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Faculty Senate Monthly Packet December 1980

Portland State University Faculty Senate

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MEMORANDUM

TO Senators and Ex-officio Members of the Senate

DATE November 17, 1980

FROM Ulrich H. Hardt, Secretary of the Faculty

The Senate will hold its regular meeting on December 1, 1980, at 3:00 p.m., in 150 Cramer Hall.

AGENDA

A. Roll
B. Approval of Minutes of the November 3, 1980, meeting
C. Announcements and Communications from the Floor
D. Question Period
   1. Questions for Administrators
      a. Question to Vice President Gruber: "What can be done to insure the anonymity of the person seeking access to the salary information of administrators?" (Submitted by Frederic H. Chino)
      b. Question to President Blumel: "Will all Music and Theater Arts offices and instruction be moved to Lincoln Hall, after the School of Education has moved out? Who will be involved in the decision-making process?" (Submitted by Senate Steering Committee)
   2. Questions from the Floor for the Chair

E. Reports from Officers of the Administration and Committees
   *1. Annual Report, Curriculum Committee--Newborg
   *2. Annual Report, Graduate Council--Newberry
   *3. Annual Report, Library Committee--Walhood
   *4. Annual Report, Scholastic Standards Committee--Griffiths

F. Unfinished Business
   *1. Explanation of New Course Requests Affecting Proposed Program Changes in EAS--Hsu

G. New Business
   *1. Curriculum Committee, Proposed Course Changes--Newborg
   *2. Graduate Council, Proposed Course Changes--Newberry

H. Adjournment

*The following documents are included in this mailing:
B. Minutes of the November 3, 1980, Senate Meeting
E1. Curriculum Committee, Annual Report**
E2. Graduate Council, Annual Report**
E3. Library Committee, Annual Report**
E4. Scholastic Standards Committee, Annual Report**
F1. Explanation of New Course Requests Affecting Proposed Program Changes in EAS**
G1. Proposed Course Changes, Curriculum Committee**
G2. Proposed Course Changes, Graduate Council**

**Included for Senators and Ex-officio Members only.

Senators unable to attend the meeting should pass this mailing on to their alternates.
Minutes: Faculty Senate Meeting, November 3, 1980
Presiding Officer: Marjorie Enneking
Secretary: Ulrich H. Hardt


Members Absent: Breedlove, Burden, Diman, Dreyer, Hashimoto, Scheans, Williams.

Ex-officio Members Present: Blumel, Corn, Erzurumlu, Forbes, Gruber, Hardt, Harris, Heath, Hoffmann, Howard, Leu, Morris, Nicholas, Parker, Pfingsten, Rauch, Ross, Schendel, Todd, Toulan, Trudeau, Vant Slot.

APPROVAL OF THE MINUTES

The minutes of the October 6 meeting were approved with the following changes: p. 2, 11. 1 - 2 "an 'early semester' . . . would minimize the problem for transfer students." On p. 3, penultimate sentence of paragraph 1, the "and" should be deleted. Bierman was also marked present; he has replaced Fisher in the Senate.

ANNOUNCEMENTS AND COMMUNICATIONS FROM THE FLOOR

1. Mark Matthews, Assistant Director of the Volunteer Escort Service, explained the service, begun last year to provide escorts for students on campus. It has now expanded to the downtown area and is offered between 6:30 - 11:00 p.m. Anyone desiring the service or wanting to volunteer should call 3152.

2. Sugarman reported that John Dart won the run-off election for the Inter-institutional Faculty Senate, held following the resignation of Vic Dahl. IFS met at OIT in Klamath Falls in October and passed the following resolutions: a) to oppose measure 6 in the November election, b) to support the Higher Education budget request based on the original budget, and c) to propose that if further budget cuts become necessary, these should be shared by local governments and agencies. The work of the Teachers Standards and Practices Commission was discussed, in particular its capricious behavior in changing norm requirements, and a meeting with TSPC will be arranged. IFS also has made it known that they want to be a part of the decision-making process in the selection of the Chancellor and Vice Chancellor; assurances have been given that IFS will participate in the interviews for Vice Chancellor.

3. M. Enneking announced that K House invites Senators for sherry following each meeting. She also invited proposals for a plan to stagger the Senatorial terms of given units. The Steering Committee should receive those prior to its next meeting on November 17.
QUESTION PERIOD

1. Questions for Administrators

To the question regarding the time of the implementation of the new "W" and "Y" grading policy, Tufts replied that Winter 1981 would be the first term. Changes in the calendar dates will be published in the Winter Time Schedule, and faculty are urged to announce these changes in their classes.

Gruber addressed the question of allocations of money to various departments for wage sections. PSU had approximately $175,000 restored to its cut budget. Fall term about $58,000 were allocated on the basis of requests submitted by department heads through the deans to the Office of Academic Affairs. Decisions for the allocation were primarily based upon a) supporting courses where student demand was exceptionally high, and b) where there was a projected availability of a qualified instructor and adequate classroom. Economics, Education, Mathematics and Women's Studies identified immediate section needs, while other units expressed a desire to wait. The projected allocations for winter and spring terms have been determined on a similar basis, the largest sums going to units which had the most significant original budget reductions due to heavy reliance on TBN dollars to support on-going academic programs.

REPORTS FROM OFFICERS OF THE ADMINISTRATION

Blumel reported that fourth week registration was 17,170, up by 24 from last year. Registration of those taking six hours or more is up 3.2 percent, while those taking fewer than six hours dropped 3.7 percent. If the average academic load for each of these groups is the same as last fall, it would represent an approximate 100 FTE student increase this fall.

Kimbrell asked the chair what is being done to help facilitate getting students across 12th Avenue to and from the new parking structure. Todd responded that PSU is meeting with the City and will pursue the problem.

UNFINISHED BUSINESS

Speaking for the Advisory Council, Beeson moved the acceptance of the constitutional amendment eliminating the Elections Committee. The following three corrections were made: p. 1, l. 15, spelling of allocated; p. 3, l. 2, personnel should read person; p. 4, l. 8, nominee should read nominees. The constitutional amendment was passed unanimously.

NEW BUSINESS

1. Newborg, speaking for the Curriculum Committee, moved the acceptance of the changes in existing programs in BA/BS in Speech Communications and BA in Computer Science. Both motions passed.

The Curriculum Committee also recommended approval of the BA/BS in Engineering and Applied Sciences. Bates pointed out that the senior year of the core curriculum (p. 4) was not shown. Hsu said that was an omission and there were no changes in that year. Kimbrell observed that this program change involved thirteen new courses which could translate to requests for four new faculty members. Erzurumlu responded that only two or three were new courses and that others had been taught for years under 410. Sommerfeldt counted over thirty underlined new courses and asked the Curriculum Committee which of those would be presented in the December Senate meeting.
Newborg said all of them. Hammond asked if all of the lined-out courses are dropped from the curriculum; Hsu explained that they represent changes in existing courses, e.g., moving from 300 to 400. Chino asked what the net gain of new courses was; Newborg answered thirteen and M. Enneking identified them. Howard inquired whether the Curriculum Committee had gotten an analysis of the impact of the new courses. Newborg replied no. Bierman wanted to know if the OAA had addressed that question. Erzurumlu reiterated that most of the courses are already in the program and are part of the accreditation requirements. In Electrical Engineering he identified the following as new courses: one of the ASE 350, 351, 352 sequence and ASE 371; the others represent changes in numbers or levels. Bates moved to table this portion of the program change until the courses are discussed in December, so that budgetary implications of the change are known. The motion passed. Heath talked about the perennial problem of the November and December Senate agenda and invited someone to come up with a solution.

Newborg moved that the Senate approve the request for changes in the certificate program in Public Health Studies. Chino wanted to know who does the approving of "other approved Sociology course." Chavigny said she did after conferring with Sociology; some good alternatives were available. The motion passed.

Newborg moved approval of the change of one course requirement in the BA/BS in Geography. Hammond noted that the rationale offered only discussed Geoq 204 and that 205 and 206 had different names in both sections. Brooké countered that the new names were already in the catalog. Dunbar pointed to the stereotyping language in the course title "Environment of Man" and was told that individual courses would be discussed in December. The motion passed.

Newborg moved that the Senate approve the undergraduate program change in Health Education. Lehman pointed out that it is the Community Health Education option that is being added; TSPC has already approved the 95-hour Health Education program. The motion passed.

Newborg moved approval of the BA/BS program change in Business Administration. The motion passed.

The Curriculum Committee moved to not approve the request for changes in the International Business Studies Certificate saying that two years of foreign language should be required of students participating in an overseas training program. Manning countered that of the 56 participating countries many do not require native speakers, among them Switzerland, Scandinavia, Japan and the Netherlands. On the other hand, Germany, France and Italy require language proficiency.* He also pointed out that business majors can earn either a B.A. or B.S. L. Nussbaum, Crowley and Buell expressed concern about sending students overseas without two years of formal language study. Hoffmann and Chino agreed and added that students with only three hours of social studies did not even know their own culture. They worried that we would send illiterates abroad and are abdicating our responsibility as a university. Instead, we should guard our reputation. Manning responded that PSU students have not embarrassed the University but have brought credit to it. E. Enneking asked how computer programming could be left out of the program, given the importance of computer science. Manning explained that the information is now included in different courses. Beeson asked if the department can use a waiver if only a small number of students are involved. Heath replied that department requirements can be waived but not University requirements. The motion not to grant the program change passed.

*All countries have identified cultural appreciation as a goal of this program, but not all require limited language proficiency.
2. On behalf of the Graduate Council, Goekjian moved the MAT/MST program change in Music for approval. The motion passed.

Goekjian moved that the request for program change in the MA degree in Theater Arts be approved. Middon moved to amend the proposed catalog statement to read "... two papers of acceptable scope on subjects chosen..." instead of "... two papers of acceptable length ...". The amendment passed and the main motion passed as amended.

Goekjian then moved acceptance of each of the following program changes: MAT/MST in Theater Arts, MA/MS in Geology, MA/MS in Economics, MA/MS in Psychology, MPA in Public Administration, and MA/MS in Applied Science. All motions were passed in turn.

Before adjournment, L. Nussbaum returned to Heath's point about the problem of the November and December Senate agenda. Sommerfeldt pointed out that presenting requests for course changes (November) before requests for program changes (December) would not really solve the problem. Chino suggested that half of the academic units could make presentations of course and program changes simultaneously in November and the other half in December. This would allow the Senate to see the total picture at one time. M. Enneking said that the Steering Committee will entertain suggestions for changing the present system.

The meeting was adjourned at 4:37 p.m.

The following addendum is presented by the Academic Requirements Committee:

Two problems arise from the juxtaposition of the November 3, 1980, amendment by the Senate to the policy on the use of "W" and "I" marks: "Withdrawal between the 4th and 8th week requires instructor approval"

1. It can be viewed as a contradiction to the preceding "He or she may withdraw for any reason before the end of the 8th week."

2. "... students are required to notify the instructor..." is made redundant in cases of withdrawal between the 4th and 8th week.

I suggest a simple editorial revision to the official wording which will not alter the intention of the policy as follows: "A student may withdraw with no record on the transcript up to the end of the 4th week of the term. As a courtesy students are advised to notify the instructor concerned of the intended or completed withdrawal. He or she may withdraw for any reason before the end of the 4th week, but withdrawal between then and the 8th week requires instructor approval. A student withdrawing after the end of the 4th week shall have a "W" recorded on his/her transcript."

Tony Middon, Chairperson, Academic Requirements Committee
November 18, 1980

Annual Report

To: Faculty Senate

From: University Curriculum Committee

The Committee has met and acted on the following curricular matters during the 1980 calendar year:

1. Reviewed and recommended to the Senate changes in existing programs in undergraduate education for 1981-1983. (Reported to the Senate in November.)

2. Reviewed and recommended against changes in the Certificate in International Business Studies. (Reported to the Senate in November.)

3. Reviewed and recommended to the Senate changes in existing courses, deletions of existing courses, and proposals for new courses at the undergraduate level for 1981-1983. (Reported to the Senate in December.)

The Committee expresses the following suggestions and concerns:

1. That Curriculum Committee members be members of their respective College, School, Division, etc. Curriculum Committees whenever possible. The Committee will forward this suggestion to the Committee on Committees for consideration.

2. That, for the purpose of uniformity throughout the University and possibly the State System, all departments review their policies on omnibus numbers. The Committee suggests that the next Curriculum Committee and Graduate Council gather information to coordinate omnibus numbered offerings.

The Chair expresses appreciation to all members of the Committee for the many hours of work spent in preparation for and at the meetings. The Chair especially thanks Jim Heath and Karen Tosi for their suggestions and advice.

Respectfully submitted,

Gwen Newborg, Chair

Committee members: Carl Abbott, Alma Bingham, David Guzman, Nan Teh Hsu, Alice Lehman, Thomas Morris, Earl Rees, Walter Shold, Nancy Tang, Robert Van Atta.

Consultants: Jim Heath, Karen Tosi.
TO: Faculty Senate
FROM: Dan Newberry, Chairperson

This report summarizes the activities of the Graduate Council for the calendar year 1980. The Council is responsible to the Faculty Senate for adjudicating petitions, recommending either approval or disapproval of course and program changes, new courses and new programs, and establishing and reviewing regulations governing the University's graduate programs. With these responsibilities, the Council must meet weekly in term with a sub-committee available during the summer.

The new University policy of publishing a biennial catalogue, instead of an annual one, has worked a hardship on the Council this year. Between the 1st of October and the end of the first week in November, the Council was forced to consider and make recommendations on 7 program changes and 262 course changes and new courses. Such a schedule guarantees that consideration will be hasty and superficial. The Council urges that the Office of Academic Affairs adjust the submission deadlines to prevent this from occurring in the future.

The Council was expanded in the Fall to include a representative from the Division of Engineering and Applied Science.

Major actions taken by the Council during the calendar year include:

1. Approved the new program proposal for the MPA Health Administration Option
2. Approved a new definition of the thesis for graduate programs in the creative arts; specifically the current MFA in Art program
3. Approved the Academic Requirements Committee's new policy on non-achievement marks, vis-a-vis graduate program policies.
4. Approved a policy on the reservation of graduate credits for transfer from University of Oregon and Oregon State University. (To be presented to the Faculty Senate for approval in 1981)
5. Began discussion on a graduate policy on academic honesty.
6. Discussed the role of the Council in adjudicating petitions to the Office of Graduate Studies.
The Council appreciates all of the help and advice it has received from members of the faculty during its deliberations. The Chairman appreciates particularly the cooperative attitude of the Council members this year and their willingness to put in long hours, and to rearrange schedules to be able to have meetings at reasonable times. The Office of Graduate Studies and Research and Dean Rauch have been more than cooperative in providing information, as was Robert Tufts, Registrar. Our appreciation and admiration to Lynne Bigelow, Office of Graduate Studies and Research, for her work with the Council Members:

Harold Adams - Social Work  
Charles Bolton - Social Sciences  
Zola Dunbar - Education  
Leo Foltz - Department of Continuing Education  
Greg Goekjian - Arts & Letters  
Ansel Johnson - Sciences  
Dan Newberry - Library  
William Rabiega - Urban Affairs  
Leonard Robertson - Business  
Loarn Robertson - H.P.E.  
Frank Terraglio - Engineering  
Stanley Rauch, Dean - Office of Graduate Studies & Research - Consultant  
Robert Tufts, Registrar - Consultant
TO: Faculty Senate

FROM: University Library Committee

RE: ANNUAL REPORT TO THE FACULTY SENATE

November 20, 1980

During the Spring and Summer terms of 1980, the search for a new Director for the Millar Library was completed. On August 18, 1980, C. Thomas Pfingsten, Associate Dean of Libraries, New York University, was appointed Director of the Millar Library.

The Library Committee's annual report to the Senate usually includes a survey of the Millar Library's annual budget; however, this year there was no budget for the Committee to review. Further, the Committee was shocked to learn that the Library would suffer a $374,608 cut, thanks to the shortfall in the state's general fund. This loss to the Library meant first, a reduction in journal and serial subscriptions. This cut came to about 10% of these funds. (A summary account of this reduction is attached to this report.)

The reduction in the purchase of serials was followed by the amazing and unbelievable news that the Library would not be allowed to purchase books during the 1980/81 fiscal year. There are no funds for new books; an intolerable state of affairs for the Library, the faculty, and the student body has become a mere fact. This news has, indeed, agitated faculty and students alike -- and all who have been heard on the matter are eager for relief of a very unfortunate state of affairs existing on a state University campus. (Only earlier commitments can be recognized, and small emergency funds are described in the attached budget description.) This cut has been pursued at length by the Committee: The immediate problems that it raises for the Library clientele -- students, faculty members, staff, general and academic readers from the Portland area -- is itself grim; the augmentation of the collection that is so necessary for the Library's services will not take place. The seriousness of the situation is clear, and the other academic libraries in the community have taken note of the matter -- even to the point of offering some help in the matter of serial subscriptions. They, however, cannot afford to take up any major share of the burden.

The Millar Library has received a donation of $8,000 from the Alumni Fund of the Portland State University Development Fund. This donation has been spread about among the colleges and other principal units of the University. The Committee is also aware of the increasing hazard to the nation's libraries of small editions very seldom reprinted -- especially in the scholarly areas. Further, this condition will worsen unless the Congress finds a solution to the publisher's loss of variable tax rates on new books held in stock. Other losses -- such as federal funding in some areas -- may also be in the offing.
Director Pfingsten has suggested to the Committee that there is a possibility of some relief early in 1981. At the moment, we proceed without a book-purchase budget. While the emphasis here is on buying books, the Director has made it quite clear that the binding of periodicals, and other difficulties loom large for the Library staff.

