved "that the 54 credits of breadth requirements for general education should include some upper-division hours." JONES and COOPER argued in favor of the motion, saying that not all breadth requirements should be fulfilled at the community college. W. WILLIAMS and BENTLEY argued for allowing upper division transfers, however. SOMMERFELDT generally supported the motion, but he cautioned Arts and Sciences to be aware of the price it would pay; science and math cannot offer upper-division courses with pre-requisites. JONES said other departments would have the same situation and did not see it as a serious problem.

The WEST motion was passed.

TANG then asked for a vote on the number of upper-division hours preferred. The results were:

- 18 hrs: - 14
- 15 hrs: - 5
- 12 hrs: - 12
- 9 hrs: - 13
- 6 hrs: - 0
- 3 hrs: - 1

In the second round of voting the results were as follows:

- 18 hrs: - 16
- 12 hrs: - 13
- 9 hrs: - 17

Before the final vote on 18 vs. 9 hours was taken, FORBES wanted to discuss the merits of 18 and 9 hours. CRESSLER reminded the Senate that we were talking about minimum hours. KIMBRELL was for 18 hours, emphasizing that we should offer an education and not simply be a drop-in University. CABELLY agreed that this would give PSU more credibility. SMELTZER said that the GEC arrived at 18 hrs by thinking that one course in each of the six areas should be upper division. WALTER agreed with that, but JONES pointed out that some students transferring to PSU at the end of three years elsewhere would have problems. CONSTANS favored 9 hours as a minimum; students could take more and not jeopardize our standards. BENNETT added that requiring 18 hrs of upper-division may force departments to create special upper division courses. Better to have a good, solid lower division course. RODICH repeated that requiring 9 more upper-division hours would burden students in professional schools. CABELLY, though, was interested in increasing the quality of education. At that point SMELTZER reminded the Senate that students still would have to take 72 upper-division hours from the University.
When the final round of votes was taken, it was a tied vote:

18 hrs - 23
9 hrs - 23

WOLK tried a compromise vote on 12 upper-division hours. The motion was defeated 22 to 18.

ADJOURNMENT

The meeting was adjourned at 16:53.
April 3, 1985

TO: Portland State Faculty Senate

FROM: University Budget Committee
    Oma Blankenship, Chair
    Tom Benson-GEOL
    Steve Best-ASPSU
    Margaret Browning-CDC
    Sheldon Edner-CUS
    Jack Featheringill-TA
    Jerry Frey-SSW
    Michael Heneghan-EE
    David Johnson-HST
    Robert Lockerby-Lib W
    John Oh-BA
    Thomas Palm-Econ
    Ronald Petrie-ED
    Arnold Pickar-PHY
    James Taylor-ASPSU
    Baxter Wilson-ENG

SUBJECT: Annual Report

Since the Budget Committee's last report to the Senate, April 3, 1984, the Committee has continued to deal with budgetary problems facing P.S.U. During the past 12 months important items affecting P.S.U.'s budget were the continued cuts due to declines in enrollment needed to meet the $324,200 in this year of the biennium, the differences between the Board's request and the Governor's recommendations to the Legislature for the 1985-87 biennial budget. A brief chronological report on these activities as related to the P.S.U. budget and the Budget Committee's work is presented below:

1985-87 LEGISLATIVE BUDGET (unapproved) FOR THE STATE SYSTEM

Governor Victor Atiyeh released his biennial budget recommendations Friday, November 30. Although the Governor did not include many of the Board's requests, it would appear that Higher Education fared as well or better than most in a State General Fund budget which was increased in total only 5.4% over 1983-85. Briefly, the following summarized the differences:

<table>
<thead>
<tr>
<th>Operating Budget</th>
<th>Board Request (Millions)</th>
<th>Governor's Recommendations (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unclassified Salary Adjustment</td>
<td>$ 55.2</td>
<td>$ 40.0</td>
</tr>
<tr>
<td>New Building Operation and Maintenance</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Facilities Maintenance</td>
<td>14.5</td>
<td>6.0</td>
</tr>
<tr>
<td>High Technology and Economic Development</td>
<td>17.6</td>
<td>11.0</td>
</tr>
<tr>
<td>High Technology and Economic Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Equipment</td>
<td>10.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Library Automation</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Library Acquisitions</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Experiment Station/Extension Service</td>
<td>1.5</td>
<td>.8</td>
</tr>
<tr>
<td>University Hospital Extraordinary Costs</td>
<td>20.0</td>
<td>15.0</td>
</tr>
</tbody>
</table>
The Governor recommended all of the requested base adjustments, including inflation allowances, but recommended nothing for Instructional Computing, Basic Research, Institution-Specific Improvements, and no funds to permit continuing the tuition freeze. Concerning the last item, resident undergraduate tuition will increase about $12 per term under the Governor's budget.

With respect to Capital Construction, the Governor recommended $1.6 million of the Board's $6.1 million request to Remove Access Barriers for the Handicapped and $2.2 million of the requested $6.5 million for Rehabilitation and Land Acquisition. One-half of each of these amounts would come from the General Fund and one-half from Article XI-G bond borrowings. The Governor recommended the requested amounts for the OSU Electrical Engineering and Computer Science facility ($8.6 million), the UO Biological and Advanced Science facility ($12 million), the OIT Classroom/Laboratory building ($6 million), and the PSU Professional Schools building ($7 million). Half the cost of these four facilities are proposed to be financed from the Lottery Fund and half from Article XI-G bond borrowings.

The Budget Allocation System (BAS) Model:

The BAS model has been approved and put into operation by the Chancellor's Office for allocating resources to institutions. The Committee feels there are still issues to be resolved and will warrant continued monitoring of the model in the next years.

The Budget Committee reviewed the expenditures of the $140,000 return to P.S.U. for higher than expected enrollment, $64,000 to $80,000 to be spent on restoring library hours, books and audio visual capabilities on campus, initiating an aggressive program in recruitment and retention of students. $25,000-$40,000 was allocated to the Office of Admissions for a commercial production to meet this goal. A third expenditure of $28,000 to $30,000 was added to lecture sections for spring term.

