## Seattle University

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Seattle University

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## Winter Quarter 1977

November 15-24
January 3
January 3
January 7
January 7
February 11
February 14-24
February 21
February 25
March 9-11

February 14-24
March 28
March 28
April 1
April 1
April 8
April 25-May 13
May 9
May 18
May 30
May 31-June 3
June 4
June 5

April 25-May 13
June 16-20
June 20
June 24
June 24
July 4
July 15
July 18
August 11-12

Advance Registration (Winter 1977)
Registration
Classes Begin
Last Day to Register
Last Day to Add or Change
Last Day to Remove Incompletes
Advance Registration (Spring 1977)
Washington's Birthday-No Class
Last Day to Withdraw with ' $W$ '
Final Examinations

## Spring Quarter 1977

Advance Registration (Spring 1977)
Registration
Classes Begin
Last Day to Register
Last Day to Add or Change
Good Friday-No Class
Advance Registration (Summer 1977)
Last Day to Remove Incomplete
Last Day to Withdraw with 'W'
Memorial Day-No Class
Final Examinations
Baccalaureate
Commencement

Summer Quarter 1977

[^1]
## 1977

| JANUARY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 234 | 5 | 6 |  | 8 |
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| 161718 | 19 | 20 | 21 | 22 |
| $23 \quad 2425$ | 26 | 27 | 28 | 29 |
| 3031 |  |  |  |  |
| FEBRUARY |  |  |  |  |
|  | 2 | 3 |  | 5 |
| 678 | 9 | 10 |  | 12 |
| 131415 | 16 | 17 | 18 | 19 |
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| 2728 |  |  |  |  |
| MARCH |  |  |  |  |
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| 131415 | 16 | 17 | 18 | 19 |
| 202122 | 23 | 24 | 25 | 26 |
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| APRIL |  |  |  |  |


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$\begin{array}{lllllll}17 & 18 & 19 & 20 & 21 & 22 & 23\end{array}$
$2425 \quad 2627 \quad 282930$ MAY
$\begin{array}{lllllll}1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$ $\begin{array}{lllllll}8 & 9 & 10 & 11 & 12 & 13 & 14\end{array}$ $\begin{array}{lllllll}15 & 16 & 17 & 18 & 19 & 20 & 21\end{array}$ $22 \quad 232425262728$ 293031
JUNE

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## NOVEMBER

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| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 |  |  |  |

## DECEMBER

| 11 | 5 | 6 | 7 | 8 | 9 | 10 |
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$\begin{array}{lllllll}18 & 19 & 20 & 21 & 22 & 23 & 24\end{array}$ $25 \quad 262728293031$

## 1978



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| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
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| APRIL |  |  |  |  |  |  |


| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
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| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
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| MAY |  |  |  |  |  |  |  |
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| 14 | 15 | 16 | 17 | 18 | 19 | 20 |  |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |  |
| 28 | 29 | 30 | 31 |  |  |  |  |
| JUNE |  |  |  |  |  |  |  |
| 4 | 5 | 6 | 7 | 1 | 2 | 9 | 3 |
| 4 | 5 | 10 |  |  |  |  |  |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |  |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 25 | 26 | 27 | 28 | 29 | 30 |  |  |


$\begin{array}{lllllll} & 4 & 5 & 6 & 7 & 8 & 9\end{array}$ $\begin{array}{lllllll}10 & 11 & 12 & 13 & 14 & 15 & 16\end{array}$ $\begin{array}{lllllll}17 & 18 & 19 & 20 & 21 & 22 & 23\end{array}$ $\begin{array}{llllll}24 & 25 & 26 & 27 & 28 & 29 \\ 30\end{array}$ OCTOBER

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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## NOVEMBER

| 5 | 6 | 7 | 1 | 2 | 3 | 4 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 12 | 13 | 14 | 15 | 16 | 17 | 11 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 |  |  |
| DECEMBER |  |  |  |  |  |  |
| 7 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 |  |  |  |  |  |  |

Fall Quarter 1977

September 26 September 27
September 28
September 29
October 5
October 5
October 24
November 10
November 14-23
November 24-25
November 30
December 12-14


November 14-23
January 3
January 3
January 9
January 9
February 13
February 14-24
February 20
March 1
March 13-15

February 14-24
March 28
March 28
April 3
April 3
April 24 - May 12
May 8
May 16
May 29
May 30 - June 2
June 3
June 4

April 24 - May 12
June 19
June 19
June 23
June 23
July 4
July 14
July 17
August 10-11

September 25
September 26
September 27
September 28
October 4
October 4
November 8
November 13-22
November 22
November 23-24
December 6-8

Orientation
Registration-Continuing Students
Registration-New Students
Classes Begin
Last Day to Register
Last Day to Add or Change
Veterans Day-No Class
Last Day to Remove Incompletes
Advance Registration (Winter 1978)
Thanksgiving Holiday - No Class
Last Day to Withdraw with 'W'
Final Examinations

## Winter Quarter 1978

Advance Registration (Winter 1978)
Registration
Classes Begin
Last Day to Register
Last Day to Add or Change
Last Day to Remove Incompletes
Advance Registration (Spring 1978)
Washington's Birthday-No Class
Last Day to Withdraw with "W"
Final Examinations

## Spring Quarter 1978

Advance Registration (Spring 1978)
Registration
Classes Begin
Last Day to Register
Last Day to Add or Change
Advance Registration (Summer 1978)
Last Day to Remove Incompletes
Last Day to Withdraw with 'W'
Memorial Day-No Class
Final Examinations
Baccalaureate
Commencement

## Summer Quarter 1978

Advance Registration (Summer 1978)
Registration
Classes Begin
Last Day to Register
Last Day to Add or Change
Independence Day-No Class
Close First Term
Registration Second Term
Final Examinations

## Fall Quarter 1978

## Orientation

Registration-Continuing Students
Registration-New Students
Classes Begin
Last Day to Register
Last Day to Add or Change
Last Day to Remove Incompletes
Advance Registration (Winter 1979)
Last Day to Withdraw with 'W'
Thanksgiving Holiday-No Class
Final Examinations


## Purpose and Scope

Seattle University, an institution of higher learning, has for its object and purpose:

- the conservation, interpretation and transmission of knowledge, ideas and values;
- the extension of the frontiers of knowledge by critical and exhaustive investigation or experimentation;
- the preparation for some of the professions by thorough and intelligent training in the theory and principles underlying those professions.
As a University, it attains its end not only through the sciences and humanities, including philosophy and theology, but also through its professional schools.
As a University operated under the sponsorship and direction of the members of the Jesuit order:
- it affirms its belief in a support of Christian ideals and values;
- it affirms its belief in the unity and totality of all human knowledge, whether experimental, speculative, or divinely revealed;
- it seeks, by a faculty inspired with the Spirit of Christ and by the creation of a liberal atmosphere inside and outside the classroom, to develop an unbiased, truly liberated and enlightened intelligence in its faculty and student body.


## History

Seattle University's development as one of the Pacific Northwest's leading universities is closely interwoven with the history of Seattle and the Pacific Northwest. It is the story of a continuing effort on the part of the University to help meet the educational demands of a burgeoning area.
In 1890, concerned with the problem of providing adequate educational opportunity for the young men of the area, the Rt. Rev. Aegidius Junger bishop of the then Nesqually diocese, asked the Jesuit fathers to establish a school in Seattle. Two pioneer priests, the Rev. Victor Garrand, S.J., and the Rev. Adrian Sweere, S.J., were sent by the Rev. Joseph Cataldo, S.J., superior of the Rocky Mountain Missions, to answer the bishop's request.

They arrived in Seattle early in 1891 and immediately set about choosing a site for the new school. Upon the advice of some of the area's leading figures, they purchased several lots in the Broadway addition on the eastern edge of the young city. Pending construction of their new building, the fathers were asked to begin classes in St. Francis Hall, at what is now Sixth and Spring Streets in downtown Seattle. They assumed administration of the church and school on September 23 , 1891, changing the name of the latter to the School of the Immaculate Conception.
In 1893, the cornerstone of the first building on the present campus at Broadway and Madison Streets was laid. The building, now the Garrand Building, served both as a school and as the first Immaculate Conception Church in Seattle. The following year, under the direction of the Rev. Conrad Brusten, S.J., and the Rev. "Patrick Mahony, S.J., students were first enrolled in an "Academic" course of studies at the high school level. Four years later, the school received its Articles of Incorporation as an institution of higher learning under the corporate title, Seattle College.
The years that followed were years of struggle for the young institution. The frontier atmosphere of the time was not especially conducive to its growth and it was not until 1900 that the collegiate program was begun with a course in "The Humanities," the forerunner of today's College of Arts and Sciences. In 1907, at the request of former students, evening courses were first offered. The University granted its first bachelors' degrees in the spring of 1909 and its first graduate degree in 1910.
Conditions during the First World War led to the suspension of classes from 1918 until 1922. The latter year they were resumed on a seven-acre campus on Interlaken Boulevard which, with two buildings, had been presented to the college by Mr. and Mrs. Thomas C. McHugh. Both college and high school classes were held on the new campus until 1931 when the college returned to its former Broadway and Madison site.
The first women students were admitted to credit courses in 1933. Seattle University's second academic unit, the School of Education, was added in 1935. In 1937, full accreditation was granted by the Northwest Association of Secondary and Higher Schools. The School of Nursing was established in 1940 and the School of Engineering added in 1941. A fifth major academic unit, the School of Commerce and Finance was initiated in 1945.
On May 28,1948 , full university status was granted by the State of Washington and Seattle College assumed its present title, Seattle University.


## Organization

Seattle University is a private, coeducational university conducted by the fathers of the Society of Jesus, popularly known as the Jesuits. It is open to students of all races and denominations and is incorporated under the laws of the State of Washington. One of 28 Jesuit colleges and universities in the United States, it derives its tradition and objectives from the four centuries of academic experience and educational ideals of the Society of Jesus, implemented by nearly two thousand years of Christian tradition and knowledge.

The University is composed of six major academic units:

The College of Arts and Sciences comprises 12 departments. These are English, fine arts, foreign languages, history, journalism, military science, philosophy, political science, psychology, rehabilitation, sociology and theology and religious studies. Program divisions are: community services, Criminal Justice/Police Science, general studies, honors, prelaw and speech.
The Albers School of Business offers programs in accounting, economics, finance, general business, management and marketing.

The School of Education offers programs which qualify its students for teaching certificates and principals' credentials issued by the State Department of Public Instruction.

The School of Science and Engineering is composed of the departments of biology, chemistry, mathematics, physics and civil, electrical and mechanical engineering. Program divisions are: general science, health information services, medical technology, predental, premedical and preoptometry studies.

The School of Nursing offers a baccalaureate program in professional nursing which qualifies students for registration through state licensure.

The Graduate School has programs leading to masters' degrees in accounting, business, education, English, history, natural science, philosophy, public service, rehabilitation and religious education. A Doctor of Education degree with a major in Educational Leadership is offered.

## Accreditation

Seattle University enjoys the highest accreditation and its students are accepted for graduate and advanced study by leading colleges and universities in all parts of the country.

The University is accredited by:
Northwest Association of Schools and Colleges
National League For Nursing
American Chemical Society
Engineering Council for Professional Development
American Assembly of Collegiate Schools of Business
National Council for Accreditation of Teacher Education
is approved by:
Washington State Board of Education
American Medical Association
American Society of Clinical Pathologists
American Medical Record Association
Washington State Board of Nursing

## The University is a member of:

American Association of Colleges for Teacher Education, American Council on Education, Association of Higher Education, Association of Jesuit Colleges and Universities, Independent Colleges of Washington, National Commission on Accrediting, Northwest Association of Colleges, Western Interstate Commission for Higher Education.


## Campus and the City

Seattle University is located on a 41-acre campus on Seattle's historic First Hill. Within short walking distance are the city's major education, cultural and recreational facilities, business and shopping centers and the Puget Sound waterfront.

The University's physical facilities serve a current student enrollment of 3,500 . Presently, the campus contains 23 buildings, including modern classrooms, student and faculty residences and service units.

The housing facilities available on campus are Bellarmine Hall, Xavier Hall and Campion Tower. Residence halls are coed.

On campus facilities include the A.A. Lemieux Library (1967), the major study and resource center, with seating for 1,100 students. A variety of study areas, including individual carrells, study lounges and conference rooms, are available for the student's comfort and convenience.

The Connolly Center (1969) is the physical education teaching facility. In addition to classroom areas, recreational facilities include two swimming pools, basketball, badminton, tennis and handball courts and a gymnastics and dance area.



The Student Union Building (1953), the Chieftain, houses the office of the Vice President for Students, student offices, dining, lounge and meeting areas. A selection of auditoriums are available in the A.A. Lemieux Library, the William Pigott (1957) and Thomas J. Bannan (1961) Buildings for films, lectures, meetings and musical presentations. Teatro Inigo (1964) is the theatre for student drama productions.
Other major campus structures include the Liberal Arts Building (1945); Bookstore Building (1964); Loyola, the Jesuit faculty residence.
Seattle University is located in a seaport city surrounded by unsurpassed natural beauty. Seattle, the largest city in the Pacific Northwest and one of the 25 largest in the United States, has all the scenic and cultural variety of a metropolitan city with the unique advantage of mountains and water at its back door.

Within city boundaries, Lake Union and Lake Washington provide the opportunity for sailing, boating, water skiing and swimming.
Ski areas are within an hour's drive of the city, with night and weekend skiing during winter months. Easy hikes, with trails marked and guide books available, are popular in the spring and summer months, as well as more difficult hikes for seasoned enthusiasts.
Bicycling has become increasingly popular and trails are set aside in various areas of the city.
Golf Courses, tennis courts, and indoor and outdoor pools for year-round swimming are available in addition to fishing and hunting opportunities.

## STUDENT SERVICES



## COSTS-GENERAL INFORMATION

All charges are due and payable at the time of advanced registration or on registration day. Registration is a coordinated process involving the Registrar, the Controller and the Director of Financial Aid. For further information about financial aid see pages 11-13. Seattle University reserves the right to change its charges without notice prior to the beginning of any quarter or summer session.

A student who has not met his/her financial obligations following registration will have his/her registration cancelled unless allowed to continue under conditions agreed to by the Controller.

## Tuition Rates

| Undergraduate courses: Fall, Winter, Spring . . . . . . . . . . . . . . . $\$ 56.00$ per credit hour |  |
| :---: | :---: |
| Masters degree programs |  |
| Business | \$80.00 per credit hour |
| Public Service | \$67.00 per credit |
| Rehabilitation | \$67.00 per credit hour |
| Education | \$60.00 per credit hour |
| Arts and Sciences | \$60.00 per credit hour |
| CORPUS Masters | \$8 |
| Doctor of Education |  |
| Certificate programs |  |
| Alcohol studies | \$40.00 per credit hour |
| Rehabilitatio | 56.00 per credit hour |
| CORPUS | \$80.00 per cr |

Auditors tuition . . . . . . . . . . $\$ 20.00$ per credit hour
(Auditors may not register until the second day of the term)

A deposit of $\$ 50.00$ is required of new students admitted for Fall quarter. This deposit is forfeited if a student does not register.

## Family Tuition Plan

Two or more members of a family living in the same household and dependent upon a common support and who are attending the University concurrently as full-time undergraduate students may apply for a tuition discount. Further information on the Family Tuition Plan can be obtained at the Controller's Office.

## Refunds

Withdrawals (full or partial)

| -10 class days | 80 percent |
| :---: | :---: |
| 11-15 class days | 60 percent |
| 16-20 class days | 40 percent |
| Thereafter | No refund |

Refunds are based on the number of consecutive Monday through Friday days from the first day of classes until the official date of withdrawal according to the above schedule. At least 10 class days must elapse between date of withdrawal and date of refund.

## Fees-Non-refundable

Application, undergraduate and graduate ..... $\$ 15.00$(must accompany application form)
Application, transient students ..... $\$ 10.00$
Late registration, per day ..... \$ 8.00
Matriculation, undergraduate and graduate ..... $\$ 20.00$
Credit by examination (per credit hour) ..... $\$ 10.00$
Validation of field experience (per credit hour) ..... $\$ 15.00$
Removal of incomplete (per course) ..... $\$ 8.00$
Graduation, undergraduate (per degree) ..... $\$ 25.00$
Graduation, graduate (per degree) ..... $\$ 50.00$
Graduation fees are due at the time of application for
graduation, and graduation forms will be releasedonly upon presentation of a receipt.
Certificate Fee ..... $\$ 10.00$
Thesis binding ..... $\$ 15.00$
Graduate Record Examination ..... \$ 7.00
Medical Technology Internship
(per credit hour) ..... $\$ 5.00$
Washington Pre-College Tests ..... $\$ 7.00$
Special Examination (per subject) ..... $\$ 5.00$
Make-up Examination (per subject ..... $\$ 5.00$
Laboratory Fees
Biology: All laboratory courses
$\$ 13.00$
$\$ 13.00$
Business 310, 509, 590 ..... $\$ 27.00$
Chemistry: All laboratory courses ..... $\$ 13.00$
Education: Ed 330, 528 ..... \$ 6.00
Ed 407, 547 ..... $\$ 11.00$
Ed 441 (per Section) ..... $\$ 37.00$
Engineering:
CE 496, 497, ME 496, 497 ..... $\$ 8.00$
All other laboratory courses ..... $\$ 13.00$
Health Information Services:$\$ 6.00$
HI 440, 441 ..... $\$ 11.00$
HI 475, 491 (computer) ..... \$16.00
Mathematics: Mt 114, 214 ..... $\$ 32.00$
Music:
MU 110, 111, 120, 122, 125 ..... $\$ 52.00$
Piano Practice room, one hour daily per quarter ..... $\$ 6.00$
Nursing: N 205, 300 ..... $\$ 6.00$
Physics: All laboratory courses ..... $\$ 13.00$
Psychology:
Psy 381, 401 ..... $\$ 11.00$
Psy 402 ..... \$16.00
Psy 390 ..... $\$ 32.00$
Residence Charges
Room (per academic year) ..... $\$ 810.00$
Board (per academic year)* ..... $\$ 580.00$
Deposit (refundable) ..... \$ 75.00
(Private room, additional 150.00 per quarter)
*Based upon 21 meals per week. Other options are also available. Further information can be obtained through the office of the Director of Resident Student Services.

## Student Services

The principal function of any university is to provide for its students an atmosphere conducive to intellectual progress-laboratories, library, classrooms and stimulating teachers. However, it is recognized that the total development of the individual is equally important. Consequently certain services have been introduced at Seattle University which exist for the purpose of serving the spiritual, social, personal and physical needs of the student body. These services of the university personnel described below are aids in making the educational pursuits of the students more profitable and satisfying.

## Advisory System

The deans of the several schools supervise the academic guidance and counseling program of both freshmen students and upperclassmen in their school. Through the department chairman, they assign an adviser for each student according to his major or area of concentration. The assignment of an adviser is normally made either during orientation or at the time the student is interviewed.

## Career Planning and Placement

This office makes available to the SU student or alumnus, services related to career information, career counseling, job listing and referral, campus interviewing and job-seeking skills instruction. Literature pertinent to employing institutions is available as is material relative to career guidance. Trained personnel is available for vocational counseling. After registering with the office, the student or alumnus is entitled to sign up for interviews with companies visiting campus. Job announcements and openings are posted and accessible to walk-in traffic. Instruction is given in resumewriting and workshops, panels and small-group instruction in job-seeking skills and interview techniques are available.

## The Child Care Center

The Child Care Center is open to children of students, staff and faculty from ages two and one-half to five years; also to community children if space is available. The preschool environment includes two snacks and a hot lunch each day, field trips, creative drama, language development and music. The Center is staffed by student interns under the supervision of a program coordinator and a director.
Fees are set on a sliding scale based on parent gross income, with qualifying parents receiving further fee reduction through State and local funding.

## Counseling and Testing Center

Specialized counseling is available at the Counseling and Testing Center by persons trained in clinical psychology. Here tests of scholastic and vocational aptitude, interest and personality are available to students. The service is administered without charge for students enrolled in the University. The Counseling and Testing Center also administers University-wide testing programs for the academic guidance of new students. At the discretion of the individual instructor, students may make up class examinations at the Center.

## International Student Services

International Student Services Office is located in the McGoldrick Student Development Center. All students from abroad, including transfers from other United States universities, report to this office after arriving on campus for passport checks and arrival-departure records. Forms for extension of stay, work permits or practical training requests are available and assistance is provided for the student who needs any other information regarding immigration regulations. Tutoring and study groups are also arranged.

## Minority Student Affairs Program

Seattle University offers to students from culturally unique economically and academically deprived backgrounds a special program of supportive services. These services include financial assistance, when available, counseling, tutoring, post graduate and career information and ethnic cultural programs. For further information, contact the Director, Office of Minority Student Affairs, McGoldrick Student Development Center.

## Orientation

To assist new students in becoming better acquainted with the University and familiar with their academic program, the Vice President for Student Life, assisted by the Director for Student Activities, the staff of the Counseling and Testing Center and members of the Student Government, sponsors a New Student Orientation Program prior to fall quarter registration. Freshmen students are expected to attend all orientation sessions. A transfer student orientation is also held during Winter and Spring quarters.

## Religious Program

The Campus Ministry team organizes and directs liturgical and religious programs aimed at furthering the spiritual welfare of the University community. Masses are offered daily in Bellarmine Hall, the Liberal Arts Chapel and the Liturgical Center. Confessions are heard at posted times each weekday as well as before the Masses.
Special liturgical and religious events are planned throughout the year by the Campus Ministry team in cooperation with a student liturgical committee. One such event is the Search. The Search is a religious experience which involves a weekend away from campus where participants have an opportunity to reflect on their personal growth in the Christian life. In addition, retreats, Pre-Cana and penance services, Scripture study programs, prayer groups and faith instruction classes are scheduled to meet student needs. NonCatholic students are invited to take part in all these activities.
For students who want to give some time to helping others, opportunities are provided to become involved in social action programs or to work with volunteer service organizations both during college years and following graduation. The Campus Ministry office also coordinates these activities through its Reach Out program.

## Spiritual and Personal Guidance

Members of the Campus Ministry team are chiefly responsible for the spiritual and personal guidance of students. They are aided in this work by other members of the student personnel staff. The Jesuit Fathers living in Loyola Hall and those who serve as moderators in the residence halls are also trained counselors, and students should feel free to come to them when in need of assistance. These faculty and staff members are available by appointment or through the informal contacts of campus life.

## Student Health Center

Students enrolled for 10 or more credit hours qualify to participate in University health services. These services are administered through the Student Health Center on campus.

## Student Health Insurance

Full-time students and their dependents are eligible to participate in the University's voluntary student health insurance program. The program provides accident and sickness benefits. This insurance may be purchased at registration.

## Student Organizations

Many campus organizations provide the student with an opportunity to develop his talents and to broaden his social and professional background. Included are professional societies, service clubs, student government groups, musical organizations, student publicatioins, scholastic honoraries, religious committees and civic and charitable organizations. A list of chartered organizations may be obtained from the Office of the Director for Student Activities.

## General Organizations

Associated Students of Seattle University - Has general supervision of all campus organizations and extracurricular activities. Direction is exercised through the student senate, activities board, financial committee, and the Director for Student Activities.
Associated Women Students-An organization whose purpose is to provide for the welfare of women students, to promote educational, religious, cultural and social interests, to foster cooperation and understanding and to instill ideals of leadership.

## Student Publications

The Aegis-student yearbook.
The Spectator-weekly student newspaper.
Fragments-literary publication.