During the Winter and Spring quarters of 1980, Dean Hoffman chaired an ad hoc University Committee, appointed by President Blumel to make recommendations relative to the proposed expansion of the Millar Library. This Committee -- the "User Committee for the Millar Library" -- completed its work and forwarded its recommendations to President Blumel during the Summer of 1980. The ad hoc committee's work was of great interest to the Library staff and of interest, of course, to the Library Committee -- and often entered the discussions during the regular meetings. The proposed expansion has, of course, been deferred.

The University Library Committee believes that the relief of the Library deserves first-priority consideration. Further, the Committee recommends that the Library funds be restored as fully as possible and as soon as possible. The Committee also very strongly appeals to the Faculty Senate for support in gaining restoration of these funds for the purchase of books and for binding and similar functions that are presently suffering, and for support in searching for means to assure the University, the student body, the faculty, and the community that the Millar Library will never again suffer such a loss.

Baxter D. Wilson
For the Committee

Carol Burden
Enid Cox
Thomas Gihring
Susan Karant-Nunn
Richard Sapp
Mary Fox Spadavecchio
Dale Walhood, Chairperson
Horace White
Baxter Wilson
The beginning library materials budget on July 1 was $848,854 (an increase of 10.8% over fiscal year 1979/80), but in August that sum was reduced by one-third to $565,903. The serials costs estimates representing on-going commitments made during the summer indicated there would have to be set aside $611,000 for the subscriptions and standing orders for the year. A $46,000 deficit even with a freeze on book purchasing and binding, was projected. Clearly, some subscriptions and standing orders had to be cancelled immediately, and each subject floor was levied a 10% cut in serials dollars. Since renewal bills were coming in every day, quick decisions on which titles to cancel had to be made. Subject librarians consulted with available faculty as much as possible in July and August.

Approximately 650 subscriptions and standing orders were dropped, or about 6% of the serials titles. The discrepancy between the 10% cut in dollars and the 6% cut in numbers is explained by the fact that inordinately expensive subscriptions were the first to be evaluated for possible cancellation. The lists of the specific subscriptions dropped is available on each subject floor and in the office of the Coordinator of Collection Development.

The $60,000 accrued from the cuts covered the $46,000 projected deficit plus a small reserve in case the serials costs estimates were low. Of the remaining sum, $1,000 was allocated to each subject librarian for emergency monographic purchases during the year, and the remainder was used for the purchase of general material directly related to course support, such as reserve books.
November 24, 1980

To: Faculty Senate members/Portland State University

In addition to its ongoing function of reading and determining action on student petitions, the SSC was involved this year in three major issues: data gathering from faculty survey on early semester versus regular term preferences; reinstitution and refinement of the Academic Support Program (ASP), policy statement for non-achievement marks W and I.

Term Versus Semester Survey

Early in the year, former Chairman Lockwood presented results of the campus survey to the committee. SSC had previously designed the instrument which was used in the survey. Lockwood reported that out of 429 responses, 61.4% had favored the early semester and 39% wished to retain the quarter system. Particulars of the survey results are available in both the Office of the Registrar and the Office of Academic Affairs.

Academic Support Program (ASP)

Since more and more student petitions revealed need for a special support program, SSC sought to resurrect, in revised form, the Academically Disqualified Student Program (ADSP). SSC members suggested requirements for such a program. Then, Jack Lutes (Student Affairs) and Jim Heath (consultant), aided by our suggestions, streamlined previous program requirements and presented them in a subsequent SSC meeting. The program, now headed by Lutes, is named Academic Support Program (ASP). Currently there are 80 students enrolled and approximately 35-40% of them are foreign students. Under this program, students who have been disqualified from PSU may be placed in ASP where they will be limited to a 12 hour course load and given careful academic counseling. ASP students must bring up their GPAs to an acceptable level within a designated number of terms. Upon doing this, they may then submit a petition to SSC for official reinstatement to the university. Transfer students are not eligible for this program and are advised to establish a B level GPA as a non admitted student at PSU or a local community college. Further details of ASP are available through the Student Affairs and Academic Affairs offices.

W and I policy

Major committee effort during the spring and summer of this year focused on revision and clarification of university policy on the non achievement marks W and I. Based on data provided by Tony Midson, Academic Records and at the request of acting Vice President for Academic affairs Margaret Dobson, the committee made substantial suggestions for improvement of the existing policy. These suggestions were incorporated into the new policy on W and I which Midson and Griffiths put into final form. Extensive work on the language and intent of policy was done in a series of meetings between Midson and Griffiths with successive drafts sent intermittently to SSC and Graduate Council members. In two instances, committee members involved were asked to vote their preferences to certain options which had been proposed. Midson presented the revised policy to Faculty Senate. It was passed with some modification on October 6, 1980 and will be implemented Winter Term, 1981. A basic change in policy is that the Withdrawal mark will not be an option for faculty on the grading register. Rather, students must initiate the procedure. They may withdraw up to the 8th week. After this time, if they wish to withdraw, they must petition the DEADLINES APPEALS COMMITTEE. Students may withdraw up to the 4th week with no record of W on their transcripts. (This is a shorter period than the present 6 week limit and it corresponds to the period determining FTE enrollment.)
Other Business

In a recent meeting, SSC reviewed a University of Oregon Academic Standards Committee Faculty Report. The committee also discussed the question of whether the 2.3 GPA, now used as one of two criteria for academic disqualification, is a realistic figure. (Students on warning must bring cumulative GPA's up to above warning levels or earn a GPA of 2.3 for the given term to avoid being disqualified.) The committee recommended that data be gathered regarding this requirement in anticipation of further discussion on the issue.

Committee Action on Petitions

The breakdown of committee action on petitions for the period from January 30, 1980 to November 10, 1980 is as follows:

**Reinstatement Petitions**
- Reinstated: 67
- Denied: 29
- ASP recommended: 45

**Admissions Petitions**
- Admit: 103
- Deny: 14

**P/NP and Vice Versa**
- Granted: 66
- Denied: 23

**Extension of Incomplete**
- Granted: 71
- Denied: 24

**Registration change after Deadline**
- Granted: 186
- Denied: 15

**Removal of Grades from Record**
- Granted: 3
- Denied: 6

**Waive 12 hour limit set by ASP**
- Deny: 1

Respectfully submitted,

Susan Griffiths, Chairperson SSC

Members: Tom Benson, Sidney Lakefish, Bob Lockwood, David Martinez, Willert Rhynsburger, Linda Parshall

Consultants: Jim Heath, Bob Tufts
The following explanation is prepared in response to the Faculty Senate request of November 3, 1980:

• New course requests affecting proposed program changes (81-83) in engineering and applied science.

<table>
<thead>
<tr>
<th>Course</th>
<th>Added Instructional FTE Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASE 351</td>
<td>Replaces currently required ASE 361 (renumbered from 461) for electrical engrg. majors only; offered previously as ASE 410. No</td>
</tr>
<tr>
<td>ASE 371</td>
<td>New course Yes</td>
</tr>
<tr>
<td>ASE 425,426</td>
<td>Offered previously as ASE 410 No</td>
</tr>
<tr>
<td>ASE 457,458,459</td>
<td>Offered previously as ASE 410 No</td>
</tr>
<tr>
<td>ASE 460</td>
<td>Replaces currently required ASE 213 for electrical engrg. majors only; offered previously as ASE 410 No</td>
</tr>
</tbody>
</table>

• New course requests not affecting proposed program changes (81-83) in engineering and applied science.

<table>
<thead>
<tr>
<th>Course</th>
<th>Added Instructional FTE Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASE 468(grade)</td>
<td>Offered previously as ASE 410 No</td>
</tr>
</tbody>
</table>

• SUMMARY: The additional instructional FTE required for ASE 371 will be offset by dropping ASE 356, which was previously required for civil, mechanical, and structural engineering majors. Therefore, there will be no net additional FTE required to implement all proposed courses.
November 18, 1980

To: Faculty Senate

From: University Curriculum Committee
Gwen Newborg (Chair), Carl Abbott, Alma Bingham, David Guzman, Nan Teh Hsu, Alice Lehman, Thomas Morris, Earl Rees, Walter Shold, Nancy Tang, Robert Van Atta.

Attached is a summary of all the proposals for new courses and proposals for changes in existing courses which have been acted upon by the appropriate faculty and administrative bodies during the 1980 calendar year. The Curriculum Committee recommends that the Faculty Senate approve the following changes with the understanding that the course proposals are approved for course content. The Curriculum Committee does not wish to imply that for those courses which have budgetary considerations it is recommending new funds be authorized to offer the courses in any given academic year.

The Curriculum Committee recommends that the Faculty Senate approve:

1. All undergraduate requests from the College of Arts and Letters.
2. All undergraduate requests from the College of Social Science.
3. All undergraduate requests from the College of Science.
4. All undergraduate requests from the School of Business Administration.
5. All undergraduate requests from the School of Education.
6. All undergraduate requests from the School of Health and Physical Education.
7. All undergraduate requests from the Division of Engineering and Applied Science.
8. All undergraduate requests from the School of Urban Affairs.

Please note the following additions and corrections to the Summary:

1. History addenda should be inserted after p. 14.
2. On p. 6 add Old Courses Dropped, TA 112, TA 113, Introduction to Theater (3, 3).
3. Omit p. 44.
   Time varying Maxwell's equations. Plane wave propagation and refraction. The theory of transmission lines, waveguides and antennas is studied. Prerequisite: ASE 350.

(over)
6. On p. 53, second to last line, (Formerly ASE 351...) Not Ph 351.

MEMORANDUM

TO: Faculty Senate
FROM: Graduate Council
Dan Newberry, Chairperson

November 18, 1980

The Graduate Council recommends approval of the course changes, drop proposals, and new course proposals for the following:

1. College of Arts and Letters - all proposals
2. College of Social Sciences - all proposals

It should be noted that, in the case of the History Department's proposals for renumbering courses, the Graduate Council does not have the authority to assign specific numbers. The Office of Academic Affairs handles this task. Also, for Geog. 484 (Grad.) and for Hst. 447 (Grad.) the P/NP option is not available to graduate students.

3. College of Sciences - all proposals with the exception of PHS. 510. 500 level courses cannot be offered without a graduate program.
4. School of Business Administration - all proposals
5. School of Education - all proposals with the exception of
   Coun. 502         Coun. 504
   Ed. 502           Ed. 504
   Lib. 502          Lib. 504
   Ed. Ad. 502       Ed. Ad. 504

These omnibus course numbers are now used only in limited numbers for special situations. The Graduate Council recommends that the use of these numbers not be approved until the Council has had time to discuss the feasibility of expanding our omnibus numbers on a campus-wide basis. The Council expects to have a recommendation for Senate consideration during Winter Term 1981.

6. School of Health and Physical Education - all proposals
7. School of Social Work - all proposals
8. Division of Engineering & Applied Science - all proposals
9. School of Urban Affairs - all proposals
Changes in Old Courses

Eng 540. Problems and Methods of Literary Study. (3-5)  
(Change in credit hours from (3) to (3-5).)

Wr 222. English Composition: Writing Research Papers. (3)  
An elective course. The techniques for compiling and writing research papers. Attention to available reference materials, use of library, taking notes, critical evaluation of evidence, and conventions for documenting academic papers. Practice in organizing and writing a long expository essay based on use of library resources. Prerequisite: Wr 121. These 3 credits may not be used for non-major distribution requirements or for the university composition requirement.  
(Removal of the restriction against use of course for fulfilling requirements of any major program.)

FOREIGN LANGUAGES

New Course

Span 150, 151. First-Year Spanish. (6, 6)  

MUSIC

New Courses

MuP 491. Applied Music in Secondary Area. (1-2) (Grad)  
Private instruction in voice, keyboard, guitar, and orchestral or band instruments, not to include the student's major performance area (for which the appropriate course is MuP 590).

Mus 511. Band Arranging. (3)  
Designed to develop fundamental skills in arranging music for concert, marching and stage bands and small wind and/or percussion ensembles. Transcription skills will also be studied. Emphasis will be on practical application of material presented. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor.
New Courses - Continued

**Mus 512. Orchestral Arranging.** (3)
Instruction in writing for instruments used in large orchestras, showing basic techniques of scoring for string quartet, woodwind and brass quintet, and percussion ensemble. Practical application through scoring of piano music for various orchestral groups. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor.

**Mus 513. Choral Arranging.** (3)
Study of voice types, text setting, and techniques of writing for various combinations of voices. Practice in arranging melodies for two-, three-, and four-part choruses, mixed and unmixed. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor.

**Mus 520. Analytical Techniques.** (3)
A study of the formal structure of musical compositions of various styles with the purpose of discovering the sources of unity, variety, order and expression present in them. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor.

**Mus 532. Band Wind Literature.** (3)
A study of literature for ensembles of wind and wind/percussion instruments from about 1600 to the present. Historical perspective will be gained through reading, style-analysis, and listening. Attention will be given to the practical application of band literature in elementary and secondary teaching situations. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor.

**Mus 533. Orchestral Literature.** (3)
A historical survey of the music associated with the symphony orchestra from the development of each orchestral instrument to the present day. Intensive study of those works of great significance is achieved through score study and analysis of several interpretations through recordings. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor.
Mus 534. Choral Literature. (3)
This course offers an investigation and analysis of literature for choir of all sizes, for secular and sacred use, particularly in relation to use in public school at the junior high and high school levels, and in church choir situations. A survey of the development of choral literature from c. 1400 to the present, with examples via listening and study of scores, will be included. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor.

Mus 537. Music History: The Baroque Period. (2)
Intensive, analytical study of the history of music from 1600 to 1750, and the relationship of events of this period to the historical events that precede and follow the period. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor. Normally limited to graduate music majors only.

Mus 538. Music History: The Classical Period. (2)
Intensive analytical study of the history of music from 1750 to 1825, and the relationship of events of this period to the historical events that precede and follow the period. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor. Normally limited to graduate music majors only.

Mus 539. Music History: The Nineteenth Century. (2)
Intensive analytical study of the history of music of the nineteenth century, and the relationship of events of this period to the historical events that precede and follow the period. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor. Normally limited to graduate music majors only.

Mus 540. Music History: The Twentieth Century. (2)
Intensive, analytical study of the history of music of the twentieth century, and its relationship to contemporary historical events. Prerequisite: Successful completion of the department's Graduate Entrance Examination or consent of instructor. Normally limited to graduate music majors only.
PHILOSOPHY

New Course

Phl 205. Elementary Logic: Predicate Logic. (3)
A continuation of Phl 204 Elementary Logic: Propositional Logic. The primary emphasis will be on formal methods for dealing with arguments involving the terms "all" and "some". Major topics will include the method of deduction for showing predicate logic arguments valid, and the method of counter-example for showing such arguments invalid. Prerequisite: Phl 204.

Changes in Old Courses

Phl 203. Elementary Logic: Practical Logic. (3)
A course designed to improve ability at reasoning and critical assessment. The primary emphasis will be on practical methods, involving study of editorials, essays, propaganda, advertisements, etc.
(Change in title.)

Phl 204. Elementary Logic: Propositional Logic. (3 or 5)
A course in basic formal logic. Major topics include the method of deduction for showing propositional arguments valid and the method of counterexample for showing such arguments invalid. Truth table methods, tests for consistency, and syllogistic arguments are optional topics.
(Formerly Phl 203. Elementary Logic. (3 or 5) Change in number, title, and description.)

Phl 207. Elementary Aesthetics. (3 or 5)
(Change in number from Phl 204 to Phl 207.)

Old Course Dropped

Phl 310. Theories of Meaning. (3)

SPEECH COMMUNICATION

Change in Old Course

Sp 477. Clinical Hearing Therapy and Diagnostic Procedures. (1-3)
(Grad)
Supervised clinical practicum in the diagnosis and rehabilitation of hearing disordered children and adults; staff seminars in case dispositions. Maximum: 18 credits. Prerequisites: Sp 483 & Sp 490 or consent of instructor.
(Change in prerequisites.)
New Course

Sp 435. Advanced Studies in Interpersonal Communication. (3) (Grad)
Central issues in theoretical development and investigative/methodological approaches pertaining to dyadic and small group communication processes. Systems, role and exchange theories of interpersonal communication are examined both in terms of theoretical value for understanding, prediction and control and in relation to empirical work generated by and associated with those theories. Interpersonal communication research projects required. Prerequisite: Sp 235 or instructor consent.

THEATER ARTS

New Course

TA 145. Acting Workshop. (3)
Rehearsal, performance, and analysis of scenes directed by Directing I students for studio presentation and critique. Prerequisite: TA 141 or consent of instructor.

TA 510. Selected Topics. Credit to be arranged.

Changes in Old Courses

TA 111. Introduction to Theater. (3)
This course is intended as a general introduction to the art of the theater: acting; directing; playwriting; scenic, costume, and lighting design; dance, and music. Emphasis is placed upon the performing arts today rather than upon the history or origins of the theater. The class is structured around a series of live performances and events in the Portland area, with attendance at these events mandatory.
(Formerly TA 111, 112, 113. Introduction to Theater. (3, 3, 3) Division of sequence; omission of TA 112, 113; change in description.)

TA 252. Makeup (2)
A study of the basic principles of the art and technique of stage makeup.
(Change in description.)