REPORT OF COSTS OF CONVERSION TO SEMESTER SYSTEM

The subcommittee consisting of Tom Palm, Gerry Frey, Bob Lockerby, Jeff Taylor and I was assigned to update the 1980 budget committee financial impact estimates on semester conversion. The 1980 semester conversion study is attached to this report.

The subcommittee has examined the rather detailed studies by the University of Tennessee at Knoxville (UTK) as well as the one by Southern Oregon State College (SOSC) which essentially followed a similar framework.
Our recommendations to the budget committee regarding an update of the financial impact analysis are as follows:

1. The on-going direct savings of $50,870 identified in the 1980 study should be adjusted by a price index.

   CPI (all items)  
   1980 = 247.0  
   1984 = 311.4  

   The adjusted savings = $64,133

   Assuming CPI to increase by 4.5% in 1985, the assumed savings should be $67,019 for year-end 1985.

2. Costs

   A loss of $6,600 in student-parent user fees was identified for the Helen Gordon Child Development Center because of the long semester break.

   Using the same adjustment as (1), the cost is estimated to be $8,695 by year end, 1985.

3. The above are the on-going savings and costs adjusted by the CPI for 1984 and estimated CPI for 1985. However, there are other possible on-going costs that have been identified by the UTK and SOSC studies that should be mentioned.

   a. Heating/cooling costs depending on when semesters begin and end. This is a recurring cost of some significance in the UTK and SOSC studies but may or may not be a factor at PSU.

   b. Departments employing part-time faculty during the fall quarter will pay more for these lecturers on a semester basis. This increased payout might not be offset in every case by the savings of not using lecturers in the spring quarter since the use of lecturers is usually highest in the fall quarter. If this is correct, the cost will be a recurring one.

4. Two non-quantifiable items regarding the transfer of community college students were identified in the 1980 report. These concerns will remain unless the semester conversion is simultaneously undertaken by the community college system. The two factors are:

   a. Loss of community college students who are unable to transfer after the winter quarter.

   b. Potential loss of PSU students who transfer to community colleges after fall semester to earn more credits at lesser costs during winter and spring quarters.
5. Both UTK and SOSC identified significant "one-time" change-over costs exclusive of compensation to faculty for restructuring curricula (UTK = $326,000 estimated in 1979, and SOSC = $200,000 1984 study). The "one-time" cost is considered to be dependent on the length of change-over period -- the shorter the period the higher the cost. In the transition period, costs are incurred by efforts to reorient and notify students and the community regarding the semester conversion. Furthermore, costs may be incurred to reorganize and redesign computer systems if the change-over is short.

6. None of the above consider the nonmonetary change-over costs involving time spent by faculty for converting courses suitable for a semester system and administrative efforts in rescheduling. Again, if their tasks were to be accomplished in a short period of time, actual "out-of-pocket" expenses may be incurred. For example, one consideration is to pay selected faculty summer salary to make course conversions.

SUMMARY

It is clear from formal studies as well as informal discussions that there are quantifiable and non-quantifiable costs and savings to be realized from semester conversion. The case for semester conversion, however, must rely on other than on-going financial savings and the potential increase in administrative efficiency. It must ultimately be based on perceived pedagogical benefits derived from such a system.

REPORT OF DEPARTMENTAL PRODUCTIVITY MEASURES
(Chair: Sheldon Edner)

Our original task was to assess the potential next steps necessary for the implementation of previous budget committee recommendations. At its first meeting the subcommittee concluded that it would be appropriate to consult President Blumel on the status of any implementation efforts. President Blumel advised the committee that while he supported the concept of approved assessment procedures in the area of productivity, that he has not sought to move in this area because of the unavailability of an appropriate alternative to Portland State's current processes. The subcommittee responded to this report by soliciting guidance from the full budget committee. The committee requested us to reassess the issue which has led us to this current memo. It is the belief of the subcommittee that while progress in the development of improved productivity measurement techniques is desirable, that it is not likely to result on the efforts of a volunteer, part-time subcommittee.

The Budget Committee would recommend that the President establish a working group in the Office of institutional Research to pursue the development of information and the assessment of alternatives in this area.
**EXHIBIT A-2**

<table>
<thead>
<tr>
<th>Board Request</th>
<th>Governor’s Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Millions)</td>
<td>(Millions)</td>
</tr>
<tr>
<td><strong>I. State System Colleges-Universities</strong>&lt;br&gt;and SNES Divisions (Except Hospital)</td>
<td></td>
</tr>
<tr>
<td><strong>Base Budget Adjusted for Inflation</strong></td>
<td>$608.1</td>
</tr>
<tr>
<td><strong>Program Improvements</strong></td>
<td></td>
</tr>
<tr>
<td>1. Faculty Salary Adjustment</td>
<td>$ 55.2</td>
</tr>
<tr>
<td>2. New Building Oper. &amp; Maint.</td>
<td>1.1</td>
</tr>
<tr>
<td>3. Facilities Maintenance</td>
<td>14.3</td>
</tr>
<tr>
<td>4. High Technology &amp; Economic Devel.</td>
<td>17.6</td>
</tr>
<tr>
<td>5. Equipment Modernization</td>
<td>10.0</td>
</tr>
<tr>
<td>6. Computers for Instruction</td>
<td>17.0</td>
</tr>
<tr>
<td>7. Library Automation/Acquisitions</td>
<td>8.2</td>
</tr>
<tr>
<td>8. Basic Research</td>
<td>1.5</td>
</tr>
<tr>
<td>9. Institution-Specific</td>
<td>4.1</td>
</tr>
<tr>
<td>10. Tuition Freeze—1985-1987</td>
<td>6.2</td>
</tr>
<tr>
<td><strong>Total, Program Improvements</strong> and Faculty Salary Adjustment</td>
<td>$129.4</td>
</tr>
<tr>
<td><strong>II. University Hospital</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Base Budget Adjusted for Inflation</strong></td>
<td>$ 32.0</td>
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<td><strong>Program Improvements</strong></td>
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</tr>
<tr>
<td>Unreimbursed Indigent Care/Freeze Rates</td>
<td>29.0</td>
</tr>
<tr>
<td><strong>Total Hospital</strong></td>
<td>$ 52.8</td>
</tr>
<tr>
<td><strong>III. Capital Construction</strong></td>
<td></td>
</tr>
<tr>
<td>Higher Education</td>
<td>$ 6.3%</td>
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<tr>
<td>Economic Development/Lottery</td>
<td>34.7%</td>
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<tr>
<td><strong>Total Capital Construction</strong></td>
<td>$ 41.0%</td>
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<tr>
<td><strong>IV. Student Loans</strong></td>
<td>$ 1.0</td>
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<td><strong>V. Debt Service</strong></td>
<td>$ 11.7</td>
</tr>
<tr>
<td><strong>Total, Department of Higher Education</strong></td>
<td>$642.1</td>
</tr>
<tr>
<td><strong>Rounding</strong></td>
<td>$642.0</td>
</tr>
</tbody>
</table>