## Academic Honoraries

Alpha Sigma Nu-national Jesuit honorary recognizing outstanding scholastic attainment, loyalty and service. Alpha Epsilon Delta-international premedical honorary.
Beta Gamma Sigma-national business school honorary.
Kappa Delta Phi-national education honorary.
Sigma Theta Tau-national nursing honorary.
Tau Beta Pi -national engineering honorary.

## Service Honoraries

Alpha Phi Omega-a national service fraternity open to all students.
Intercollegiate Knights-a national service fraternity open to all students.
Spurs-a women's service organization open to sophomore women who have shown qualities of scholarship, interest in school events and attributes of leadership and personality.
IK Little Sisters-women's service honorary.

## Athletic Program

Seattle University is a member of the National Collegiate Athletic Association, the Association of Intercollegiate Sports for Women and the West Coast Athletic Conference. Its athletic policies are governed by the constitution and by-laws of these associations. The athletic program is administered by the Director of Athletics and his staff. Intercollegiate Sports for men include basketball, baseball, golf, tennis, crew, soccer and cross country. The Women's Intercollegiate Program offers competition in gymnastics, tennis, volleyball and track and field.

An intramural athletic program is conducted for both men and women students. The program is administered by the Director of the Connolly Center and includes a wide range of group and individual athletic activities.

## Housing

Seattle University requires all full-time freshmen under 21 years of age to live in University housing unless they are married or living with their parents, or unless they have been granted an advance waiver. Letters of permission and requests for waivers are to be sent to the Director for Resident Student Services. Upperclassmen may live in the residence halls if space is available.

## Residence Halls

Bellarmine Hall has a capacity of 444 and Xavier accommodates 206. Campion Tower has facilities for 600 residents. Campion residents are a combination of upperclass men and women and foreign language students. The halls provide study and recreational facilities and lounges. All students living on campus take their meals in the Bellarmine dining room. The residence halls are supervised by professionally trained directors, floor moderators and student resident assistants.

## Application for Housing

Requests for student housing are made through the Director for Resident Student Services. A seventydollar ( $\$ 70.00$ ) deposit is required to make reservations. See page 8 for schedule of housing costs.
Cancellation of a reservation must be received at the office of the Director for Resident Student Services or Dean for Women no later than August 1.
Applicants who do not cancel contracts by the above date forfeit the deposit fee. Residents who terminate their stay in University residence halls before the end of a quarter incur significant financial loss.

## FINANCIAL AID

## Meeting College Costs

The financial aid program at Seattle University assists academically competent and needy students in meeting the expenses of their college education. This assistance is offered to both new and continuing students, may be directed toward normal educational expenses as well as living expenses, and is available to full-time students without racial or religious discrimination.

Seattle University expects its students and their families to make a reasonable contribution toward the expense of a college education. This expected contribution is determined by the financial need analysis of the College Scholarship Service (CSS). Financial need is the difference between the cost of attending college and the amount the student and family is expected to contribute toward that cost. Once the expected student and family contribution is determined, the University will attempt to supplement that contribution with an award of financial aid which may consist of a combination of grants, loans, and/or part-time employment. The Financial Aid Office will determine the student's eligibility for all types of aid and, hopefully, the total cost of attending Seattle University can be met from three sources-student, family, and financial aid.

## Types of Financial Aid

Eligible students are likely to receive a combination of three types of aid, commonly called a financial aid "package".

1. GRANT and SCHOLARSHIP - An out-right award that does not require repayment.
2. LOAN - College loan programs allow liberal repayment periods and low interest rates. Repayment normally begins after graduation.
3. EMPLOYMENT - An opportunity to work at a campus job or in a Seattle Area business.
Seattle University reserves the right to change its financial aid policy without notice.

## How to Apply for Financial Aid

1) Apply for admission to Seattle University. A student must be ACCEPTED to Seattle University before being considered for financial aid.
2) Submit by mail the Parents' Confidential Statement or the Financial Aid form to CSS offices in Berkeley, California or Princeton, New Jersey. Be sure to indicate Seattle University as a recipient of the need analysis which will be calculated from the information you provide on the statement you mail to CSS.
3) Submit the Seattle University Application for Aid to the Seattle University Financial Aid Office.
4) Submit by mail a Basic Educational Opportunity Grant application to the Federal government at offices in lowa City, lowa. Submit all three copies of the BEOG Student Eligibility Report.
To ensure maximum consideration for financial aid, in the Seattle University Financial Aid Office, your file must be ready for consideration by March 1 . It is the applicant's responsibility to see that the file contains all
necessary documents. Applicants whose files are completed after the March 1 deadline will be evaluated for need and awarded on a funds available basis.
Currently enrolled students, new students and transfer students who are enrolling for Fall quarter must observe the March 1 deadline. All applicants for other than Fall quarter should contact the Financial Aid Office to determine the deadline. Continuing students must reapply for financial aid each year.
Applicants are advised to make and retain copies of all documents submitted.

## SCHOLARSHIPS

A limited number of scholarships are awarded annually to entering new students, transfer students and currently enrolled undergraduates. Awards are based on scholastic achievement, financial need, participation in school and community activities and leadership potential. Applicants need not prepare, except as indicated, a separate application for scholarships. All applicants for financial aid are automatically considered as a part of a financial aid package. Scholarship awards range from partial to full tuition. Other financial aid may apply to living expenses.

## Seattle University

Some scholarships are provided directly from Seattle University's own funds beginning with students having a perfect 4.00 grade point average and descending to those at approximately 3.60. The exact number awarded each year depends on available funds. Students with less than a 3.60 grade point average may be considered for tuition remission on a funds available and need basis.

## Honors Program Scholarships

Tuition scholarships are granted for one year and are renewable on the performance basis. Applicants should contact the Honors Program chairperson for complete information.

## Donated Scholarships

These are scholarships made available each year to Seattle University through the generosity of companies and individuals. In addition to the qualifications indicated, academic achievement and financial need are major considerations in selecting recipients.

## Father Beezer Memorial

Alumni and friends of the late Gerald Beezer, S.J. have established a fund to maintain a scholarship in memory of his many years of devoted service to the University. Applicants may receive a partial scholarship grant at this time.

## The Blume Family

## The Boeing Company

A scholarship grant extended to students majoring in engineering, physics, mathematics, or business. Renewable annually.

## Alphonse \& Mary Brenner and John Brenner Scholarship Fund

A grant to a deserving Catholic student from the Yakima diocese.

## Louella Cook Foundation

## Farmers Insurance Group

Partial scholarship funds granted to students majoring in business or mathematics. Grants are renewable.

## Seattle University Guild Scholarships

For scholarships in the Fine Arts department.

## Italian Club of Seattle

For students whose parents are Italian Club members.

## Laventhol \& Horwath

A partial scholarship award to a student majoring in accounting.

## Harry Kinerk Memorial Scholarship

A partial scholarship award in memory of the late Professor Harry Kinerk.

Rosemary McCone Memorial
Paul Pigott Memorial
Pay-n-Save Corporation Scholarship
For a student majoring in marketing.

## Army ROTC Scholarships

The United States Army awards scholarships to selected high school seniors and to college freshmen, sophomores and juniors who enroll in the Army Reserve Officer Training Corps program at Seattle University. All expenses for tuition, books and fees are paid for one, two, three or four years, and each student receives an additional $\$ 100$ per month allowance while on scholarship during the school year. Write to the Seattle University Professor of Military Science for information.

## Albert A. Schafer Memorial

Seattle First National Bank Minority Scholarship
A scholarship for a minority student enrolled in the School of Business.

## Washington Congress of Parents, Teachers, and Students Financial Grant

A grant of $\$ 175$ per year to an incoming first year new student with deep need. Renewable all four years of college.

## William E. Sullivan Memorial

## Western Gear Foundation

Awarded to students majoring in engineering in honor of the late Phillip L. Bannan, Sr. Renewable all four years of college.

## William P. Woods Business Scholarship

A $\$ 1,000$ award to a deserving upperclassman or graduate. Contact the Dean Albers School of Business.

## Wyman Youth Trust

## Loans

Loans are a part of the financial aid award "package" offered to students. Some loans do not require payment of principal or interest until the student graduates or leaves school. At that time low interest payments which may extend over a long period, begin. Loans are an excellent means for the student to assume, but delay, at least a part of the cost of education. This allows the student's family to assume a portion of the education cost without utilizing current income or savings. Students must be United States citizens, a resident of a Trust Territory, or have Immigration Department approved permanent status to be eligible for loans which involve federal funds.

## National Direct Student Loan (NDSL)

A long-term loan based on financial need. Eligible students may borrow a total of $\$ 5,000$ for their undergraduate education. Repayment begins nine months after the student graduates or leaves school. The annual interest rate is three per cent and repayment may extend ten years, but payments may not be less than $\$ 30$ per month. The NDSL repayment program also includes deferrment provisions and cancellation features.

## Federaly Insured Student Loan (FISL)

A long term loan arranged by the student with a lender selected by the student. A bank, credit union, or savings and loan are possible lenders. Students may borrow a total of $\$ 7,500$ for their undergraduate education. Repayment begins nine months after the student graduates or leaves school. The annual interest rate is seven per cent and repayment may extend ten years at not less than $\$ 360$ per year. The FISL is not need-based and may include a provision for the federal government to pay the interest while the student is in school. Early application is advised since processing takes 6 to 8 weeks.

## Law Enforcement Education Loan

A long term loan for full time employees of police, corrections agencies, or courts who are also full time students enrolled in a graduate or undergraduate program related to law enforcement. A LEEP loan will provide funds to cover tuition and fees. The Criminal Justice/Police Science and Community Services programs have been approved for this loan. The annual interest rate is seven per cent with a liberal cancellation policy.

## Student Short-Term Loans

Students are expected to arrive on registration day with funds required to pay tuition, room and board, and all fees. Late applicants for the Federally Insured Loan may not have received their loan funds, or other causes may prevent a student from having the required funds at registration. The Seattle University Alumni Credit Union may grant a short term loan to these students or their families. These loans, however, must be repaid during the quarter for which they apply. Application for these loans should be made before registration day directly to the Seattle University Alumni Credit Union.

## Special Loan Funds

## Ravetti Educational Fund

A low-interest loan fund established by Armand J. and Bessie M. Ravetti.

## Bing Crosby Loan Fund

A low-interest loan established by the Bing Crosby Foundation.

## Alda Medack Loan Fund

A fund established to provide emergency short-term loans.

## Grants

Several forms of grants are offered as part of the financial aid award package which might also include loans and employment. These are non-repayable federal and state grants as well as Seattle University tuition grants which provide partial tuition. Need rather than grade point average is the primary consideration.

## Supplemental Educational Opportunity Grant (SEOG)

Seattle University receives these federal funds to distribute to students with exceptional financial need. SEOG awards usually range from $\$ 200$ to $\$ 1,000$ in the initial year and may continue in the subsequent years. SEOG awards are non-repayable. Graduate students are not eligible.

## Basic Educational Opportunity Grant (BEOG)

Students considering Seattle University are encouraged to obtain a BEOG application form, complete the form, and mail it directly to the federal government in lowa City, lowa. In approximately four weeks the federal government returns to the student a Student Eligibility Report (SER) and, regardless of the reported eligibility, it is necessary for the student to forward all three copies of that SER to the Seattle University Financial Aid Office which will determine the BEOG amount, all of which is non-repayable. Up to $\$ 1,400$ per year is available. Students currently enrolled at Seattle University and receiving financial aid are required to file a BEOG application and submit the Student Eligibility Report. Graduate students are not eligible.

## Nursing Scholarship Grant

Federal non-repayable grants of up to $\$ 2,000$ per year are available to nursing students with exceptional financial need.

## Washington State Need Grant

A grant designed to assist needy and/or disadvantaged Washington state residents in obtaining postsecondary education. Selection is made by the Council for Postsecondary Education from nominations submitted by the University.

## Law Enforcement Education Grants

Grants of up to $\$ 250$ per quarter are available for full time employees of police, corrections agencies, or the courts who are full or part-time students in a program related to law enforcement.

## Veterans, Widows \& War Orphans Educational Assistance

Veterans (or spouses of deceased veterans) may receive up to 45 months of educational assistance under terms of the GI Bill. War orphans and dependents of disabled veterans may also receive up to 45 months of educational assistance. Contact the Seattle University Veterans Office.

## Social Security Assistance

Students may be eligible for Social Security assistance if one of their parents currently receives or had received social security benefits. Eligible students must be between 18-22 years of age, unmarried and attending full time. Information and forms may be obtained from a Social Security office.

## Student Employment

The financial aid award frequently includes work-study along with the loan and grant elements. Work-study eligible students may earn funds by being employed under the work-study program. These earned income may be used to pay either tuition or living costs. It is important to note that funds earned during the academic year under the work-study program will not be available at the time of Fall quarter registration and students must plan accordingly.

Work-study eligible students are not required to work nor guaranteed a job. The Seattle University Career Planning and Placement Office assists the student in obtaining a job on or off campus.

## Federal College Work-Study Program (FCWSP)

Students who have a determined need are offered part: time employment on or off campus with non-profit employers.

## Washington State Work-Study Program (WSWSP)

Students who have a determined need per the state formula are offered part-time employment with off campus profit making employers.

## Army ROTC Subsistence

$\$ 100$ per month is paid to all students enrolled in the Army ROTC program during their Junior and Senior years. Write to the Seattle University Professor Military Science for information.

## Student Job Placement Center

The Career Planning and Placement Office maintains a listing of jobs available on campus and with Seattle area employers at no charge.

## Admission Policy

Seattle University selects for admission those students who have demonstrated in their prior studies an ability to achieve a level of academic performance necessary to earn a degree. University admission policy is established by the Academic Council. It is administered by the Academic Vice President through the Director of Admissions and Registrar. All records submitted by applicants become the property of Seattle University. In addition to the requirements for admission set forth in this section of the bulletin, reference must be made to additional or distinctive requisites in the individual colleges or schools of the University. This information will be found in the section of the bulletin dealing with the specific college or school.

Seattle University offers the opportunities and experiences of higher education to all students equally without regard to race, religion, age, sex or national origin. It does so in keeping with the guidelines and requirements of laws and regulations as promulgated by state and federal agencies."

Admission may be granted to qualified applicants for any of the four quarters of the academic year. All applicants, excluding transients and audits, must remit the $\$ 15$ application fee to the University. Inquiries concerning admission should be addressed to the DIRECTOR OF ADMISSIONS, SEATTLE UNIVERSITY, SEATTLE, WASHINGTON 98122

## From Secondary Schools

To be admitted to the University as a regular student an applicant must meet the following entrance requirements:

Have graduated or will graduate from an accredited high school.
Have a high school grade point average of 2.50 or above as measured on the 4.00 scale or rank in the upper 50 per cent of the senior class.

Have completed 16 units of college preparatory courses.
Applicants with a grade point average below 2.50 as computed by the University admissions office will be reviewed by a special board. Applicants with a grade point average below 2.00 will not be admitted to the University on either a regular or probationary status.

## Unit Requirements

Admission is granted subject to graduation from an accredited high school and the applicant must present as part of his/her school record successful completion of a minimum of 16 units. One unit equals one year. These 16 units must be distributed as follows:



## Application

In the State of Washington, application blanks for those wishing to enter as freshmen may be obtained from high school offices. Out of state applicants may obtain forms by writing to the Director of Admissions. To be considered official, records must be forwarded to the University directly by the high school or registrar of a previous school.

In making application for admission the candidate must complete the following procedures after completion of at least the sixth semester:

1. Complete page one of the Washington uniform application for admission and leave the entire form with high school counselor to have the back of the page completed and forwarded directly to the Office of Admissions.
2. Submit a non-refundable application fee of $\$ 15$ to the Office of Admissions. Make remittances payable to Seattle University.
3. Follow carefully any other instructions which are received with the letter of acceptance.
4. Immediately upon receipt of housing material submit an advance room deposit of $\$ 70$. This deposit is not refundable after August 1.
Requests for housing for men and women should be addressed to the Director of Resident Student Services.

Notification of acceptance or refusal will begin December 1 and continue as files are completed. However, students whose records do not give sufficient evidence of the ability to pursue college level work will be notified that a final decision will not be made until the receipt of specified information.
High school students are encouraged to apply before May 1. All applications for admission should be received no later than one month before the beginning of each quarter.

## Early Admission

High school students with a grade point average of 3.3 or above on the 4.0 scale and who are recommended by their high school principal and their high school counselor may be considered for enrollment after their junior year at high school.

## Early Decision Plan

Students who select Seattle University as their firstchoice college and who have clearly demonstrated a high level of scholastic ability are eligible to apply for admission under this plan. Complete admission credentials should be submitted as soon as possible after the close of the sixth semester, but no later than November 1 of the senior year. Notification will be sent as soon as all credentials are received.

## Probation

Students admitted on probation will be placed in the General Studies Program under the guidance of the General Studies Director. Probation students must gain regular status by the end of the freshman year or be subject to dismissal from the University.

## Placement Examinations

Placement tests in chemistry, mathematics and foreign languages are administered by these departments during Orientation and offer entering freshmen the opportunity to show the extent of their preparation in these areas and enable their department head or adviser to determine the level at which they are ready to begin college work. For additional mathematics placement information, consult the departmental section of this bulletin.

## Entrance Examination

In addition to the high school record, it is recommended that candidates for admission to the Freshman class take the Scholastic Aptitude Test of the College Entrance Examination Board or the test of the American College Testing Program or the Washington PreCollege Test and have the scores submitted to the Admissions Office of the University.


Test application forms and information concerning testing centers and test dates may be obtained from high school counselors and principals. Applicants planning to take the College Boards may also write directly to the Educational Testing Service, P.O. Box 1025, Berkeley, California 94701, or P.O. Box 592, Princeton, New Jersey 08540. Students living in the eastern half of the United States should write to the latter address. Applicants planning to take ACT tests may write directly to American College Testing Program, Inc., Iowa City, lowa. The Washington Pre-College Test will be made available to juniors in all Washington High Schools.

## Advanced Placement

Entering students interested in receiving advanced placement in subject matter other than as set forth above should plan to take the Advanced Placement Tests of the College Entrance Examination Board. Information concerning these tests may be obtained from high school guidance personnel or by writing to Educational Testing Service. The Educational Testing Service will forward test results directly to Seattle University. At the discretion of the dean of the school and the head of the department, a student who has been given advanced placement on the basis of the CEEB Advanced Placement Tests may also be granted college credit. Advanced Placement or credit may also be granted on the basis of the subject examinations of the College Level Examination Program (CLEP) of the College Entrance Examination Board. To receive course credit through CLEP, students must submit the test results one month prior to the quarter they wish to enroll.

## Special Consideration

Mature students who give exceptional promise may be admitted without rigid adherence to minimum unit requirements even if they have not graduated from high school or have graduated from a non-accredited high school. Decision as to admission in these cases is reserved to the Academic Vice President and the Board of Admissions.

## Auditor

Admission as an auditor must be approved by the instructor of the course. An auditor will not be required to participate in class discussion or laboratory work. Assignments may be made at the discretion of the instructor.


## From Other Universities

A student who has established a satisfactory record in another accredited college or university may apply for admission with advanced standings at Seattle University. An applicant for transfer must:

1. Submit to the Director of Admissions at Seattle University the application form, application fee and one official copy of a transcript from each college previously attended. Failure to furnish previous college records when applying for freshman standing or to supply complete college credentials when applying for advanced standing place students under penalty of immediate dismissal. The University has the option to declare all credit not presented at the time of application as non-transferable.
2. Present a minimum 2.00 academic grade point average for college work attempted prior to transfer. Courses completed at the lowest passing grade are acceptable for transfer, but the dean or department chairman may require that such courses in the major field be repeated No transfer applicant will be admitted with a grade point average below 2.00 .
3. Transfer applicants who have completed less than one full year ( 30 quarter credits or 20 semester credits) at another university must fulfill secondary school unit requirements for admission to the Freshman class.
4. Submit a non-refundable application fee of $\$ 15$ to the Office of Admissions. Make remittances payable to Seattle University.

Students of other colleges or universities who have been placed on probation, suspended, or dismissed will not be considered for admission to Seattle University until at least one calendar year has elapsed. At the end of this period, admission can be granted only by the Board of Admissions. In such cases two letters of recommendation are required.
In assessing the student's record for admission, grades in non-credit courses will not be counted. For work done in institutions whose academic standing is unknown or for work with private teachers, admission and advanced credit will be granted only upon examination. Examination to establish credit for such work may be taken after completion of 15 credits in residence. This credit is granted according to conditions set down under Credit by Examination (see page 22).

## Advanced Standing

For the purpose of guidance and registration, the Academic Evaluation Unit will make tentative evaluation of transfer credits. All evaluations are subject to the approval of the Academic Vice President and the dean of the appropriate school.
The following conditions apply to transfer students in granting credits acceptable to Seattle University:

1. Credit transferred from two-year colleges may be applied to University freshmen and sophomore years only. Transfer of such credit may not exceed 90 credits.
2. For admission with advanced standing no more than 135 quarter credits in academic subjects will be accepted toward a bachelor's degree requiring four years of college study. All transfer students must take at least two courses in their major field of study at Seattle University and meet philosophy and theology requirements. Consult page 24 for listing of required courses in ph"osophy and theology.

3. Credit earned through extension courses may be accepted if the institution offering such work is a member of the National University Extension Association. Not more than 45 credits of extension credit will be accepted. Credit earned through correspondence shall not exceed 12 credits and must be included in the extension credit total of 45 credits.
4. Credits over 10 years old will be reviewed to determine transferability.

## Foreign Students

Specific admission requirements and procedures for all foreign students, except Canadians, are listed on the official foreign student application form. Canadian applicants must meet the admission requirements outlined above for American students and eligible for admission to the university of their province. The Immigration Form (1-20) necessary to enter the United States is issued to the student upon admission to the University.

## Special Students

A special student may take such undergraduate courses as the dean of his/her school may determine. A special student is not eligible for a degree until he/she fulfills the requirements for admission to the college in which he/she is enrolled. $\mathrm{He} /$ she may then become a regular student.

## Transient Students

Admission as a transient student is granted to a student in good standing in any recognized college who meets Seattle University's admission standards and who is taking work to be transferred to his/her college. By special arrangement superior high school students may be admitted to specific courses in a transient status. University credit will be awarded for successful completion of the course to be applied toward a degree after the student enrolls in a college or university.


## The CORE CURRICULUM

Students at Seattle University take a basic program of liberal studies courses called the core curriculum. Additional requirements, exceptions and stipulated courses are established by the schools and departments of the University and those sections of this bulletin should be consulted before choosing core courses. Check course descriptions in the respective departmental sections for prerequisites.

## Required Sequences

ENGLISH SEQUENCE
En 100 Freshman English _ 5 credits and any one of the following:
En 132 Masterpieces of
American Literature - 5 credits
En 133 Masterpieces of
World Literature $\quad 5$ credits
En 134 Masterpieces of British Literature $\quad 5$ credits
En 220 Introduction to Poetry —— 5 credits
En 230 Introduction to Fiction -_ 5 credits
En 240 Introduction to Drama _ $\quad 5$ credits
En 383 Masterpieces of
Black Literature 5 credits
HISTORY SEQUENCE
10 credits
Students have the option to select one of the following:
Plan 1
Hs 104 and Hs 105
Plan 2
Hs 100 and Hs 105
Plan 3
Hs 100 and any one of the following: Hs 231, 251, 261, 271, 281, 349

## MATHEMATICS/SCIENCE

SEQUENCE - 10 credits
Any two 5 -credit courses in mathematics, biology, chemistry or physics, which the student is qualified to take, will fulfill the mathematics/science requirement. The following courses are recommended for nonmajors in mathematics and the sciences:

| Bl 101 | Life Science <br> Ch 100 | Principles of the <br> Physical Sciences | 5 credits |
| :--- | :--- | :--- | :--- |
| Mt 175 | Mathematics for <br> Liberal Arts Students | 5 credits |  |

Business, mathematics, engineering and science majors should consult their departmental programs for mathematics/science requirements.