TA 315. Technical Theater Drawing. (2)
A course designed to develop drafting and drawing skills as they apply to the theater. Prerequisite: TA 211 or consent of instructor.
(Change in title, description and prerequisites.)
Changes in Old Courses - continued

TA 325. Costume Construction. (3)
A practical study of stage costume construction techniques, beginning
and advanced. Students will participate in the construction of
costumes for departmental productions. Maximum: 6 credits.
(Maximum credits added.)

TA 352. Advanced Makeup. (2)
Training in advanced techniques of stage makeup. Prerequisite:
TA 252 and/or consent of instructor.
(Change in description and credit hours from (3) to (2).)

TA 411. Scene Design. (3) (Grad)
Basic principles of scenic design for the theater. Special work
required for graduate credit. Prerequisites: TA 311 and TA 315 or
consent of instructor.
(Change in prerequisites.)

TA 474. Playwriting. (3) (Grad)
(Formerly Playwriting for Directors. Change in title.)

Dropped Courses

TA 112, 113
The College of Social Science proposes the addition of 81 credit hours and the deletion of 18 credit hours for a net increase of 63 credit hours. A substantial portion of the new courses requested are in connection with the assignment of discrete numbers by the Public Administration Program to offerings the Program wishes to establish on a permanent basis. The History Department has reorganized and renumbered almost all of its entire curriculum, resulting in the addition of a number of new courses, the deletion of various old courses not recently taught, as well as making the necessary revisions in its current offerings. The Anthropology, Geography, and Psychology Departments also are requesting assignment of discrete numbers to courses offered during the past several years under omnibus numbers. In addition, various requests in connection with changes to present offerings and degree requirements in order to clarify and update content are made by the Anthropology, Economics, Geography, and Sociology Departments.

**ANTHROPOLOGY**

**New Course**

Anth 476. Advanced Topics in Human Evolution. (3) (Grad)

In-depth exploration and analysis of current problems in the study of human evolution. Emphasis is on articulation of evolutionary theory with fossil and other relevant evidence. Prerequisites: Anth 320 or instructor consent. Anth 321 and/or Mth 364 are strongly recommended.

**Changes in Old Courses**

Anth 320. Human Evolution. (3)

A survey and analysis of the data, theory and methods relevant to the study of human evolution. Emphasis is on the period from the Miocene to the late Pleistocene. Prerequisites: Anth 101, 102, 103 or instructor consent.

(Formerly Anth 320, 321, 322. Physical Anthropology. Division of sequence; change in title and description.)

Anth 321. Population Dynamics. (3)

The study of the principles of mendelian and population genetics as they apply to the evolution of human populations and the maintenance of diversity of modern populations. Emphasis is also placed on the articulation of genetic methods with evolutionary theory. Prerequisites: Anth 101, 102, 103. Mth 95 or instructor consent. Anth 320 and Bi 341 would be helpful.

(Formerly Anth 320, 321, 322. Physical Anthropology. Division of sequence; change in title and description.)
ANTHROPOLOGY - Continued

Changes in Old Courses - Continued

Anth 322. The Biology of Human Variability. (3)
The study of the causes and significance of biological variation in contemporary human population. Prerequisite: Anth 101, 102, 103 or instructor consent. Anth 320 and 321 are strongly recommended. (Formerly Anth 320, 321, 322. Physical Anthropology. Division of sequence; change in title and description.)

BLACK STUDIES

New Courses

BST 414. Racism. (3) (Grad)
A survey of the pertinent social-psychological literature on individual and cultural forms of racism in America. The rationalizations, processes and machinery of oppression as constructed by White European and American governments which control and exploit the resources of non-White peoples will be examined. Special attention will be paid to the theoretical social-psychological explanations of Black/White differences. Prerequisites: Psy 334 and 335 or Soc 334 and 335, or consent of instructor.

BST 417. The Afro-American Family. (3) (Grad)
A review of the present-day lifestyles of Afro-American families in the United States. Special attention is placed on cultural variations by class as they relate to the Afro-American family. A careful study of the appropriate social science literature commonly used to describe the Afro-American family will provide more accurate insights. Prerequisites: Soc 461 or consent of instructor.

BST 460. Community Economic Development and Poverty. (3) (Grad)
A review of the factors and interactions related to the causes and realities of poverty in America. The course will also include examination of the various theories for solution of the poverty problem. Prerequisites: Econ 201, 202, 203 or consent of instructor.

BST 467. Political Economy of African Underdevelopment. (3) (Grad)
An examination of the causes of poverty and underdevelopment of the African continent. A comparative analysis of pre-colonial, colonial and post-colonial circumstances will be conducted. Prerequisites: Econ 201, 202, 203 or consent of instructor.

BST 468. African Economic History. (3) (Grad)
An examination of the economic status of Africa from the pre-colonial period to the post-colonial present day. The course will include a comparative analysis of the different economic policies of various African countries in each era. Prerequisites: BST 467 or consent of instructor.
Changes in Old Courses

BST 411. Afro-American History Seminar. (3) (Grad)
This course will provide an in-depth analysis of critical topics and issues in Afro-American history. The focus will be topical rather than chronological and the approach will emphasize specific periods, individuals, or relevant developments for a concentrated treatment in a seminar environment. Prerequisites: BST 202, 203 or 204; Hst 201, 202 or 203; or consent of instructor.
(Change in course description; addition of prerequisites and grad option.)

BST 412. Oregon Afro-American History. (3) (Grad)
An examination of the Black experience in Oregon history. The course will include coverage of the slavery controversy in early Oregon development as well as the individual contributions of Blacks to the growth of the state. Additional topics will include the Black migration of World War II, Vanport Flood, and various legislative actions related to Black status in Oregon. Prerequisites: BST 202, 203, 204; or Hst 201, 202, 203; or consent of instructor.
(Addition of prerequisites and grad option.)

BST 413. Slavery. (3) (Grad)
An examination of the institution which has played a central role in establishing the status and position of the modern Black population in American society both in physical and psychological terms. The course will attempt to put information and understandings of slavery in the proper and accurate context of an institution which has been a part of the human experience since the ancient world and which has a legacy and implications far beyond the racially associated perceptions usually attached to it. The approach will be through the comparative analysis of the numerous forms the institution of slavery has assumed in human history. Prerequisites: Hst 150, 151, 152 or consent of instructor.
(Change in description; addition of prerequisite and grad option.)

BST 416. Afro-American Urban Education Problems. (3) (Grad)
Course examines the education systems in major cities being inherited by Afro-Americans. The relationship between public and private education will be studied for impacts on Afro-Americans. Educational system response to Afro-American enrollment will be discussed. Moreover, pertinent literature, e.g., the Coleman Report, Jensen's thesis, and others will be introduced with respect to their overall effect on the curricula available to the Afro-American child. Topics of concern include community control, citizen involvement,
Changes in Old Courses - Continued

alternative education forms, race relations, faculty-staff responses, modern trends, etc. Prerequisites: junior, senior, or graduate level standing.
(Formerly Black Urban Education Problems. Change in title and description; addition of prerequisite and grad option.)

BST 419. Afro-American Women in America. (3) (Grad)
A course designed to investigate the evolution of the Afro-American female experience from preslavery to the present period. Afro-American pioneers will be viewed as participants in antislavery, suffrage and civil rights movements. Modern complexities of psychological conflicts and insecurities, economic survival, liberation, club movement and sexual jealousies will be examined. Information relative to the development of Afro-American women as part of the total human experience will be emphasized. Prerequisites: BST 200, WS 101, or consent of instructor.
(Formerly Black Women in America. Change in title and description; addition of prerequisite and grad option.)

BST 420. Afro-American Experience in the Twentieth Century. (3) (Grad)
An upper division seminar course designed to examine within a factual framework and on a sound conceptual foundation the history of the Black experience in the Twentieth Century. Primarily a discussion reading format, augmented with speakers and films. Special consideration will be given to developing in the student the skill to reexamine traditional concepts and approaches to the study of the Black experience within the broader context of mainstream developments in American life and history. Prerequisite: Hist 203 or consent of instructor.
(Addition of prerequisite and grad option.)

BST 421. Afro-American Writer in America Seminar. (3) (Grad)
A concentrated examination of significant Afro-American literary figures and their impact on American Arts and Letters. The course will identify each quarter a particular author or literary period of writing and then read, analyze and discuss the major works and the background information of that period. Special consideration will be given the relationships between the topic of focus and the larger spheres of American and world writing. Prerequisites: BST 221; Eng 107, 108, 109; Eng 253, 254, 255; or consent of instructor.
(Formerly Black Writer in America Seminar. Change in title and description; addition of prerequisite and grad option.)
Changes in Old Courses - Continued

BST 430. Afro-American Political Thought, 1850-1920. (3) (Grad)
An in-depth examination of the political theory of Afro-American leaders between 1850-1920 and an impact of that thought on American political thought. Prerequisite: BST 230 or consent of instructor.
(Formerly Black Political Thought I. Change in title and description, addition of prerequisite and grad option.)

BST 431. Afro-American Political Thought, 1920-present. (3) (Grad)
An in-depth examination of the political theory of Afro-American political leaders between 1920-1970 and the impact of this thought on American political thought. Prerequisite: BST 230 or consent of instructor.
(Formerly Black Political Thought II. Change in title and description; addition of prerequisite and grad option.)

BST 484. Afro-American Community Development. (3) (Grad)
Designed to investigate processes of community development for their application to urban Afro-American communities. Topics include community development, community organization, ghettos as colonies, citizen participation, roles of change agents, social planning, and social change implications. Prerequisites: BST 200 or consent of instructor.
(Formerly Community Development in Black Ghettos. Change in title and description.)
COLLEGE OF SOCIAL SCIENCE - continued

GEOGRAPHY

New Courses

Geog 201. Oregon. (3)
A study of the environment and resources of Oregon. Emphasis will be on such elements as landforms, climate, soils and vegetation; the natural resources that provide the base for many of the state's economic activities; and the human utilization of these resources.

Geog 313. Geographic Backgrounds to World Affairs. (3)
An examination of major world trouble spots in the light of long-standing political-geographic realities, including ethnic group rivalries, economic disparities, and conflicting historical claims. Designed for persons seeking perspectives on current events.

Geog 484. Hydrology. (3) (Grad)
A detailed analysis of the physical processes of the hydrologic cycle, emphasizing an applied approach for the purposes of resource management and environmental analysis: precipitation, runoff processes, evapotranspiration, soil water, flooding and floodplain utilization, and techniques of hydrologic data analysis. Prerequisites: Geog 208 or 209, or G 201, 202.

HISTORY

New Courses

Hst 369. Habsburg Empire. (3)
A survey of the history of the lands and peoples of Central Europe ruled by the Habsburg dynasty from the late middle ages until 1918.

Hst 440. Medieval England. (3) (Grad)
An advanced examination of England from the Anglo-Saxon to 1450 covering selected topics in political, religious, social and intellectual history.

Hst 441. Tudor England. (3) (Grad)
An advanced examination of political, intellectual and social change in Tudor England including the Henrician revolution in government, the English Reformation, the Elizabethan renaissance and the crisis of the aristocracy.

Hst 447. Irish History. (3) (Grad)
A survey of Irish history from Celtic times to the present which attempts to increase understanding of the complexities of 20th century Irish problems through an examination of their historical roots--social, religious, political, economic and intellectual.

Hst 456. The Protestant Reformation of the Sixteenth Century. (3) (Grad)
A survey of the history of Europe during the first half of the sixteenth century, the so-called Reformation era. It will treat religious, intellectual, political, social and economic developments that helped
create the setting for the Reformation, as well as the course of events that constitutes the Reformation, the personalities and intentions of the major reformers, the reaction of the Catholic Church, and the consequences of reform.

Hst 473. Russian Expansion to the Pacific and North America, 1580-1867. (3) (Grad)
This course will examine the following: historical literature about Russian expansion; Muscovite-Russian society on the eve of expansion; Moscovy's eastern adversaries; the conquerors—the Stroganovs, the cossacks, and the promyschleniks; the direction of Russian expansion in the 17th century; the administration of the colonial empire; attempts to establish relations with China; attempts to establish relations with Japan; Russian penetration to Alaska and California and imperial policies in Asia and the North Pacific.

Hst 495. Film and History. (3) (Grad)
The study of selected topics of modern history through the viewing and analysis of important documentaries and feature films. Emphasis is on the application of techniques of historical source criticism to the varied information preserved and transmitted in cinematic form. The subject matter will vary from term to term. (Maximum number of credits is 9: 3 credits each for 3 courses with different topics.)

Changes in Old Courses

Hst 150, 151, 152. History of Western Civilization. (3, 3, 3)  
(Formerly Hst 101, 102, 103. Change in numbers.)

Hst 190, 191, 192. Eastern Civilizations. (3, 3, 3)  
(Formerly Hst 104, 105, 106. Change in numbers.)

Hst 300. The American Colonies, 1492-1763. (3)  
(Formerly Hst 484. Change in number.)

Hst 301. The American Revolution and Constitution, 1763-1789. (3)  
(Formerly Hst 485. Change in number.)

Hst 302. The Age of Hamilton Jefferson, 1789-1815. (3)  
(Formerly Hst 486. Change in number.)

(Formerly Hst 457, 458, 459. Change in numbers.)

Hst 310, 311, 312. The United States in the 20th Century. (3, 3, 3)  
(Formerly Hst 480, 481, 482. Change in numbers.)
Changes in Old Courses - Continued

Hst 330, 331, 332. Latin America. (3, 3, 3)
(Formerly Hst 350, 351, 352. Change in numbers.)

Hst 340, 341, 342. English History. (3, 3, 3)
(Formerly Hst 304, 305, 306. Change in numbers.)

Hst 351. Classical Greece. (3)
(Formerly Hst 424. Hellenic History. Change in number and
title.)

Hst 352. Roman Republic. (3)
(Formerly Hst 441. Change in number.)

Hst 356. Medieval Europe: 300-1300. (3)
A survey of political, cultural, intellectual, religious, social,
and economic aspects of this millennium, including among other
topics the decline of Roman power in Western Europe, the rise of the
Franks, the Carolingian empire, the spread of Roman Catholicism, and
the so-called Renaissance of the twelfth century.
(Formerly Hst 426. Medieval Europe, Part I, 400-1200. Change
in number, title, and description.)

Hst 357. Early Modern Europe: 1300-1550. (3)
An examination of the transition from medieval to early modern
period. Among subjects discussed will be disasters of the four­
teenth century including the Black Death and the Hundred Years' War;
the triumph of nominalism; humanism; the Italian cities; and the
Protestant Reformation.
(Formerly Hst 427. Medieval Europe, Part II, 1200-1500.
Change in number, title, and description.)

Hst 360, 361, 362. Europe Since the Renaissance. (3, 3, 3)
Political, social, economic, and cultural trends from the sixteenth
Hst 362: 1914-present.
(Formerly Hst 429. Europe 1648-1774, and Hst 342, 343. Europe
since 1789. Change in numbers, titles, and descriptions;
delete prerequisites.)

Hst 366, 367, 368. History of Modern Italy. (3, 3, 3)
(Formerly Hst 436, 437, 438. Change in numbers.)

(Formerly Hst 454, 455, 456. Change in numbers.)
HST 411. Historical Museums. (3) (Grad)
Administration of historical museums; curatorial methods, collections, and exhibits; history of museums; museums as historical sources. Sequential with Hst 412. Prerequisites: 12 credits in American History, or consent of instructor.
(Formerly Hst 414. Sources of Regional History: Collections. Change in number, title, and description.)

HST 412. Historical Research Libraries. (3) (Grad)
Administration of historical libraries; services; collections and conservation; cataloguing; bibliography of history and culture as represented in historical libraries. Sequential with Hst 411. Prerequisite: Hst 411, or consent of instructor.
(Formerly Hst 416. Sources of Regional History: Interpretations. Change in number, title, and description.)

HST 413. Historical Societies. (3) (Grad)
Administration and activities of: publications, oral history, education programs, volunteer services, historic preservation, merchandizing shop, building operation. Sequential with Hst 411 and 412. Prerequisites: 12 credits in American history, or consent of instructor.
(Formerly Hst 415. Sources of Regional History: Bibliography. Change in number, title, and description.)

HST 414, 415, 416. U. S. Cultural History. (3, 3, 3) (Grad)
The relation of cultural attitudes, values, and beliefs to the American historical experience. Hst 414: 1600-1800, European legacy and Native Americans; Puritanism and mission; race, class and ethnicity; American Enlightenment and Revolution; cultural nationalism. Hst 415: 1800-1900, Jacksonian democracy and self-made man; Manifest Destiny and Native Americans; industrialism and pastoralism; slavery, Black culture, and abolitionism; social reform and Protestant ferment; culture of corporate capitalism. Hst 416: 1900-1980, crisis of the 1890's; Progressive faith; cultural conflicts of 1920; Depression realism; anti-communism and corporate culture: fragmentation of national consensus. Prerequisites: Hst 201, 202, 203, or consent of instructor.
(Formerly Hst 460, 461, 462. American Cultural History. Change in numbers, title and description.)
Hst 418. Social History of the United States, Part I. (3) (Grad)
This course is the first part of a three-quarter examination of United States social history. It examines (1) how the interaction of three peoples--European, Native American, and African--shaped early American society in the northern, middle, and southern colonies; (2) the social, economic, and cultural role of the family; (3) the effects of demographic patterns upon community and class structure; (4) economic development and urban growth; and (5) the consequences of the war for independence upon colonial life and labor. Readings are drawn from primary sources as well as recent historical studies.
(Formerly Hst 465, 466, 467. Social History of the United States. Change in number, title, and description; division of sequence.)