* An equal amount is to be provided from Article XI-G bond borrowings, thus doubling the amounts indicated.

** Automation only.

WLS-11
12/3/84
TO: Margaret Dobson  
Acting Vice President for Academic Affairs  
FROM: Budget Committee  
SUBJECT: Semester Conversion Study

At your request we prepared and administered a questionnaire designed to determine estimated annual expense changes in academic and administrative operations. The questionnaire, a copy of which is attached to this report, was administered to 111 PSU units (68 academic and 43 administrative) on February 27, 1980. Slightly more than half (59/111) were completed and returned. They were almost equally divided between academic units (36/68) and administrative units (23/43). None were returned from the School of Business Administration and only one was returned from the School of Education. All other schools and colleges were adequately represented. A follow-up on delinquent academic units was conducted by committee representatives in April, 1980. The Office of University Relations was the only administrative unit that did not return any of the questionnaires.

An analysis of the questionnaires produced the following findings.

1. Most (33/59) units reported no major operational changes would occur. Most of these units (19/33) were from academic areas.

2. $50,870 total expense decreases were identified, almost all of which were associated with the operations of administrative units. (See attached table for details.)

3. Academic units identified $2,813 in various expense decreases, however, they were offset by a major expense increase of $4,000 in the operations of the Chemistry Department and several smaller increases in the Speech Communications Department ($300) and the Sociology Department ($200).

4. The Helen Gordon Child Development Center estimated a loss of student/parent user fees of approximately $6,600 because of the long break between the two semesters.
Several major budgetary concerns were identified. They were:

1. There will be a loss of community college students who would be unable to transfer to PSU after the winter quarter. (123 transferred in 1979 Spring and 106 in 1978 Spring.)

2. There may be a potential loss of PSU students who transfer to a community college after the fall semester to earn more credits at less cost during the winter and spring quarters.

In general, it would appear that there are potential budgetary savings associated with a conversion from quarters to semesters, although, there are also real and potential revenue losses whose magnitude could not be accurately determined.

<table>
<thead>
<tr>
<th>Description of Operational Changes</th>
<th>Supplies</th>
<th>Services</th>
<th>Personnel</th>
<th>Other (explain)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADMINISTRATIVE UNITS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(BO) fewer registrations</td>
<td>$ 2,295</td>
<td>$ 277</td>
<td>$ 5,555</td>
<td>$ 10,535</td>
</tr>
<tr>
<td>(BUD) fewer budget changes &amp; appointments</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(REG) less duplication, postage, forms, etc</td>
<td>7,125</td>
<td>6,500</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>(COMP) less SIS production</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(CSSO) less overtime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$ 9,470</td>
<td>$26,777</td>
<td>$ 5,875</td>
<td>$ 10,535</td>
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<tr>
<td><strong>ACADEMIC UNITS</strong></td>
<td></td>
<td></td>
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<tr>
<td>fewer examinations</td>
<td>$ 452</td>
<td>$ 55</td>
<td>$ 400</td>
<td></td>
</tr>
<tr>
<td>fewer registrations</td>
<td>910</td>
<td>10</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>less written material</td>
<td>10</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>less duplication, xeroxing, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fewer CWSP students</td>
<td>50</td>
<td>225</td>
<td></td>
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</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$ 1,422</td>
<td>$ 440</td>
<td>$ 951</td>
<td></td>
</tr>
<tr>
<td>more chemistry experiments</td>
<td>$ 4,000</td>
<td></td>
<td></td>
<td>$ 100</td>
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<tr>
<td>more speech communication materials</td>
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<tr>
<td>more sociology advertising</td>
<td>200</td>
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<td></td>
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<td><strong>Subtotal</strong></td>
<td>$ 4,500</td>
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<tr>
<td><strong>Totals</strong></td>
<td>$ 6,392</td>
<td>$27,117</td>
<td>$ 6,826</td>
<td>$ 10,535</td>
</tr>
</tbody>
</table>
1884-85 activities included:

1. Reviewed and recommended to the Incidental Fee Committee budgets for Intercollegiate Athletics, Intramurals, Club Sports and Recreation. A brief review of each program, including a review of program goals and objectives, participation levels and future needs preceded the review of proposed budgets. The Board also supported the formal appeal by Intercollegiate Athletics for an increase in the initial allocation recommended by the IFC.

2. Reviewed procedures being followed by the University to ensure compliance with new NCAA regulations governing student-athlete declaration of academic program and its verification.