PHILOSOPHY SEQUENCE
15 credits
PI 110
PI 220
Philosophical Problems The World Man $\square$
5 credits
5 credits
and any other 5-credit course in philosophy which the student is qualified to take. Consult the course listing in the Philosophy department section of this bulletin for third course options.

## SOCIAL SCIENCE SEQUENCE <br> 10 credits

Any two 5-credit courses in economics, political science, psychology and/or sociology for which the student is qualified. The following are recommended:

Cs 321 Asian-American Experience 5 credits
Ec 100
Ec 271
Ec 272
Ec 273
Ec 371
Pls 160
Pis 200
Pls 214
Pls 242
Pls 249
Pls 340
Pls 341
Pls 375
Psy 100
Psy 210
Psy 315
Psy 322
Sc 101
Sc 200
Sc 266
Sc 302

| Asian-American Experience | 5 credits |
| :---: | :---: |
| Nature of Economic Society | 5 credits |
| Principles of Economics I | 5 credits |
| Principles of Economics II | 5 credits |
| American Economic History | 5 credits |
| History of Economic Thought | 5 credits |
| American National |  |
| Government | 5 credits |
| Comparative European |  |
| Democracies | 5 credit |
| Government and |  |
| the Economy | 5 credits |
| American Political |  |
| Thought | 5 credits |
| Introduction to |  |
| International Politics | 5 credits |
| Comparative Asian |  |
| Systems | 5 credits |
| Comparative African |  |
| Systems | 5 credits |
| Minority Politics |  |
| in the United States | 5 credits |
| Introductory Psychology | 5 credits |
| Personality Adjustment | 5 credits |
| Abnormal Psychology | 5 credits |
| Psychology of Growth |  |
| and Development | 5 credits |
| Fundamentals of |  |
| Sociology I | 5 credits |
| Perspectives in |  |
| Social Psychology | 5 credits |
| Interracial and |  |
| Interethnic Relations | 5 credits |
| The Black People's |  |
| Social Movement | 5 cre |

(Students in the School of Education substitute Ed 322 for Psy 322.)

## THEOLOGY AND RELIGIOUS STUDIES SEQUENCE

Students should choose one 5-credit course from each of the two theology and religious studies areas listed below:

## AREA 1

Rs 200
Judaeo Christian Origins -
Synoptic Gospels
Johannine Theoology
Pauline Theology
Prophetic and Wisdom Literature
of the Old Testament
Comparative Religion
Religious Experience,
East and West

5 credits
Rs 210
Rs 215
Rs 220
Rs 240
Rs 289
Rs 290

AREA 2
Rs 320
Rs 330
Rs 335
Rs 340
Rs 344
Rs 347
Rs 350
Rs 420
Rs 433
Rs 443
Rs 450
Rs 475
Rs 476
Rs 477
Rs 490

Fundamental Themes in Theology
em of God The Problem of God
Christ and Modern Man Theology of Man Church as Community $\qquad$ Black Religious Experience Perspective of Christian Hope
Christian Sacraments Theology of Human Sexuality and of Marriage $\qquad$
$\qquad$ Theology of Liberation Contemporary Christian Morality
Social Theology Christian Response to Some Socio-Legal Problems Special Topics - Core $\qquad$
$\square$

5 credits
5 credits
5 credits 5 credits
5 credits
5 credits
5 credits
5 credits

## 5 credits

5 credits
5 credits
5 credits
5 credits
5 credits
3-5 credits

Students should begin their theology sequence in the Sophomore Year or later and should have taken some philosophy courses.

Core Exceptions for Science, Engineering and Business
Science and engineering students should consult the section of the bulletin giving their programs of studies for their history and social science requirements.
Students in the Albers School of Business must consult that section of this bulletin for required courses.


## Academic Regulations

Each student is responsible for informing himself/herself of the academic regulations and requirements set forth in this Bulletin of Information and for revisions of same as posted on campus bulletin boards or in other official publications of the University. Failure to meet the requirements or comply with regulations because of lack of knowledge thereof does not excuse the student from being subject to them.

A student's program of study must be approved by a member of the faculty, usually the adviser, at registration. However, such approval does not give official sanction to any failure to meet University requirements nor does it free the student of that responsibility necessary to intelligent personal choice.

The Academic Council has discretionary powers for all cases not covered by the rules and regulations listed in this section. The University reserves the right to cancel any class which does not meet the required minimum enrollment. The enrollment and graduation of each student, the awarding of academic credits, and the granting of any award or degree are strictly subject to the disciplinary power of the University. The University reserves the right to change any requirement and to ask a student to withdraw at any time.

The policy of Seattle University on the right of student access to his/her educational record and on confidentiality of information conforms to current public law. The full statement of policy is available for inspection in the Office of the Academic Vice President and/or Registrar.

## Academic Terms

ACADEMIC AVERAGE - Computed by the University for each applicant to determine the quality of high school work in academic subjects such as English, algebra, history, and laboratory sciences. Non-academic high school subjects such as music, physical education, and typewriting are excluded when this average is computed.
ACCREDITED - Certified as fulfilling standards set up by regional accrediting agencies. Indicates that course work is acceptable to other colleges or universities.

ADVANCED PLACEMENT - Admission of freshmen to courses beyond the beginning level. Granted to students who pass designated advanced placement tests.
ADVANCED STANDING - Granted to transfer students who have previous college work which is acceptable to Seattle University.
ADVISER - A member of the faculty designated to assist the student in planning his program of study.
AUDITOR - A student who is permitted to register for courses without obtaining college credit.
BACCALAUREATE MASS - Official academic function of Commencement Week for those graduating.
CERTIFICATION FOR TEACHERS - Granted through the School of Education to graduates who have met State of Washington requirements for teaching in elementary or secondary schools.

CEU - CONTINUING EDUCATION UNIT - A type of credit assigned for courses not a part of a regular degree program; one CEU equals ten hours of formal classroom instruction.


CHANGE OF MAJOR - Procedure whereby student declares his intention to change from one subject field into another within the same division (school or college) of the University.

CHANGE OF SCHOOL - Procedure whereby student obtains permission to change from one school of the University into another and officially notifies deans and the Registrar of the change.

CLASS CARDS - Issued to students and collected from them during registration. Used to produce class lists which constitute official notification to instructor that the student is enrolled in his class.

CLASSICAL - One of two types of degree programs offered by the College of Arts and Sciences. The classical degree differs from the non-classical in that it requires 15 hours of Latin or Greek courses numbered 300 to 499.

COLLEGE - One of the six academic administrative divisions of Seattle University, i.e., College of Arts and Sciences, consisting of the dean, the advisory board, the faculty of the college and the students registered in the division.
CORE CURRICULUM - That body of subject matter common to programs of study and the foundation of Seattle University's liberal education.

COMPREHENSIVE EXAMINATION - An examination covering the entire scope of the student's major area of study.

COREQUISITE - A course which must be taken in the same quarter with another specified course.

COURSE OF INSTRUCTION - A complete set of lectures, quizzes, recitations, student exercises, laboratory periods, and examinations on a given subject.

COURSE OF STUDY - See program of study.

CREDIT BY EXAMINATION - Procedure to obtain credit for work done in private study or for work not otherwise acceptable to the University.

CREDIT HOUR - The unit of instruction used in computing University graduation requirements. A credit is given for each hour of class per week for a term of nine or ten weeks. To earn five credits a student attends the class five hours each week for 10 weeks. A two-hour laboratory period is considered the equivalent of one hour of lecture and/or recitation except in the School of Science and Engineering.

CUMULATIVE GRADE POINT AVERAGE - The quality measurement of each student's university work computed by dividing total quality points by total credits attempted.

CURRICULUM - An established program of study leading toward a degree in a particular subject field.

DEFICIENCY - Lack of credit in a course required for graduation, or lack of credit in subject matter required for entrance.

DEGREE - Awarded by the University upon successful completion of a specific program of study.

DEGREE PROGRAM - See Program of Study.
DEPARTMENT - A division of a school or college of the University consisting of those faculty members who are actively engaged in instruction, administrative or research work in a specific subject field under the direction of a chairman.

ELECTIVE - A subject chosen by the student not demanded by his/her program of study.

FIELD OF CONCENTRATION - Student's major field. See major.

FIFTH YEAR - Status of those with bachelor's degree taking additional college work in any undergraduate area of study with no specific degree objective; may be seeking teacher certification.

FULL-TIME - For academic reporting purposes, 12 credits is considered full-time for undergraduate students and nine credits full-time for graduate students.

GENERAL STUDIES - Program for students who have a wide range of interest and want a broad liberal arts education, as well as students who have not yet decided upon a traditional major.

GRADE POINT AVERAGE - An average computed on the basis of numerical values assigned to the letter grades received by students. To determine this average the quality points assigned to the letter grades are totaled and divided by the total number of credit hours attempted.

GRADUATE STUDENT - One who has been admitted to Graduate School to pursue a specific advanced degree program or post master's program.

HUMANITIES - Cultural subjects as distinguished from social sciences (history, psychology, or sociology) and physical sciences.

I-20 FORM - United States immigration Form No. 20 issued by the University to students from foreign countries who have been accepted for admission.

INTERNSHIP - A period of one quarter or one year during which a student gains experience in an actual work situation. The length of internship and type of agency to which a student is assigned are determined by his/her major or some special interest within the major field.

LOW SCHOLARSHIP LIST - A warning list circulated to deans each term showing students whose poor academic work in one quarter if not immediately improved will result in probation or dismissal.

MAJOR - The specific field of study selected by a student.
MATRICULATE - Enrollment at the University for the first time as a regular student to pursue a degree or professional program.

MAKE-UP EXAMINATIONS - Special examinations prepared by an instructor for students who for serious reason miss a scheduled examination.
MINOR - The secondary field of concentration selected by a student.

ORIENTATION - A period preceding fall quarter in which new students are introduced to the University.
PART-TIME - For academic reporting purposes, less than 12 credits is considered part-time for undergraduate students and less than nine credits part-time for graduate students.

PERMANENT RECORD - The University record of all courses for which a student registers.

PLACEMENT TESTS - Tests in a specific field administered to entering students to determine the level of achievement before assigning his college courses.

PREREQUISITE - A required course which must be complete before a student is permitted to register for a more advanced course.

PROBATION - Status resulting from academic performance below the minimum university level.

PROVISIONAL STUDENT - One who is admitted with an entrance requirement unsatisfied.

PROGRAM OF STUDY - The curriculum in a given subject matter field. A series of courses assigned by schools and departments of the University which must be completed by the student before a degree is awarded.

QUALITY POINTS - The numerical values assigned to letter grades. See the section of this bulletin on the grading system.

QUARTER - Term of instruction consisting of nine or ten weeks during which a student completes a series of courses he has selected. There are three quarters in a regular academic year, Fall - September to December, Winter - January to March, and Spring - April to June. The summer quarter extends from June to August.

RATIO STUDIORUM - Traditional plan of studies of the Society of Jesus.

READMISSION - Procedure whereby a student who has not been in attendance for one or more quarters is permitted to register for continued course work.

REGISTRATION - Official enrollment in the University. Process in which student selects courses each quarter.

REGULAR STUDENT - A fully matriculated student pursuing a degree program.
SPECIAL STUDENT - A student taking course work is not applicable toward a degree until regular standing is achieved.
SCHOOL - An academic and administrative division of the University consisting of a dean, the advisory board, the faculty of the school, and the students registered in the school.

SPECIFIC CURRICULUM - In addition to the core curriculum required of all students, each individual student selects a specific curriculum or field of concentration. These curricula are offered by the component schools of the University according to degree requirements.

TRANSCRIPT - A copy of the student's permanent record. An official transcript is one bearing the University's seal. An unofficial transcript bears no seal and is not acceptable as a genuine copy of a student's record by other universities.

TRANSFER CREDIT - Credit awarded to a student for work completed at another college or university.
TRANSFER STUDENT - One who is admitted to Seattle University having previously completed work at another college or university.

## UNIT OF INSTRUCTION - See Credit Hour.

WITHDRAWAL - Procedure whereby student notifies the University that he/she will not complete course(s) for which he/she is registered.



## Attendance Requirement

Attendance may be an essential and intrinsic element of the educative process. In any course in which attendance is necessary to the achievement of a clearly defined set of course objectives, it may be a valid consideration in determining the student's grade. While there is no all-University regulation requiring class attendance, it is the responsibility of the instructor to state the relevance of attendance at the beginning of each course.

## Classification of Students

Regular undergraduate students are classified as follows:

$$
\begin{array}{ll}
\text { Freshmen- } & 0-44 \text { credits completed } \\
\text { Sophomore }-45-89 \text { credits completed } \\
\text { Junior- } & 90-134 \text { credits completed } \\
\text { Senior- } & 135 \text { or more credits completed }
\end{array}
$$

Other students are classified as follows:
5th year-
post baccalaureate students not seeking an advanced dearee
Graduatepost baccalaureate students admitted to Graduate School for a master's or

Special-
Transients-
an undergraduate student awaiting approval for regular status

Auditors-non-matriculated students registering for one or two quarters only non-matriculated students registered for audit only not for regularly graded credit

## Concurrent Enrollment at Two Colleges

University regulations require students to seek written permission to be enrolled at another institution simultaneously with enrollment here. Credits completed at a second institution are not transferable unless prior to enrolling elsewhere a faculty action authorizing dual enrollment is approved by the Dean and Registrar.

## Course Numbering System

The course numbering system at Seattle University is as follows:

100 to 199 are freshman courses
200 to 299 are sophomore courses
300 to 399 are junior courses
400 to 499 are senior courses
500 and above are graduate courses - graduate
standing required to register for courses numbered
500 or above.

## Credit by Examination

Examinations for advanced credit in courses offered by the University may be taken by a student for work done in private study or on subject matter taken at a nonaccredited college or university, with the following restrictions:

1. Student must be currently registered at Seattle University.
2. No student may take an advanced credit examination in a course in which he has already been registered.
3. The maximum number of credits obtainable by advanced credit examination is 30 , not more than 15 of which may be obtained in one subject matter field. All credits obtained by examination will be counted as extension credit and included in the maximum 45 extension credits allowed.
4. No credit will be granted unless the applicant has earned a minimum of 15 resident credits with a minimum grade point average of 2.50 .
5. No student within a given field of study may receive advanced credit in subject matter more elementary than that for which he has previously received credit.
6. No student will be permitted to repeat an examination for advanced credit.
7. No student may take examinations for more than 15 advanced credits in any one quarter.
8. No student may receive advanced credit by examination for lower division foreign language courses in his native language or from earlier schooling except in rare cases and for the 106 language course only.
9. Students who wish to qualify for credit by examination must apply to the Dean, Registrar and Controller for approval.
10. No graduate credit is to be given by examination.
11. No credit by examination may be given for physical education activity courses.

## Credit Load

The normal load is 15 credits per quarter. No student may carry excess credit hours without permission from the dean of the school, which may be obtained before or during registration.
Students on academic probation may be required by the dean of their school to carry less than the normal
credit load. Each student is responsible to the dean for judging the correct ratio between credit load, cocurricular activities and outside employment so that he/she has adequate time for academic preparation.

## Dismissal

Students who have three quarters at Seattle University with a cumulative grade point average below 2.0 or who fail to maintain standards in a professional school, or those who receive failing grades in 10 or more credits in one quarter, or those with an excessive number of I or NC grades, are subject to dismissal. If dismissed for academic reasons, request for reconsideration must be filed in writing with the dean in accordance with the policy of the individual college.
A student withdrawing voluntarily from the University is entitled to a statement of honorable dismissal if he/she is not liable to dismissal on account of scholarship, absence, breach of discipline, or financial indebtedness to the University.

## Examinations

Examinations in all courses are regularly held at the middle and end of each quarter, and at such other times as the instructor may determine. Absence from an announced written examination is excusable at the discretion of the instructor and subject to review by the dean. Students absenting themselves from a scheduled examination without justifiable cause will receive a failing grade for the examination.
Make-up examinations assigned by an instructor for students excused from a scheduled one are administered by the Counseling and Testing Center. Arrangements for a make-up examination and payment of the required fee are the responsibility of the student.

## Grade Changes

Once a grade is recorded it can be changed only by the Academic Vice President on the written faculty action sheet completed by the instructor and countersigned by the department chairman and dean of the school. Errors in grades must be reported within six months of date of issue of grade reports.

## Grade Point

The University uses a letter grade to indicate the level of individual student achievement. Each letter grade has a quality point value assigned for the grade achieved. The quality point value is assigned to each letter grade as follows:

| A | $\ldots \ldots \ldots \ldots \ldots$ | 4 quality points |
| :--- | :--- | :--- |
| B | $\ldots \ldots \ldots \ldots \ldots$ | 3 quality points |
| C | $\ldots \ldots \ldots \ldots \ldots$ | 2 quality points |
| D | $\ldots \ldots \ldots \ldots \ldots$. | 1 quality point |
| E | quality points |  |

The grades of CR, NC, I, W, S, N, Y, or YW have no negative quality point value.
Each student is required to maintain a C average, which is equivalent to a 2.00 grade point average. The grade point average is computed by dividing the total number of quality points achieved in one quarter by the total number of credit hours attempted in which the student earns a letter grade A, B, C, D or E.

## Grade Reports

Student quarterly grade reports are mailed at the end of each quarter. The University does not hold itself
responsible for grade report errors unless the Registrar is notified of the error within six months after the date of issue of a grade report.

## Grading System

The University follows the letter grading system shown below.

## Grade

A

B

C

D Below average student - knowledge is fair, scholarship does not meet assignments; essential information is lacking or false information given.

E
W Withdrawal - official withdrawal during the first eight weeks of the quarter.

CR Credit - grade assigned under credit/no credit option if work meets or is above minimum passing level.

No Credit - grade assigned under credit/no credit option if work is below minimum passing level, or grade assigned by Registrar when student registers, does not withdraw yet does not complete the course.


Incomplete - the incomplete grade policy is as follows: At the discretion of the instructor the student is given this grade when as a result of serious illness or other justifiable cause the work cannot be completed. I grades carry no penalty - i.e. they are not counted in credit or grade point average computations. The student has until six weeks after the beginning of the next quarter, regardless of whether the student is enrolled, to complete the work and file an official Incomplete Removal request with the required fee. I grades assigned spring quarter must be removed by six weeks after the beginning of the fall quarter. Once this period elapses an I cannot be removed. In cases of serious illness, extensions will be granted provided student requests same and obtains approval from instructor and Registrar before the six week period elapses.

Records will be audited annually. Students with more than one I grade per quarter and/or a consistent pattern of l's in consecutive quarters will be considered on probation.

No Grade - a suspended grade for courses in which work is not scheduled for completion until after the quarter closes, i.e. thesis or research courses at the graduate level. It is the responsibility of the student to arrange with the supervising instructor to remove the N within one calendar year of the quarter the grade is assigned. One calendar year is taken to mean within the following four consecutive academic quarters per the schedule given below. Once the closing date has passed, re-registration and payment of regular tuition is required in order to obtain credit for the work completed.

## N Grades Received <br> Summer term

Fall term
Winter term
Spring term

Satisfactory - a satisfactory grade which may be given for thesis, research, independent study, offcampus courses, field experience type courses and in non-credit courses.

Audit - course for which no credit is given.
Audit Withdrawal - registered but did not attend through end of course.

Missing - symbol used on grade reports to inform student that grade has not been received from instructor.

## Honor Roll

Undergraduate students registered for 12 or more credits who achieve a 3.50 or higher grade point average for any quarter will be included on the honors list published by the Registrar. The privilege of attending a single lecture or all sessions of classes for which they are not registered is granted to honor roll students with the permission of the teacher.

## Credit/No Credit Option

Undergraduate students may elect a credit/no credit option in elective courses under the following conditions:

1. Student must declare desire for credit/no credit during registration; student may change to or from credit/no credit only during the five-day drop/add period.
2. Eight courses (except those mentioned in 6 below) regardless of credit hours per course, is the maximum number of credit/no credit classes acceptable toward a bachelor's degree. Transfer students will be allowed the following number of credit/no credit courses at Seattle University:

| Transfer Credits | 0-44 . . . . . . . . . . . 7 courses |
| :---: | :---: |
|  | 45-89 ........... . . 6 courses |
|  | 90-134 ............. 4 courses |
|  | 135 and above........ 0 courses |

3. Credit/no credit may apply to a maximum of two courses in the major or departmental requirements outside the University core; students may not select this CR/NC option for any courses in the University's core.
4. Students who elect a credit/no credit option are eligible for quarter honor roll only if credit for graded courses totals 12 or more.
5. Only one credit/no credit course may be taken in a given quarter, except those in item No. 6 below.
6. All P.E. activity courses and music practice courses shall be credit/no credit.
7. No graduate courses may be graded CR/NC.
8. All courses elected as credit/no credit will appear on the student's permanent record and will be graded:

$$
\begin{aligned}
& \text { CR (credit) - PASS } \\
& \text { NC (no credit) - NO/PASS }
\end{aligned}
$$

CR and NC courses will not be computed in credits attempted and therefore will be excluded from computations of grade point averages. Courses in which a CR grade is given will be counted as completed credits. When student selects the CR/NC option this becomes a matter of record with the Registrar, but it is not reported to instructors.

## Probation

If a student falls below the standard he/she must maintain in order to graduate, he/she may be placed on probation and given the opportunity to improve the quality of work before final dismissal. A student will be placed on probation if the cumulative grade point average falls below 2.00 .
At the discretion of the dean a student on academic probation may be required to reduce the number of credits carried per quarter. Probation may extend for two quarters after the initial warning before dismissal is warranted.


## Readmission

Students who have been absent from Seattle University for one or more quarters and students who have attended another school since withdrawing from Seattle University are required to fill out an application for readmission form. A re-entering student who has attended another school since withdrawal from Seattle University must arrange for two copies of his/her transcript to be submitted to the Registrar before application for admission can be considered.
Credit for courses completed elsewhere is considered not transferable unless an official transcript is filed with the Registrar at time of readmission. Credit from a twoyear community college does not transfer once a student has a total of 90 quarter credits (junior status). Records of summer work must be on file by December 1 for credit to transfer.

## Records

As required by federal legislation, Seattle University has a policy on the rights of students to privacy of their educational records and access to the information on file. Student directory information will be published by the University unless a student requests it not be released in writing to the Registrar by the fifth day of any term. Records policy includes the right of the University to place a hold against the transcript of a student with a financial obligation and to deny re-registration until all debts owed the University have been paid. The full policy statement including right of appeal may be obtained from the Academic Vice President or Registrar.

## Registration

Newly admitted students and returning students must present themselves at the University for registration on the date specified in the calendar or elsewhere by the Registrar.

No registrations are permitted after the fifth class day. Payment of the late registration fee of $\$ 8$ for the first day and $\$ 8$ for the next four days to a maximum of $\$ 40$ is required. Students registering late are held responsible for absences thus incurred.