Hst 419. Social History of the United States, Part II. (3) (Grad)
This course is the second part of a three-quarter examination of United States social history. It examines (1) the consequences of northern industrial development, southern plantation slavery, and western agricultural and mineral exploitations upon family, worker, and community; (2) transportation, technology, and the growth of an urban network; and (3) the immigrant and the labor force under the conditions of maturing industrial capitalism. Readings are drawn from primary sources as well as recent historical studies.
(Formerly Hst 465, 466, 467. Social History of the United States. Change in number, title, and description; division of sequence.)

Hst 420. Social History of the United States, Part III. (3) (Grad)
This course is the third part of a three-quarter examination of United States social history. It examines (1) the industrialization of rural society; (2) suburban growth and urban decay; (3) race, class and the fractured city; and (4) the professions and the family, church, and community. Readings will be based upon primary sources as well as recent historical studies.
(Formerly Hst 465, 466, 467. Social History of the United States. Change in number, title, and description; division of sequence.)

Hst 421, 422, 423. American Diplomatic History. (3, 3, 3) (Grad)
The history of American involvement in world affairs from colonial times to the present. Emphasis on America as the object of European diplomacy; winning and maintaining independence, continental expansion and civil war; American intervention in the Far East, imperialism and world war; political isolation, World War II, the Cold War and American globalism. Prerequisites: Hst 201, 202, 203, or consent of instructor.
(Formerly Hst 473, 474, 475. The Diplomatic History of the United States. Change in numbers, title, and description.)
Hst 424, 425. History of the Westward Movement. (3, 3) (Grad)
A description of the westward movement into the various geographic regions
of the nation and an evaluation of the significance of this phenomenon
for the American people, both contemporaneously and subsequently. Social,
cultural, economic, and political aspects of the migration process will be
examined. Hst 424: the Atlantic seaboard to the Mississippi.
Hst 425: the trans-Mississippi West. Prerequisite: upper division
standing or consent of instructor.
(Formerly Hst 476, 477. History of the West. Change in number,
title, and description.)

Hst 426. History of the Pacific Northwest. (3) (Grad)
The social, cultural, economic, and political aspects of the development
of civilization in Oregon and Washington. The history of the region
is related to national and international contexts. Prerequisites:
Hst 201, 202, 203, or consent of instructor.
(Formerly Hst 478. Change in number, description and pre-
requisites.)

Hst 427. American Economic History: The Colonial Period to the Early
Nineteenth Century. (3) (Grad)
(Formerly Hst 487. Change in number.)

Hst 428. American Economic History: The Civil War to the Twentieth
Century. (3) (Grad)
(Formerly Hst 488. Change in number.)

Hst 429. American Economic History: The Twentieth Century. (3) (Grad)
(Formerly Hst 489. Change in number.)

Hst 430. Twentieth Century Latin America. (3) (Grad)
(Formerly Hst 490. Change in number.)

Hst 431. Inter-American Relations. (3) (Grad)
(Formerly Hst 491. Change in number.)

Hst 432. The Caribbean. (3) (Grad)
(Formerly Hst 493. Change in number.)
Hst 433. History of Brazil. (3) (Grad)
The history of Portuguese American from colonial times to the present with emphasis on Portuguese maritime expansion, colonial institutions, and political, economic, and social developments of the Empire of Brazil, 1822-1889, and the Republic since 1891. Prerequisites: Hst 330, 331, 332, or consent of instructor.
(Formerly Hst 494. Change in number.)

Hst 434, 435, 436. History of Mexico. (3, 3, 3) (Grad)
(Formerly Hst 496, 497, 498. Change in number.)

Hst 446. English Constitutional Development. (3) (Grad)
The constitutional and legal development of Britain, with special reference to its significance for the American constitutional and legal system. Among the topics for consideration are the development of the common law, the jury, Parliament, sheriffs and justices of the peace, impeachment, and the great legal theorists. Prerequisites: Hst 340, 341, 342, or consent of instructor.
(Formerly Hst 464. British Constitutional Development. Change in number, title, and description.)

Hst 450. Hellenistic Monarchies and Leagues. (3) (Grad)
(Formerly Hst 425. Hellenistic History. Change in number and title.)

Hst 451. Roman Empire. (3) (Grad)
Roman history from the death of Julius Caesar to the fall of Rome. A study of the imperial structure, and social, economic, and cultural development. Prerequisites: Hst 150, or consent of instructor.
(Formerly Hst 442. Change in number and description.)

Hst 452. Age of Constantine. (3) (Grad)
The foundation of an Eastern Christian Empire on the ruins of Greco-Roman antiquity. The Greek, Roman and oriental political, social, economic, and cultural forces that contributed to the creation of the Byzantine Empire. Prerequisites: Hst 150, or consent of instructor.
(Formerly Hst 447. The Age of Constantine the Great. Change in number, title, and description.)

Hst 453. The Byzantine Empire. (3) (Grad)
(Formerly Hst 432. History of the Byzantine Empire. Change in number and title.)
Hst 455. The Renaissance. (3) (Grad)
(Formerly Hst 428. Change in number.)

Hst 458. The French Revolution and Napoleon. (3) (Grad)
A critical examination of the era of the French Revolution and
Napoleon in the context of the Age of Democratic Revolutions; the
relevance and impact of the era; the historiography of the period.
Prerequisites: Hst 150, 151, 152.
(Formerly Hst 430. The Era of the French Revolution, 1774-1799
(3), and Hst 431. The French Imperium and 19th Century
Revolutions, 1800-1848 (3). Change in number, title, description,
and prerequisites.)

Hst 459, 460, 461. History of Germany. (3) (Grad)
(Formerly Hst 444, 445, 446. Change in number.)

Hst 462, 463, 464. European Intellectual History. (3, 3, 3) (Grad)
A lecture course that examines major developments in European
thought. Each quarter, writings of three or four authors will be
used to investigate the relationship between ideas and their social
context. Prerequisites: Hst 150, 151, 152, or consent of in-
structor.
(Formerly Hst 433, 434, 435. European Intellectual History:
1500 to the present. Change in number, title, and descrip-
tion.)

Hst 465, 466, 477. European Diplomatic History. (3, 3, 3) (Grad)
The diplomacy of the major and minor European powers from 1815 to
the present. Hst 465: the diplomacy of the powers from 1815-1870.
Hst 466: the diplomatic activity leading to World War I,
war-time diplomacy and peacemaking 1919. Hst 467: Inter-war and
World War II diplomacy, the age of the Cold War, contemporary
problems.
(Formerly Hst 451, 452, 453. Change in number and description.)

Hst 470. History of Russia: Medieval, 800-1700. (3) (Grad)
(Formerly Hst 447. Change in number.)

Hst 471. History of Russia: Imperial, 1700-1917. (3) (Grad)
(Formerly Hst 448. Change in number.)

Hst 472. History of Russia: Soviet, 1917-Present. (3) (Grad)
(Formerly Hst 449. Change in number.)
HST 480, 481, 482. Ancient History of the Middle East. (3, 3, 3) (Grad)
(Formerly Hst 421, 422, 423. Change in number.)

HST 490. Historiography. (3) (Grad)
A survey of theories and literature of history as seen in the works
of selected historians and writers. This course is required for
graduate and undergraduate students in history.
(Formerly Hst 420. Change in number and description.)

HST 491. Elementary Quantitative Methods in History. (3) (Grad)
(Formerly Hst 483. Change in number.)

Old Courses Dropped
HST 101, 102, 103. History of Western Civilization. (3, 3, 3)
HST 104, 105, 106. Eastern Civilizations. (3, 3, 3)
HST 304, 305, 306. English History. (3, 3, 3)
HST 341. Europe Since 1789. (3)
HST 342, 343. Europe Since 1789. (3, 3)
HST 350, 351, 352. Latin America. (3, 3, 3)
HST 414. Sources of Regional History: Collections. (3) (Grad)
HST 415. Sources of Regional History: Bibliography. (3) (Grad)
HST 416. Sources of Regional History: Interpretations. (3) (Grad)
HST 417. The Age of Constantine the Great. (3) (Grad)
HST 420. Historiography. (3) (Grad)
HST 421, 422, 423. Ancient History of the Middle East. (3, 3, 3)
(Grad)
HST 424. Hellenic History. (3)
HST 426. Medieval Europe, Part I. 400-1200. (3)
HST 427. Medieval Europe, Part II. 1200-1500. (3)
COLLEGE OF SOCIAL SCIENCE - Continued

HISTORY - Continued

Old Courses Dropped - Continued

Hst 428. The Renaissance. (3) (Grad)
Hst 429. Europe 1648-1774. (3)
Hst 430. The Era of the French Revolution, 1774-1779. (3)
Hst 431. The French Imperium and 19th Century Revolutions, 1800-1848. (3)
Hst 432. History of the Byzantine Empire. (3) (Grad)
Hst 433, 434, 435. European Intellectual History: 1500 to the present. (3, 3, 3) (Grad)
Hst 436, 437, 438. History of Modern Italy. (3, 3, 3)
Hst 441. Roman Republic. (3)
Hst 442. Roman Empire. (3) (Grad)
Hst 443. Modern France. (3) (Grad)
Hst 444, 445, 446. History of Germany. (3, 3, 3) (Grad)
Hst 447. History of Russia: Medieval, 800-1700. (3) (Grad)
Hst 448. History of Russia: Imperial, 1700-1917. (3) (Grad)
Hst 449. History of Russia: Soviet, 1917-Present. (3) (Grad)
Hst 451, 452, 453. European Diplomatic History. (3, 3, 3) (Grad)
Hst 454, 455, 456. History of Eastern Europe. (3, 3, 3)
Hst 457, 458, 459. The United States in the 19th Century. (3, 3, 3)
Hst 460, 461, 462. American Cultural History. (3, 3, 3) (Grad)
Hst 463. Scandinavian History. (3) (Grad)
Hst 464. British Constitutional Development. (3) (Grad)
Hst 465, 466, 467. Social History of the United States. (3, 3, 3) (Grad)
Hst 469. Twentieth Century England. (3) (Grad)
COLLEGE OF SOCIAL SCIENCE - Continued

HISTORY - Continued

Old Courses Dropped - Continued

Hst 473, 474, 475. The Diplomatic History of the United States. (3, 3, 3) (Grad)

Hst 476, 477. History of the West. (3, 3) (Grad)

Hst 478. History of the Pacific Northwest. (3) (Grad)

Hst 480, 481, 482. The United States in the 20th Century. (3, 3, 3)

Hst 483. Elementary Quantitative Methods in History. (3) (Grad)

Hst 484. The American Colonies, 1492-1763. (3)

Hst 485. The American Revolution and Constitution, 1763-1789. (3)

Hst 486. The Age of Hamilton & Jefferson, 1789-1815. (3)

Hst 487. American Economic History: The Colonial Period to the Early Nineteenth Century. (3) (Grad)

Hst 488. American Economic History: The Civil War to the Twentieth Century. (3) (Grad)

Hst 489. American Economic History: The Twentieth Century. (3) (Grad)

Hst 490. Twentieth Century Latin America. (3) (Grad)

Hst 491. Inter-American Relations. (3) (Grad)

Hst 493. The Caribbean. (3) (Grad)

Hst 494. History of Brazil. (3) (Grad)

Hst 495. History of Southern South America. (3) (Grad)

Hst 496, 497, 498. History of Mexico. (3, 3, 3) (Grad)

POLITICAL SCIENCE

New Course

PS 365. Introduction to Asian Politics. (3)

A broad based comparative introduction to Asian politics. Though the focus will be on the domestic politics of the Asian States, there will also be an examination of the relations among these States and
with the rest of the world. The perspective will allow comparison with other developing and industrial States of the world.

PSYCHOLOGY

New Course

Psy 515, 516, 517. Advanced General Psychology. (3, 3, 3)
This sequence of 3 graduate-level, 3-credit hour courses includes 9 instructional segments taught by 9 psychology faculty members. Each segment provides an in-depth survey of an important topic in psychology, including the scientific method, motivation, learning, perception, cognition, developmental, physiological, social, and clinical psychology. Enrollment is limited to students admitted to the Master's Program in Psychology.

PUBLIC ADMINISTRATION

New Courses

PA 511. Public Administration. (3)
This course is a survey of the field of public administration and its role in contemporary American governments; development of public administration as an academic discipline; survey of the literature, ideas, schools of thought, and practices in public administration; trends and issues.

PA 513. Administrative Ethics and Values. (3)
This course explores values, ethics, and morality in public sector administration. It considers such concepts and issues as the following: personal and professional values and roles; the myth of value neutrality; the public interest; values, ethics, and change; value trade-offs; ethical ambiguities; ethical codes, fiscal ethics, and ethics and administrative discretion.

PA 520. Management of Not-for-Profit Organizations. (3)
This course deals with a wide range of management needs, problems and issues of not-for-profit organizations. It considers such items as the following: the executive director as manager; working with a policy board; volunteer/staff relations; personnel administration; budgeting and financial management; fund raising and sources of revenue; long-range planning; and community organization.
PA 545. Organization Development. (3)
A consideration of organization development as a strategy for organizational change. This course emphasizes concepts and methodologies relating to organizational problem diagnosis, action research, planned change, change implementation and evaluation, and the development of appropriate interpersonal competencies and skills.

PA 555. Program Evaluation and Management. (3)
The course examines program evaluation from the perspective of the public administrator. Emphasis is given to the problem of utilization of evaluation findings and the influence of organizational and political factors. The administrative feasibility of alternative program evaluation strategies is considered. Prerequisites: PS 597 or equivalent, or consent of instructor.

PA 565. Water Resources: Federal, Regional & State Policies and Administration. (3)
This course focuses on the major controversies and solutions that have created our present institutional arrangements for federal, regional, and state water quality and quantity decision-making. It addresses the development of federal water policies and programs and the roles played in these by federal agencies, Congress, and interest groups. The course deals with the role of regional agencies and proposals for regional solutions. The Oregon program for water management is also examined. The physical and social forces that are shifting responsibility from the federal to state and local governments are explored as are the sharpening conflicts between states and regions and between users.

PA 567. Energy Resources: Federal, Regional & State Policies and Administration. (3)
Energy policy decision-making occupies center stage of our national and state governments. This course will provide insights into and analysis of the development and execution of energy policies. Energy policies have a central concern with "who gets." Another major theme is the allocation of social costs and benefits. The course is organized into state and local, regional, national and international perspectives. Emphasis is given to policy options and directions for new forms of energy. National policy alternatives are analyzed by computer simulation techniques.

PA 591. Issues in Public Personnel Management. (3)
Provides an in-depth analysis of contemporary issues in the management of public personnel systems. Topics for analysis include: the design and implementation of employee performance evaluation programs; determining training needs and planning for a programmed
response; compensation systems, including problems of wage compres­sions, negotiated wage settlements and other economic benefits related to wages and salaries; the management of human resources; and the management of employee benefit programs. This course is a continuation of material covered in PA 590, Public Personnel Adminis­tration. Students may take this course without having had PA 590.

PA 593. Discrimination Law. (3)
The course will examine state and federal laws prohibiting discrimi­nation, the major legal theories of proof, the employer's defenses against discrimination charges, the administrative agencies involved, the complaint process, and remedies for violations. It is recom­mended that this course be taken prior to taking PA 594, Affirmative Action Planning.

PA 594. Affirmative Action Planning. (3)
This course is designed to instruct the student in the affirmative action requirements imposed on federal contractors by federal laws, presidential executive orders and implementing regulations. Lectures, reading and discussions will be directed toward an exploration of federal and state case law, the enforcement agencies in the adminis­trative process, complaint investigation, resolution of non-compliance, and the elements of an affirmative action compliance program, including the concepts of availability and goals. Recommended that students have had PA 593.

PA 595. Public Sector Collective Bargaining: The Legal Framework. (3)
The history and development of public sector collective bargaining in the United States. Specifically include: the role and importance of public sector collective bargaining law; the diversity of collective bargaining laws; comparison of various state laws with proposed national legislation; an in-depth analysis of Oregon's public sector collective bargaining law; the Oregon Employment Relations Board (ERB)--its structure and operation, the rules of procedure of ERB, major functional areas of the ERB--bargaining unit determination, representation and decertification procedures, unfair labor prac­tices, the conduct of elections, the Oregon Mediation Service, impasse procedures and continuing legal issues (mandatory vs. per­missive home rule and sovereignty, bargaining in good faith). This course is a prerequisite for PA 596 and PA 597.

PA 596. Public Sector Collective Bargaining: Negotiations and Impasse Resolution (3)
This course deals with the diversity of roles of the parties in negotiation, planning for negotiations, development of original demands and fallback positions, negotiation strategy and tactics,
New Courses - Continued

the major issues in negotiating, the diversity and similarity of negotiations in state government, cities, counties, school districts and higher education. A mock negotiation case will be bargained. This course will also deal with the processes of mediation, fact-finding and interest arbitration. PA 595 is a prerequisite for this course.

PA 597. Public Sector Collective Bargaining: Administering the Agreement. (3)
This course deals with the nature of the collective bargaining agreement, the establishment of a grievance procedure, the meaning of a grievance, the processing of grievances, continuing grievance problems such as discipline, transfers, seniority, overtime, work assignments, insubordination, layoff, recall, and manning requirements. Emphasis will be on the use of case materials to illustrate these problems. This course also includes a discussion of arbitration followed by a mock arbitration session. Prerequisite: PA 595.