3. Initiated Spring term a process for the "program and policy review of athletics at Portland State University." Initial work will be completed by a subcommittee of the Board. A final document will be forthcoming no later than December 1, 1985, and will include a description of each program (intercollegiate athletics, intramurals, recreation and club sports); current policy and procedures; identification of problems; and recommendations to the President and Faculty Senate aimed at improving athletics at the University. The last comprehensive review of athletics at the University was completed by the Board in 1976.

4. Reviewed and discussed the adequacy of current academic advising services available to student athletes. Discussion will continue Spring term.

5. Reviewed the special admissions policies and procedures of the Oregon State System of Higher Education and Portland State University. Of the about 40 special admissions slots available each year to freshman coming directly from high school only 2 or 3 are filled by student athletes. The Board unanimously passed a motion applauding the PSU admissions Office and its director for the careful and judicious application of special admissions policies and procedures.

I would like to commend all who served on this year's University Athletics Board and their willingness to participate in the comprehensive review of athletics at the University.
University Athletics Board Members
Mary Kinnick, Chair, Education
Robert Vieira, OSA
Robert Scruggs, HPE
Jon Mandaville, History
Clyde Calvin, Biology
Craig Nichols, Community Representative
Steve Best, Student
Karin Nelson, Student
David Cress, Student

Ex-Officio
Charles Becker, HPE Intramurals
Zola Dunbar, Mountain West Athletic Conference Representative
Roger Edgington, Acting Vice President for Administration
Roy Love, Director of Athletics
Betty Rankin, Associate Director of Athletics
Jack Schendel, Dean, School of Health and PE
Sylvia Moseley, Program Director, Student Recreation

Consultants
Megan Boyle, Educational Activities, Sports Club Advisor
Ruth Fitzpatrick, Student, Program Director for Club Sports
During this year the Board established the program of visiting lecturers for academic year 1985-86. The focus of the lectures will be the development of the professions in western culture, culminating in a conference on "Science, Medicine and Engineering".

The Visiting Scholars for 1985-86 will be:

Professor Daniel Kevles,
Professor of the History of Science
California Institute of Technology

Professor Ted Humphrey,
Professor of Philosophy
Arizona State University

Professor John Root,
Professor and Head, Department of Humanities,
Illinois Institute of Technology

Professor David Hollinger,
Professor of the Philosophy and History of Science
University of Michigan

Professor Steven Meyer,
Professor of the History of Technology and Engineering
Illinois Institute of Technology

Andrew Perry
British Journalist, Visiting Professor
New York University.

The Program received a grant from the Academically Controlled Auxiliary Activities Fund to support the participation of fifteen students from the Program in the regional meeting of the National Collegiate Honors Council, to be held April 11-14 at Scottsdale Community College, Scottsdale, Arizona. Twelve students from the Program will present papers or join in seminar presentations.

No student appeals were submitted. Forty-two students were admitted to the Program; four students received degrees at Fall and Winter Commencements; fifteen have applied for Spring Commencement. Currently one hundred and eighty-five students are active in the Program.

The Board formulated and sent, in February, 1985, to the departments of the College of Liberal Arts and Sciences
a set of guidelines for the development of departmental honors programs, a copy of which is appended to this report. It is the hope of the committee that the departments already having provisions for departmental honors will review their procedures, and that other departments that do not have departmental honors will give consideration to these suggested departmental guidelines. The committee recommends that next year's University Honors Board confer with the departments of the College in the establishment of departmental honors.

Respectfully Submitted,

Claudine Fisher
Chair

University Scholars' Board Members:

Claudine Fisher, Chair
Larry Crawshaw
David Cressler
Candice Goucher
Bruce Jensen
Daniel Newberry
Richard Killian
Michael Woolfolk

Foreign Languages
Biology
Psychology
Black Studies
Mathematical Sciences
Library
Student
Student
DEPARTMENTAL HONORS
FOR MAJORS WITHIN THE COLLEGE
OF LIBERAL ARTS AND SCIENCES

The national council of Honors programs has drawn up a list of criteria to be used in providing for Honors education in terms of not only University Honors Programs, but also Departmental Honors. The present proposal is formulated with those criteria as guide:

1) SELECTION OF STUDENTS: Departments shall determine their own selection procedures, however, a minimum GPA requirement should be maintained by all departments.

   A) An overall GPA of 3.2 with higher requirements for work in the major.
   B) Students be admitted formally into Departmental Honors after completion of 90 hours of course work.

2) REQUIREMENTS: Departments should determine the requirements for graduation with departmental honors, however, the following should apply to all majors:

   A) A departmentally approved thesis/project;
   B) At least nine hours of special Honors work in the major field, e.g., seminars, colloquia, or independent study.

3) WORK OUTSIDE THE MAJOR: Departments should determine whether any specific requirements are desirable. It is recommended that students be encouraged to do some of their general education requirements in Honors courses outside the major. Two years of foreign language study is recommended.

4) ADMINISTRATION OF DEPARTMENTAL HONORS: To facilitate the use of already existing administrative procedures, departments will send names of students accepted for Departmental Honors to the University Honors Program. The Program will develop files for each student; such files will contain a transcript of each quarter's work, and a duplicate file will be sent to the departmental office. This will allow the college-wide identification of students involved in Honors education--whether the University Honors Program, or in Departmental programs.

5) RELATIONSHIP OF EXISTING UNIVERSITY HONORS PROGRAM AND DEPARTMENTAL HONORS: Students will have the option of doing Departmental Honors without fulfilling the requirements of the University Honors Program; however, all students in the
University Honors Program graduating in departmental majors will be required to fulfill the requirements of Departmental Honors.