Registration is completed only when fees are paid and approved registration cards are turned in to the Controller's office. No person may attend any University course for which he/she has not registered.

## Registration Changes

Students are held accountable for completion of every course entered on registration cards. If it is necessary to drop or add a course or to otherwise change a program of study, the student must obtain a change of course card from the Registrar's office and present it to his adviser or dean for approval. This card must be returned to the Registrar within the specified time limit. No course may be added or changed after the fifth day of class. A student who drops or changes courses without following this procedure is ineligible for tuition refund and will be assigned a grade of NC.

## Repeating a Course

Students who receive a grade of D or E may repeat the course. In such cases the grade received the second time shall be the one counted in computing the grade point average required for graduation. The grade earned the second time cannot be higher than a C. In determining University graduation honors only the grade received the first time will be counted.

## Transcripts

Students may obtain official transcripts from the Registrar's office. No official transcript copies will be sent for students with a financial obligation to the University until that obligation is satisfied.
Seattle University will not issue a transcript to any third party unless the student or graduate files a written request with the Registrar and supplies the necessary name and address.

Letters of recommendation or copies of transcripts should be requested at least one week before they are required. Transcripts cannot be issued during the period of registration, examinations, or commencement, nor will they be issued if the student has a financial or property obligation to the University.
The University does not hold itself responsible for any error on a transcript which is not brought to the attention of the Registrar within six months of the closing date of the quarter in which the error occurred.

## Transfer within the University

To transfer from one school of the University to another or from one department to another (change of major) the student must follow this procedure:

Obtain a form from the Registrar and present it to the dean of the school from which withdrawal is sought. When the form is approved by this dean it is presented to the dean of the school in which the student wishes to enroll. If approved by the new dean the form is returned to the Registrar and the student's record is altered accordingly.

## Withdrawal

The Registrar's office must be officially notified when a student withdraws from one or more of his courses. The withdrawal card is obtained from the Registrar and presented to the adviser, instructor, dean and Registrar in that order for approval and signature. In an emergency, notification of withdrawal may be made by telephoning the dean of the school or Registrar.
The official withdrawal is completed only when the approved card is presented to the Registrar within the specified time limit. A grade of W will be allowed until the eighth last class day of the quarter.

## Degrees and Honors

Official Commencement Exercises are held once a year in June. Students completing course requirements at the close of summer, fall or winter quarter will receive diplomas at the succeeding Commencement. All responsibility for fulfilling the requirements for graduation rests with the individual student.

## Application for a Degree

Application for a degree must be made at the Office of the Registrar within the period indicated in the University calendar or other official publications. Candidates for a degree normally file applications during the quarter preceding their final registration. A receipt for the graduation fee must be presented before the Registrar may issue the application forms.

## Degree Requirements-Bachelor's

As a general rule, students are required to meet degree program requirements in effect at the time of their matriculation.
Candidates for an undergraduate degree must meet the requirements listed below.

1. Core curriculum requirements and specific requirements of the college or school from which the student expects to graduate must be fulfilled; A minimum grade point average of 2.00 must be achieved.
2. A minimum of 180 credits is required for the baccalaureate degree. However, only students matriculating as freshmen beginning September 1963 or later and transfer students matriculating January 1966 or later are eligible to graduate with 180 credits. Students who matriculated before these dates will be required to meet minimum requirements in effect at the time they were last enrolled as full time students, unless the following reduction scale applies:
a. Readmitted students who earn 12 credits after returning to campus will be permitted to graduate with 192 credits.
b. Readmitted students earning 35 credits after returning to campus may graduate with 185 credits.
c. Readmitted students earning 45 or more credits after returning to campus may graduate with 180 credits.
3. A minimum of 15 credits in philosophy and 10 credits in theology and religious studies are required in all degree programs. See page 18 for specific requirements.
4. The senior year must be spent in residence at the University, which shall be understood to mean the final 45 credits of degree requirements, and the class work is to be taken in the University classrooms under the direction of members of the faculty.
5. Completion of all degree requirements within 10 years of the date on which the college work was begun. Students who were in attendance prior to October 1951 are not affected by this regulation.
6. Satisfaction of all financial obligations toward the University.
7. While attendance at commencement is not compulsory, diplomas will be routinely mailed only to those graduates who declare their intention to graduate in absentia at least two weeks in advance of the commencement date.
8. Students working for a second baccalaureate degree, either consecutively or concurrently, must complete a minimum of 45 credits beyond the requirements of the first baccalaureate degree. These 45 credits must be completed in residence at Seattle University. A minimum of one course ( 5 credits) in philosophy and one course in theology and religious studies ( 5 credits) is required.

Students completing this minimum of 10 credits in philosophy and theology and religious studies at Seattle University or elsewhere as part of a first bachelor's degree will be considered as having fulfilled this requirement. Minimum academic and administrative requirements listed above must also be met.

Requirements for advanced degrees are given in the section on the Graduate School.

## Honors at Graduation

Graduation with honors requires completion of at least 90 credits in residence at Seattle University; the minimum of 90 credits must be earned in regularly graded courses (courses in which grades of A, B, C, or D are given). Should a student elect the CR/NC option for any one course as part of his 90 credit minimum, he loses his honors eligibility. In programs where CR/NC grades are mandatory for field experience courses, a student with these as a part of his minimum 90 units also loses his eligibility for automatic honors on the scale shown below. However, such students may apply for honors by filing a petition with their Dean. The petition must be received by May 1 and will be reviewed by the Deans, with notification of the decision on honors issued to the student by May 20.

|  | 1976 and After |
| :--- | :---: |
| Cum Laude | 3.40 |
| Magna Cum Laude | 3.65 |
| Summa Cum Laude | 3.90 |

## Special Awards

The President's Award - Awarded to the graduating senior who has maintained the highest scholarship throughout the four years of college work, as determined by grades and the judgment of the academic deans.

## ARTS \& SCIENCES

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## ARTS \& SCIENCES



College of Arts and Sciences<br>James G. Powers, S.J., Ph.D., Dean

The College of Arts and Sciences has for its objective the development of personality - integral and liberal, Christian and humane. The instruments it employs to attain this objective are the traditional principles and structures of Jesuit education, of which in the ensemble of the University it is the natural custodian and guide.

## Curriculum

Pursuant of this objective and these instruments and commensurate with its position as the oldest and largest school of Seattle University, the College of Arts and Sciences has a dual role: 1) for all the students of the University it provides the programs and faculty of the core curriculum - the primary instrument of Jesuit higher education and 2) for its own students it offers, beyond the core curriculum, programs and faculty guidance toward graduate proficiency in one or more of the various arts and sciences.

## Organization

The College comprises 18 administrative subdivisions, of which 12 are departments in a specific academic subject. The departments are: English, Fine Arts, Foreign Languages, History, Journalism, Military Science, Philosophy, Political Science, Psychology, Rehabilitation, Sociology, Theology and Religious Studies.

The program divisions are: Community Services, Criminal Justice/Police Science, General Studies, Honors, Prelaw and Speech.

Certificate programs are offered in Alcohol Studies Rehabilitation and CORPUS (Pastoral Ministry).

Each department chairperson or program director, in collaboration with proper or assigned faculty, arranges study programs and counsels individual students. All programs are coordinated and supervised by the Dean of the College. Students wishing to inquire about programs in detail should consult either the Dean or the respective department chairperson or program director.

## Admission Requirements

Students entering the College must satisfy all entrance requirements for the University as outlined in the Admission section in this bulletin. In addition, some departments list further requirements for admission into certain major programs. Concerning these the respective departmental sections in this bulletin should be consulted.

## Bachelor of Arts

with a major in: Community Services, Criminal Justice/Police Science, Drama, English, Fine Arts, Foreign Languages, General Studies, History, Humanities, Journalism, Music, Philosophy, Political Science, Psychology, Rehabilitation, Social Sciences, Sociology and Theology and Religious Studies.

## General Program Requirements

Students in the College of Arts and Sciences must satisfy the core curriculum requirements of the University given on page 18 of this bulletin.

For the degree of Bachelor of Arts (Classical), in addition to these general requirements, the following must be fulfilled: 15 hours of courses number 300 to 499 in either Latin or Greek; 5 additional hours of English literature, and 5 additional hours of philosophy.
Additional specific requirements are set by the department or program division in which the student's major program is pursued. For these requirements consult the respective sections in this bulletin.

## Subject Majors

In all programs having a specific subject major, the number of required courses and hours varies according to the department or program division. The minimal number required in any subject major is 40 hours; majors in departments having core sequences must consist of 35 hours beyond the core sequence.


Community Services
Herbert M. Kagi, Ph.D., Director

## Objectives

Community Services is a program primarily involving social work courses and field experience supported by the study of economics, political science, psychology and sociology. The primary objective is to prepare students for work in the field of social services immediately after the bachelor's degree. Other objectives are to contribute to the liberal education of all students, and to prepare students for admission to graduate schools of social work. The program assists students in deciding on a career choice by making known the nature of, and opportunities in, the social service field, and provides knowledge and understanding of this field for students preparing for advanced training in the related professions.
Supervised field experience in agencies, institutions or related organizations is a unique and vital part of the program. This experience is provided in such areas as probation and parole, public assistance, mental health facilities, youth and children's services, employment counseling and economic opportunity programs. The Community Services program is not an apprenticeship system but rather a basic program with courses and
supervised field practice aimed at giving those principles, skills, knowledge and attitudes necessary for workers in the above fields. Coordinating seminars, concurrent with two required field experiences, provide each student opportunity to understand himself/herself more deeply and acquire a broad perspective of community services.

## Degree Offered <br> Bachelor of Arts in Community Services

## General Program Requirements

Candidates must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. A minimum of two field experiences is required, with which the coordinating seminars must be taken concurrently. The required experiences must be in diverse areas.

## Degree Requirements

Bachelor of Arts - 105 credits which must inciude CS 300, $374,376,378,379,478$ and $479 ; 20$ credits in sociology; 15 credits in psychology; 10 credits in political science; 10 credits in economics; 5 credits in statistics or research methods courses.

## Bachelor of Arts in Community Services

## Freshman year

English 100 and core option .................. 10 credits
History core option .............................. 10 credits
Mathematics/Science core option ............. 5 credits
Philosophy 110.................................... 5 credits
Political Science ..................................... 5 credits
Psychology .......................................... 5 credits
Sociology .......................................... 5 credits

Sophomore year
Economics ........................................... 5 credits
Mathematics/Science core option ............ 5 credits
Philosophy 220 and core option................ 10 credits
Political Science .................................... 5 credits
Sociology .............................................. 10 credits
Psychology .......................................... 5 credits
Theology............................................ 5 credits

Junior year
Community Services 300, 374, $376 \ldots \ldots \ldots .15$ credits
Community Services Elective .................. 5 credits
Economics ......................................... 5 credits
Psychology .......................................... 5 credits
Sociology ............................................. 5 credits
Theology............................................. 5 credits
Electives .............................................. 5 credits

[^2]

Alcohol Studies Program<br>James E. Royce, SJ, Ph.D., Director

## Objectives

This program is designed to provide a strong background for work in alcoholism treatment and rehabilitation, in education and prevention, in social service agencies, in industry or in referral centers. It examines various aspects of addiction to alcohol and other drugs: causes, nature, effects, treatment and prevention and also provides supervised field experience.

## Alcohol Studies Certificate

A certificate in Alcohol Studies will be granted upon successful completion of 20 credits, which must include the following courses: Alc 400 (or Psy 490), 401, 402, $403,405,407-8$ with a 2.50 minimum g.p.a. Certificate candidates may register as transient students. These courses may also be taken as electives, or applied by those eligible toward the BA in Community Services, the BA in Rehabilitation, the BA in Criminal Justice/ Police Science, or the M.A. in Rehabilitation. Candidates for the certificate may be a) paraprofessionals in or entering the field who wish stronger academic background to balance their experience, b) professionals lacking training in the specific field of alcoholism, or c) students in nursing, psychiatry or psychology, social work, rehabilitation, community services or allied fields.

The Certificate program is a combination of classroom instruction ( 12 credits) and supervised field experience ( 8 credits) under experienced counselors. Evening classes will permit in-service training.

## Community Services Courses

CS 291 Special Topics $\quad \mathbf{1 - 5}$ credits

CS 292 Special Topics $1-5$ credits
CS 293 Special Topics
1-5 credits
CS 300 Introduction to Community Services

## 5 credits

CS 300 Introduction to Community Services 5 credits Historical development, structure and function of social welfare services and institutions; emphasis on philosophy and methods utilized by professional social work in meeting human needs. (fall, winter)

CS 310 Dynamics of the Family 5 credits Behavioral dynamics of interpersonal relationships with emphasis on the impact of complementary roles in the family. Concentration is on the reciprocal nature of relationships. Development of a conceptual framework for individual and family therapy through study of a variety of treatment modalities. (spring)

CS 315 Working with Children
2 credits
Theories of child development which direct the modes of service to children. Study of the laws which control agency services to children. Examination of selected agency case records

CS 321 Asian-American Experience
5 credits
From an historical perspective the course will cover the period beginning with the Asian immigrants to America, the problems they faced, and how they laid the groundwork for the present generation of AsianAmericans. (spring)

CS 330 Citizen and the Law

## 3 credits

A discussion of the role of the lawyer in society; a survey of the fields of poverty law; family law, the contractual relationship, consumer law, landlordtenant and house laws, tort law and personal liability, wills and probate. (spring)


Examination of the sanctions and processes of criminal law as related to the ethical implementations of social justice. Prerequisite: Upper division standing.

CS 374 Intervention Skills 5 credits Provides students with the basic principles and processes involved in giving help to individuals, groups and communities in the human services field; focus on some of the basic methods, techniques and strategies. (fall)

CS 376 Factors of Interviewing
5 credits The interview as one of the major methods of helping people; study of factors of knowledge and method in proficient interviewing to provide a basis for future development. Prerequisite: CS 300 or permission. (winter, spring)

CS 377 Field Experience
5 credits
(Sc 377) For Sociology majors only. (spring)
CS 378 Field Experience I 7 credits
CS 379 Field Experience II 7 credits
CS 380 Field Experience III
3-7 credits Direct observation, supervised practice experience and academic study in a selected social welfare agency or organization with stress placed upon the agency's clientele, its services and its functions in the community. Prerequisites: CS 376 or permission for 378; 378 for $379 ; 379$ for 380. (fall, winter, spring)

CS 420 History and Survey of Drug Abuse 5 credits Scope and complexity of problems arising from addictive drug abuse. Socio-cultural, historical, criminal, statistical, industrial, family aspects of drug abuse. Psychology of drug addiction; patterns of progression, early symptoms and diagnosis; types of drug addicts. Theories of etiology.

CS 440 Crisis Intervention
5 credits Seminar in the theory and practice of crisis intervention strategies, with the focus on clinical application in a variety of settings: Schools, criminal justice agencies, family service agencies, public welfare agencies and crisis centers.

CS 478 Coordinating Seminar I 3 credits
CS 479 Coordinating Seminar II 3 credits
Discussion and analysis of practices, programs, objectives, policies and procedures of various agencies, organizations and institutions. Corequisites: CS 378 with 478; 379 with 479.

CS 497 Individual Research
1-5 credits
By arrangement, with professional supervision. Prerequisite: Upper division standing and permission.

CS 498 Independent Study
1-5 credits
Prerequisite: Upper division standing and permission.

## Alcoholism Courses


progression. Symptoms and diagnosis, types of alcoholics. Theories of etiology; the disease concept. (Psy 490 may substitute.) Pre or corequisite to Alc 401 through 413.

## Alc 401 Pharmacology and

Physiology of Alcohol
2 credits
Ingestion, absorption, metabolism. Effects of different blood/Alcohol levels. Psychiatric complications: damage to brain, liver and other organs. Evaluation of results. Prerequisite: Alc 400.

Alc 402 Counseling Principles and Techniques 3 credits Interview techniques. Intake and crisis intervention vs. long-range therapy. Supportive, client-centered, transactional, group, reality therapy. Confrontation, role-playing, marriage problems. Vocational guidance. Information and referral, use of local facilities. Prerequisite, Alc 400.

Alc 403 Personal and Social Rehabilitation 2 credits Motivation and personality reconstruction in the recovering alcoholic. Post-detoxication, long-range sobriety; relapses, dry drunk. Spiritual aspects. Family and social adjustments. Al-anon and Alateen. Industrial programs. Prerequisite: Alc 400.


Alc 404 Agency Administration 2 credits Personnel policies, budgeting, financing, office management, public relations, ethics. Informational and educational policies. Relations with schooi systems, courts, professions and agencies, clergy. Prerequisite: Alc 400.

Alc 405 The Law and Alcohol
2 credits
Impaired driving, traffic court schools, probation and parole, correctional programs, constitutionality problems, preventative programs. Prerequisite: Alc 400.

Alc 406 Counseling Ethnic/Minority Alcoholics 2 credits Special problems and techniques, understanding of cultural background and instruction by members of minority groups. Prerequisite: Alc 400 and 402.

Alc 407 Field Experience I in Alcoholism 4 credits Field Experience II in Alcoholism $\mathbf{4}$ credits Supervised work in an agency, clinic, rehabilitation center and referral center. Oral and written reports by student required. Prerequisite: Alc 400 and 402.

Alc 410 Individual Research
1-3 credits
Open only to students with sufficient academic background to pursue independent study. Permission of director required.

Alc 411 Advanced Counseling - Alcoholism 2 credits Instruction and supervised practice in counseling techniques of special value in counseling alcoholics. Playback video tape equipment used. Two and one-half hours per week. Prerequisite: Alc 402.

Alc 412 Group Dynamics in Alcoholism Treatment

## 2 credits

Role playing as a means to development of self awareness; dynamics of group interaction; introduction to psychodrama. Two and one-half hours per week. Prerequisites: Alc 402, 411 or permission.

Alc 413 Alcoholism Schools Workshop

## 2 credits

 Goals, methods, and skills in teaching Alcohol Information Schools (AIS), (OAR), (ADE), and court referral schools for those driving while intoxicated (DWI). Problems with defensive and hostile clients. Prerequisite: Alc 400 or experience in alcoholism work.


## Criminal Justice/Police Science

Herbert M. Kagi, Ph.D., Director

## Objectives

The Criminal Justice/Police Science degree program seeks to offer academic preparation for professional performance in expanding law enforcement roles requiring a new scope of involvement and a spirit of inquiry; to provide an educational background in operational and managerial concepts and techniques in preparation for future positions of increasing responsibility in the management of police services; to provide students with a liberal arts education; to contribute significantly to the improvement of the quality of law enforcement services; and to assist a student in gaining a broad but incisive view of the theories, practices, and problems of criminal justice systems to include research techniques and strategies.

Graduates of the program may qualify for careers in public and private law enforcement, criminal investigation, crime prevention, law enforcement training, education and planning, and other components of the criminal justice system.

## Degree Offered

Bachelor of Criminal Justice/Police Science

## General Program Requirements

Candidates must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. Because of the interdisciplinary nature of the degree program, majors are required to take 15 credits in sociology; 15 in political science; 15 credits in psychology; and 10 credits in economics.

## Degree Requirements

Bachelor of Criminal Justice/Police Science - 55 credits in CJP.

## Bachelor of Criminal Justice/Police Science Freshman and Sophomore years

English 100 and core option 10 credits
History core option ................................... 10 credits
Mathematics-Science core option ............. 10 credits
Criminal Justice/Police Science .............. 10 credits
Philosophy core option............................ 15 credits
Theology core option ............................... 10 credits
Economics ............................................ 5 credits
Political Science ...................................... 5 credits
Sociology .......................................................... 5 credits
Psychology ........................................ 5 credits
Elective ...................................................... 5 credits

## Junior year

Criminal Justice/Police Science .............. 10 credits
Economics ............................................ 5 credits
Political Science ............................................. 10 credits
Psychology ............................................. 10 credits
Sociology ................................................... 10 credits

## Senior year

Criminal Justice/Police Science ................ 35 credits
Elective 10 credits

Total
.. 180 credits

## Criminal Justice/Police Science Courses

| CJP 291 | Special Topics |
| :--- | ---: |
| CJP 292 | Special Topics |
| CJP 293 | Special Topics |
| CJP 325 | $1-5$ credits |
|  | Criminal Law and Procedure |
| Study of the criminal law processes from detention |  |
| to appeal; State and Federal rules of criminal pro- |  |
| cedure and the constitutionally derived procedural |  |
| rights of persons accused of crime; knowledge of |  |
| criminal law and procedure, rules and understand- |  |
| ling |  |
| ing of policies underlying those rules. |  |

CJP 350 Police and the Community
5 credits
(Sc 351) The role of police in the community; relationships with individuals, groups and community organizations. Analysis of ethnic, cultural and economic differences as factors in the administration of justice; community responsibility for the administration of justice.

Survey of planning techniques; development of long and short range goals; data collection; processing and analysis; budgeting; design of evaluation and monitoring systems.

CJP 355 Crime Prevention
5 credits Nature and causes of crime and deviant behavior; analysis of theory and methods of prevention; planning for elimination of conditions conducive to crime including demographic and ecological factors.

CJP 356 Industrial Security
5 credits
Historical, philosophical and legal basis of private security. Role of security in modern industrial society. Administrative, personnel and physical aspects of the security field.

CJP 360 Society and Justice
5 credits
(Sc 352) Survey of criminal justice process from arrest through release; the relationships of the police, the prosecutor, the defense, the courts, the prisons and corrections, as each integrates into a system.

CJP 362 Deviant Behavior
5 credits
(Sc 362) An overview of what American society generally regards as deviant behavior. Emphasis is placed on the results of stigmatization and the acceptance of low self-esteem.

CJP 365 Probation and Parole
5 credits
(Sc 365) Examination of current trends and issues in probation, parole, supervision, the legal aspects, research, prediction and personnel.

## CJP 366 Corrections

## 5 credits

(Sc 366) Analysis of the various post-arrest treatment methods applied to offenders; examination of rehabilitative versus punishment theories; psychiatric and group treatment methods to behavioral modification; the correctional institution and com-munity-based corrections.



CJP 410 Juvenile Justice Systems
3 credits
(Sc 412) Examination and study of contemporary police-juvenile operations. Theory and examination of the Juvenile Justice System. Relationship between the ju-venile-officer, crime prevention and community relations.

CJP 415 Victimology
5 credits
(Sc 415) Survey of the victim-offender relationship; including the origin and scope of victimology, a victim and his society, the victim and the administration of justice and the social reaction to victimization.

CJP 420 The Politics of Civil Liberties
5 credits Introduction to the "Politics" of civil liberties in American Society by relating the attitudes and behavior of Americans to Supreme Court doctrine and law. The focus will be upon three major libertarian values: Freedom of expression; equality; and due process in criminal procedure.

CJP 425 Problems of Public Service Bureaucracies

5 credits
Descriptive analysis of the administrative side of large scale post-industrial governments. Emphasis upon coordination and conflict resolution among public agencies by examining the budgeting and planning processes.

CJP 450 Politics of the Criminal Justice System 5 credits The relationship of political values and partisan influence in the criminal justice system including courts, prosecutors, attorneys and pressure groups.

CJP 455 Criminal Justice System Planning
5 credits Methodology of systems planning, theories of analysis and problems of program evaluation with special attention to the criminal justice system.
CJP 491 Special Topics 1-5 credits
CJP 492 Special Topics
$1-5$ credits
CJP 493 Special Topics
1-5 credits
Prerequisite: Upper division standing and permission.
CJP 497 Individual Research
1-5 credits By arrangement, with professional supervision. Prerequisite: Upper division standing and permission. sion.