Changes in Old Courses

PA 532. Organization and Methods. (3)
This course is designed to familiarize students with the substance and range of work performed by management analysis in the public sector, commonly referred to as organization and methods. Emphasis will be on developing skills and ability to conduct management analysis studies. Specific content will include: conducting re-organization studies; procedures analysis; forms control; management by objectives; management information systems. Prerequisite: PA 540. (Addition of prerequisite.)

PA 540. Administrative Theory and Behavior. (3)
A seminar on the major theories of organization and their application to public sector agencies. Emphasis on understanding administrative behavior and the mechanisms most commonly utilized to control behavior and secure integration of the individual within the larger organization. Issues of structure, power and authority, leadership, communications, organizational linkages and client relations will be covered. A theory course, some attention will be given to the relationship between theory and practice. Prerequisite: PA 511, or consent of instructor. (Addition of prerequisite.)

PA 590. Public Personnel Administration. (3)
An introduction to the administration and management of personnel systems in the public sector. The course will focus on the underlying values of personnel administration, conflicts between related
Changes in Old Courses - Continued

public policies, structural patterns, functional areas, and integra-
tion of personnel with management practices. Specific attention will
be directed to merit system concepts, management of positions through
classification systems, methods of securing a qualified labor force,
affirmative action requirements, and labor relations. Emphasis will
be on learning by doing through use of skill-building exercises,
simulation and analysis of case materials and review of current
literature. This course serves as a foundation for PA 591, Issues in
Public Personnel Management.
(Change in description.)

SOCIOLOGY

New Course

Soc 486. Applied Survey Research. (3) (Grad)
Provides experience in design, execution, and interpretation of
social surveys including sampling procedures, questionnaire design,
interviewing techniques, coding and computer analysis, and report
writing. Prerequisite: Mth 364 or Soc 384 or equivalent or consent
of instructor.

Changes in Old Courses

Soc 434. Power and Inequality. (3) (Grad)
(Formerly Social Stratification. Change in title.)

Soc 436. Social Movements. (3) (Grad)
Analysis of the nature and ramifications of social movements.
Development, membership characteristics, ideology, and consequences
for social change of such collectivities as sectarian association,
revolutionary movements, reform movements, general social movements,
utopian and separatist movements. Leadership, strategy, and morale
in such collectivities are examined. Prerequisites: Soc 204, 205,
or consent of instructor.
(Change in description and prerequisites.)

Soc 463, 464. Correctional and Therapeutic Communities. (3, 3) (Grad)
Theory and research on hospitals, prisons, mental institutions, and
other organizations totally encompassing members. Attention given
to insulation from environment, role relations, development of
community subcultures, rehabilitation versus restraint, and system
characteristics of these communities. Prerequisites: Soc 204, 205,
or consent of instructor.
(Change in prerequisites; addition of graduate credit.)
COLLEGE OF SCIENCE

BIOLOGY

New Courses

Bi 161. Food, Plants and Man. (3)
The role of plants in human affairs as sources of food, fiber, fuel, beverages and drugs. Primarily for non-majors.

Bi 360. Introduction to Marine Biology. (3)
Introduction to the marine environment and its life forms. Survey of organismal diversity with emphasis on structural and physiological adaptations to the marine realm. Prerequisite: One year of college biology.

Bi 361. Introduction to Marine Biology Laboratory. (1)
Laboratory and field work in marine biology. Prerequisite: Completion of or concurrent enrollment in Bi 360.

Bi 423. Microbial Ecology. (3) (Grad)
Study of the interaction of microorganisms with each other and plants, animals, soil and aquatic systems. Man as an ecosystem. Prerequisite: Bi 420 or consent of instructor.

Bi 453. Biology of Aging. (3) (Grad)
The study of molecular and structural changes in animals as a function of age. Emphasis is on the basic biological factors which limit life-span. Prerequisite: Bi 335 or Biochemistry. Recommended: Bi 322 and 481.

Bi 463. Comparative Invertebrate Physiology. (5) (Grad)
Comparative physiology of feeding and digestion respiration and circulation, osmotic regulation and excretion, nerves, receptors and responses; effectors, and coordinating systems in the invertebrates. Prerequisite: Bi 335, Principles of Physiology, Bi 461-462, Invertebrate Zoology.

Bi 516. Advanced Comparative Physiology. (4)
Advanced topics and current research on various aspects of comparative physiology. Prerequisites: Bi 417 or Bi 418 and Bi 419.

Bi 582. Modern Advances in Microbiology. (3)
Analysis of new developments in microbiology including metabolic pathways, anaerobic systems, mechanisms of pathogenicity and the exploitation of microorganisms to generate products for mankind. Prerequisite: Bi 420.

Bi 587. Pathogenic Microbiology Laboratory. (2)
Isolation and characterization of pathogenic microorganisms. Prerequisite: Completion of Bi 486, completion of either Bi 483 or Bi 484, and with consent of instructor.
Changes in Old Courses

Bi 221. Elementary Microbiology Laboratory. (2)
The laboratory is designed for science majors and others who need practical experience in culturing and observation of microorganisms. Topics will include culture techniques, use of the microscope for observation of microorganisms, and procedures for study of microorganisms in the laboratory and field. Two 2-hour laboratory periods. Prerequisite: Bi 220 or concurrent enrollment in Bi 220.

Bi 420. Introductory Microbiology. (5) (Grad)
Fundamental concepts and techniques of bacteriology. Role of bacteria and other organisms in physical and chemical transformations in nature, with special emphasis on their importance to man. 3 lectures; two 2-hour labs; one recitation period. Prerequisite: 1 year of biology, general chemistry and organic chemistry.

Bi 442. Plant Physiology. (3) (Grad)
Biochemical activities of plants, photosynthesis and respiration. Course is intended to be taken in sequence with Bi 441. Prerequisite: Bi 441 or consent of instructor.

Bi 486. Pathogenic Bacteriology. (4) (Grad)
Study of bacteria pathogenic to humans and their relationship to infectious disease. Emphasis is on the biochemical mechanism of infection and pathogenicity. Four hours lecture. Prerequisite: Bi 420 or consent of the instructor.

Changes in Old Courses

Ch 201, 202, 203. Chemistry for Engineering Majors. (3, 3, 3)
Fundamental basis of chemistry particularly adapted for students in engineering. Three lectures. Requires concurrent enrollment in Ch 214 for 201, in 215 for 202, and in 216 for 203. Prerequisite: Mth 95 or equivalent. High school chemistry is recommended.

Ch 204, 205, 206. General Chemistry (4, 4, 3)
Fundamental basis of chemistry for science majors, health science students (such as predental, premedical, premedical technology and preveterinary students), and prechemical engineering students. Ch 204, 205: three
Changes in Old Courses

CH 206: three lectures. Requires concurrent enrollment in CH 214 for 204 and in CH 215 for 205. Prerequisite for CH 204: MTH 95, or equivalent. Satisfactory performance on a placement test or a passing grade in CH 100. High school chemistry is recommended. Prerequisite for CH 205: grade of C or better in CH 204. CH 207 should be taken concurrently with CH 206. (CH 207 is not offered in the summer session; therefore, a summer student should enroll in CH 207 in the following fall quarter.

(Change in description, credit hours from (5, 5, 4) to (4, 4, 3) and separation of laboratory hours.)

CH 214, 215, 216. General Chemistry Laboratory. (1, 1, 1) Laboratory work to accompany General Chemistry (CH 204, 205) or Chemistry for Engineering Majors (CH 201, 202, 203). Concurrent enrollment in the appropriate lecture course is required. One three-hour laboratory. Pass/No Pass only.

(Change in number, title, description, credit hours, laboratory hours, and change to Pass/No Pass only.)

CH 217. Introductory Chemical Analysis. (2)

(Formerly CH 207. Change in number.)

Old Course Dropped

CH 207. Introductory Chemical Analysis. (2)

COMPUTER SCIENCE

New Course

CS 485. Computer Programming Laboratory. (3) (Grad) Individual and group projects involving the design and implementation of a substantial computer program. Students are encouraged to suggest and define their own topics. A written report is required. May be taken for more than one quarter. Prerequisite: CS 356 or CS 456.

EARTH SCIENCES

New Course

G 301. Geology for Engineers. (3) A study of the origin, interior, and crustal materials of the earth: the natural processes which have built it up, deformed and torn down the crust throughout geologic time: the environmental interrelationships between man and geologic processes and resources stressing application to engineering. For major in civil-structural engineering.
Changes in Old Courses

G 201, 202, 203. Geology. (3, 3, 3)
(201, 202) Physical Geology. Study of the earth's materials, structures and the processes that have changed the earth's surface throughout geologic time, in the light of the unifying Plate Tectonics model. (G203) Historical Geology. Introduction to the history of the earth and life on it. Concurrent enrollment in G 204, 205, and 206 is recommended.

G 420. Introduction to Geophysics. (3) (Grad)
Principles of Geophysical measurement and interpretation; seismology, gravimetry, isostasy, heat flow, geomagnetism, terrestrial electricity. Includes a survey of geophysical exploration techniques. Prerequisites: Ph 203, Mth 202 or equivalent and upper division standing.

G 421. Economic Geology. (3) (Grad)
Economics of mineral deposits; geology of metallic and non-metallic mineral deposits. Prerequisites: G 314, G 393 or consent of instructor.

G 432. Stratigraphic Paleontology. (3) (Grad)
The stratigraphic and paleo-ecologic relationships of the major groups of fossil invertebrates, vertebrates, and plants. Two lectures; one 2-hour laboratory period. Prerequisite: G 331, 392.

G 455. Minerals in World Affairs. (3) (Grad)
The geologic origin and occurrences of metals, fuels and industrial minerals and rocks: their geographic distribution and relative abundance or lack among nations; the rules and principles which influence their past, present and future exploration, development and use. Prerequisites: Upper division standing.

G 507. Seminar. Credit to be arranged.
Pass/No Pass only.

Old Course Dropped

G 390. Historical Geology. (3)
COLLEGE OF SCIENCE - continued

MATHEMATICS

Changes in Old Course

Mth 424, 425. Tensor Analysis and Differential Geometry. (3, 3) (Grad)
Tensors and their algebra; applications to geometry, elasticity, mechanics, fluid dynamics, etc.; Riemannian differential geometry, non-Riemannian geometry with application to special and general relativity.
Prerequisite: Mth 321 and Mth 324 or consent of instructor.
(Change in prerequisites.)

PHYSICS

Changes in Old Courses

Ph 161. Beginning Photography. (3)
Introductory course in technical and practical photography including scientific aspects of photography. Two lectures; one 3-hour laboratory period.
(Formerly Ph 161. Essentials of Photography. (2) Change in title, description, credit hours from (2) to (3) and lecture hours.)

Ph 207, 208, 209. General Physics (with Calculus). (3, 3, 3)
Introductory physics for students majoring in engineering and science.
Three lectures. Prerequisites: Mth 201 previously or concurrently and concurrent enrollment in Ph 204, 205, 206.
(Formerly Ph 207, 208, 209. Physics for students of Engineering. Change in title and prerequisites.)

Ph 361. Advanced Photography. (4)
Advanced technical and practical photography emphasizing scientific aspects of photography. Three lecture hours; one 3-hour laboratory period. Prerequisite: Ph 161 or previous photographic experience, with consent of instructor. A course in chemistry or physics is recommended.
(Formerly Ph 361. Photography. (3) Change in title, description, credit hours from (3) to (4) and change in prerequisites and laboratory hours.)

Ph 363. Color Photography. (3)
Principles of color photography, including the physics of color and scientific explanations of the formation of color images on light sensitive materials. Lab work includes color film processing and color printing. Two lectures; one 4-hour laboratory period. Prerequisites: Ph 361 and consent of instructor.
(Formerly Ph 363. Color Processes in Photography. (3) Change in title and description.)
Changes in Old Courses - continued

Ph 424, 425. Analytical Mechanics. (4, 4) (Grad)
Newton's law of motion. Kinematics and dynamics of particles in inertial
Lagrange's and Hamilton's equations. Inertia tensors and introduction to
rigid body dynamics. Theory of small vibrations. Prerequisites:
Ph 203 or Ph 209; Mth 321 previously or concurrently.
(Change in prerequisites.)

Ph 464. Optics. (4) (Grad)
Theory of imaging and aberrations, wave nature of light, interference,
diffraction and polarization; lasers and other modern topics in optics.
Prerequisites: Ph 203 or Ph 209, Mth 203, and Ph 414 (laboratory course)
concurrently.
(Change in number from Ph 364 to Ph 464; change in prerequisites
and addition of graduate credit.)

Ph 465. Thermodynamics. (3) (Grad)
Concepts of temperature, heat and work; the conservation of energy and
the first law of thermodynamics, Carnot and other thermodynamic cycles;
the second law of thermodynamics, entropy; thermodynamic potentials;
properties of ideal and some real gases. Prerequisites: Ph 203 or
Ph 209, Mth 203, and Ph 415 (laboratory course) concurrently.
(Change in number from Ph 365 to Ph 465; change in description,
prerequisites and addition of graduate credit.)

Ph 511, 512, 513. Physics of Solids and Liquids. (3, 3, 3)
The theory of mechanical, thermal, electrical, magnetic, and optical
properties of solids and liquids. Prerequisite: Ph 413, or equivalent,
and consent of instructor.
(Formerly Ph 511, 512, 513. Properties of Liquids and
Solids. Change in title and prerequisites.)

Ph 517, 518, 519. Quantum Mechanics. (3, 3, 3)
Principles of quantum mechanics; the Schrodinger equation; the hydrogen
atom and other problems; approximation methods: time-independent and
time-dependent perturbation theory; scattering problems. Prerequisites:
Ph 411, Ph 425 and consent of instructor.
(Change in description and prerequisites.)

Ph 524, 525, 526. Classical Mechanics and Hydrodynamics. (3, 3, 3)
Advanced treatment of analytical mechanics of particles, systems of
particles, and rigid bodies. Methods of Lagrange, Hamilton, and Jacobi.
Symmetry and conservation laws. Dynamics of continuous media.
Prerequisites: Ph 425 and consent of instructor.
(Formerly Ph 524, 525, 526. Classical Mechanics, Relativity and
Hydrodynamics. Change in title and description.)
Changes in Old Courses - continued

Ph 531, 532, 533. Electromagnetic Fields and Interactions. (3, 3, 3)
Classical description of the electromagnetic field: classical electron
theory and plasmas. Prerequisites: Ph 432 and consent of instructor.
(Change in description and prerequisites.)

Ph 541, 542, 543. The Physics of Atoms and Molecules. (3, 3, 3)
Radiation from atoms and molecules, Raman effect. Structure of one and
many electron atoms, Zeeman effect, Stark effect, Lamb shift, hyperfine
structure, line intensity. Quantum mechanics of diatomic and polyatomic
molecules. Symmetry. Molecular electronic transitions. Valence and
resonance. Prerequisite: Ph 411 and consent of instructor.
(Change in description and prerequisites.)

Ph 564, 565, 566. Statistical Mechanics. (3, 3, 3)
Foundations of statistical mechanics and kinetic theory; statistical
interpretation of thermodynamics; ensembles in classical and quantum
systems; transport phenomenae. Prerequisites: Ph 519, Ph 525, and
consent of instructor.
(Change in description and prerequisites.)

Ph 571, 572, 573. Nuclear Physics. (3, 3, 3)
An introduction to nuclear physics dealing with the fundamental properties
of nuclei and their description. Topics include: nuclear forces, prop-
erties of stable nuclei, nuclear models, radioactivity and nuclear
spectroscopy, nuclear reactions, nuclear energy, and elementary particles.
Prerequisites: Ph 412, and consent of instructor.
(Change in prerequisites.)

Old Courses Dropped

Ph 364. Optics. (4)
Ph 365. Thermodynamics. (3)

PUBLIC HEALTH STUDIES

New Courses

PHS 401. Research. Credit to be arranged.
Prerequisite: consent of instructor.

PHS 405. Reading and Conference. Credit to be arranged.
Prerequisite: consent of instructor.

PHS 407. Seminar. Credit to be arranged.
Prerequisite: consent of instructor.
COLLEGE OF SCIENCE - continued
PUBLIC HEALTH STUDIES - continued

New Courses - continued

PHS 409. Practicum in Public Health. (3)
Prerequisite: Public Health Certificate student only. Consent of instructor.

PHS 410. Selected Topics. Credit to be arranged.
Prerequisite: consent of instructor.

PHS 452. Epidemiologic Biostatistics. (3)
This course will describe the biostatistical methods which are applicable for epidemiologic research. It will emphasize in particular epidemiologic measures of effect. It will include non-parametric statistics which are applicable to a wide variety of public health problems. Standardization techniques will be particularly emphasized and opportunities for group workshops will be presented. Prerequisites: Epidemiology 451 or consent of instructor.

PHS 510. Special Topics. (3)
Prerequisite: consent of instructor.