A) All courses carrying the Honors designation will be filed with the University Honors Board and will be listed in time schedules under both the Honors prefix and under the departmental prefix;

B) The University Honors Program will continue to offer its present special programs and accept up to 200 students. The Program will also serve as a center for Honors education information through its participation in the National and Regional Collegiate Honors Councils, will publish an Honors newsletter dealing with honors throughout the university, maintain academic records on all honors students, develop brochures on Honors education at Portland State, endeavor to publish a twice-yearly refereed collection of student work at Portland State, and continue offering the Visiting Scholars Lectures and Colloquia.
A REPORT TO THE FACULTY SENATE
TEACHER EDUCATION COMMITTEE
5 May 1985

MEMBERS: Chairperson: William Tate, Theater Arts; Leonard Robertson, Business Administration; Steve Brannan, Education; Carol Burden, Education; Jean Glazer, Art and Architecture; Jomar Lacoco, Speech Communication; Carl Markgraf, English; Stan Stanford, Music; Ann Bennett, Social Science; Mike Carl, Education; Carl Bachhuber, Science; Glen Gilbert, Health and Physical Education; Linda Parshall, Foreign Languages; Mildred Bennett, Mathematics; ex-officio members: Donald Leu, Dean of School of Education; George Guy, Assistant Dean of School of Education and secretary to Committee; Kathleen Greey, Education Librarian.

The Committee met each term during the 1984-85 academic year. Its discussions and business can be summarized as follows:

1. The Committee examined a number of curriculum proposals having an impact on teacher education from a variety of departments. These included proposals for new courses as well as changes in existing courses. Recommendations were forwarded to the School of Education faculty or other appropriate committees.

2. Forbes Williams, Dean of Undergraduate Studies, at the Committee’s request, reviewed its role and responsibilities within the institutional program/course approval process. He stated the need to remind deans and department heads that TEC should be consulted on curricular and policy matters affecting teacher education.

3. Dean Leu reported to the Committee that the Chancellor and State Board of Higher Education, in response to an action of the Teacher Standards and Practices Commission, have mandated the CBEST (California Basic Educational Skills Test) as the test for admission to programs of teacher education at all state system colleges and universities.

Respectfully submitted,

William Tate, Chairperson
TO: Faculty Senate
FROM: Senate Steering Committee

April 17, 1985

For your information, the following are issues to be resolved at the May 6, 1985, meeting of the Senate. Documents to be referenced include the OAA memorandum of February 4, 1985, summarizing the General Education Requirements Committee and the ARC's recommendations, and the Summary of Issues outline provided with the mailing (and also in the April mailing).

Issue 1 - Breadth Requirements

Options as identified in the OAA memorandum and as discussed in prior meetings. This issue must be resolved before other issues can be decided.

Issue 2 - Course List and Committee

Depending upon the decision regarding breadth requirements for general education, the use of a list of approved courses issue must be decided as well as the appropriate committee or process to develop and monitor general education course listings.

Issue 3 - Omnibus Numbers

Should omnibus numbers be included or excluded from general education breadth requirements courses?

Issue 4 - Upper Division Hours

At the April Senate meeting the Senate voted to require that some of the breadth requirements be upper division hours. The appropriate number of hours to be required must be decided.

Issue 5 - BS Degree

The GER Committee and the ARC recommended: BS Degree: Completion of the liberal education requirements and other school, department, or general studies requirements.

Issue 6 - BA Degree

Two issues are involved: (1) should the BA degree require 36 credits of foreign language, literature, and/or philosophy? and (2) should fine and performing arts be excluded from the foreign language requirement for a BA degree?
General Education Requirements Committee and ARC recommended:

BA Degree: Completion of the liberal education requirements and other school, department or general studies requirements including completion of two years of college level work in a foreign language or demonstration of equivalent proficiency; or completion of the liberal education requirements and completion of the degree requirements in a fine or performing art.
To: Members of the Faculty Senate

FROM: John Cooper, English

At the May meeting of the Faculty Senate I plan to make the following motion concerning distribution requirements as a substitute for both the GEC and the ARC recommendations:

Every student earning a B.A. or a B.S. in a major department must earn a minimum of 18 credits in each of the following divisions: 1. Arts and Letters, 2. Life and Physical Sciences and Mathematics, 3. Social Science. These credits must be earned in two departments in each division, with a minimum of six credits to be earned in any one department.

All courses used for this distribution requirement must be selected from a list of courses designated by each department as being usable for distribution requirements.

The departments of Black Studies and Women's Studies will designate which of their courses can be used for Social Science distribution credit and which for Arts and Letters credit.

Explanation
This proposal requires that each student do six to twelve hours of work in each of six departments from a broad range of disciplines from the physical sciences to arts and letters. Thus the student will have a significant body of work in each of these departments and will not scatter distribution work by taking single courses in many departments.

The proposal also requires that each department address seriously the issue of general education in its area. The result should be that each department will set up some criteria for general education courses and will see to it that courses meet those criteria. It is the assumption of this proposal that departments will take that responsibility seriously.
TO: Faculty Senate
FROM: Faculty Senate Steering Committee

Additional departments have responded to the request for course listings by breadth requirement to assist senators in analyzing the General Education Requirements Committee recommendation. These listings are in addition to those in the memorandum of April 5, 1985.

### World Culture and Civilization

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
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<tbody>
<tr>
<td>ENG 101, 102, 103</td>
<td>Survey of English Literature</td>
</tr>
<tr>
<td>ENG 107, 108, 109</td>
<td>World Literature</td>
</tr>
<tr>
<td>ENG 311</td>
<td>Tragedy</td>
</tr>
<tr>
<td>ENG 314</td>
<td>Epic</td>
</tr>
<tr>
<td>ENG 318</td>
<td>The Bible as Literature</td>
</tr>
<tr>
<td>ENG 384, 385, 386</td>
<td>Contemporary Literature</td>
</tr>
<tr>
<td>ANTH 102</td>
<td>Introduction to Archaeology</td>
</tr>
<tr>
<td>ANTH 103</td>
<td>Introduction to Social-Cultural Anthropology</td>
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<tr>
<td>ANTH 314</td>
<td>Indians of North and South America</td>
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<td>ANTH 316</td>
<td>Ethnography of Asia</td>
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<td>ANTH 317</td>
<td>Peoples of the Pacific</td>
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<td>ANTH 318</td>
<td>Peoples and Cultures of the Middle East</td>
</tr>
<tr>
<td>ANTH 319</td>
<td>Traditional Cultures of Africa</td>
</tr>
<tr>
<td>ANTH 361</td>
<td>European Prehistory</td>
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<td>ANTH 362</td>
<td>African Prehistory</td>
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<td>Pacific Northwest Prehistory</td>
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<td>ANTH 366</td>
<td>Mesoamerican and South American Prehistory</td>
</tr>
<tr>
<td>ANTH 367</td>
<td>East Asian Prehistory</td>
</tr>
<tr>
<td>D 452, 453, 454</td>
<td>Dance History</td>
</tr>
<tr>
<td>D 493</td>
<td>Dance Aesthetics</td>
</tr>
<tr>
<td>BST 205, 206</td>
<td>Introduction to African History</td>
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<tr>
<td>BST 262</td>
<td>Survey of the Economics of Africa</td>
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<tr>
<td>BST 467</td>
<td>Political Economy of African Under Development</td>
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### United States Studies