## English

Alexander McDonald, S.J., M.A. (Oxon.), Chairman

## Objectives

The English department offers courses which are designed to develop in the student a knowledge and appreciation of the literature which comprises our cultural heritage, to give the student a knowledge of the language and its effective use in communication, and to prepare graduates for those professions which require a broad background in language, rhetoric and literature.

## Degrees Offered

## Bachelor of Arts

Master of Arts-See Graduate Bulletin
Master of Arts (in Teaching)-See Graduate Bulletin

## General Program Requirements

Students in English must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. A Fine Arts sequence, FA 101, 102, 103, is recommended. For English majors the second core course requirement is met by En 264, 265 or 266. Those students who plan to go to graduate school, unless they have already achieved reading proficiency in French or German, are strongly advised to take 10 credits of one of those languages.

## Departmental Requirements

Bachelor of Arts (English concentration)-60 credits of English which must include the following courses: En 100, 250, 264, 265, 266, 310, 314, 315 and 330. The remaining credits must be taken in courses in the 300 and 400 series. The nature of the courses is to be determined by the student in consultation with an adviser.
Bachelor of Arts (Comparative Literature Concentra-tion)- 60 credits of English and Comparative Literature which must include the following courses: En 100, 250, 264, 265, 266, 314, 315, 414 and 416. The remaining credits must be taken in the 300 and 400 series. Recommended are En 382 and 415. The student must take one five-hour course of a foreign literature in the original language when a reading competency in that language has been demonstrated.
Teaching Major (School of Education) - 60 credits of English which must include En 100, 175 or 220 or 230 or $240,250,264,265,301,330$, either 266 , 382, 482 or 484, and either 310 or 407. The remaining 15 credits must be taken in courses in the 300 and 400 series. En 314 and 315 are strongly recommended.
Undergraduate Minor - 20 credits of English beyond En 100 and either 264, 265 or 266. These courses should be taken in the 300 and 400 series, as specified by the department. For the Journalism - English Interdisciplinary Program, see the section on Journalism.

## Bachelor of Arts

## Freshman year

English 100, 250
10 credits
Fine Arts 101, 102, 103 (English concentration; recommended)........... 15 credits or
Foreign Language (Comparative Literature concentration; recommended)

15 credits
History core option ............................... 10 credits
Philosophy core option............................ 10 credits

## Sophomore year



## Junior year

English 310, 314, 315, 330 (English concentration)

20 credits
or
English 314, 315, 414, 415 (Comparative
Literature concentration) ................... 20 credits
French or German 105, 106................... 10 credits
Mathematics/Science core options........... 5 credits
Electives ............................................... 10 credits

## Senior year

English 300 and 400 series courses
15 credits
Electives
30 credits
Total . . . . 180 credits


## English Courses

En 100 Freshman English
5 credits
Study and practice in rhetoric, emphasizing expository writing and mastery of style.

En 101 Freshman English
5 credits
Continuation of En 100.
En 132 Masterpieces of American Literature 5 credits Close reading and analysis of American literary classics: novels, plays, poetry and essays.

En 133 Masterpieces of World Literature
5 credits
Close reading and analysis of world literary classics: novels, plays, poetry and essays.

En 134 Masterpieces of British Literature 5 credits Close reading and analysis of British literary classics: novels, plays, poetry and essays.

En 175 Introduction to Literature
5 credits
Introduction to the study of novels, plays, poetry and essays.

## En 200 Advanced Composition <br> 5 credits

Advanced study and practice in expository writing.

## En 203 Vocabulary

5 credits
A practical course in vocabulary building. Emphasis on etymology, Latin and Greek roots, prefixes and suffixes. emphasis on appreciation, form and technique.


En 230 Introduction to Fiction
5 credits Introduction to the study of fiction with special emphasis on appreciation, form and technique.

En 240 Introduction to Drama
5 credits
Introduction to the study of drama with special emphasis on appreciation, form and technique.

En 250 Practical Criticism
Introduction to the terminology and techniques of literary analysis. Required of English majors.
$\begin{array}{lll}\text { En } 264 & \text { Great English Authors I } & \mathbf{5} \text { credits } \\ \text { En } 265 & \text { Great English Authors II } & 5 \text { credits } \\ \text { En } 266 & \text { Great English Authors III } & 5 \text { credits }\end{array}$ I. Study of major British writers from the Medieval period through the Renaissance (1640). II. Study of major British writers from the Puritan period through the Eighteenth Century (1640-1798). III. Study of major British writers from the Romantic period to the Victorian period (1798-1900). Required of English majors.
$\begin{array}{lll}\text { En } 291 & \text { Special Topics } & 1-5 \text { credits } \\ \text { En } 292 & \text { Special Topics } & 1-5 \text { credits } \\ \text { En } 293 & \text { Special Topics } & 1-5 \text { credits } \\ \text { En } 301 & \text { Advanced Rhetoric and the } & \\ & \text { Teaching of English } & 5 \text { credits }\end{array}$
Study of rhetorical theory and techniques and their application to writing, with emphasis on methods of teaching composition.

En 305 Writing Fiction
5 credits Study and practice in the forms and methods of short story writing, with subsidiary attention to other types of narrative writing.

En 306 Writing Poetry 5 credits
Study of and practice in the modes and techniques of poetic composition.
ntroduction to Cha
Study of Chaucer's "Canterbury Tales." Required English majors.
En 313 Mythology
Study of the mythological backgrounds of English
and American literature.

En 314 Backgrounds of Western Literature I

5 credits
En 315 Backgrounds of Western Literature II

5 credits
I. From the beginnings into Medieval Period. II. From Dante through the Renaissance. Required of English majors.
En 330 Introduction to Shakespeare 5 credits Readings in the comedies, tragedies and histories. Required of English majors.

En 382 Major American Novelists 5 credits
American fiction from its beginning to modern times: Cooper, Melville, Twain, James, Hemingway, Faulkner and others.

En 383 Classics of Black American Literature 5 credits An historical approach to the literature of AfroAmericans, with emphasis on the moderns: Jones, Wright, Cleaver, Baldwin, Ellison and others, in the context of general American literature.

| En 391 | Special Topics | $\mathbf{1 - 5}$ credits |
| :--- | :--- | ---: |
| En 394 | Modern Tradition: Fiction | 5 credits |
| En 395 | Modern Tradition: Poetry | 5 credits |
| En 398 | Modern Tradition: Drama | 5 credits |
| En 401 | Studies in Rhetoric | 5 credits |
| En 407 | History of the English Language <br> Study of the historical development of English. |  |



En 411 Medieval Literature
5 credits
En 414 Eighteenth and Nineteenth Century Continental Literature

5 credits
5 credits
5 credits
5 credits
5 credits
5 credits

5 credits
5 credits

5 credits
5 credits

5 credits
5 credits
5 credits
5 credits

5 credits
5 credits
5 credits

5 credits
1-5 credits
1-5 credits
1-5 credits
5 credits
5 credits



Fine Arts
Marvin T. Herard, M.F.A., Chairman

## Objectives

The Fine Arts department provides that element of a liberal education which distinguishes the truly refined and cultured person. By studying the masterpieces of art, drama and music, the student is led to an awareness of one of man's superior intellectual powers, his creative imagination; by means of practical experience in the fine arts, he is enabled to understand the operation of that power.
By observing the characteristics of the arts in proper historical perspective, the student learns how changes of style reflect the changing attitudes, ideas, ideals and social conditions of various historical periods. Thus the fine arts become an integrative study sharing in the common goals of all liberal arts subjects. The department offers basic professional courses in its three areas, but does not seek to duplicate the art academy, school of drama or conservatory of music. While the fine arts major acquires the basic professional foundation in his own field, the interdisciplinary approach enables him to obtain practical experience in the related art forms. The student's ability to pursue advanced study in his field will depend upon the nature of his talents and the extent of special gifts for his subject. The department also offers an elective program in Aesthetics.

## Degree Offered

Bachelor of Arts

## General Program Requirements

Students in fine arts must satisfy the core curriculum requirements of the University given on page 18 of this bulletin. Fifteen credits of Fine Arts courses are required.

## Departmental Requirements

Bachelor of Arts - Major in Art - 69 credits which must include Art 221, 222, 223, 231, 232, 233, 311, 312, 334, 346, 351; 21 elective credits in art; 10 elective credits in music; $\operatorname{Dr} 220$ and 7 elective credits in drama.

Bachelor of Arts - Major in Drama - minimum of 81 credits which must include $\operatorname{Dr} 101,220,221$, 222, 225, 226, 227, 261, 262, 263, 351, 352, 353, $420,421,425,451,452,453$, and one of the following pairs: 300-301, 310-311, or 410-411-412; Art 221, 231 and 6 elective credits in art; Music 202, 251 and 4 elective credits in music.

Bachelor of Arts - Major in Music - 83 credits which must include $\mathrm{Mu} 115,116,117,215,216,217$, 372,$373 ; 10$ credits from 415,416 , or 417,$418 ; 6$ credits of ensemble and 6 credits of vocal or instrumental lessons; 10 credits of art electives; Dr 220 and 7 elective credits in drama.

Bachelor of Arts - Area major in Fine Arts - 60 credits which must include Art 221, 222, 223, 231, 232, 233; 8 credits in the areas of painting, graphics and sculpture; Dr 220, 221, 225, 226, $227,261,300 ; \mathrm{Mu} 115,116,117 ; 3$ credits of ensembles, 3 credits of vocal or instrumental lessons; 5 credits of music electives numbered 200 or above.

Teaching Subject, Elementary, Art (School of Education) - 25 credits which must include Art 221, $231,311,312,334,346,351,370$.

Teaching Subject, Elementary, Drama (School of Education) - 25 credits which must include Dr $220,221,225,226,227,425$.

Teaching Subject, Elementary, Music (School of Education) - 24 credits which must include FA 103, Mu 115, 116, 117, 2 credits of Mu 110 and 2 credits of Mu 130. Music 114 is required by the School of Education.

Teaching Subject, Elementary, Fine Arts (School of Education) - 25 credits which must include Art 221, 231; one course selected from 334-346-351; Art 370; Mu 115, 116; 1 credit of Mu 110 and 3 credits of Mu 130; Dr 220 and 261. Music 114 is required by the School of Education.
Bachelor of Arts - Major in Art
Freshman year
Art 221, 222, 223 ..... 6 credits
English 100 and core option ..... 10 credits
Fine Arts 101 ..... 5 credits
Philosophy 110, 220 ..... 10 credits
Social Science core options ..... 10 credits
Electives ..... 4 credits
Sophomore year
Art 231, 232, 233 and electives 10 credits
Fine Arts 102 ..... 5 credits
History 101-102 or 102-103 ..... 10 credits
Mathematics/Science core options ..... 10 credits
Philosophy core option ..... 5 credits
Theology core option ..... 5 credits
Junior year
Art 311, 312 and electives 20 credits
Drama 220 and electives ..... 10 credits
Fine Arts 103 ..... 5 credits
Theology core option ..... 5 credits
Senior year
Art electives 33 credits
Music elective ..... 5 credits
Electives ..... 7 credits
Total 180 credits
Bachelor of Arts - Major in Drama
Freshman Year
Drama 101, 225, 226, 227, 261 ..... 11 credits
English 100, 134 ..... 10 credits
History core option ..... 10 credits
Philosophy 110 ..... 5 credits
Electives ..... 9 credits
Sophomore year
Art electives ..... 4 credits
Drama 220, 221, 222, 263 ..... 12 credits
Mathematics/Science core options ..... 10 credits
Philosophy 220 and core option ..... 10 credits
Social Science core options ..... 10 credits
Junior year
Drama 351, 352, 353, 420, 421 13 credits
Fine Arts sequence ..... 15 credits
Music elective ..... 5 credits
Theology core option ..... 5 credits
Senior year
Drama 425,451, 452, 453 18 credits
Drama electives ..... 10 credits
English 430, 431 ..... 10 credits
Music elective ..... 5 credits
Theology core option
180 credits

Bachelor of Arts - Area major in Fine ArtsFreshman year
English 100 and core option ..... 10 credits
Fine Arts sequence ..... 15 credits
History core option ..... 10 credits
Philosophy 110 ..... 5 credits
Social Science core option ..... 5 credits
Sophomore year
Art 221, 222, 223 ..... 6 credits
Drama 220, 221 ..... 6 credits
Mathematics/Science core options ..... 10 credits
Music 130 or 131 or 135 ..... 3 credits
Philosophy 220 and core option ..... 10 credits
Social Science core option ..... 5 credits
Theology core option 5 credits
Junior year
Art 231, 232, 233 and electives 12 credits
Drama 261 and electives ..... 14 credits
Music 115, 116, 117 ..... 9 credits
Theology core option ..... 5 credits
Electives 5 credits
Senior year
Art electives ..... 2 credits
Music 110 or 111 and electives ..... 8 credits
Electives ..... 35 credits

## Fine Arts Sequence and Symposium Courses

FA 101 Fine Arts - Art 5 credits
Synoptic view of art history; period and national styles; principles and implications of design, with cross-reference to music and drama

FA 102 Fine Arts - Drama

## 5 credits

Introduction to drama as an art form. An historical approach with emphasis on major periods, plays and philosophies.

FA 103 Fine Arts - Music
5 credits Introduction to music as an art and as a literature, with emphasis upon historical and cultural correlations.

FA 201 Fine Arts - Art and Music
5 credits
Interdisciplinary course providing both fundamental concepts and historical perspective. May be taken in lieu of either FA 102 or 103.

FA 202 Fine Arts - Drama and Music
5 credits
Interdisciplinary course providing both fundamental concepts and historical perspective. May be taken in lieu of either FA 102 or 103.

FA 400 Fine Arts-Symposium
5 credits
Interdisciplinary course combining art, drama and music using team teaching techniques. May be taken by all students in lieu of a Fine Arts sequence course and by majors to count towards their required courses in the related divisions. (Fine Arts majors must also take the Fine Arts sequence course in their field of specialization.) Prerequisite: Any of the above Fine Arts courses or permission.


## Art Courses

| Art 221 | Drawing | 2 credits |
| :--- | :--- | ---: |
| Art 222 | Drawing | 2 credits |
| Art 223 | Drawing | 2 credits |
|  | Studies of line and value in the delineation of form; |  |
|  | training in awareness and perception; structure and |  |
|  | space indication; essential relationships of organic |  |


| Art 231 | Design | credits |
| :---: | :---: | :---: |
| Art 232 | Design | 2 credits |
| Art 233 | Design | 2 credits |
|  | Primary concepts and analysis problems of contemporary design; dimensional design. | structure; $m$ in three- |
| Art 291 | Special Topics | 1-5 credits |
| Art 292 | Special Topics | 1-5 credits |
| Art 293 | Special Topics | 1-5 credits |

Art 311 History of Art 5 credits
Art 312 History of Art 5 credits

Survey of the arts of the Western world from the earliest times to the Renaissance and from the Renaissance to the present.

| Art 321 | Advanced Drawing | 3 credits |
| :--- | :--- | :--- |
| Art 322 | Advanced Drawing | 3 credits |
| Art 323 | Advanced Drawing | 3 credits |

Study of the human form; special problems in group composition. Prerequisite: Art 223.
$\begin{array}{lll}\text { Art } 331 \text { Advanced Design } & 3 \text { credits } \\ \text { Art } 332 \text { Advanced Design } & 3 \text { credits } \\ \text { Art } 333 \text { Advanced Design } & 3 \text { credits }\end{array}$
Problems of practical application; advertising art; synthesis and research. Prerequisite: Art 233.

Art 334
Graphics
2 credits
Art 335 Graphics
2 credits
Art 336 Graphics
2 credits
Principles and techniques of print-making; lithography and woodcut.

Art 346 Painting 2 credits
Art 347 Painting 2 credits
Art 348 Painting 2 credits
Study of the principles and practices of rendering in paint; complex composition; advanced problems.

Art 351
Art 353 Sculpture
Sculpture
Principles and practices leading to a realization of the nature of form; dependence of design on materials; advanced problems.

Art 370 Arts and Crafts
5 credits
Experience in artistic expression in basic art media for elementary and secondary school teachers.

Art 446 Advanced Painting 3 credits
Art 447 Advanced Painting
3 credits
Art 448 Advanced Painting 3 credits Experimental research toward the development of a creative and personalized idiom, synthesis and research. Prerequisite: Art 348 or permission of department chairman.

| Art 451 | Advanced Sculpture | 3 credits |
| :--- | :--- | ---: |
| Art 452 | Advanced Sculpture | 3 credits |
| Art 453 | Advanced Sculpture | 3 credits |
|  | Includes foundry techniques and lost wax process. |  |
|  | Prerequisite: Art 453 or permission of instructor. |  |

Art 470 Advanced Media
5 credits
Experience in artistic expression in advanced art media for elementary and secondary school teachers.

| Art 491 | Special Topics | $\mathbf{1 - 5}$ credits |
| :--- | :--- | ---: |
| Art 492 | Special Topics | $1-5$ credits |
| Art 493 | Special Topics | $1-5$ credits |
|  |  |  |
| Art 497 | Independent Study | $1-5$ credits |
| Art 498 | Independent Study | $1-5$ credits |
| Art 499 | Independent Study |  |
|  | Advanced work in academic or experimental |  |
|  | research. Prerequisites: Advanced standing in art |  |
|  | and permission of department chairman. |  |

## Drama Courses

Dr 101 Oral Communication Techniques 3 credits Theory and practice of basic groups of communication. Exercises in relaxation, breathing and breath control, voice production. Emphasis on theatre speech.

Dr 220 Pantomime 3 credits Study and practice of the form as a living art and as a basic part of all acting.

Dr 221
Improvisation
3 credits
Living in free form under imaginary circumstances. Group exercises and improvisations for development of sensory perception and imagination.

Dr 222
Acting
3 credits Study and practice in modern realistic acting: preparation presentation and criticism.

Dr 225 Body Movement 1 credit
Dr 226 Body Movement 1 credit
Dr 227 Body Movement 1 credit Development and discipline of the body as an expressive instrument.

Dr 261 Production Preparation
5 credits
Study of the specific technical areas of theatre and their inter-relation in production.

Dr 262
Production Projects
3 credits
Production Projects 3 credits
Student specializes in one of the following areas: Scene Construction, Lighting-Sound, CostumeMakeup, Design (scene or costume). Laboratory periods in conjunction with major productions. Prerequisite: Dr 261
Dr 291

Special Topics
1-5 credits
Dr 292
Dr 293
Dr 300
Dr 301

Special Topics
1-5 credits
Special Topics 1-5 credits

Dramatic Theory I
3 credits
Dramatic Theory II 3 credits
I. A study of Aristotle's Poetics and other dramatic theories to Lessing. II. Dramatic theories from Diderot to Langer and the Present. Prerequisite: Dr. 300 for 301


American Theatre I
5 credits
American Theatre II
5 credits
I. The history of the American Theatre from its beginnings until the Civil War. II. The continuation of American Theatre history from the Civil War until the present.


A senior seminar investigating tragic theories from Aristotle to the present.

Dr 411 Comedy
3 credits
A senior seminar on the nature of comedy from the Greeks until the present.

Dr 412 Mixed Genre
3 credits
A senior seminar on dramas that are neither tragedy nor comedy.

Dr 420 Directing
2 credits
Theory and practice in principles of directing various styles of drama.

## Dr 421 Directing Experience

2 credits
Practical application of directing principles. Work done in the community. Prerequisite: Dr 420 or permission of instructor.

Dr 425 Drama Internship
12 credits
Actual apprenticeship in specific area of study in the community under the supervision of the drama faculty. Prerequisite: Drama majors only, plus permission of Drama faculty.

| Dr 451 | Theatre History I | 2 credits |
| :--- | :--- | :--- |
| Dr 452 | Theatre History II | 2 credits |
| Dr 453 | Theatre History III | 2 credits |

I. Primitive to Elizabethean era. II. Restoration to 19th century. III. 19th and 20 th century.

Dr 491 Special Topics $1-5$ credits
Dr 492 Special Topics $\quad \mathbf{1 - 5}$ credits
Dr 493
Special Topics
1-5 credits
Dr 497 Independent Study
1-5 credits
Dr 498 Independent Study
1-5 credits
1-5 credits

## Music Courses

| Mu 110 | Piano Lessons | 1 credit |
| :--- | :--- | :--- |
| Mu 111 | Vocal Lessons | 1 credit |

Mu 114 Music Fundamentals and Methods 5 credits Rudiments of music and methods that will lead to a successful music program in the elementary school. Required of all majors in elementary school education.

Mu 115 Theory I
5 credits Mu 116 Theory II 5 credits Mu 117 Theory III 5 credits
Basic musicianship, stressing scales and tonality, modes, intervals, chords,rhythm, form. Knowledge of these concepts will be acquired by listening, singing, analysis, discussion and keyboard practice. Prerequisite: Placement by examination.

Mu 120 Violin
Mu 122 Cello
Mu 123 Classical Guitar
Mu 125 Organ
1 credit

1 credit
1 credit
1 credit



Mu 130 A Cappella Choir
1 credit
Mu 131 Vocal Ensemble
1 credit
Mu 135 Fine Arts Ensemble
1 credit Instruments, singers, dancers and actors in ensemble performance.

Mu 136 Orchestra
1 credit Prerequisite: Audition

Mu 151 Songwriting
5 credits
A course for beginners in music theory. This course is designed for the general student.

Mu 200 Music of J.S. Bach
2 credits
Analysis of his instrumental and vocal music, particularly as reflecting the ultimate refinement of Baroque form. Prerequisite: FA 103

Mu 201 Studies in American Music
3 credits Survey from the early folksong to the vocal and instrumental music of the present.

Mu 202 History of Opera
3 credits Consideration of the basic elements in the combination of music and drama with a historical survey of the various solutions offered to the problems involved. Prerequisite: FA 103.

Mu 205 Symphonies of Beethoven
3 credits
Nine works, preceded by a brief consideration of symphonic form. Prerequisite: FA 103.

Mu 207 History of Jazz
2 credits
Explorations of origins in Afro-American culture, its evolution as a result of merging cultures and the accomplishment of a distinctly new musical language.

Mu 214 Introduction to 20th Century Music 2 credits Techniques, forms and styles of impressionism and expressionism; neo-classicism and dodecaphony; total control-chance-electronic music.

Mu 215 Theory IV 5 credite
Mu 216 Theory V 5 credits
Advanced musicianship, beginning part writing and analysis.

Mu 217 Theory VI
5 credits
Advanced musicianship, part writing and analysis. Harmonic style of the common-practice period up to the late Nineteenth Century. Corequisites: Mu 216 with 372; 217 with 373.

Mu 251 Electronic Music
3 credits
Creative modification of electronic sound by means of synthesizers. Lectures and individual laboratory work. Recommended for public school teachers. No prerequisites.
$\begin{array}{lll}\text { Mu } 291 & \text { Special Topics } & 1-5 \text { credits } \\ \text { Mu } 292 & \text { Special Topics } & 1-5 \text { credits } \\ \text { Mu } 293 & \text { Special Topics } & 1-5 \text { credits }\end{array}$
Mu 315 Theory VII
and History of the 19th Century 5 credits Advanced part writing and analysis. Harmonic style of the common-practice period from the establishment of the principle of tonality to the extension of that principle in the late Nineteenth Century.

Mu 372 History and Literature of Music Classic Period Corequisite: Mu 216.

Mu 373 History and Literature of Music Romantic Period

3 credits Corequisite: Mu 217.