Changes in Old Courses

PHS 443, 444, 445G. Principles of Environmental Health and Safety. (3, 3, 3)
The emphasis of these courses is on the major environmental factors essential to the control and prevention of health hazards and disease transmission and to the safeguarding of our environment. PHS 443: Designed to enable the student to understand the principles of environmental health as they apply to the protection of potable water and the assessment of the safety of methods of disposal of human wastes and hazardous waste materials. Emphasis is given to the interface of environmental health programs with other public health services. The control and prevention of communicable diseases and their relationship to water quality and waste disposal programs is detailed. PHS 444: Designed to enable the student to understand the principles of environmental health and safety relating to the control of air quality and methods of food protection. Solid waste disposal and the role of insects and rodents in promoting disease are emphasized. Programs of environmental sanitation for vector control and the maintenance of sanitary housing are discussed. PHS 445G: Relates the control of the environment to occupational health and accident prevention. Emphasizes ionization radiation hazards and institutional sanitation and includes information regarding environmental protection programs for tourists and travelers. Prerequisites: PHS 443, 444 or consent of instructor.
(Formerly PHS 443, 444, 445. Principles of Environmental Health. (3, 3, 3) Change in title, description, prerequisites, and addition of graduate credit to PHS 445.)
Changes in Old Courses - continued

PHS 446, 447, 448G. Public Health Principles and Practices. (3, 3, 3)
Provides an overview of the scope of the problems in the field of public health to include the delivery of community services, the structure of official and unofficial agencies, and policy and decision making processes. PHS 446: Describes the basic principles of public health. It includes a discussion of the application of the major principle of prevention and control of disease and introduces the concepts of community theory and delivery of health care. Current hypotheses associated with disease are explored to illustrate the application of the principles of community health care. PHS 447: The principles and characteristics of the delivery of health care services are presented. Several methods of delivery of care are compared and contrasted. Some legal and economic aspects of health care systems are referenced, and current areas for research in health care services are included. PHS 448G: Studies the organizational structure of health care systems. Reviews the sources of several public health programs of surveillance for the control and prevention of hazards in communities and includes relevant principles of administration in health agencies. Prerequisites: PHS 446 and 447 or consent of instructor.
(Change in description and addition of graduate credit to PHS 448.)

PHS 450, 451. Epidemiology. (3, 3)
PHS 450: An historical approach to epidemiology. Relates examples of the application of traditional epidemiologic methods as they have been used for the control of communicable diseases. Modern applications of traditional epidemiologic methods will be discussed. Prerequisite: Bi 220/221 or 420 or consent of instructor. PHS 451: Discusses basic epidemiologic research methods. Details cohort, case-comparison and prevalence studies. Emphasis is on epidemiologic research design and the measurement and evaluation of community problems and solutions. Bio-statistical methods, as they apply to epidemiologic design, will be referenced.
(Change in description; change in prerequisites for 450 and deletion of prerequisites for 451.)
SCHOOL OF BUSINESS ADMINISTRATION

ACCOUNTING

Changes in Old Courses

Actg 211. Introduction to Financial Data. (3)
A study of the nature and role of accounting information in our society. An introduction to the process of data handling and communication as they relate to accounting systems. Deals primarily with accounting information generated for financial reporting to external users for profit-making institutions. Emphasis on the income statement. Prerequisite: sophomore standing or consent of instructor.

(Change in description and prerequisites.)

Actg 212. Introduction to Financial Accounting. (3)
Continues the presentation of accounting information for profit-making institutions and presentation of financial accounting information. Emphasis on balance sheet, statement of changes in financial position and financial analysis. Prerequisite: Actg 211.

(Change in description.)

Actg 213. Management Accounting Systems. (3)
A study of accounting information and its application and uses within the business organization. Includes the study of manufacturing operations with emphasis on management decision making; determination and control of costs; and budgeting. Prerequisite: Actg 211 and 212.

(Change in description and prerequisites.)

BUSINESS ADMINISTRATION

Changes in Old Courses

BA 214. Business Communications. (3)
Development of the ability to communicate within an organization on an interpersonal basis and in the form of written and oral expression. Provides means of increasing the effectiveness of the communications process in order to increase the value of information to the organization. Prerequisites: WR 121.

(Change in prerequisites.)

BA 344, 345, 346. Systems and Operations Analysis. (3, 3, 3)
A three course sequence to introduce a set of concepts, problems, processes, and techniques within an organization. Includes decision-making, models, capital investment, search and forecasting, and behavioral fundamentals. Prerequisites: Mth 114, 364, 365 and Mgmt 109.

(Change in prerequisites.)
Changes in Old Courses - continued

BA 360. Financial Analysis for Decision Making. (3)
Application of financial analysis techniques to evaluating a firm, setting goals, and measuring performance; implication of financial decisions on marketing, production, and other functional areas. Prerequisite: Actg 213.
(Change in prerequisites.)

New Courses

BEd 409. Practicum. Credit to be arranged.
Consent of instructor.

BEd 3XX. Teaching Personal Finance. (1)
A study of personal finance concepts and competencies identified by the Oregon State Department of Education in the Personal Finance Education Guide. The content is designed to prepare teachers in all disciplines, kindergarten-12th grade, to teach basic skills and concepts in personal finance. Students will also prepare learning activities and resource materials appropriate for their area and level of teacher education. Prerequisite: Admission to the program of studies in teacher education.

BEd 4XX. Women in Management -- An Overview. (3)
This course is for women who are interested in management as a career, to identify special needs and discuss useful strategies for achieving management success. Topics include: career planning, communication technique and barriers, committee management, assertiveness training, leadership styles, time management and conflict management.

New Course

Finl 459. Capital Budgeting and Investment Decisions. (3)
Theory and analysis necessary to develop a rational and systematic approach to formulating a firm's strategy for asset investments. Acquisition/divestment evaluation techniques; riskiness of cash flows; portfolio risk and CAPM; inflationary impacts on valuation; and tax implications are emphasized. Prerequisites: Finl 359, Mth 365.
Change in Old Courses

FinL 359. Finance Management. (3)
A study of the role of the finance system and its functioning. Analytical methods leading to more efficient decision processes involving the use of money and debt in the firm. Emphasis on efficient cash flow management and capital budgeting techniques as well as short and long term instruments of finance. Prerequisites: BA 360.
(Change in prerequisites.)

FinL 411. Laws of Real Estate and Property. (3)
Introduction to commercial law; distinction between real and personal property; the landlord-tenant relationship; fixtures; gifts; patents; copyrights; legal estates in land; deeds; concurrent ownership; adverse possession; easements; zoning, and eminent domain. Prerequisite: upper division standing, or consent of instructor.
(Formerly FinL 411. Laws of Property and Contracts. Change in title and description.)

FinL 412. Laws of Contracts and Insurance. (3)
Formation, performance, and enforcement of valid contracts. Mutual assent, mistake, fraud, unconscionability, consideration, capacity, legality of contracts. The Statute of Frauds, parol evidence rule, discharge, breach of contract, and damages. Third party beneficiary contracts, and the laws of insurance. Also covers one-third of law part of CPA exam. Prerequisite: upper division standing, or consent of instructor.
(Formerly FinL 412. Laws of Insurance, Negotiable Instruments, and Sales. Change in title and description.)

FinL 413. Laws of Commercial Paper and Sales. (3)
Negotiable notes, checks and drafts, the holder in due course doctrine, the bank collection process, bailments, carriers, warehousemen, documents of title, sales of goods, risk of loss, buyer-seller remedies, product liability, and letters of credit. Also covers one-third of law part of CPA exam. Prerequisite: upper division standing, or consent of instructor.
(Formerly FinL 413. Laws of Business Organizations and Professional Responsibility. Change in title and description.)

FinL 414. Laws of Business Organization, Securities and Antitrust. (3)
Employees versus independent contractors; agency; sole proprietorships, partnerships and corporations; Uniform Limited Partnership Act; federal securities law; Foreign Corrupt Practices Act; Antitrust law; and labor law including collective bargaining. Also covers one-third of law part of CPA exam. Prerequisite: upper division standing, or consent of instructor.
(Formerly FinL 414. Real Estate Law. Change in title, description and deletion of graduate credit.)
FINANCE/LAW - continued

Changes in Old Courses - continued

Finl 415. Laws of Bankruptcy, Professional Responsibility, Trusts and Estates. (3)
The 1979 Federal Bankruptcy Law; protection of creditors under Article 9 of the UCC; mortgages; suretyship; bulk sales; business torts; professional responsibility; trusts, wills, gift and death taxes, and estate planning. Prerequisite: upper division standing, or consent of instructor.
(Formerly Finl 455. Estate Planning. (3) (Grad). Change in number, title, description and deletion of graduate credit.)

Finl 422. Financial Markets and Institutions. (3)
Examination of the structure, functions, and theories of financial markets and the important role that financial markets and institutions play in the financial decision making process of a business firm. Prerequisites: Econ 201, 202, 203.
(Formerly Finl 322. Financial Institutions. (3). Change in number, title, description and prerequisites.)

Old Courses Dropped

FinL 322. Financial Institutions. (3)
FinL 455. Estate Planning. (3)
Finl 470. Business, Government, and the Law. (3) (Grad)

MANAGEMENT

New Course

Mgmt 5XX. Business/Government Relations. (3)
The role and importance of the business/government relations function in business enterprises is examined. Topics covered include: monitoring the governmental system, interest groups, lobbying, trade associations, government relations strategies, governmental structure, regulatory process, and access to executive legislative-processes. Prerequisite: graduate standing.

MARKETING

New Course

Mktg 464. Marketing Strategy and Management. (3)
Integrative course designed to apply marketing concepts in a variety of business applications. Emphasis will be on marketing strategy in the major areas of marketing management including customer identification, product and communication strategies, distribution, pricing and control. Prerequisite: Mktg 366 and Mktg 415.
SCHOOL OF BUSINESS ADMINISTRATION - continued

MARKETING - continued

Changes in Old Courses

Mktg 238. Personal Selling. (3)
An overview of the personal selling segment of the promotion mix. Emphasis is applied to the traits and characteristics of successful salespersons, buyer behavior and motivation, the process of selling and task analysis, and management of the selling effort. This course will assist students in making decisions about when and how to apply personal selling as an element in the marketing framework.
(Formerly Mktg 238. Salesmanship. Change in title and description.)
SCHOOL OF EDUCATION

New Courses

LIB 401. Research. Credit to be arranged.

EdAd 401. Research. Credit to be arranged.

COUN 402. Laboratory. Credit to be arranged.

ED 402. Laboratory. Credit to be arranged.

EdAd 402. Laboratory. Credit to be arranged.

LIB 402. Laboratory. Credit to be arranged.

SpEd 402. Laboratory. Credit to be arranged.

COUN 403. Thesis. Credit to be arranged.

ED 403. Thesis. Credit to be arranged.

EdAd 403. Thesis. Credit to be arranged.

LIB 403. Thesis. Credit to be arranged.

SpEd 403. Thesis. Credit to be arranged.

COUN 404. Writing and Conference. Credit to be arranged.

ED 404. Writing and Conference. Credit to be arranged.

EdAd 404. Writing and Conference. Credit to be arranged.

LIB 404. Writing and Conference. Credit to be arranged.

SpEd 404. Writing and Conference. Credit to be arranged.

EdAd 405. Reading and Conference. Credit to be arranged.

LIB 405. Reading and Conference. Credit to be arranged.

COUN 406. Special Problems. Credit to be arranged.

EdAd 406. Special Problems. Credit to be arranged.

LIB 406. Special Problems. Credit to be arranged.

SpEd 406. Special Problems. Credit to be arranged.

LIB 407. Seminar. Credit to be arranged.

EdAd 407. Seminar. Credit to be arranged.

COUN 408. Workshop. Credit to be arranged.
New Courses - continued

ED 408. Workshop. Credit to be arranged.
EdAd 408. Workshop. Credit to be arranged.
LIB 408. Workshop. Credit to be arranged.
SpEd 408. Workshop. Credit to be arranged.
EdAd 409. Practicum. Credit to be arranged.
LIB 409. Practicum. Credit to be arranged.
COUN 410. Experimental Course. Credit to be arranged.
ED 410. Experimental Course. Credit to be arranged.
EdAd 410. Experimental Course. Credit to be arranged.
LIB 410. Experimental Course. Credit to be arranged.
SpEd 410. Experimental Course. Credit to be arranged.
LIB 501. Research. Credit to be arranged.
COUN 502. Laboratory. Credit to be arranged.
ED 502. Laboratory. Credit to be arranged.
EdAd 502. Laboratory. Credit to be arranged.
LIB 502. Laboratory. Credit to be arranged.
SpEd 502. Laboratory. Credit to be arranged.
LIB 503. Thesis. Credit to be arranged.
COUN 504. Writing and Conference. Credit to be arranged.
ED 504. Writing and Conference. Credit to be arranged.
EdAd 504. Writing and Conference. Credit to be arranged.
LIB 504. Writing and Conference. Credit to be arranged.
SpEd 504. Writing and Conference. Credit to be arranged.
SpEd 505. Reading and Conference. Credit to be arranged.
LIB 505. Reading and Conference. Credit to be arranged.
New Courses - continued

LIB 506. Special Problems. Credit to be arranged.

LIB 508. Workshop. Credit to be arranged.

LIB 509. Practicum. Credit to be arranged.

COUN 510. Experimental Course. Credit to be arranged.

ED 510. Experimental Course. Credit to be arranged.

EdAd 510. Experimental Course. Credit to be arranged.

LIB 510. Experimental Course. Credit to be arranged.

SpEd 510. Experimental Course. Credit to be arranged.

ED 448. Special Secondary Methods. (3)
Problems and methods in selecting and organizing materials for instruction; comparison and evaluation of methods, laboratory techniques, supplies, equipment; economy of time and materials. Courses include business education, composition, health education, literature, mathematics, modern foreign languages, music, physical education, science, social science. Pre-student-teaching work experiences are provided in the public schools. Prerequisites: admission to the program of studies in teacher education, ED 310 and ED 312.

ED 5XX. Theory of Instruction. (3)
An investigation of what happens in the classroom, emphasizing the interrelatedness of learning, subject matter, and teaching; testing of scholars' and the student's own ideas against the concrete of case studies of instruction; formulation and defense of one's own theory. Prerequisites: Teaching experience or Consent of Instructor.

ED 5XX. School and Community Relations. (3)
An intensive examination of the school and its environment. Major emphasis is on the linking mechanisms utilized by the school in interacting with parents, citizens and special interest groups. Prerequisites: Graduate standing or consent of instructor.

ED 5XX. Politics and Policy Processes in Education. (3)
An intensive examination of political behavior in educational policy making. Central to the course is a review of the increasing number of educational policies which are formulated at the Federal and State levels and the impact of these policies on local school districts. Prerequisites: ED 594 and Admission to Doctoral Studies.

ED 5XX. Theories and Interventions II. (3) (Grad)
This course is designed for those who wish to increase their understanding of counseling theory, interventions (techniques, strategies) and research. The Behavioral Psychoanalytic, Adlerian and Client-Centered approaches
New Courses - continued

to counseling will be studied; the focus will be on the three parameters 
mentioned above. Course content can be applied to both individual and 
group counseling. Prerequisites: ED 485 (3) and ED 581 (3) or equiva­
 lent.

ED 5XX. Marriage and Family Counseling. (3) (Grad)
This course constitutes an introduction to the theory and methodology of 
marr iage and family counseling. Attention is given to the major family 
interactional patterns which lead to family system breakdowns as well as 
the development of skills in the identification of such patterns. 
Family process assessment techniques, beginning work with families, 
dealing with resistance in family counseling, use of "self," doubling, 
sculpting, etc., are interventions which are taught using an experiential 
format. Prerequisite: Soc 461, Sociology of the Family.

ED 5XX. Group Counseling. (3) (Grad)
This course includes the study of group guidance, group counseling and 
group therapy in both school and agency settings. Topics such as member­
ship roles, leadership styles, stages of group life, nonverbal communica­
tion in groups, ethical and professional issues relating to groups, 
theoretical models for group work, group practice with special groups and 
research on group process and outcome will be presented. Students en­
rolled in the course will also be expected to participate in a co­
facilitated, ongoing, small group experience which will require sensi­
tivity to the contributions of other group members. Prerequisites: ED 
485 (3), ED 581 (3), ED 5_ (3), ED 5 (3).

EdAd 5XX. Law and Educational Policy. (3) (Grad.)
The focus of the course is on the relationship between legal decisions 
and the educational policy process. Analyses of the major trends 
towards "legalization" in education is central to the course. 
Attention will especially be given to the ways legislative, admin­
istrative and judicial decisions and governmental organizations 
shape educational policies and programs. Prerequisites: Ed 594 and 
adm ission to doctoral program.

EdAd 5XX. Cultural Pluralism and Urban Education. (3) (Grad)
This course is designed to explore the process of education policy 
development and implementation in culturally diverse, urban environ­
ments. The course is organized around several cultural pluralism 
perspectives; among the topics to be explored are the issues of 
socialization of the child, governmental operations, educational 
administration, teacher preparation and curriculum design. Pre­
requisites: ED 594 and admission to Doctoral Program.

EdAd 5XX. Educational Organization and Administration. (3)
Examination of the role, functions and responsibilities of the 
school administrator; study of administrative and organizational
New Courses - continued

theory and its application to the operation of schools and school
districts. Prerequisites: Graduate standing or consent of instructor.

LIB 5XX. Issues and Problems of Elementary School Media Centers - current
year. (3)
Examination of current issues and problems relating to elementary
school library media centers; approaches and strategies for solving
these problems. Comprehensive analysis of selected topics related to
on-site class visitation of elementary school's media centers.
Prerequisites: Basic Educational Media Endorsement or consent of
instructor.