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<td>ENG 253, 254, 255</td>
<td>Survey of American Literature</td>
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<tr>
<td>ENG 364, 365, 366</td>
<td>American Fiction</td>
</tr>
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<td>WS 230</td>
<td>Minority Women in the United States</td>
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<td>WS 215</td>
<td>History of Feminism</td>
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<tr>
<td>BST 203, 204</td>
<td>Introduction to Afro-American History</td>
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<tr>
<td>BST 233</td>
<td>Black Minority and American Politics</td>
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<tr>
<td>BST 412</td>
<td>Oregon Afro-American History</td>
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<tr>
<td>BST 414</td>
<td>Racism</td>
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### Fine Arts and Humanities

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<td>ENG 104, 105, 106</td>
<td>Introduction to Literature</td>
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<td>ENG 201, 202, 203</td>
<td>Shakespeare (one or two terms)</td>
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<td>ENG 312</td>
<td>Comedy</td>
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<td>ENG 313</td>
<td>Satire</td>
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<td>ENG 315</td>
<td>Lyric Poetry</td>
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<td>ENG 316</td>
<td>The Short Story</td>
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<tr>
<td>ENG 320, 321, 322</td>
<td>The English Novel</td>
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<tr>
<td>ENG 371, 372, 373</td>
<td>The Novel</td>
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Fine Arts and Humanities (continued)
D 350  Improvisation
D 351  Dance Composition
D 352  Choreography
D 452, 453, 454  Dance History
D 493  Dance Aesthetics
D 494  Interdisciplinary Collaboration
BST 221  Survey of Afro-American Literature
BST 421  Afro-American Writer in American Seminar

Individual and Society
MKTG 340  Advertising
WS 101  Introduction to Women's Studies
WS 415  Issues in Contemporary Feminism
PSY 204  Psychology as a Social Science
PSY 311  Developmental Psychology
PSY 432  Personality
PSY 334, 335  Social Psychology
PSY 345  Motivation
BST 413  Slavery
BST 415  Justice and the Afro-American Experience
BST 417  The Afro-American Family

Mathematical and Computer Sciences
CS 100  Introduction to Computer Science I
CS 150  Computing Fundamentals
CS 208  Introduction to Programming in Fortran
CS 207  Introduction to Programming in COBOL

Natural Sciences
ANTH 101  Introduction to Physical Anthropology
ANTH 370  Paleoanthropology I
ANTH 372  Human Variability
PSY 205  Psychology as a Natural Science
PSY 351  Elements of Physiological Psychology
PSY 352  Elements of Physiological Psychology
PSY 357  Comparative Psychology
PSY 346  Learning
PSY 347  Perception
PSY 348  Thinking
BIO 111  Biology Department indicated all Biology courses should be acceptable
G 199  Evolutionary Concepts
G 199  Columbia Gorge Field Trip (fall); North Oregon Coast Field Trip (winter); John Day Field Trip (spring)
G 201, 202  General Geology
G 203  Historical Geology
G 204, 205  General Geology Laboratory
G 206  Historical Geology Laboratory
G 301  Geology for Engineers
G 351  Oceanography
G 430  Life of the Past
G 450  Rocks and Minerals
G 451  Earth Science
G 452  Geology of Oregon Country
G 455  Minerals in World Affairs
SUMMARY OF ISSUES

DISTRIBUTION (BREADTH) REQUIREMENTS

Should there be a maximum and/or a minimum number of credits from a single department (discipline) which can be used to meet the 54 credits of distribution requirements?

What should the maximum number of credits be?

What should the minimum number of credits be?

Should all courses taught in the College of Liberal Arts and Sciences and the departments of Music, Theater Arts, and Computer Science (with the exception of Mth 93, 94, 100: Wr 120, 121, 222, 323) be allowed to fulfill the distribution requirements?

Should the courses be limited to a selected list of pre-authorized courses?

Should all omnibus numbered courses be excluded?

Should a part of the 54 credits of distribution requirements be upper division?

How many credits of upper division should there be?

How many of the upper division distribution requirements should be taken at PSU?

How many of the upper division distribution requirements should be outside of the student's major distribution area?

Should a foreign language with a different prefix be considered out of major and allowed to fulfill distribution requirements for a student taking a major in a foreign language? (i.e., GL for FR major)
WRITING SKILLS
Should satisfactory performance on a junior-level examination of competence in standard written English be required?

Should writing be taught on the horizontal or the vertical pattern?

If vertical composition is to be the required pattern, should transfer and registration policy enforce registration for the second course as an upper division course taken no earlier than the junior year?

HEALTH AND PHYSICAL FITNESS
Should the HPE requirement be HPE 298 or allow some other combination of three credits from HPE courses?

BS DEGREE
Should a BS require 36 credits in either Social Science or Science?

BA DEGREE
Should a BA degree require 36 credits in foreign language, literature, and/or philosophy?

Should a BA degree require completion of two years of college level foreign language or equivalent?