Mu 415 Counterpoint (modal), Literature and History of the Middle Ages and Renaissance

5 credits
Sixteenth-Century contrapuntal style as found in the music of Palestrina and his contemporaries. For music majors.

Mu 416 Counterpoint (tonal), Literature and History of the Baroque Era

5 credits
Eighteenth-Century contrapuntal style as found in the music of Bach and his contemporaries. For music majors.

Mu 417 Counterpoint Literature and History of the 20th Century

5 credits
Contrapuntal techniques as used by composers in the Twentieth Century. For music majors.

Mu 418 Orchestration and Harmonic Analysis

5 credits Practical application of study of the instruments and their creative use. Prerequisite: Permission of adviser.

Mu 491 Special Topics $\quad 1-5$ credits
Mu 492 Special Topics $1-5$ credits
Mu 493 Special Topics
1-5 credits


## Foreign Languages

Engelbert M. Axer, S.J., Ph.D., Acting Chairman

## Objectives

The foreign language programs in French, German, Italian, Spanish, Latin and Greek all recognize academic, cultural and practical purposes.

Academic - These goals aim at broadening the scope of the student's intellectual formation by affording facility in one or more languages and a background in other cultures. This end is achieved through a major-minor in foreign languages; or a double major, coupling proficiency in a foreign language with a major in another field.

Cultural - Learning about another culture and civilization, its history, geography, literature and arts through the medium of its language leads to better understanding one's self and the world. To achieve this goal all foreign language courses are taught in the language and in their cultural context.
Practical - Contrary to the common belief on many campuses, career opportunities involving foreign languages are quite good. For the university student trained in a particular field with the extra asset, proficiency in foreign languages, openings exist in the following fields: teaching, government, military, social and foreign service; professions such as international law, engineering, librarianship, foreign trade and international management.

To meet these objectives, the Foreign Languages department offers regular, intensive, specialized and multi-discipline courses and programs on the Seattle University campus, and in foreign countries.

## Degrees Offered

Bachelor of Arts
Master of Education - F/L Teaching (French) - See Graduate Bulletin
Master of Arts in Education - F/L Teaching (French)
See Graduate Bulletin

## General Program Requirements

Students majoring in a foreign language must satisfy the core curriculum requirements of the University, as given on page 18 of this bulletin.

## Departmental Requirements

Bachelor of Arts (modern languages) - 40 credits beyond the elementary language courses 115, 125 and 135. These 40 credits must include 215, 225 $235,315,325$ and any three courses at the 400 level.

Teaching Major (School of Education) - 40 credits beyond elementary courses 115, 125, 135. The 40 credits must include courses $215,225,235,315$, and 325 . French, German and Spanish only.

Undergraduate Minor (modern languages) - 20 credits beyond elementary language courses 115, 125 and 135 . Those 20 credits must be earned in 215 , 225, 235 and 315.

Undergraduate Minor (classical languages) - 25 credits which must include two special topics courses.

## International Studies

The French-in-France Program offers a full academic year of study ( 45 credits) of French language, culture and civilization in Grenoble, France under the direction of regular faculty. The program is open to all students of the University, with no prerequisites.

The German-in-Austria program offers one full academic year of study in Graz, Austria, under the direction of regular faculty. There are no language prerequisites and the program is open to all students of the University.

Reading Programs (sequence of two courses: 105, 106) prepare the student to translate the written text with accuracy and comprehension for scholarly purposes. They fulfill the foreign language requirements and help the student gain the facility needed to pass the graduate language examination.

The reading language requirements may not be satisfied by examination in a student's native language, since the intent of such a requirement is mastery of a language new to the student.
Intensive programs are offered during the summer quarter, in which one year's work in a language can be done, earning 15 credits.

The interdisciplinary concept is emphasized, in advanced courses, by the collaboration of the faculty of other departments, as well as the participation of Foreign Language faculty in programs in related humanities.

Credit by examination and waiver - The Foreign Languages department, recognizing proficiency over requirements, reserves the right to waive all or part of the degree requirements for students who demonstrate, by examination, equivalent achievement at the college level. Courses may be waived, allowing substitution of electives, or credit may be obtained by meeting the University's requirements for credit by examination.

Electives
15 credits
Total . . . . $\overline{180 \text { credits }}$

## Modern Language Courses

French Courses
Fr 105 Reading French 5 credits
Fr 106 Reading French 5 credits
An intensive two-course program of study of written French for reading and translation with accuracy and comprehension. The two-course sequence covers, at an accelerated pace, the matter generally studied in the traditional three-course sequence. The level of competency attained in 106 is consequently equivalent to that of the former 103.

All the following courses except Fr 390 are taught in French.

Fr 115
5 credits
Fr 125 French Language II 5 credits
Fr 135 French Language III 5 credits
Fr 215 French Language IV
5 credits
Fr 225 French Language V
Fr 235 French Language VI
5 credits
Fr 291 Special Topics $\quad \mathbf{2 - 5}$ credits
Fr 292 Special Topics 2-5 credits
Fr 293 Special Topics 2-5 credits
Fr 315 French Culture, Civilization, History and Geography
Fr 325 Introduction to French Literature
Fr 390 French Literature in Translation (for non-majors and non-minors only)

| Fr 41 | XIXth Century, Literary Movements |  |
| :---: | :---: | :---: |
| Fr 425 | XVIIth Century, Classicism | ded |
| Fr 435 | XVIIIth Century, The Enlight |  |
| Fr 445 | XXth Century, Contemporary Literature |  |
| Fr 450 | Methodology of Teaching the French Language |  |
| Fr 451 | Teaching French Culture and Civilization |  |
| Fr 452 | Language Improvement <br> These three courses form part of the req for the BA in Education - F/L teaching | 5 credit quirement (French). |
| Fr 455 | Methodology of Teaching Foreign Languages (French) | 5 credit |
| Fr 460 | Theories, Techniques and Practice of teaching the French Language | 5 credits |
| Fr 461 | Theories, Techniques and Practice of Teaching French Culture and Civilization |  |
| Fr 462 | Teaching Internship <br> These three courses form part of the teaching internship with the French Program. | 5 credits e graduate -in-France |
| Fr 465 | Comparative Methods, Techniques and Performance Objectives of Foreign Language Teaching | 3 cre |
| Fr 491 | Supervised Studies | 2-5 |
| Fr 492 | Supervised Studies | 2-5 |
| Fr 493 | Supervised Studies | 2-5 |

## German Courses

| Gr 105 | Reading German | 5 credits |
| :---: | :---: | :---: |
| Gr 106 | Reading German | 5 credits |
|  | An intensive two-course program of stu | of written |
|  | German for reading and translation and comprehension. | accuracy |
| Gr 115 | German Language I | 5 credits |
| Gr 125 | German Language II | 5 credits |
| Gr 135 | German Language III | 5 credits |
| Gr 215 | German Language IV | 5 credits |
| Gr 225 | German Language V | 5 credits |
| Gr 235 | German Language VI | 5 credits |
| Gr 291 | Special Topics | 2-5 credits |
| Gr 292 | Special Topics | 2-5 credits |
| Gr 293 | Special Topics | 2-5 credits |
| Gr 315 | German Culture, Civilization, History and Geography | 5 credits |
| Gr 325 | Introduction to German Literature | 5 credits |
| Gr 390 | German Literature in Translation (for non-majors and non-minors only) | 2-5 credits |
| Gr 415 | Contemporary German Literature (Short stories-plays) | 5 credits |
| Gr 425 | Survey and Excerpts of German Literature before 1900 | 5 credits |
| Gr 430 | Selected Works of German Literature | 5 credits |
| Gr 435 | Contemporary German Literature (Tragedy and Comedy) | 5 credits |
| Gr 440 | German Classicism and Romanticism | 5 credits |
| Gr 445 | Contemporary German Literature (Prose) | 5 credits |
| Gr 455 | Methodology of Teaching Foreign Languages (German) | 2-5 credits |
| Gr 491 | Supervised Studies | 2-5 credits |
| Gr 492 | Supervised Studies | 2-5 credits |
| Gr 493 | Supervised Studies | 2-5 credits |



## Italian Courses

It 101 Reading Italian I 5 credits It 102 Reading Italian II 5 credits
It 103 Reading Italian III 5 credits Intensive study of written Italian for reading and translation with accuracy and comprehension.
It 291 Special Topics $\mathbf{1 - 5}$ credits
It 292 Special Topics $\mathbf{1 - 5}$ credits
It 293 Special Topics $\mathbf{1 - 5}$ credits

Sp 215 Spanish Language IV 5 credits
Sp 225 Spanish Language V 5 credits
Sp 235 Spanish Language VI 5 credits
Sp 291 Special Topics
2-5 credits
Sp 292 Special Topics
2-5 credits
Sp 293 Special Topics
2-5 credits
Sp 315 Spanish Culture, Civilization, History and Geography

5 credits
5 credits
Sp 325 Introduction to Spanish Literature
2-5 credits
Sp 390 Spanish Literature in Translation (for non-majors and non-minors only)

Sp 415 XIXth Century. The Romanticism 5 credits
Sp 425 The Generation of 1898 Essays and Poetry

5 credits
Sp 435 Early 20th Century Literature 5 credits
Sp 440 Contemporary Spanish Theatre
Sp 445 Contemporary Spanish American Literature

5 credits
5 credits
Sp 450 Methodology of Teaching the Spanish Language

5 credits
Sp 451 Teaching Spanish Culture and Civilization

5 credits
Sp 452 Language Improvement
5 credits (Sp 450, 451, 452 form part of the requirements for the BA in Education F/L Teaching-Spanish)

Sp 455 Methodology of Teaching Foreign
Languages
2-5 credits
(Spanish)
Sp 491 Supervised Studies
2-5 credits
Sp 492 Supervised Studies
2-5 credits
Sp 493 Supervised Studies
2-5 credits
Classical Language Courses
Greek Courses

| Gk 101 | Greek Language I | 5 credits |
| :--- | :--- | :--- |
| Gk 102 | Greek Language II | 5 credits |
| Gk 103 | Greek Language III | 5 credits |

Functional treatment of the phonology, morphology, syntax and lexicon of Koine Greek with readings from the New Testament.

| Gk 291 | Special Topics | $\mathbf{2 - 5}$ credits |
| :--- | :--- | :--- |
| Gk 292 | Special Topics | $\mathbf{2 - 5}$ credits |
| Gk 293 | Special Topics | $\mathbf{2 - 5}$ credits |
| Gk 390 | Greek Literature in Translation | $\mathbf{2 - 5}$ credits |
|  | (for non-minors only) |  |
| Gk 491 | Supervised Studies | $\mathbf{2 - 5}$ credits |
| Gk 492 | Supervised Studies | $\mathbf{2 - 5}$ credits |
| Gk 493 | Supervised Studies | $\mathbf{2 - 5}$ credits |

Latin Courses

| Lt 101 | Latin Language I | 5 credits |
| :--- | :--- | :--- |
| Lt 102 | Latin Language II | 5 credits |
| Lt 103 | Latin Language III | 5 credits |

Spanish Courses
$\begin{array}{lll}\text { Sp } 105 & \text { Reading Spanish } & 5 \text { credits } \\ \text { Sp } 106 \text { Reading Spanish } & 5 \text { credits }\end{array}$
Sp 106 Reading Spanish 5 credits An intensive two-course program of study of written Spanish for reading and translation with accuracy and comprehension.

All the following courses except Sp 390 are taught in Spanish.
Sp 115 Spanish Language I 5 credits
Sp 125 Spanish Language II 5 credits
Sp 135 Spanish Language III 5 credits

| Lt 291 | Special Topics | $2-5$ credits |
| :--- | :--- | :--- |
| Lt 292 | Special Topics | $2-5$ credits |
| Lt 390 | Latin Literature in Translation <br> (for non-minors only) | $2-5$ credits |
|  |  |  |
| Lt 491 | Supervised Study | $\mathbf{2 - 5}$ credits |
| Lt 492 | Supervised Study | $\mathbf{2 - 5}$ credits |
| Lt 493 | Supervised Study | $\mathbf{2 - 5}$ credits |



## General Studies Program

Mary Margaret Ridge, B.A., Director

## Objectives

Students who have a wide range of interests and want a broad liberal arts education, AS WELL AS THOSE WHO HAVE NOT YET DECIDED UPON A MAJOR, may enroll in the General Studies Program. Such students begin their University work by taking core curriculum subjects required for all majors. They may then select courses from two or three related fields, and formulate a program that will best suit the needs of their long-range goals.
The thrust of the program looks to constructing indepth combinations of a variety of disciplines such as fine arts, humanities, social sciences, or any other atypical interdisciplinary synthesis.
A student admitted to the General Studies Program may also transfer to one of the traditional majors of the College of Arts and Sciences, or to one of the professional schools, such as Business, Education, Nursing, Science and Engineering. A student may change at any time as long as academic qualifications for the intended program are met.

## Degrees Offered

Bachelor of Arts in Humanities
Bachelor of Arts in Social Science

## General Program Requirements

Requirements of a General Studies degree are 60 credits beyond the core, of which 40 credits must be taken in courses designated 300 or 400 level, plus five credits in an interdisciplinary seminar to be taken during the senior year.

Suggested combinations are: 40 hours in one subject and 20 in another; or 35 hours in one, 15 in a second, and 10 in a third; or 25,20 and 15. THE SELECTION OF SUBJECTS AND THEIR MEANINGFUL COMBINATION IS THE RESPONSIBILITY OF THE STUDENTS IN CONSULTATION WITH THE PROGRAM DIRECTOR OR AN ASSIGNED ACADEMIC ADVISER.


## History

Robert D. Saltvig, Ph.D., Chairman

## Objectives

Defying classification as either humanity or social science, history functions as both. It focuses on the values as well as the ideas, personalities and institutions that existed in the past and shaped the present. As concerned with perceptions of reality as with historic reality itself, it attempts to exploit all forms of information concerning the past-myth, folklore, legend and works of art, as well as conventional manuscript and published sources. And, while the department attempts to assist all students in acquiring that knowledge of the past which is essential to the educated person, it is especially concerned with developing the methods and techniques unique to historical inquiry. By consistently raising questions regarding "how we know" as well as "what we know" the department aims at the development of fundamental intellectual skills that will be of lifelong utility.

## Degrees Offered

Bachelor of Arts
Master of Arts - See Graduate Bulletin

## General Program Requirements

Students in history must satisfy the core curriculum requirements of the University as given on pages 18 and 19 of this bulletin. Required sequences are 15 credits of philosophy and 10 credits each of English, theology, social science and mathematics/science.

## Departmental Requirements

Bachelor of Arts - 60 credits including Hs 104 and $105,200,400,499$. Of the remaining 35 credits, 20 are to be taken in a general area (Western Europe, United States, Russia-China-Japan). Study of a modern foreign language is highly recommended.


Undergraduate Minor - 35 credits of history of which Hs 104 and 105 are required.

Teaching Major (School of Education) - 55 credits of history, including Hs 104, 105, 231, 341 and seven upper-division courses.

## Bachelor of Arts

## Freshman year




## Sophomore year

History 200 and electives ......................... 15 credits
Philosophy 220 and core option ............... 10 credits
Theology core option ........................... 5 credits
Electives ............................................ 15 credits

## Junior year

History electives ................................... 15 credits
Mathematics/Science core options........... 10 credits
Social science core option .................... 5 credits
Theology core option ................................. 5 credits
Electives ............................................. 10 credits

## Senior year

Modern language or electives .................. 10 credits
History 400, 499 and elective ................... 15 credits
Social Science core option ..................... 5 credits
Electives ...................................................... 15 credits

## History Courses

Hs 100 Origins of the Modern World 5 credits An interpretation of the historical development of contemporary society.

Hs 104 Western Civilization I
5 credits
A study of the ideas, values and institutions that comprised Western Civilization, through the 17th century.

Hs 105 Western Civilization II
5 credits
The development of Western civilization from the 18th through the 20th centuries and its impact on the non-Western World.

Hs 200 Methodology
5 credits
Techniques of historical research, criticism and writing.

Hs 231 Survey of the United States
5 credits
Events, movements, ideas and institutions of American history from the era of discovery to the present.

Hs 251 Survey of Latin America 5 credits Events, movements and institutions of Latin American history from the era of discovery to the present.

Hs 261 Survey of African Cultures
5 credits
A cultural study of the ancient, medieval and modern peoples of Black Africa, with emphasis on social, religious, and political institutions and the cultural contributions of Africans to American culture.

Hs 271 Survey of Russian History 5 credits An introduction to the history and culture of Russia and the Soviet Union.

Hs 281 Survey of the Far East since $1900 \quad 5$ credits Domestic and international development of China, Japan and the states of Southeast Asia.

Hs 29
Special Topics
1-5 credits
Hs 292 Special Topics
Hs 293 Special Topics

## 1-5 credits

1-5 credits

Hs 303 Foundations of European Civilization 5 credits The emergence of the Carolingian Empire and Anglo-Saxon England. Western European relations with the Byzantine and Arab-Mohammedan states. The foundation of western political, economic and cultural institutions in a Christian Commonwealth.

Hs 306 Europe of the High Middle Ages
Analysis of the cultural, political and social institutions of Medieval Europe.

Hs 307 Europe in the Age of the Renaissance 5 credits Europe of the 14th through the 16th centuries. An analysis of the concept of Renaissance and the historical reality in both southern and northern Europe.

Hs 309 Early Modern Europe
5 credits Analysis of specific problems of the Protestant Reformation and the Catholic Counter-Reformation, as arising from Renaissance humanism, and in relationship to modern political, social, economic, and religious institutionalization.

Hs 311 Europe of the 18th Century
5 credits
Cultural and political ferment of Western civilization in the century of the Enlightenment and the French Revolution.

Hs 313 Europe of the 19th Century
5 credits
The era of revolutions in ideas and societies, from the Napoleonic wars to the beginning of World War I.

Hs 315 Europe of the 20th Century
5 credits Contemporary movements and institutions.

Hs 321 Modern France 5 credits
Development of cultural and political France from the 17th century to the present.

Hs 325 Modern Western Culture
5 credits
Reading in interpretive and secondary literature investigating the relationship of Christianity to 19th and 20th century Western culture.

Hs 331 Colonial North America
5 credits European discoveries, explorations and settlements from the 16th through the late 18th centuries.

Hs 333 The Beginnings of the United States 5 credits The Revolution, Confederation and Constitution. Continental expansion; domestic and international development to the Age of Jackson.

Hs 335 Expansion and the Crisis of the Union 5 credits The Age of Jackson, territorial expansion, slavery and abolition, civil war and reconstruction.

Hs 337 The United States in the Progressive Era

5 credits
Industrialization, immigration, urbanization and their effects on American society and politics.

Hs 339 Recent United States
5 credits
The culture of the 1920's, the Great Depression, the Second World War, contemporary American society.

Hs 341 The Pacific Northwest 5 credits Past development and present problems of the states comprising the United States Pacific Northwest with emphasis on Washington state.

Hs 343 American Society and Culture 5 credits Social and intellectual history of the United States, with emphasis on the 19th and 20th centuries.

Hs 345 American Urban History
5 credits
The rise of the American city, its role in American culture, and reactions to it.

Hs 349 Atro-American History
5 credits
African origins, the slave trade, the Afro-American experience; the contributions of Afro-Americans to American culture.

Hs 351 Mexico
5 credits
Formation and development of the Mexican nation from pre-Columbian and Spanish origins to the present.

Development, under Portugese and other influences, of the Brazilian nationality and culture to the present.


Hs 364 England (to 1715)
5 credits
The transformation of a traditional society, the crisis of revolution, and the emergence of the first modern state.

Hs 365 Modern Britain
5 credits
The growth of England as a democratic, industrial state with the subsequent growth of imperialism and its decline. The crisis of wars and the emergence of socialism in the twentieth century.

Hs 367 History of Ireland
5 credits
The development of Ireland from pre-historic times to the present. Celtic civilization, Anglo-Norman invasion and the blending of cultures. Present problems of the North and the South.

Modern Russia
5 credits
History and culture of the Russian people in the 19th and 20 th centuries.

Hs 383 China-20th Century
5 credits
The western impact and the Chinese revolutions from the Opium War to the People's Republic.

Hs 385 Traditional Japan
5 credits
The development of Japanese culture, thought and institutions to 1867.

Hs 387 Modern Japan
5 credits
The transformation of Japan from feudalism to imperial power and industrial giant, 1867 to present.

Hs 389 History of Hawaii
5 credits
Cultural and political history of Hawaii and an introduction to Hawaii's place in Pacific developments in the modern world.

Hs 391 Special Topics $\quad \mathbf{1 - 5}$ credits
Hs 392 Special Topics $\mathbf{1 - 5}$ credits
Hs 393 Special Topics $\mathbf{1 - 5}$ credits
Private work by arrangement, with the approval of department chairman.

Hs 400 Historiography
5 credits
Historical study and writing and the philosophy of history from the earliest times to the present.

Hs 412 The French Revolution and Napoleon 5 credits Studies in the institutions and events which led to the fall of old France.

Hs 414 Modern Germany 5 credits Studies in German history and culture.

Hs 431 The Westward Movement 5 credits
American frontier history from colonial times to the end of the 19th century.

Hs 434 American Revolution and
Confederation
5 credits
Events and interpretations in the history of the Atlantic seaboard provinces from the end of the Great War for Empire through independence and Confederated United States.

Hs 435 American Civil War and Reconstruction 5 credits Political, social and economic aspects of the American civil war and reconstruction.

Hs 451 Pre-Columbian America 5 credits
Mayan, Aztec, Incan and other civilizations in subsequent Latin America.

Hs 463 Social and Intellectual Change in Tudor England 5 credits Study of the relationships between thought and a late medieval society in transition.

Hs 481 Modern Asian Revolutions 5 credits Problems and forces in selected examples of Asian nations in the 20th century, especially of circumstances, leaders, tactics, and doctrines of revolutionary groups in China, Viet Nam and Indonesia.

| Hs 491 | Special Topics | $1-5$ credits |
| :--- | :--- | ---: |
| Hs 492 | Special Topics | $1-5$ credits |
| Hs 493 | Special Topics | $1-5$ credits |
|  |  |  |
| Hs 497 | Independent Study | $1-5$ credits |
| Hs 498 | Independent Study | $1-5$ credits |
|  |  | 5 credits |



## Honors Program

Rosaleen Trainor, CSJ, Ph.D., Director

## Objectives

The Honors Program is a two-year program designed to develop students who can think, read, write and speak integratively across various university disciplines. For this reason it is historically conceived, beginning with the Ancient Near East and proceeding through the civilizations of the Hebrews, Greeks, Romans and Medieval Europeans to modern and contemporary times. The various disciplines - literature, thought, history, fine arts and science - are correlated to provide the student with the greatest possible depth in each period under examination. The program is conducted according to the dialogue method in seminars. In addition, each quarter the student must write at least one paper in each course and be prepared to defend this written work in a tutorial session of five or six students and the instructor. Examinations are normally oral and cumulative and are given at the end of each quarter.

## Scholarships/Applications

Scholarships are granted on a one-year basis, renewable on proof of competence. Applicants are chosen on the basis of their previous record and evidence that they are willing to make the effort necessary to achieve genuine superiority in the intellectual pursuits. In addition to application to Seattle University, candidates must apply directly to the Honors Program.

## Program Requirements

When accepted in the Program, students complete each of the course sequences numbered Hu 101 through 243. Completion of the Honors Program satisfies University core requirements in philosophy, science, English, history and theology. Honors students, on completion of their two year program, transfer into one of the departments of the University to fulfill the requirements for their major. Students may elect to take Hu 398 or 499 while completing their major.