LIB 5XX. Issues and Problems of Secondary School Media Centers - current
year. (3)
Examination of current issues and problems relating to secondary
school library media centers; approaches and strategies for solving
these problems. Comprehensive analysis of selected topics related to
on-site class visitation of elementary school's media centers.
Prerequisites: Basic Educational Media Endorsement or consent of
instructor.

LIB 5XX. Advanced Production of Instructional Materials. (3)
Advanced skill development in the design and production of media to
meet instructional, curricular, public relations, and other communication
needs. Prerequisite: LIB 436 or consent of instructor.

LIB 5XX. Program Planning and Evaluation of School Library Media Centers. (3)
Analysis of media center programs and planning techniques; study and
application of media center evaluation instruments; analysis and
development of library media center programs. Prerequisites: Basic
Educational Media Endorsement or consent of instructor.

Changes in Old Courses

COUN 401. Research. Credit to be arranged.
(Formerly COUN 401. Special Studies. Change in title.)

ED 401. Research. Credit to be arranged.
(Formerly ED 401. Special Studies. Change in title.)

SpEd 401. Research. Credit to be arranged.
(Formerly SpEd 401. Special Studies. Change in title.)

LIB 484. Administration of School Library Media Centers. (3) (Grad)
Introduction to school librarianship. Overview of the school library
media program and its integral role in the school's instructional
SCHOOL OF EDUCATION - continued

Changes in Old Courses - continued

program. Focus on growth of the school library media movement, leadership and teaching roles of the media specialist, management of personnel, media program budgeting, facility planning, role of state and national standards, and other administrative areas.

(Formerly LIB 484. School Library Administration. Change in title and description.)

LIB 486. Introduction to Cataloging and Classification. (3) (Grad) Instruction and practice in basic procedures for the classification and cataloging of all media, print and nonprint. Procedures for ordering and using commercial processing.

(Change in description.)

COUN 506. Special Problems. Credit to be arranged.

(Formerly COUN 506. Special Studies. Change in title.)

ED 506. Special Problems. Credit to be arranged.

(Formerly ED 506. Special Studies. Change in title.)

EdAd 506. Special Problems. Credit to be arranged.

(Formerly EdAd 506. Special Studies. Change in title.)

SpEd 506. Special Problems. Credit to be arranged.

(Formerly SpEd 506. Special Studies. Change in title.)

ED 5XX. Theories and Intervention I. (3) (Grad) This course is designed for those who wish to increase their understanding of counseling theory, interventions (techniques, strategies) and research. The Transactional Analysis, Gestalt, Rational-Emotive and Reality approaches to counseling will be studied; the focus will be on the three parameters mentioned above. Course content can be applied to both individual and group counseling. Prerequisites: ED 485 (3) and ED 581 (3) or equivalent.

(Formerly ED 487, Counseling Techniques. (3) (Grad). Change in number, title, description and prerequisites.)

Old Courses Dropped

Ed 406. Problems in Elementary Education. (3)

Ed 487. Counseling Techniques. (3) (Grad)
New Courses

HE 261. Foundations of Community Health Education. (3)
An introduction to the theoretical framework, concepts and methods which provide the basis for community health education programs. Health legislation and local, state and national programs will provide a basis for examining changing roles and responsibilities of community health educators.

HE 372. Community Organization for Health Education. (3)
Major theories in community organization are identified and explored in relation to health education goals. Group work methods and leadership theories are examined. Prerequisite: Upper division standing or consent of instructor.

HE 423. Traffic Safety Education. (3) (Grad)
Required of teachers for driver training classes in the public school system. This course is designed to provide behind the wheel instruction, as well as study the engineering, enforcement and environmental factors as they influence driver, pedestrian and traffic safety within the community and for the individual. Prerequisites: Ed 310, 312.

HE 448. Teaching Methods in Health Education. (3)
Problems and methods in selecting and organizing materials for instruction; comparison and evaluation of methods, supplies, equipment; economy of time and materials. Must be taken concurrently with HE 409 Practicum: Schools. Prerequisite: Admission to the program of studies in teacher education, Ed 310 and Ed 312 or by permission of instructor.

HE 455. Consumer Health. (3)
Designed to make a critical analysis and evaluation of consumer behavior in the health marketplace, to develop analytical skills of the prospective health educator dealing with the consumer movements, provide special methods, techniques, and tools relating to consumer health instruction, and to allow the student an opportunity to organize and present materials which will provide him/her with an effective background for future use in the field. Prerequisites: Upper division standing or consent of instructor.

HE 474. Planning and Evaluation of Community Health Education. (3)
Analyzes the planning, implementation and evaluation phases of community health education programs including: Consumer participation, consulting and negotiating skills, training, budgeting, implementation, data collection, evaluation and program summary writing. Prerequisite: HE 123, 361, upper division standing or instructor's consent.

HE 542. Programs in Sex Education. (3)
Designed to provide elementary, junior high school, senior high school teachers and other professionals with appropriate content and materials
SCHOOL OF HEALTH AND PHYSICAL EDUCATION

New Courses

HE 423. Traffic Safety Education. (3) (Grad)
Required of teachers for driver training classes in the public school system. This course is designed to provide behind the wheel instruction, as well as study the engineering, enforcement and environmental factors as they influence driver, pedestrian and traffic safety within the community and for the individual. Prerequisites: Ed 310, 312.

HE 448. Teaching Methods in Health Education. (3)
Problems and methods in selecting and organizing materials for instruction; comparison and evaluation of methods, supplies, equipment; economy of time and materials. Must be taken concurrently with HE 409 Practicum: Schools. Prerequisite: Admission to the program of studies in teacher education, Ed 310 and Ed 312 or by permission of instructor.

HE 455. Consumer Health. (3)
Designed to make a critical analysis and evaluation of consumer behavior in the health marketplace, to develop analytical skills of the prospective health educator dealing with the consumer movements, provide special methods, techniques, and tools relating to consumer health instruction, and to allow the student an opportunity to organize and present materials which will provide him/her with an effective background for future use in the field. Prerequisites: Upper division standing or consent of instructor.

Changes in Old Courses

HE 123. Introduction to Health Education. (2)
Professional orientation: historical development, professional opportunities and qualifications, leaders and major organizations in health education. Open to any student considering a major in health education or a related field. This course does not meet the University health education requirement.
(Change in description.)

HE 359. Safety Education. (3)
Introduces the principles and fundamentals of safety education. Concerns safety as a social problem and considers major accident areas, accident causes, liability and analyzes possible solutions to accident problems.
(Change in description.)
Changes in Old Courses - continued

for teaching in the area of human sexuality. The course will examine
the controversial issues related to sex education instruction and will
review available materials and curricula in the field. Prerequisite:
HE 231/PSY 299 or consent of instructor.

HE 543. Drug and Alcohol Education. (3)
This course is designed to familiarize students with principles and
programs in dealing with problems of drug and alcohol use/abuse.
Prevention models are emphasized. Prerequisite: HE 326 or consent
of instructor.

Changes in Old Courses

HE 123. Introduction to Health Education. (2)
Professional orientation: historical development, professional
opportunities and qualifications, leaders and major organizations in
health education. Open to any student considering a major in health
education or a related field. This course does not meet the Univer­
sity health education requirement.
(Change in description.)

HE 326. Drug Education. (3)
An examination of various approaches to drug education with emphasis on
prevention models. This course also reviews current information on
drug actions. Prerequisites: Bi 301, 302, 303 or permission of
instructor.
(Formerly HE 326. Social Health Problems. (2) Change in title,
description, credit hours and prerequisites.)

HE 359. Safety Education. (3)
Introduces the principles and fundamentals of safety education.
Concerns safety as a social problem and considers major accident
areas, accident causes, liability and analyzes possible solutions to
accident problems.
(Change in description.)

HE 361. Personal Health Problems. (3)
Provides an overview of current health problems and priorities.
Emphasizes effects of personal choices and decision making on health
behavior and resulting health status - past, present, future. Open to
Health Education majors and majors in related fields. Prerequisites:
Bi 301, 302, 303 or consent of instructor.
(Change in description.)

HE 420. Driver Education for Teachers. (3) (Grad)
Designed to prepare teachers for driver training courses in the
secondary schools. Includes the development of instructional units,
methods and materials of instruction and selecting, organizing and
evaluating the learning process. Prerequisites: ED 310, 312 and
current valid driver's license.
(Change in description.)
SCHOOL OF HEALTH AND PHYSICAL EDUCATION - continued

Changes in Old Courses - continued

HE 465. School Health Programs. (3) (Grad)
Designed primarily to acquaint the professional health education student with the necessary concepts relating to the total school health program. It provides new insights and concepts relative to health information, healthful school living, and school health services. The course will also provide information in administration, curriculum construction and cooperation with community agencies. (Change in description.)

Old Course Dropped

HE 545. Health Counseling. (3)

New Courses

PHYSICAL EDUCATION

PE 296. Dance Laboratory - Ballet I, II, III. (2, 2, 2)
Intermediate ballet technique. Emphasis on execution and application of all basic ballet vocabulary and on alignment and skill development. Prerequisite: Intermediate skill level required.

PE 297. Dance Laboratory - Jazz I, II, III. (2, 2, 2)
Intermediate-advanced laboratory in jazz dance technique and improvisation emphasizing body alignment, contractions, and isolation technique and Latin American, West Indian, and American rhythms. Prerequisite: by audition only.

PE 344. Management and Administration of Dance. (3)
The administration of dance in the private studio and in the educational setting, the management and organization of dance performances, and the management and funding of dance companies.

PE 396. Dance Laboratory - Ballet IV, V, VI. (2, 2, 2)
Intermediate-advanced ballet technique, emphasis on body alignment, development of advanced technical skills, point work, and performance quality. Prerequisite: Intermediate skill level required.

PE 397. Dance Laboratory - Jazz IV, V, VI. (2, 2, 2)
Advanced laboratory in Jazz dance technique and improvisation emphasizing body alignment, contractions, and isolation technique and Latin American, West Indian, and American rhythms. Prerequisite: by audition only.

PE 448. Teaching Methods for Physical Education. (3)
Description and critique of teaching methods and teacher evaluation procedures for physical education. Lecture, laboratory, and field experience. Concurrent registration with PE 333 required.
New Courses - continued

PE 494. Interdisciplinary Collaborations/ Experiments in Performance. (3)
Course to study the history of mixed media theater, happenings and
performance collaborations and to create performance pieces based on
the interests and talents of those in the class. Prerequisite:
Intermediate skill level within the chosen field.

PE 573. Analysis of Training Programs. (3)
Exploration of the physiological bases for training the components of
physical fitness. Topics include: methods of assessing and improving
fitness, application to specific sports, and the co-variables of age,
sex, environmental conditions and ergogenic aids. Prerequisite:
PE 473. Physiology of Exercise.

Changes in Old Courses

PE 340. Sports Administration and Programming. (3)
Exploration of administration, organization, management and program­
ming of sports programs.
(Formerly PE 340. Organization and Administration of Intramural
Sports. (2). Change in title, description, credit hours and
lecture hours.)

PE 341. Physical Education and Humanity: Contemporary Concepts. (3)
Theory and application of relevant concepts from the social sciences
and humanities to physical education. Prerequisites: upper division
standing.
(Change in description.)

PE 370. Motor Learning. (3)
An introduction to the nature, the performance and the acquisition of
motor skill. Implications for teaching are drawn from the develop­
mental nature of skill and the influence of personal and environmental
factors. Prerequisite: Upper division standing.
(Change in description and prerequisite.)

PE 444. Adapted Physical Education. (3) (Grad)
An analysis of the physical education needs of students who have
physical and/or mental handicaps which prevent them from sucessfully
participating in the school's normal physical education program.
Content includes methods of mainstreaming, evaluating, designing
programs and selecting appropriate activities for each handicapped
group. The nature of some handicaps will be discussed. Prerequisite:
Bi 301, 302, 303.
(Change in description.)
Changes in Old Courses - continued

PE 473. Physiology of Exercise. (3) (Grad)
An overview of the physiological basis of human physical performance including metabolic, circulatory, and respiratory responses to exercise and training. Methods of training are given special emphasis. Two hours lectures and one 2-hour lab. Prerequisites: Bi 301, 302, 303.
(Change in description, lecture hours and laboratory hours.)

PE 533. Motor Learning. (3)
Analysis of recent literature relating to the acquisition of motor skills. Emphasis on applying theory and research to improve skill performance and teaching. Prerequisite: PE 370 or consent of instructor.
(Change in description.)

Old Courses Dropped

PE 518. Current Trends in Physical Education. (3)

PE 571. Foundations of Physical Education (3)
New Courses

SW 542. Natural Helping Networks. (2)
Social support as a mediator of individual stress. The place of informal helping in the human services and its relationship to professional social work. Theoretical perspectives and intervention strategies based on social network analysis.

SW 566. Program Evaluation: Introduction to Practice. (2)
History and models of program evaluation, organizational context of evaluation and relationship to managerial functions, and the process of conducting a program evaluation.

SW 567. Information Systems and Cost Analysis for Human Services. (2)
Assessment of human service agency's information needs, design and implementation of alternative information systems. Use of cost analysis procedures to make program decisions.

SW 571. Community Mental Health. (2)
Examination of the community mental health movement and related legislation, overview of the organization and delivery of mental health services at federal, state and local levels, and review of selected issues as deinstitutionalization and primary prevention.
DIVISION OF ENGINEERING AND APPLIED SCIENCE

New Courses

ASE 371. Introduction to Computer Architecture. (4)
Introduction to the macro level components of computers: ROM/RAM memory units, CPU/Arithmetic Units, Micro/macro control of computer operations, von Neumann and Harvard machines. The interrupt system and global operational properties of computers. Prerequisite: ASE 358.

ASE 425. Communication Systems I. (4)
An introduction to signals and noise in electrical communication; signal spectra and filters, noise and random signals, baseband transmission of analog and digital signals, linear modulation and exponential modulation. Prerequisite: ASE 253.

ASE 426. Communication Systems II. (4)
Study of the relative merits of communication systems, noise in continuous wave and pulse modulation, information theory, digital data systems, and advanced topics. Prerequisite: ASE 425.

ASE 457, 458, 459. Microprocessor System Design. (4, 4, 4)
Introduction to microprocessor technology. Hardware requirements, software fundamentals, computer aids to software design, intermediate software design and introduction to hardware design. Courses must be taken in sequence. Three lectures; three hours of laboratory. Prerequisite: ASE 253, or consent of instructor.

ASE 460. Solid State Electronic Devices. (4)
Solid state theory leads to an understanding of the PN junction. Solid state devices are stressed. These include diodes, bipolar and field effect transistors, integrated circuits and optoelectronic devices. Prerequisite: ASE 358.

ASE 468. Solar Heating Design. (3) (Grad)
Introduction to design of active and passive systems utilizing solar energy for space and water heating in buildings. Emphasis on energy efficient building design and passive solar heating design methodologies. Heat loss and gain in buildings, load calculations, "quick and dirty" design procedures, detailed calculation procedures, computer simulation techniques, and economics of solar heating. Project in design/simulation. Prerequisites: ASE 323 and familiarity with use of computers.

ASE 486. Pavement Design. (3) (Grad)
Pavement structure classification and components, wheel loads and design factors, stresses in flexible pavements, subgrade strength and evaluation, design methods, material characteristics, stresses in rigid pavements, design of concrete pavements, joints and reinforcement, condition surveys. Prerequisite: ASE 340.
DIVISION OF ENGINEERING AND APPLIED SCIENCE - continued

New Courses - continued

ASE 488. Earth Dams. (3) (Grad)
Design, construction and operation of earth and earth-rock dams; seepage analysis, slope stability and construction procedures. Emphasis includes both the design of new structures and the evaluation of safety of existing facilities. Prerequisites: ASE 483.

ASE 489. Solid Waste Management. (3) (Grad)
Introduction to the problem of solid waste management with special emphasis on municipal solid waste. Topics include solid waste collection, processing, reuse and recycling, composting, incineration and sanitary landfill operations. Other topics include disposal microbiology, state and federal legislation and new technologies for waste management and recycling.

ASE 530. Water Resource Systems. (3)
A study of the technical, legal, political and economic factors which govern the allocation of water resources. This will include a detailed study of the riparian and appropriate water law systems, hydrologic models and cost benefit analysis applied to water resource systems.

Changes in Old Courses

Nature, scope and role of, and current trends in, engineering: basic preparation in the rudiments and working methods of engineering analysis and design; introduction to computer methods and to basic laboratory work in various engineering areas. Prerequisites: Mth 102 taken concurrently with ASE 111.
(Change in prerequisites.)

ASE 115. Engineering Graphics I. (3)
Fundamentals of graphic communication. Multiview and pictorial representations.
(Formerly ASE 115, 116, 117. Engineering Graphics. (3, 3, 3). Change in title, description, prerequisites and division of sequence.)

ASE 116. Engineering Graphics II. (3)
The graphic language applied to engineering. Projection systems. Graphical representations. Computer graphics. Prerequisite: ASE 115 or equivalent.
(Formerly ASE 115, 116, 117. Engineering Graphics. (3, 3, 3). Change in title, description, prerequisites and division of sequence.)

ASE 117. Descriptive Geometry. (3)
Projection of points, lines, planes, solids. Theory and engineering applications. Prerequisite: ASE 115 or equivalent.
(Formerly ASE 115, 116, 117. Engineering Graphics. (3, 3, 3). Change in title, description, prerequisites and division of sequence.)
Changes in Old Courses - continued

ASE 211. Statics. (4)
Principles and Applications of static equilibrium to structures and machines. Prerequisite: Mth 201, Ph 207 taken concurrently.
(Change in prerequisites.)