MAJORS IN GENERAL STUDIES
Should General Studies Option I be retained?

Should General Studies Option II be retained?
TO Faculty Senate

FROM Zola Dunbar, Chair
Graduate Council

On April 8, 1985, the Graduate Council approved proposed changes to the Systems Science Ph.D. Program. The revised program is described on the attached pages to be included in the 1985-86 catalogue. (These replace p. 245 of the 1983-85 catalogue, also here attached.) The Council recommends Senate approval.

ZD/des
THE SYSTEMS SCIENCE PH.D. PROGRAM

Systems Science is the study and application of general methods of problem solving and general principles governing systems of widely differing types. Systems concepts and techniques are extensively used for both applied and research purposes. In industry and government, considerable demand exists for professionals skilled in modern methods of decision making and systems design, and capable of managing complex social and technical systems. In mathematics, engineering, business administration, and the natural and social sciences, systems theorists continue to make important contributions to the growth of knowledge within academic disciplines and to the application of knowledge across disciplinary boundaries.

In 1970, a Systems Science Ph.D. Program was established at Portland State University. The Program encompasses both applications and theory oriented aspects of the field. It is designed to prepare students for professional practice in industrial, governmental, and public service organizations and for research and teaching in academic institutions.

The School of Business Administration (Departments of Management, Marketing, Finance/Law, and Accounting), the College of Liberal Arts and Sciences (Departments of Economics, Mathematics, Sociology, Anthropology, and Psychology), and the School of Engineering and Applied Science (Departments of Civil Engineering, Mechanical Engineering, Computer Science, and Electrical Engineering) participate in the Program. In addition to the systems courses offered by these departments (e.g., cost-benefit analysis, operations research, systems analysis and synthesis, mathematical modeling, etc.), the Systems Science core faculty offer courses in information systems, risk analysis, multiple perspectives for decision making, general systems and cybernetics, and other areas.

There are two options for study in the Systems Science Program.

Option A: The student undertakes advanced academic preparation primarily in a single department or school. Discipline-oriented studies are supported by systems coursework and lead to research on a systems-related topic. This option is currently available in most of the above listed departments in the College of Liberal Arts and Sciences and the School of Engineering and Applied Science. In the School of Business Administration, students concentrate their coursework in one department or subject area, and take courses from other departments as well.

Option B: The student pursues interdisciplinary studies with a stronger emphasis on systems coursework. Examples of subject areas appropriate to such a program are: the development of systems theories or methodologies, the design of computer information systems, the assessment of social and economic impacts of engineering projects or of new technologies or public policies, the study of organizations, and the construction of macro theories of social systems.

Both of the options facilitate the design of curricula which are individually tailored to the needs and interests of students.

ADMISSION AND ADVISING

Students with high academic standing and with a baccalaureate and/or master's degree may apply for admission to the doctoral program. Generally, applicants should rank in
the top 25 percent of graduate students nationally as determined by the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT). Applicants must submit scores for either the GRE aptitude or GMAT test to verify their national ranking.

In considering an applicant for admission, the Admissions Committee for Systems Science seeks evidence of demonstrated intellectual capacity, a thorough preparation in an allied discipline including mathematics, and the potential to pursue advanced study and research for the Ph.D. Students are admitted to the program in fall, winter, and spring terms. Prospective applicants should write to the Office of Graduate Admissions and request the Application for Admission to Doctoral Program form. The Office of Graduate Admissions must receive: (1) the completed Application for Admission to Doctoral Program form, (2) the application fee, (3) two copies each of all undergraduate and graduate transcripts to be sent by the institutions to Portland State University. The applicant must arrange for the Admissions Committee for Systems Science to receive: (1) GRE or GMAT score, (2) three letters of recommendation from academic and/or professionals acquainted with the applicant's abilities and record, (3) TOEFL score or other evidence of English competency if a foreign student, and (4) statement of the student's expectations of the program.

Applicants who meet the selective requirements to enter the graduate degree program in systems science are admitted to regular status. In exceptional cases a student who meets the required standards for admission except for a minor gap in subject matter background, such as deficiencies in computer and mathematics knowledge, or introductory courses in disciplines identified with a proposed program of study, may be admitted to conditional status in systems science. The student must immediately remove the background deficiency or be dropped from the graduate program.

Each applicant who has received formal notice of admission to the Doctoral Program in Systems Science should contact the office of the program for initial advising. Adviser(s) will be appointed to assist and consult with the admitted student regularly in planning the program of study and research. A comprehensive examination committee is appointed for each student to give the required oral and written examinations. A research committee supervises the research and preparation of the dissertation.

PROGRAM REQUIREMENTS

A discussion of General Requirements for Doctoral Degrees is on page _. Minimum requirements specific to the Ph.D. in Systems Science include:

*Systems Core. SySc 511, 512, 513 form a one-year sequence which develops the fundamental principles of systems science. Nine additional hours of Systems Science courses are also required to complete the core (may include crosslisted courses given by participating departments).

*Additional Coursework. Additional approved systems and/or departmental graduate courses are required.

Option A: For the School of Business Administration: a minimum of 48 hours or 72 hours (for those who wish a concurrent MBA) or 18 hours (for holders of an MBA degree). All candidates must develop strength in a defined discipline by taking at least 24 hours in that discipline. For departments in the College of Liberal Arts and Sciences: a minimum of 45 hours beyond the baccalaureate degree; specific requirements as determined by the department. For departments in the School of Engineering and Applied Science: a minimum of 9 hours beyond the master's degree (or equivalent coursework).
Option B: 9 hours of Systems Science courses and 45 additional hours in approved areas.

*Language Requirement. Competency must be demonstrated in one foreign language. The choice must be approved by the student's adviser. The examination is administered through the Department of Foreign Languages; procedures are described in a separate document.

*Comprehensives. Written and oral comprehensive examinations are required in appropriate areas. Quality and breadth of academic competencies must be demonstrated. A student may have to do coursework and study beyond the minimum requirements to prepare for the comprehensive exams.