## Honors Program Courses

Hu 101 Humanities Seminar - Though
Hu 202 Humanities Seminar - Thought
5 credits
Hu 103 Humanities Seminar - Thought 5 credits 5 credits Three quarters of critical reading and discussion of the works which have most deeply influenced the development of the Western world, including the Old Testament, Pre-Socratics, Plato, Aristotle, New Testament, St. Augustine, St. Thomas, Duns Scotus, William of Ockham.

Hu 111 Humanities Seminar - Literature 4 credits
Hu 112 Humanities Seminar - Literature 4 credits
Hu 113 Humanities Seminar - Literature 4 credits
Critical examination of those literary works which have most deeply influenced the development of the Western world, including the dramatic books of the Old Testament, Homer and the Greek playwrights, Virgil, The Cid, Song of Roland, Dante and Chaucer.

Hu 121 Humanities Seminar - History 4 credits
Hu 122 Humanities Seminar - History 4 credits
Hu 123 Humanities Seminar - History 4 credits Historical survey which also furnishes a background discipline for humanities-thought and humanitiesliterature, covering Hebrew, Greek, Roman and Medieval Christian history.
Hu 131 Humanities Seminar - Science 2 credits
Hu 133 Humanities Seminar - Science 2 credits The history and nature of the physical sciences.

Hu 142 Humanities Seminar - Art 2 credits Synoptic view of art history; period and national styles; principles and implication of design.

Hu 191* Interdisciplinary Seminar
2-10 credits
Hu 192* Interdisciplinary Seminar
2-10 credits

Hu 201 Humanities Seminar - Thought
4 credits
Hu 202 Humanities Seminar - Thought 4 credits
Hu 203 Humanities Seminar - Thought 5 credits Three quarters of critical reading and discussion, including Descartes, Bacon, Hobbes, Locke, Spinoza, Leibniz, Rousseau, Hume, Kant, Hegel, J.S. Mill, Nietzche, Marx, Sartre, Heidegger, Merleau-Ponty, Ricoeur.

Hu 211 Humanities Seminar - Literature 4 credits
Hu 212 Humanities Seminar - Literature
4 credits
Hu 213 Humanities Seminar - Literature
4 credits Shakespeare, Donne, Moliere, Milton, Dryden, Pope, Goethe, the Romantics, Victorians, Russian novelists and modern plays through the Existentialists.

Hu 221 Humanities Seminar - History
4 credits
Hu 222 Humanities Seminar - History 4 credits
Hu 223 Humanities Seminar - History 4 credits

Hu 231 Humanities Seminar - Science 3 credits
Hu 232 Humanities Seminar - Science

A study of some contemporary problems in the physical sciences.

Hu 243 Humanities Seminar - Music 2 credits
Synoptic view of music history with emphasis upon historical and cultural correlations.

Hu 291 Special Topics $1-5$ credits
Hu 292 Special Topics $1-5$ credits
Hu 293 Special Topics $\mathbf{1 - 5}$ credits

Hu 398 Humanities Special Topics
1-5 credits
Private work by arrangement. Prerequisite: Approval of program director.

Hu 499 Humanities Senior Seminar
5 credits
Reading and discussion of major synthetic literature in the humanities on selected topics. Prerequisite: Approval of instructor.

* Not an Honors Program course




## Journalism

John R.Talevich, M.A., Chairman

## Objectives

To the University's basic liberal studies program, journalism adds courses designed to give the student an awareness of the role of mass communications in a free society and the special knowledge and skills required for effective communication.
The journalism program is specifically directed toward editorial competence, the basis for careers in all areas of mass communications. It seeks to produce graduates who can become responsible professional journalists or who can undertake graduate study in specialized areas.

## Degree Offered

Bachelor of Arts

## General Program Requirements

Students in journalism must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. To be admitted to the journalism program applicants must receive a satisfactory grade in the departmental entrance examination administered during Orientation Week. Students who do not pass the examination will be admitted on a probationary basis and will retake the examination prior to beginning their sophomore year. Journalism students must receive a minimum grade of C in any journalism course to be applied toward major requirements. A student must have a minimum typing average of 40 words per minute to enroll in journalism writing courses.

During the freshman year the journalism student will be asked to specify an area of interest such as print or broadcast journalism, advertising or public relations, or graduate study. With his adviser he will then plan a sequence of courses, in journalism and in related areas, to meet his individual requirements.

Practical experience is an essential complement to the journalism student's course work. This experience may be gained through part-time work on off-campus media, as a staff member of a student publication or in internships.

## Departmental Requirements

Bachelor of Arts - 50 credits in journalism which must include Jr 100, 200, 210, 250, 330 and 25 credits in courses numbered 300 and above; 10 credits of English beyond core requirements numbered 200 or above; 5 additional credits of social science; 10 credits of upper division United States history courses (or approved substitutes); 10 credits of language or fine arts and/or speech and drama courses.

Journalism-English Interdisciplinary Program - 60 credits which must include Jr 100, 200, 210, 250, 330 and 15 credits chosen from Jr 310, 350, 370 and 430; and 20 credits chosen from En 250, 305, $382,407,488$ and 490.

Journalism/Fine Arts Interdisciplinary Program-60 credits which must include Jr 100, 200, 210, 250, 330, 430 and 10 credits chosen from Jr 350, 370 or internship; and 20 credits of fine arts courses chosen in consultation with the adviser. Students in this program must also take the 10 credits of language/fine arts required by the department in the fine arts area.

Undergraduate Minor - 30 credits which must include Jr 100, 200, 210, 250 and 10 credits of additional courses numbered 300 and above.

Undergraduate Minor (teaching) - 25 credits which must include Jr 100, 200, 210, 250 and 465 or approved substitute.

## Bachelor of Arts <br> Freshman year

English 100 and core option .................. 10 credits
History 101, 102 or 102, $103 \ldots \ldots . . . . . . . . . . . . . . . .10$ credits

Philosophy 110, 220 ................................... 10 credits
Social Science core options ..................... 10 credits

## Sophomore year

Journalism 200, 210, $250 \ldots \ldots \ldots \ldots \ldots \ldots . . . . . . . . . . . . .15$ credits
Modern Language, Fine Arts or
Speech/Drama options ....................... 10 credits
Philosophy core option.............................. 5 credits
Social Science option ................................. 5 credits
Theology core options................................ 10 credits
Junior year
English 200/300 options ....................... 10 credits
History 331 or 333 or 335 or 337 or 339
or 347 or 348 or approved substitutes ... 10 credits Journalism 330 and $300 / 400$ options ........ 15 credits
Electives .............................................. 10 credits

## Senior year

Journalism 300/400 options .................... 15 credits
Mathematics/Science core options............ 10 credits
Electives ............................................. 20 credits
Total . . . . $\overline{180 \text { credits }}$


## Journalism Courses

Introduction to Journalism
5 credits
Review of grammar for journalists. Introduction to journalistic style; writing news leads and basic news stories. (fall)

Jr 200 Mass Communication and Society 5 credits
Historical press concepts; nature and functions of the mass media; social, political and economic roles; principles governing journalistic communication; role of the news consumer. (fall)

Jr 210 Newswriting 5 credits Elements of the news story; practice in gathering data for and writing news stories. Prerequisite: Jr 100

Jr 250 Newsediting 5 credits Copy and proof editing procedures; headline writing, layout and makeup of the newspaper; photographic editing techniques.

| Jr 291 | Special Topics |
| :--- | :--- |
| Jr 292 | Special Topics |
| Jr 293 | Special Topics |

Jr 293 Special Topics

5 credits
Study of and practice in gathering and writing complex news stories based upon activities of government, judicial and community agencies. Prerequisite: Jr 210. (Biennially, fall)

2 credits

2 credits Elementary principles of newsphotography, processing and picture editing. Photography for student publications. Prerequisite: Permission of department chairman. (Biennially, I-fall, II-winter)
Jr 330 History of Journalism ..... 5 credits
Study of the origins and growth of the Americanpress from colonial to modern times. (Biennially)
Jr 345
Mass Communications Law
3 credits
Constitutional guarantees and restrictions on freedom of information, with a study of significant cases; libel, copyright, privacy, postal regulations. (Biennially)
Magazine and Feature Writing Elements of non-fiction articles for newspapers and magazines; study of markets; writing for sale. (Biennially)
Communications Graphics
5 credits
Basic typographic, layout and design concepts. Editing techniques for organizational publications. Planning and purchasing printing. (Biennially, winter)
Editorial and Opinion Writing
5 credits Nature, function and structure of persuasive writing; analysis of media editorials; practice in editorial writing. (Biennially, spring)
Jr 380
Jr 381
Jr 382

## Publications I <br> 1 credit

Publications III 1 credit Supervised editorial work on The Spectator and The Aegis. Prerequisite: Permission of department chairman. (I-fall, II-winter, III-spring)

## Reviewing the Arts

5 credits
5 credits
Reading, discussion and writing of newspaper and magazine style reviews of books, movies, television and musical and theatrical presentations. (Biennially)
Public Relations
5 credits
Public relations as a management function; policies, procedures and problems; program analysis and case study. (Biennially, spring)
Publications' Advising
5 credits
Policies, techniques and problems in advising school publications. (summer)

| Jr 480 | Publications IV 1 credit |
| :---: | :---: |
| Jr 481 | Publications V 1 credit |
| Jr 482 | Publications VI 1 credit |
|  | Advanced, supervised editorial work on The Spectator and The Aegis. Prerequisite: Permission of department chairman. (IV-fall, V-winter, VI-spring) |
| Jr 490 | Journalism Ethics 3 credits |
|  | Seminar in contemporary ethical problems for journalists. |
| Jr 491 | Special Topics $\quad 1-5$ credits |
| Jr 492 | Special Topics 1-5 credits |
| Jr 493 | Special Topics 1-5 credits |
| Jr 497 | Independent Study 1-5 credits |
| Jr 498 | Independent Study <br> 1-5 credits |
| Jr 499 | Independent Study 1-5 credits |
|  | Supervised research in communications; special projects; internships on media and affiliated agencies. For journalism students only. Prerequisite: Permission of department chairman. |



## Military Science

Lt. Colonel Archille O. Bourque, M.B.A., Chairman

## Objectives

The Military Science program is specifically designed to give college men and women training and experience in the art of organizing, motivating and leading others. It includes instruction to develop self-discipline, physical stamina, and bearing-qualities that are an important part of leadership and should contribute to success in any kind of career, military or civilian. The emphasis is on "doing" rather than classroom instruction alone. Department philosophy is that leadership is learned only by leading, and ample opportunity is provided in the Military Science program for the practice of leadership under the supervision of experienced instructors.

The Army Reserve Officer's Training Corps (Army ROTC) program is conducted by the Military Science department to develop college educated officers for the Army and Army Reserve. Through Army ROTC the man or woman who wants an Army career can earn either a Regular Army or Reserve commission as a lieutenant. A student may take Army ROTC by two different methods; by enrolling in Army ROTC as an elective and majoring in some other academic discipline, or by majoring in Military Science.

## Degree Offered

Bachelor of Science in Military Science

## General Program Requirements

Students in Military Science must satisfy the University core curriculum requirements as given on page 18. Military Science majors must also satisfy requirements for a minor in some other academic discipline.

## Programs

Three distinct programs are conducted by the Military Science department: Basic Army ROTC, Advanced Army ROTC, and the Military Science degree program.
Basic Program-The basic course is elective for all physically fit students at the University. The course consists of two hours of classroom instruction per week and three hours of leadership workshop twice a month for six academic quarters (freshman and sophomore years). Students who are unable to participate in ROTC classes on campus during their first two years of college may satisfy requirements for Basic Army ROTC by attending Army ROTC Basic Camp for six weeks during the summer after their sophomore year.

Advanced Army ROTC-The advanced course is elective for qualified students who have received credit for the two-year basic course or successfully completed basic camp. The course consists of three hours of classroom instruction per week and three hours of leadership workshop twice a month for six academic quarters (junior and senior years). Advanced course students must also attend Army ROTC Advanced Camp for six weeks during the summer between the junior and senior year. Advanced course students receive $\$ 100$ per month allowance for up to 20 months of their junior/senior years. Upon completion of advanced course requirements and graduation from the University, students are commissioned as second lieutenants in the Regular Army or Army Reserve.

## Degree Requirements

Bachelor of Science in Military Science-40 credits in military science, successful completion of the Army ROTC advanced course, and completion of requirements for a minor in another academic discipline.
Undergraduate Minor-32 credits in military science which must include successful completion of the Army ROTC advanced course.

## Scholarships

Army ROTC scholarships are available to selected students who desire a military career. Expenses for tuition, books and fees are paid for one, two, three or four years, and each student receives a $\$ 100$ per month allowance for each school year while on scholarship. For more information write the Professor of Military Science, Seattle University.

## Bachelor of Science in Military Science Basic Course

Freshman year (MS I)
English core requirement ...................... 10 credits
History core requirement ........................ 10 credits
Mathematics/science core requirement ..... 10 credits
Military Science $101,102,103 \ldots \ldots \ldots \ldots \ldots . . . . . . . .$.
Philosophy core requirement.................... 5 credits

Sophomore year (MS II)
Military Science 200, 202, $203 \ldots \ldots \ldots \ldots . . . . . . . . .$.
Philosophy core requirement.................. 10 credits
Social science core requirement ............... 10 credits
Theology and Religious Studies core
requirement
10 credits
Electives ............................................. 10 credits

## Advanced Course

Junior Year (MS III)
Military Science $300,302,303,304 \ldots \ldots \ldots . .16$ credits
Minor concentration ............................. 15 credits
Electives ............................................ 15 credits
Senior year (MS IV)
Military Science $401,402,403 \ldots \ldots \ldots \ldots \ldots . .12$ credits
Minor concentration ............................. 15 credits
Electives ........................................... 20 credits Total ....... 180 credits

## Military Science Basic Courses

MS 101 Psychology of Leadership 2 credits
Psychological basis for the phenomenon of leadership. A study of why groups follow a leader in informal and formal situations. Two one-hour conferences per week. (fall)

MS 102 Anaiysis of Conflict 2 credits Interdisciplinary studies in the uses and abuses of national power. Introduction to the principles of warfare and application of military force. Team-taught by political science, history and military science departments. Two one-hour conferences per week. (winter)

MS 103 American Military History
2 credits
United States military history from the colonial wars to the Vietnam conflict. Emphasis is on military leadership, the principles of war, and development of the military art. Two one-hour conferences per week. (spring)

MS 200 Communication Skills Development 2 credits Development of oral and written communication skills for the military leader. Methods of military instruction. Student presentations and writing projects provide practice in communicating thoughts to others. Two one-hour conferences per week. (fall)

MS 202 Military Organizations
2 credits
Introduction to the structure of the American Military establishment and branches of the Army. Discussion of equipment and weapons available to combat units. Two one-hour conferences per week. (winter)

MS 203 Concepts of Combat Operations 2 credits Principles of offense and defense. Application of the principles of warfare by small unit leaders. Combat formations and battle drill. Two one-hour conferences per week. (spring)

4 credits
Military training at Fort Knox, Kentucky qualifying the student for entry into the Army ROTC advanced course. Subjects include instruction offered on campus in MS 101 thorugh MS 203. Open to students who have completed their Sophomore year and have no prior Army ROTC experience. Students receive pay and travel expenses. Six weeks during June, July or August. (summer)

Military Science Advanced Courses

MS 300 Military Topographical Analysis
4 credits Principles of land navigation, orienteering, terrain analysis, map reading and aerial photograph interpretation for the small unit leader. Three one-hour conferences per week. (fall)

MS 302 Tactical Operations
4 credits
The role of the company commander and his subordinate leaders during tactical operations. Planning and execution of small unit offensive and defense maneuvers. Three one-hour conferences per week. (winter)

MS 303 Preparation for Leadership
4 credits
Special problems of military leaders. Adjustment to military life. Selected military subjects in preparation for Army ROTC advanced camp. Pre-camp testing and evaluation. Three one-hour conferences per week. (spring)

MS 304 Army ROTC Advanced Camp
4 credits Application of leadership principles and techniques in a military environment. Students perform as leaders in a variety of roles, both administrative and tactical. All students receive pay and travel expenses. Conducted for six weeks during June and July at Fort Lewis, Washington. Successful completion of Advanced Camp is required for commissioning. Prerequisite: MS 303. (summer)

MS 401 The Military Team
4 credits Discussion of command and staff, combined arms, combat support, and service support elements. Concepts of planning, coordination, and decisionmaking at division, brigade, battalion and company level. Three one-hour conferences per week. (fall)

MS 402 Military Logistics/Military Justice 4 credits Discussion of the responsibilities of the junior officer concerning logistical management of the Army support system. The Uniform Code of Military Justice, its application within Army units, and its importance to military discipline. Three one-hour conferences per week. (winter)

MS 403 The US Military and World Affairs 4 credits The interrelationship of the US with other nations and the role of military and political arms of government. Responsibilities of the junior officer in Army administrative management. Selected military subjects in preparation for commissioned service. Three one-hour conferences per week. (spring)

MS 404 Flight Instruction Program 4 credits
Ground school and flight instruction, dual and solo, conducted by FAA approved flight school. Costs paid by the Department of the Army. Private pilot's license may be obtained on completion of the course. Prerequisites: Must be enrolled as a senior ROTC cadet and meet physical requirements (fall, winter, spring)


## Philosophy

James B. Reichmann, SJ, Ph.D., Chairman

## Objectives

The task of philosophy is to study the world and man in terms of that which constitutes their inner-most unity and meaning. It seeks to discover those all-pervasive factors in the world which refuse to yield to the segregating tendencies of a fragmentary approach to knowledge and to truth. It strives to introduce the student to the language of universal communication whereby he/she might translate the complex manifold of human experience into relevant and creative meaning for themselves and for society. It raises such searching questions as: What is the function of language? What is the meaning of knowing? What is change and is anything permanent? What does it mean to exist? What is the nature of value and can value be merely relative? What is man and his destiny? Can God's existence be rationally determined? What is the nature and origin of evil?

The philosophy taught at Seattle University strives to raise these and similarly significant questions in an atmosphere conducive to facilitating the student's search for truth. It unashamedly recognizes its debt to the past, particularly to those philosophers who have presented a realist view of man and the world compatible with the Judaeo-Christian vision of the universe. At the same time it realizes that to remain dynamically relevant to the contemporary age it must advance and grow and be ever open to new problems, new ideas, new contributions and new perspectives.

Degrees Offered<br>Bachelor of Arts<br>Master of Arts - See Graduate Bulletin

## General Program Requirements

Students in philosophy must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. In addition, students in philosophy must take 10 credits of language; 10 credits of fine arts; and 5 additional credits of each of the following: English, history, mathematics/science, social science, theology and religious studies.

## Departmental Requirements

Bachelor of Arts - 55 credits of philosophy which must include PI 110, 220, 250 and 260 plus a program of seven upper division courses. These seven courses must include one from each of the following pairings: PI 340 or $350 ; 400$ or $420 ; 460$ or 465. Qualified students may substitute a written thesis for one of the required courses. Five credits are granted for the thesis which is written under the direction of a faculty member.

Undergraduate Minor - 35 credits of philosophy which must include PI 110, 220, 250, 260 and three upper division courses offered by the department.

## Bachelor of Arts

## Freshman year

English 100 and core option .................. 10 credits
History core option .................................. 10 credits
Philosophy 110, $220 \ldots \ldots \ldots . . . . . . . . . . . . . . . . . . . . . .$.
Social Science core options..................... 10 credits
Elective .................................................... 5 credits

## Sophomore year

English elective .................................. 5 credits
History elective ............................................... 5 credits
Mathematics/Science core options........... 10 credits
Philosophy 250,260 and seminar .............. 15 credits
Theology core option............................ 5 credits
Elective .................................................. 5 credits

## Junior year

Mathematics/Science elective ................... 5 credits
Modern language $105,106 \ldots \ldots \ldots . . . . . . . . . . . . . . .$.
Philosophy seminars...................................... 15 credits
Theology core option ........................... 5 credits
Electives ....................................................... 10 credits

## Senior year

Fine Arts sequence ............................... 10 credits
Philosophy seminars.............................. 15 credits
Social Science elective ............................... 5 credits
Theology elective......................................... 5 credits
Electives ................................................... 10 credits
Total
180 credits

## Philosophy Courses

PI 110 Philosophical Problems:
World
5 credits
A combined historical and problematic approach to the nature of philosophical inquiry. An introduction to fundamental philosophical problems of being, language, logic, knowledge, reality, human existence and God.

PI 125 Introduction to
Ancient Greek Philosophy
5 credits
Readings from source material of the philosophy of the ancient Greeks. Investigation of the topics, problems and doctrines of the pre-Socratics, Plato and Aristotle.

PI 150 Introduction to Medieval Philosophy 5 credits Synthesis of medieval philosophy in its historical perspective with a particular examination of the themes of Arabic, Scholastic and Nominalist metaphysics.

Pi 175 Introduction to Modern Philosophy 5 credits Readings from source material of the modern philosophers. Investigation of topics, problems and doctrines of selected authors from Descartes to Kant.

PI 220 Philosophical Problems - Man 5 credits Systematic study of man, his nature and his powers. Special emphasis on the human knowing process and the problems of human freedom and personal responsibility. Prerequisite: PI 110.

PI 230 Cognitional Analysis
5 credits
Study of the dynamics of man's cognitional structure and of the implications of this dynamism for metaphysics and ethics based on Lonergan's "Insight" and related writings. Prerequisite: PI 220.


PI 250
Ethics
5 credits
General theory of moral behavior, ethics as a science, the purpose of human life and the means of attaining this goal. Applications of general ethical theory in specific instances. Prerequisite: PI 220.

PI 252 Business Ethics
5 credits
Application of general ethical theory to those problems directly related to the business world; employment practices, wages, advertising, honesty, strikes. Prerequisite: PI 220.

Medical Ethics
5 credits
Application of general ethical theory to basic problems encountered in the medical profession; fees, professional secrecy, rights of patients, abortion, transplants, drugs. Prerequisite: PI 220.

Logic I

## 5 credits

Systematic treatment of traditional logic. The themes of communication and language, division and definition, propositions, syllogisms and the nature of science will be examined.

PI 261
Logic II
5 credits
Introduction to symbolic or mathematical logic from both an intuitive and formal standpoint. Elementary calculus of classes and relations and introduction to axiomatic set theory and Boolean algebra. Prerequisite: PI 220.

19th Century Philosophy 5 credits Readings from source material of the 19th Century philosophers. Investigation of central topics, problems and teachings of selected authors from Hegel to Nietzsche. Prerequisite: PI 220.

PI 285 20th Century Philosophy The Analytic Tradition 5 credits Readings from source material from 20th Century analytic philosophers. Investigation of contemporary schools of logical positivism and linguistic analysis from Russell to Wittgenstein. Prerequisite: PI 220.

20th Century Philosophy The Speculative Tradition

5 credits
Readings from source material of 20th Century process philosophers from Bergson to Whitehead and of the phenomenological tradition from Husserl to Sartre. Prerequisite: PI 220.

PI 291
Special Topics
1-5 credits
PI 293
Special Topics
Special Topics
1-5 credits
Prerequisite: PI 220

Contemporary Philosophical Problems 5 credits Indepth study of one or more contemporary philosophical problems such as: language and meaning; knowledge and reality; body-mind freedom and responsibility; God and evil; atheism.