ASE 212. Strength of Materials. (4)
Study of the relationship between strain and stress in deformable bodies; principles of stress analysis for axial force, flexure, torsion, and shear; studies in combined stresses and column stability. Prerequisites: ASE 211, Mth 202.
(Change in prerequisites.)

ASE 213. Properties of Materials. (4)
Basic properties, behavior, and survey of engineering and industrial applications of materials. Three lectures; one 3-hour laboratory period. Prerequisites: Ch 201, ASE 212 concurrently.
(Change in prerequisites.)

ASE 215. Dynamics. (4)
Fundamental principles and methods of Newtonian mechanics including kinematics and kinetics of motion and the conservation laws of mechanics. Basic particle and rigid body applications. Prerequisites: ASE 211, Mth 202.
(Formerly ASE 311. Dynamics. Change in number and prerequisites.)

ASE 231. Plane Surveying and Mapping. (3)
An introductory analytical treatment of the principles of engineering measurements applied to plane surveys. Origins of datums, random errors, observation systems, computations, nonrigorous adjustments and topographic mapping. Computer applications. Prerequisite: Mth 200 or Mth 204 or consent of instructor.
(Change in prerequisites.)

ASE 251, 252. Electrical Circuit Analysis. (4, 4)
Experimental laws, network theorems, and useful computer analysis techniques of electrical circuit analysis. Solution of electrical network responses to various forcing functions of time by phasor methods. Three lectures; one 3-hour laboratory period. Prerequisite: Mth 201 for ASE 151; Mth 202 for ASE 252.
(Change in description, prerequisites and division of sequence.)

ASE 265. Introduction to the Frequency Domain. (4)
Impulse and step response of electrical circuits, introduction to the frequency domain, Laplace and Fourier transforms, spectra Bode plot and passive filter design. Block diagrams and transfer functions. Prerequisites: ASE 252 and Mth 321 taken concurrently.
(Formerly ASE 251, 252, 253. Electrical Circuit Analysis. (4, 4, 4). Change in number, title, description, prerequisites, lecture hours & laboratory hours & division of sequence.)
ASE 312. Advanced Dynamics. (3)
Advanced topics in dynamics: central force motion model application to space mechanics; moving reference frames, application; Euler equations, application to rigid body motions; dynamic balancing; gyroscopic motion; elements of generalized dynamics, Lagrange equation, applications. Prerequisites: ASE 215, Mth 321.
(Change in prerequisites.)

ASE 313. Engineering Vibrations. (3)
Elements of free and forced vibrations with and without damping. Introduction to numerical methods; continuous systems; application to mechanical and structural systems. Two lectures; one 2-hour laboratory period. Prerequisites: ASE 212, 215, Mth 321.
(Change in description, prerequisites, lecture hours and laboratory hours.)

ASE 314. Kinematics of Machine Elements. (3)
Study of motion pertaining to displacements, velocities and accelerations in linkages, cams, gears and other mechanisms. Selected associated topics. Two lectures; one 2-hour design laboratory period. Prerequisites: ASE 212, ASE 311.
(Change in prerequisites.)

ASE 321, 322. Engineering Thermodynamics. (3, 3)
Study of energy sources and utilization; basic laws of thermodynamics; thermodynamic processes and cycles; heat power systems; internal combustion engines, nuclear power plants, etc. Prerequisites: Ph 209, Mth 203.
(Change in prerequisites.)

ASE 323. Heat Transfer. (3)
Elements of steady-state conduction, free and forced convection, and radiation heat transfer by combined effects; condensation and boiling heat transfer; mass transfer; special topics. Two lectures; one 2-hour laboratory period. Prerequisites: ASE 322, Mth 321.
(Change in description, prerequisites, lecture hours and laboratory hours.)

ASE 350. Engineering Electromagnetics I (4)
Review of vector algebra; study of Coulomb's law, electric field intensity, electric flux density. Gauss's law, divergence theorem, electrostatic potential, conductors, capacitance, solution of Laplace and Poisson's equations, magnetic fields, Ampere's law, magnetic flux and flux density, vector magnetic potential, magnetic forces and magnetic circuits; applications to electrical engineering problems. Four lectures per week. Prerequisites: ASE 253, Ph 208.
(Formerly Ph 351. Engineering Electromagnetics. Change in number, title and prerequisites.)
DIVISION OF ENGINEERING AND APPLIED SCIENCE - continued

Changes in Old Courses - continued

ASE 354. Fundamentals of Electrical Circuits. (4)
Circuit parameters. Basic theorems and techniques for network analysis. Forced and transient responses in D-C circuits. Sinusoidal steady-state response of circuits, phasors, application of network theorems to complex impedances, resonance, three-phase circuits. Three lectures; one 3-hour laboratory. Prerequisites: Mth 203, Ph 209, or equivalent.
(Change in title, description, credit hours and lecture hours.)

ASE 355. Electrical Energy Conversion Fundamentals. (3)
Electronic amplifiers, equivalent circuit analysis and operating characteristics of transformers and rotating machinery. Basic theory of magnetism and magnetic circuits. Prerequisite: ASE 354 or equivalent.
(Formerly ASE 356. Fundamentals of A-C Electrical Circuits. (3). Change in number, title, description, prerequisites, lecture hours and laboratory hours.)

ASE 361. Fluid Mechanics. (4)
Properties of fluid; fluid static; conservation of mass, energy and momentum; selected topics in pipe flow, compressible flow, and fluid metering. Three lectures; one 3-hour laboratory period. Prerequisite: ASE 215, Mth 321, taken concurrently.
(Formerly ASE 461. Change in number and prerequisite.)

ASE 362. Hydraulics. (4)
Stability of floating and submerged bodies; dimensional analysis and dynamic similitude; introductory, turbulent and boundary layer theory; open channel hydraulics; and flow measurement. Three lectures; one 3-hour laboratory period. Prerequisite: ASE 361.
(Formerly ASE 462. Change in number and prerequisites.)

ASE 365. Principles of Feedback Control System Design (4)
(Formerly ASE 451, 452, 453. Automatic Control Processes. (4, 4, 4). Change in number, title, description, prerequisites, lecture hours and laboratory hours.)

ASE 421, 422, 423. Advanced Electronics. (4, 4, 4)
Transistor modeling; Analog (linear and nonlinear) circuit and digital circuit analysis and design. Computer aided analysis and design. Three lectures; one 3-hour laboratory period. Prerequisite: ASE 359.
(Formerly ASE 421, 422, 423. Electronics II. (3, 3, 3). Change in title, description, credit hours and lecture hours.)
DIVISION OF ENGINEERING AND APPLIED SCIENCE - continued

Changes in Old Courses - continued

ASE 431. Transfer and Rate Processes. (3)
Study of the rate processes of momentum, energy and mass transfer as a unified topic. Interpretation and use of experimental rate data, relationship between design and uncertainties in rate measurement. Processes such as pipe flow and flow through porous media are examined to illustrate procedures and concepts. Prerequisites: ASE 323, ASE 361, Mth 321.
(Change in prerequisites.)

ASE 452, 453. Automatic Control Processes. (4, 4) (Grad)
State space description of systems, criteria for controllability, observability and stability for time invariant linear systems, both continuous and discrete; sample data systems; use of analog and digital computers in control systems. Prerequisite: ASE 365.
(Change in description and add graduate credit.)

ASE 467. Engineering Acoustics. (3) (Grad)
A study of sound generation, propagation, measurement and analysis; acoustical characteristics of materials and material configuration; application of noise standards; system design to reduce sound levels. Two lectures; one 2-hour laboratory period. Prerequisites: ASE 313, 322.
(Change in description, prerequisites, lecture hours and laboratory hours.)

ASE 474. Mechanical Engineering Testing and Evaluation Laboratory. (3) (Grad)
Testing and verification of theory, design, and laboratory evaluation of performance of mechanical components and systems. Two lectures; one 3-hour laboratory period. Prerequisites: ASE 215, 323, 495.
(Change in prerequisites.)

ASE 487. Advanced Strength of Materials. (3)
(Deletion of graduate credit.)

ASE 491, 492, 493. Mechanical Analysis and Design. (4, 4, 4)
Philosophy and morphology of design; socioeconomic factors and decision processes in design, utilization of computers in optimization of design factors; design of machine elements; design of mechanical systems; failure criteria and manufacturing considerations in mechanical design. Prerequisites: ASE 313, 314, 356, 487.
(Change in prerequisites.)

ASE 495. Engineering Measurement and Instrumentation Systems. (3)
(Grad)
Principles and applications of measurement methods and instrumentation techniques, as used in various engineering disciplines, are studied. This course shows the broad common principles and techniques in various engineering disciplines. General measurement concepts
Changes in Old Courses - continued

and instrumentation characteristics are examined. Specific devices for measuring such parameters as displacement, force, strain, pressure, flow, temperature, motion, time and frequency are discussed. Pre-requisites: ASE 356, senior standing in engineering. (Change in prerequisites.)

Old Courses Dropped

ASE 253. Electrical Circuit Analysis. (4)
ASE 311. Dynamics. (4)
ASE 351. Engineering Electromagnetics. (4)
ASE 356. Principles of Electromagnetic Energy Devices. (3)
ASE 461. Fluid Mechanics. (4)
ASE 462. Hydraulics. (4)
AN OPEN SYSTEM ANALYSIS OF THE DECISIONS MADE IN THE CRIMINAL JUSTICE PROCESS. CONTEMPORARY PROBLEMS AND ISSUES, PREVAILING IDEOLOGIES, AND CURRENT OPERATIONAL PRACTICES WILL BE ANALYZED FOCUSING AROUND THESE CRITICAL DECISIONS. ALTERNATIVES AND THE DILEMMAS OF CHANGE IN POLICING, PROSECUTION, COURT ADMINISTRATION AND CORRECTIONAL PROGRAMS WILL BE CONSIDERED.

NEW COURSES

USP 211. GRAPHICS FOR URBAN PLANNERS. (3)
This introductory course in basic principles of graphic communication and drafting techniques will explore the fundamentals of visual language used in the field of urban planning and design. It will offer training that will enable students to represent planning/design ideas in graphic form and will provide practical skills for graphic presentation in reports and public exhibitions. Students will be required to become familiar with the basic types and contents of planning/design maps and graphics and the methods of two- and three-dimensional presentation. They will develop competence in using drafting tools and designing, and constructing graphics and maps individually.

USP 212. GRAPHIC ANALYSIS AND COMMUNICATION. (3)
This course will provide studio experience in the development of graphic communication skills. It will teach basic design problems and provide practice in combining verbal, tabular, and graphic presentation of planning data.

USP 311. DESIGN AND ECOLOGICAL PROCESSES. (3)
A course designed to bring together the many aspects of nature and their relationship with human activities. The content will focus on the site planning process as it is modified to accommodate natural environmental factors and the needs for energy conservation and utilization of alternative energy sources. The course will provide ethical evaluation for deliberate aesthetic expression in handling every part of the environment.

USP 312. PRINCIPLES OF ENVIRONMENTAL DESIGN. (3)
This course will explore the basic processes of design and change in the environment. It will treat strategies for intervening among institutions and their physical settings. Presentation of examples of professional practice and of efforts to guide urban development
New Courses - continued

will be included, along with consideration of historical precedents and the social values of what constitutes good environments.

USP 420. Urban Design: Analysis of Space. (3)
This course is intended to train students to inventory and analyze the spatial elements of urban environments. Students will gain practice in dealing with the interrelationships of buildings, streets, squares, parks, open spaces and transportation modes.

USP 427. Urban Restoration: Theory and Practice. (3)
This course will focus on the following processes: (a) the development of the historic urban center and the consistent attempts undertaken to ensure its survival; (b) the present significance of the historic urban centers within the framework of the modern urban cluster and its corresponding townscape; (c) the future significance of the historic urban center within the future spatial cluster and its corresponding spatial setting; and finally describe methods of procedure to be employed in town planning projects involving historic sectors and towns.

USP 528. Comprehensive Planning Workshop. (6)
Organized teamwork approach to a current planning problem in the Portland metropolitan area. Assignments focus on applied planning practice, and include field investigation, data analysis, written and oral communication. Work program includes strategies, methods & skills needed to identify issues and draw together all participants in the search for solutions. Emphasis is placed on the blending of practical skills with knowledge gained from core-area courses.

USP 533. Models of Urban Systems. (3) (Grad)
This course examines models of urban systems that are widely used in planning analysis. Simple and complex models of population projection, models of location and travel behavior, and large scale simulation models of urban systems will be examined. Students will apply several of the above models in the context of simulated planning problems. Prerequisites: USP 532.

USP 542. Planning Implementation. (3)
An examination of alternative approaches to implementation of plans. Topics include: regulatory tools, e.g. zoning and sub-division ordinances; review functions, e.g. design review and administrative review; and programs, e.g. growth management, capital improvements, community development, housing assistance plans; and political-procedural issues, e.g. permit streamlining, cost impacts.
New Courses - continued

USP 544. Urban Transportation Planning. (3) (Grad)
Principles of urban transportation planning. Urban transportation problems and policy formation. Techniques used in transportation planning.

USP 546. Theory of Urban Design. (3)
The Theory of Urban Design is an exploration of the plurality and contradictions inherent in urban design methodologies. The course will outline the history of urban design, describe current trends, including the separation of urban planning from urban design, and discuss future design possibilities for cities. Special attention will be given to the interactions among social, economic, and political forces. Discussion will also cover cultural determinants and the significance of technological changes. The class will examine the nature of the design process and attempt to develop a model for such process.

USP 564. Organizational Theory and Development. (3)
The first part of this seminar is dedicated to a review of the major theories of how we should organize ourselves to work together. The goal here is to gain an understanding of the development of organizational thought; what we used to think and why and what we now think and why. The second part is focused on the theory and practice or organizational development, the most contemporary and perhaps most promising of movements in this field.

USP 565. Intergovernmental Relations. (3)
While intergovernmental relations have been motivated by a strong concern for the effective delivery of public services to clients, either on a distributive or redistributive basis, the activities have become a major part of all units of government. The course examines the structures, functions, processes and programs, officials' actions and attitudes, which are a part of intergovernmental relations. Policy issues are analyzed from the perspective of the professional bureaucracy in government, elected officials, interest groups, and the general public. Several urban policies are examined in a systems context. Fiscal community issues are framed amidst political, economic and administrative forces, all influenced by federal policy-making and implementation. Interorganizational activities in the mixed climate of centralized decision-making and decentralized implementation amidst reduced resources are examined.

USP 566. National Urban Policy. (3)
Examines the origin of national urban policy concerning major local problems. Analysis is made of the utilization of social policy
research in urban problem solving. Raises questions regarding criteria for reallocation of resources that are aimed at effecting social equity and improving general welfare of urban populations. Constructs social indicators and quality-of-life indicators in order to compare local conditions with national averages. Assesses the incidence of distributive and redistributive policy impacts on socioeconomically differentiated and geographically dispersed metropolitan households. Reviews emerging theories of social justice in light of contemporary social change.

USP 576. Activity Location. (3) (Grad)
The location of human activities in urban systems. Location of economic activities where profit maximization is desired, and location decision with equity maxima. Prerequisite: USP 515, 519 or GEOG 489.

USP 579. Metropolitan Fiscal Structure. (3)
The course will focus on the following topics: the tax burdens, fiscal resources and expenditure patterns of local governments in metropolitan areas. The impact of revenue sharing and categorical grants. The spatial distribution of local government services, transfer payments, and tax burdens. Review of literature on the urban-suburban exploitation thesis, the Tiebout-Oates model, etc. Prerequisite: USP 515.

USP 580. Urban Scenes and Lifestyles. (3)
Examination of sociological theories and research evidence on emerging lifestyles in urban areas. Analysis of alternative social systems, subcultures, and "urban scenes." Examination of "high culture" and "mass culture" in modern urban communities.

USP 586. Urban Social Networks. (3)
Analysis of the social psychological and anthropological literature on social networks: the structure and content of interpersonal networks (including kinship, friendship, instrumental) in an urban setting. Specific topics will include: the nature of interpersonal ties in the city, urban migration and networks, access to urban resources, methods of analyzing personal and group networks.

USP 587. Perspectives on Aging. (3)
An overview colloquium or lectures series covering many disciplines and applied problems relating to understanding adult development and aging. Included are lectures by PSU faculty, program specialists and experts from the community dealing with social psychological issues, bio-physiological issues, and policy-program issues relating to older adults in contemporary urban society.
Changes in Old Courses

USP 532. Urban Data Systems. (3)
(Change in description and prerequisites.)

USP 534. Data Analysis. (3)
The use of multivariate statistics, e.g. multiple linear regression, factor analysis, and discriminant analysis, in Urban Studies. Data base management as it pertains to these applications. Prerequisite: USP 532.
(Change in description and prerequisites.)

USP 551. Criminality, Crime Control and Criminal Justice. (3)
(Formerly USP 524. Change in number.)

USP 584. Social Change and the Future of the City. (3)
(Formerly USP 521. Change in number.)

USP 585. Community Theory. (3)
(Formerly USP 523. Change in number.)

Old Courses Dropped

USP 521. Social Change and the Future of the City. (3)
USP 523. Community Theory. (3)
USP 524. Criminality, Crime Control and Criminal Justice. (3)