*Internship. Internship in a public or private organization or an equivalent experience is required of Option B students who intend a career in government or business.

*Research. All students must establish competency in appropriate research methodology before beginning thesis work. After this and all other requirements have been met, the student prepares a proposal for independent research leading to a significant and original contribution to knowledge in the systems field. When the proposal is accepted, the student is advanced to candidacy, and then focuses exclusively on research. Students must register for twenty seven hours of thesis research.

*Dissertation. Completed research is presented in a dissertation which must be approved and successfully defended in a final oral examination.

The student can anticipate approximately four to five years of full-time study beyond the baccalaureate degree in order to satisfy the program requirements. Detailed additional information on requirements and procedures are contained in Program documents, and should be obtained by contacting the Coordinator, Systems Science Ph.D. Program.
Considerable demand exists in industry and government for systems specialists able to deal effectively with complex scientific, managerial, and social problems. This need was recognized early at Portland State University, where systems courses have been offered since 1962. In 1970 a Ph.D. degree program in systems science was initiated, and the first doctorate was awarded in 1972. The program has been developed in an interdisciplinary educational and research environment with the present major emphasis being given to the applications of systems science to management problems in the public and private domains.

For the systems professional, the curricula develop the abilities to design and manage complex systems, and to consider uncertainties, constraints, trade-offs, and political and social realities in decision making through courses emphasizing systems theory and applications. Students acquire strong disciplinary backgrounds in management, economics/public policy, engineering, or mathematics. In addition, students enhance their interdisciplinary capabilities by completing programs of study in related and supporting concentrations.

In recent years computer developments have improved capabilities to analyze policy problems and identify alternative strategies, and have stimulated the growth of a technological system science. The program of study includes these contributions of computer science, as well as other methodological courses, such as operations research, decision theory, modeling and simulation, systems analysis and synthesis, and research methods. Supporting academic offerings are available in the general systems theory, technological forecasting and assessment, and futures. Individual curricula can be designed which prepare the student for professional work in industrial, governmental, research, and public service organizations.

Admission. Students with high academic standing and with a baccalaureate and/or master's degree may apply for admission to the doctoral program. Generally, applicants should rank in the top 25 percent of graduate students nationally as determined by the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT). Applicants must submit scores for either the GRE aptitude or GMAT test to verify their national ranking.

In considering an applicant for admission, the Admissions Committee for Systems Science seeks evidence of demonstrated intellectual capacity, a thorough preparation in an allied discipline including mathematics, and the potential to pursue advanced study and research for the Ph.D. Students are admitted to the program in fall, winter, and spring terms. Prospective applicants may apply through the Office of Graduate Admissions and request the Application to Graduate Study form. The Office of Graduate Admissions must receive: (1) the completed Application to Graduate Study form, (2) the application fee, (3) two copies each of all undergraduate and graduate transcripts to be sent by the institutions to Portland State University. The applicant must arrange for the Admissions Committee for Systems Science to receive: (1) GRE or GMAT score, (2) three letters of recommendation from academic and/or professionals acquainted with the applicant's abilities and record, (3) TOEFL score or other evidence of English competency if a foreign student, and (4) statement of the student's expectations of the program.

Applicants who meet the selective requirements to enter the graduate degree program in systems science are admitted to gular status. In exceptional cases a student who meets the required standards for admission except for a minor gap in subject matter background, such as deficiencies in computer and mathematics knowledge, or introductory courses in disciplines identified with a proposed program of study, may be admitted to conditional status in systems science. The student must immediately remove the background deficiency or be dropped from the graduate program.

Advising. Each applicant who has received formal notice of admission to the Doctoral Program in Systems Science should contact the office of the program for initial advising. Adviser(s) will be appointed to assist and consult with the admitted student regularly in planning the program of study and research. A comprehensive examination committee will arrange the required oral and written examinations and approve the dissertation proposal. A research committee supervises the research and preparation of the dissertation material.

**Program Requirements**

The requirements for the Ph.D. degree in systems science are essentially those described in the section for General Requirements for Doctoral Degrees, page 52. The student can anticipate a minimum of three years of full-time study beyond the baccalaureate degree in order to satisfy the specified requirements.

The program of study for all students seeking a Ph.D. in systems science, in addition to the preparation in the appropriate major discipline, include:

- **Core courses.** SySc 511, 512, 513 form a one-year sequence which develops the fundamental principles of systems science. Additional hours in Systems Science Workshop are required as an interdisciplinary training experience.

- **Methodology.** Each major discipline area requires students to have specified number of credits in courses providing for quantitative skills, selected from topics such as computer science, cost-benefit analysis, decision theory, modeling and simulation, operations research, research methods, and systems analysis and synthesis.

- **Support area(s) of concentration.** A minimum of one support area of concentration is required for all programs of study. The area of concentration, of at least 15 credits, may be selected with the approval of the adviser from areas such as computer and information systems, economics systems, engineering systems, general systems theory, management systems, mathematics, public policy, and technological assessment and futures.

- **Internship.** Direct internship in a governmental or private organization or an equivalent experience normally is required of all candidates.

- **Dissertation.** Independent research leading to a significant contribution to knowledge and the preparation of a dissertation is required of all candidates.

**Language Requirement.** Competency must be demonstrated in one foreign language. The choice must be approved by the student's adviser. Examination procedures are described in a separate document.

**General Requirements.** The doctoral degree is not granted on the basis of the completion of a prescribed number of courses or graduate credits, but rather on the basis of breadth and quality of competencies in systems science, quantitative skills, the major and supporting disciplines, internship, and research/dissertation. The satisfactory fulfillment of doctoral requirements includes passing a foreign language examination, advancement to candidacy, approval of a dissertation proposal, competition and approval of the dissertation, and the final oral examination. Further information on the program requirements and procedures can be obtained by contacting the Director, Doctoral Program in Systems Science.