Philosophy of Nature
5 credits

Philosophical appraisal of the material universe, its nature, causes and activities, incorporating the mathematical and experimental findings into the philosophical account of the cosmos. Prerequisite: PI 220.

## Philosophy of Science

5 credits
Philosophical reflections on the historical development of the scientific view of the cosmos. Readings from significant sources. Prerequisite: PI 220.

PI 305 Philosophy of Science The Behavioral Science

5 credits Study of the philosophical implications and presuppositions of the methodology and conceptual framework of the behavioral sciences; special emphasis on behavioral psychology and statistical analysis. Prerequisite: PI 220.

PI 307 Philosophy of Science The Life Sciences

5 credits
Consideration of the basic problems concerning the meaning, origin, evolution and structure of organic life. Prerequisite: PI 220.

PI 310 Contemporary Ethical Theory 5 credits Selected readings from contemporary moral philosphers such as Hare, Stevenson and Fletcher. Prerequisite: PI 220.

PI 312 Contemporary Social Ethics
5 credits
Moral problems facing urbanized man in his contemporary setting. Prerequisite: PI 220.

PI 315 Value Theory 5 credits Survey and critique of various theories of value, including representatives of naturalism, utilitarianism, analysis, existentialism, formalism, moral sense. Prerequisite: PI 220.

PI 325 Philosophy of Art
5 credits
Philosophical reflection on the nature of art and its reality; beauty as a transcendental property of being and its relationship to art and the artist. Prerequisite: PI 220.

PI 335 The Philosophy of History
5 credits
Study of the aim and scope of history; the meaning of historical explanation and the criteria for historical truth. Prerequisite: PI 220.
PI 338 Philosophy of Revolution
5 credits
A philosophical analysis of the underlying meaning and causes of the social and political phenomenon of revolution with emphasis on ideological revolutionary developments since the 17 th century. Prerequisite: PI 220.

PI 339 Philosophy of Racial Conflict
5 credits
A critical examination of the philosophical presuppositions of the historical phenomenon of racial conflict viewed as a derivative of cultural alienation. Prerequisite: PI 220.

PI 340 Plato
5 credits
Selected readings from Plato's "Dialogues." Prerequisite: PI 220.

Aristotle
5 credits
Selected readings from the writings of Aristotle. Prerequisite: PI 220.

PI 385 Epicureans, Stoics and Skeptics 5 credits Survey of Post-Aristotelian and Pre-Plotinian philosophy, with stress on the writings of the Epicureans, Stoics and Skeptics. Prerequisite: PI 220.


PI 390 Plotinus
5 credits
Selected readings from Plotinus' "Enneads." Prerequisite: PI 220.

## PI 400 St. Augustine <br> 5 credits

Readings from the important writings of St. Augustine, such as "The Confessions," "City of God." Prerequisite: PI 220.

PI 410 Early Medieval Philosophy
5 credits
Philosophy of the early medieval period from Augustine to Aquinas, including leading Arab and Jewish philosophers. Prerequisite: PI 220.

St. Thomas Aquinas
5 credits
Selected readings from the writings of St. Thomas Aquinas. Prerequisite: PI 220.

PI 440 Renaissance Philosophy
5 credits
Survey of readings from important Renaissance philosophers and Humanists such as Nicholas of Cusa, Machiavelli, Erasmus, Thomas More, Ficino, Pomponazzi, Bruno. Prerequisite: PI 220.

PI 450 Descartes
5 credits Consideration of his principal writings, discussion of clear and distinct ideas, the methodic doubt, the existence and attributes of God, the nature of the material world, the mind-body problem. Prerequisite: PI 220.

PI 455 British Empiricism of the
Seventeenth Century 5 credits Study of British Empiricism with special emphasis on Locke, Berkeley and Hume. Prerequisite: PI 220.

PI 456 17th Century Rationalism 5 credits
Philosophical systems of Spinoza and Leibnitz. Prerequisite: PI 220.

PI 460 Kant
5 credits
Seminar in "The Critique of Pure Reason" with a brief supplementary discussion of the moral rationalism of Emmanuel Kant. Prerequisite: PI 220.

PI 465 Hegel 5 credits Philosophy of Hegel with emphasis on "The Phenomenology of Spirit" and "The Philosophy of History." Prerequisite: PI 220.

PI 467 Philosophy of Communism
5 credits Investigation of selected writings from such framers of the philosophy of communism as Marx, Engels, Feuerbach and Lenin. Prerequisite: PI 220.

## PI 468 Marx

5 credits
A study of the historical background, philosophic origins and nature of the dialectical materialism of Karl Marx. Prerequisite: PI 220.

PI 470 Philosophy of Society
5 credits
Consideration of the social nature of man, purpose of society, social groups, the common good, subsidiarity, pluralism and authority. Prerequisite: PI 220.

PI 475 Linguistic Analysis
5 credits
Representative readings from among Wittgenstein, Ayer, Ryle, Austin, Strawson, Hampshire, Hare. Prerequisite: PI 220.

PI 478 Process Philosophy
5 credits
Selected readings from philosophers of process such as Bergson, Dewey, Whitehead and Teilhard de Chardin. Prerequisite: PI 220.

PI 480 American Philosophy 5 credits
Survey of American philosophy with readings from Peirce, James, Royce, Dewey, Santayana and Whitehead. Prerequisite: PI 220.

PI 483 Heidegger
5 credits Investigation of his theory of being and its relation to man and to time, especially as seen in "Being and Time" and "The Introduction to Metaphysics." Prerequisites: PI 220.

## PI 484 Merleau-Ponty

5 credits
His philosophy as set forth in "The Phenomenology of Perception" and "The Structure of Behavior." Prerequisite: PI 220.

PI 485 Paul Ricoeur - Philosophy of Will 5 credits Introduction into Ricoeur's methodology and phenomenology of will, especially as contained in his "Freedom and Nature." Prerequisite: PI 220. and from such existentialists as Sartre and Camus. Prerequisite: PI 220.


PI 488 Early Existentialism
5 credits
Philosophies of Klerkegaard, Nietzsche and Dostoievski, with emphasis on their existentialist trends. Prerequisite: PI 220

## PI 489

Existentialism
5 credits
Selected readings from contemporary existentialist figures including Sartre, Heidegger, de Beauvoir, Camus, Jaspers, Marcel and Tillich. Prerequisite: PI 220.

Jean-Paul Sartre
5 credits Analysis of Sartre's phenomenological ontology of "Being and Nothingness" and its contribution to existential phenomenology. Prerequisite: Pi 220.

Special Topics in Philosophy
1-5 credits
PI 492
PI 493
Special Topics in Philosophy

PI 494
PI 495
Special Topics in Philosophy
1-5 credits
1-5 credits

## 5 credits

5 credits
5 credits
Specially directed projects in research. Limited to seniors in Arts and Sciences. Prerequisite: PI 220 and at least two other courses in the 300/400 series.

PI 497 Independent Study $\mathbf{1 - 5}$ credits
PI 498 Independent Study $1-5$ credits
PI 499 Thesis
$1-5$ credits
Original philosophical investigation under the direction of a faculty member appointed by the chairman of the department. Prerequisite: PI 220.


## Political Science

Ben Cashman, Ph.D., Chairman

## Objectives

The curriculum in political science introduces the student to political values, trains in political analysis and informs of government processes at the international, national, state and local level. It prepares students for graduate study or for careers in government, research, teaching or private enterprise where either a knowledge of political science or a broad liberal arts background is required.
The Bachelor of Public Affairs program is highly flexible and designed to serve a variety of student interests within the broad area of public affairs and activities. This program is for students who have decided on public service as a career and is especially suited for individuals now employed in the public area who have not completed the baccalaeurate degree or wish additional education. (Depending on the agency, funds may be available to help defray tuition costs.) All of the options within the program stress a basic academic program augmented by an on-the-job internship in an appropriate agency during the senior year. This program will give the necessary preparation for the beginning level staff, professional, and research positions in departments and agencies of city, county, state and national government. It is the expectation that normal progression after employment will bring graduates to leadership roles in public agencies.

## Degrees Offered

Bachelor of Arts
Bachelor of Public Affairs

## General Program Requirements

Students in political science must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. Political science majors are strongly encouraged to take additional courses in English, history, philosophy and theology and religious studies and are advised to enroll in courses in economics, psychology, sociology, fine arts and languages. Students who plan to attend law school after graduating in political science should take accounting.

## Departmental Requirements

Bachelor of Arts - 60 credits of political science which must include Pls 150 and 160. Majors must select two courses in each of the four major subdivisions of the department and two additional in the area in which they intend to specialize. The four major subdivisions of the department and the applicable courses are: American Government and Politics - Pls 214, 280, 324, 325, 370, $371,372,374,375,418,419$.

International Relations and Foreign Policy - Pls 249, 350, 360, 362, 385, 390, 391, 437, 438.

Comparative and Foreign Governments - Pls 200, 315, 330, 335, 340, 341, 342, 400, 402.

Political Thought and Theory - Pls 242, 351, 353, 354, 355490.

Bachelor of Public Affairs - 50 regular class credits of political science which must include Pls 160 and one course from three of the departmental subdivisions. A maximum of 15 additional internship credits will be allowed but an internship will not necessarily be required of all BPA students; determination of this requirement will be made in consultation with the adviser. If no internship is taken, the student must take 10 additional hours of political science course work. There are four areas of specialization within this degree and courses will be determined according to the area of concentration: Urban Studies, American Studies, International Studies and Public Administration.

Undergraduate Minor - 30 credits which must include Pls 150 and 160 and one course from each of the four major subdivisions of the department.
Bachelor of Arts
Freshman year
English 100 and core option ..... 10 credits
History core options ..... 10 credits
Philosophy 110, 220 ..... 10 credits
Political Science 150, 160 ..... 0 credits
Social Science core option ..... 5 credits

## Junior year

Mathematics/Science core options............ 10 credits
Political Science ..................................... 15 credits
Electives .............................................. 20 credits
Senior year
Political Science 488 or $489 \ldots \ldots \ldots \ldots \ldots . . .15$ credits
Political Science ....................................... 15 credits
Electives ............................................. 15 credits
Total . . . . $\overline{180 \text { credits }}$

## Bachelor of Public Affairs

Freshman year
English 100 and core option ................... 10 credits
History 103 and core option..................... 10 credits
Philosophy 110, $220 \ldots \ldots . . . . . . . . . . . . . . . . . . . . . .$.
Political Science 160 ............................. 5 credits
Psychology 100............................................ 5 credits
Sociology 101....................................... 5 credits

## Sophomore year

Economics 271 ..................................... 5 credits
Philosophy core option........................... 5 credits
Political Science ..................................... 15 credits
Theology core option ............................... 10 credits
Electives .............................................. 10 credits

American National Government 5 credits Study of the foundations, structures, functions of the executive, legislative and judicial branches of the government and their inter-relations with the popular processes of government.

Pis 200 Comparative European
Democracies
5 credits
Analysis of selected foreign democratic systems; constitutional and ideological principles, governmental forms, practices and problems.

Pls 214 Government and the Economy
5 credits
Government regulation and promotion of business, agricultural, labor and consumer interests. The regulatory agencies. Government corporations, antipoverty programs. Government economic Stabilization policies, critique of American capitalism.

Pls 242 American Political Thought
5 credits
Study of American political traditions; Puritanism, revolutionary thought, federalism, Jeffersonianism, intellectual democracy, slavery, progressivism, pragmatism, social utilitarianism and political thought in law and literature.

Pis 249 Introduction to International
Politics
5 credits
Analysis of the dynamic forces in international rela-
tions; power nationalism, sovereignty, colonialism, imperialism, theories of war and peace.

Pls 280 The Judicial Process
5 credits
Overview of the role of law and the judiciary in American political life; the powers and limitations of the judiciary; individual rights in legal conflicts; study of selected key cases. Designed especially for nonmajors.

## Pls 290 Parliamentary Procedure

3 credits Parliamentary procedure based on the practice of Great Britain and the United States as summarized by leading authorities on parliamentary law. Practicum sessions, the writing and analyzing of Constitutions and the politics inherent in parliamentary procedure.

## Political Science Courses

Pls 150 Introduction to Political Science 5 credits Study of concepts and tools used by political science; foundations of politics; development of the state and political and legal institutions; comparisons of various forms of government; definitions of key terms.

1-5 credits $1-5$ credits
Special Topics
1-5 crdits

Pls 315 Comparative Totalitarian Systems 5 credits Study of 20th Century totalitarian ideologies and their influence on governmental functions and processes. Comparative study of selected communist states, military dictatorships and nationalist-authoritarian states.

Pls 324 Political Parties
and Interest Groups
5 credits
Theories, organization, strategy and leadership or American political parties, campaigns and party leadership. Role of agrarian, labor, professional, educational, business and ethnic groups in the American political process; their impact on institutions and processes of government.

Pls 325 The Legislative Process
3 credits
Analysis of American State and national legislative processes; legislative politics; the role of the legislature in the political system; lobbying; theories of representation.

Pls 330 Government of the Soviet Union 5 credits Study of the ideological foundations of Soviet government, the functions of government, the role of the Party, the military and Soviet law.

Pls 335 Government of Communist China 5 credits Study of the structure, function and processes of contemporary Chinese government; the role of the Party and the military; government administration and the personalities of the top leadership.

Pls 340 Comparative Politics of Asia
5 credits
Analysis of selected Asian systems; governmental forms and ideologues; problems of nation-building; inter-state relations in the area.

Pls 341 Comparative African Systems
5 credits
Analysis of selected governments of Africa; constitutionalism, militarism, economic development and social change.

Pls 342 Comparative Latin
American Systems
5 credits
Analysis of selected governments of Latin America; nationalism, imperialism, revolutionary models and problems of economic development and social change.

Pls 350 International Law
5 credits
Fundamentals of international law; states and international law; the individual in international law; creation; application and enforcement of international law.

Pls 351 Political Thought:
Ancient and Medieval 5 credits
Critical examination of political ideas from the preSocratics to 1400. Middle Eastern as well as Western Medieval ideas will be considered with emphasis on the rading of source materials.

Pls 353 Modern Political Thought
5 credits
Political ideas from Machiavelli through Hobbes, Locke, Montesquieu, Rousseau, the English Utilitarians, 19th Century non-Marxian Socialism.

Pls 354 Comparative Marxist Political Theories

5 credits
Critical examination of the chief theories developed by Marx, Engels, Lenin, Mao Tse Tung, Tito, Braz and certain revisionists.

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Pls 355 Recent Political Theory
5 credits
Critical analysis of political theories from Marx to the present.
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Pls 360 Contemporary International Relations in Europe 5 credits European diplomacy and international relations from World War I to the present; contemporary developments and prospects for the future.

Pls 362 Contemporary International Relations in Africa 5 credits Role of Africa in world politics from World War I to the present; the Western Powers in Africa; African nations in the United Nations.

## Pls 370 Public Administration

## 5 credits

Role of public adminstration in the political system; relationship of bureaucracy to the executive, judicial and legislative branches of government, the budgetary process, personnel administration, organization theory; control of the bureaucracy.

Pis 371 State Government and Politics
5 credits
Comparative analysis of American state governments including the executive, judicial and legislative branches of government, state party politics; policy outputs of state governments; statelocal, interstate and state-national intergovernmental relations.

Pls 372 Urban and Metropolitan Government and Politics

5 credits
Problems of large American cities with special emphasis on transportation, housing, public safety and planning problems. Fiscal problems of American cities; analysis of the types of American city government; metropolitan government; public school politics.

Pls 374 The American Presidency
5 credits
Analysis of the powers of American presidents: relationship with Congress, bureaucracy, judiciary, public, private sector of the economy and with foreign governments. Emphasis on analysis of the activities of the incumbent president and his contemporaries.

Pls 375 Minority Politics in the United States 5 credits Examinations of the non-white American in political and legal perspective and an analysis of alternatives for change. Consideration of Native Americans, Chicanos and Asian-Americans with special focus on the Black political experience. Prerequisite: Pls 160 or permission.

Pls 385 Peace and The United Nations
5 credits
Introduction to the history, theories and problems of international organizations; the League of Nations and the United Nations and the Specialized Agencies.

Pls 390 Diplomatic and Consular Practices
3 credits Analysis of American foreign policy-making; the Constitutional framework; operations of the Department of State and overseas missions; diplomatic privileges of immunities.

Pls 391 United States Foreign Policy
5 credits
Constitutional framework; major factors in formulation and execution of foreign policy; American policy in Europe, the Near East, Africa, the Far East and in Latin America historically and current.
the use of recent approaches to politics, political culture, systems analysis and the developmental model. Prerequisites: Pls 200 and 315.

Pls 402 Comparative Politics of the Middle East

5 credits Study of the nature of the political conflict between Israel and her Arab neighbors; special emphasis on the political institutions of Egypt and Israel.

Pls 418 Constitutional Law
5 credits
Growth, philosophy and development of the United States Constitution as reflected in decisions of the Supreme Court with emphasis on the role of the Court in contemporary America. Prerequisite: Junior or senior standing.

Pls 419 The Supreme Court and the Bill of Rights 5 credits Interpretation of the Bill of Rights by the Supreme Court and the impact on the individual and the States. Prerequisite: Junior or senior standing.

Pls 435 Politics of Developing Countries 5 credits Emergence of nationalism, resistance and conflict in the modernization process, economic modernization, patterns and problems of political development.

Pls 437 Peace Movements and World
Government
5 credits
An analysis of the theoretical basic of regionalism and universalism as approaches to world peace. A study of current regional experiments; proposals for revision of the U.N. Charter; World Federalism and World State. Trends and prospects.

Pls 438 Contemporary World Politics
5 credits
An examination of the dominant political forces on today's international scene and the effects of these forces on international relations, international law and international organizations. Trends and prospects toward peace and war today.

Pls 488 Internship - American Government 2-15 credits
Pls 489 Internship - International
2-15 credits On-the-job experience with an appropriate governmental agency required for the BPA degree. Students may register for two or more credits per quarter; however, no more than 15 total intern credits may be earned. No letter grade will be given, only credit/no credit will be granted.

Pls 490 Scope and Methods of Political Science

2-5 credits
Analysis of the history, methodology and focus of research in political science. Current state of the discipline. Prerequisite: Permission of instructor.

Pls 491 Special Topics
Pls 492 Special Topics
Pls 493 Special Topics

Pls 494 Seminars
2-5 credits 2-5 credits
2-5 credits

Pls 495 Seminars
Pls 496 Seminars

## 2-5 credits <br> 2-5 credits <br> 2-5 credits

Pls 497 Independent Study
2-5 credits
Pls 498 Independent Study
Pls 499 Independent Study

2-5 credits
2-5 credits


## Prelaw

Ben Cashman, Ph.D., Adviser
Sr. Christopher Querin, SP, Ph.D., Adviser

## Program

The best preparation and a requirement for entrance to many law schools is the completion of a four-year program for the bachelor's degree. Only a few law schools will admit students who have completed three years of undergraduate work.

In advising prelaw students, Seattle University follows the recommendations of the Association of American Law Schoois. These stress comprehension and expression in words, critical understanding of human institutions and values with which the law deals, and creative power in thinking. These capacities may be developed through study in any of a number of departmental majors.

Entering students interested in law must declare a major in the field in which they are most interested and for which they are best suited. Those unable to make such a determination upon entrance will be enrolled in the General Studies program. The program of study of each prelaw student must be approved by the departmental adviser and the prelaw adviser should be consulted quarterly. During their junior year, students must acquaint themselves with the entrance requirements of the law school they plan to attend and make arrangements to take the law school admissions test. The application form and the instruction booklet for this test may be obtained from the prelaw adviser.


## Psychology

George D. Kunz, Ph.D., Chairman

## Objectives

The curriculum is designed for students who plan to work as professional psychologists and thus need a sound preparation for graduate study; for students who plan a career in any field dealing primarily with people, such as nursing, teaching, social work, guidance and personnel; or for those who desire a well-rounded education and thus need a basic knowledge and understanding of human bahavior. The specific and unique role of the Psychology department is to provide a solid knowledge of psychology as a science.

## Degrees Offered

Bachelor of Arts
Bachelor of Science

## General Program Requirements

Students in psychology must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. See programs of study for additional requirements.

Psychology majors may choose any minor. For social work, the recommended curriculum is a major in psychology and a minor in sociology. Premedical students may take a Bachelor of Science in psychology. All psychology majors must obtain a grade of C or higher in those courses listed below under department requirements, and must maintain a 2.00 grade point average in all other psychology courses.

## Departmental Requirements

Bachelor of Arts - 45 credits of psychology which must include Psy 100, 201, 301 and 401.

Bachelor of Science - 45 credits of psychology which must include Psy 100, 201, 202, 301, 330, 401, 402 and a minimum of 40 credits of mathematics and physical science.

Undergraduate Minor - 30 credits of psychology which must include Psy 100.
Bachelor of Arts
Freshman year
History core option ..... 5 credits
Mathematics/Science core option ..... 5 credits
Psychology 100 ..... 5 credits
Electives ..... 20 credits
Sophomore year
Mathematics/Science core option ..... 5 credits
Philosophy 110, 220 ..... 10 credits
Social Science core option ..... 5 credits
Electives ..... 20 credits
Junior year
5 credits
Psychology and electives ..... 10 credits
Theology core options ..... 10 credits
Senior year
Philosophy core option ..... 5 credits
Psychology 301, 401
Psychology 301, 401 ..... 10 credits ..... 10 credits
Electives
Electives
180 creditsBachelor of Science
Freshman year
English 100 ..... 5 credits
History core option ..... 10 credits
Mathematics/Science electives ..... 15 credits
Psychology 100 ..... 5 credits
Electives ..... 10 credits

## Sophomore year

Mathematics/Science electives ................ 10 credits
Philosophy 110, $220 \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . . . . . . . . .10$ credits
Psychology 201, 202 and elective ............... 13 credits
Social Science core option ..................... 5 credits
Electives .................................................... 7 credits

## Junior year

English core option ................................ 5 credits
Mathematics/Science electives ................ 10 credits
Psychology electives............................ 15 credits
Social Science core option ..................... 5 credits
Theology core options............................. 10 credits

## Senior year

Mathematics/Science elective ................... 5 credits
Philosophy core option.............................. 5 credits

Electives ............................................. 15 credits
Total . . . . $\overline{180 \text { credits }}$

## Psychology Courses

Psy 100 Introductory Psychology
5 credits General introduction to the data of scientific psychology, including its nature, scope and method; organic, environmental and personal factors that influence human behavior. (fall, winter, spring)

Psy 201 Statistics I
5 credits
Psy 202 Statistics II
3 credits
I. Basic descriptive methods; measures of central tendency, variability, correlation and regression; inferential statistics, hypothesis testing, bionomial probability, t-tests, Chi-square, simple analysis of variance. II. More complex analyses; factorial designs and non-parametric statistics. Prerequisite: Psy 201 or 202. (1-fall, winter, spring, II-winter)

Psy 210 Personality Adjustment
5 credits
The normal personality; self-knowledge and selfactualization; personality adjustment problems; various inadequate reactions, escape and defense mechanisms; positive mental health. (fall, winter, spring)



Psy 291 Special Topics
1-5 credits
Psy 292 Special Topics 1-5 credits 1-5 credits

Psy 301 History and Schools of Psychology 5 credits Survey of the history of psychology, including the classic periods of structuralism, functionalism, behaviorism, psychoanalytic schools and Gestalt. Prerequisite: Psy 100. (fall)

Psy 302 Contemporary Theories
5 credits Critical examination of the major theories, issues and methodology in psychology since 1935; emphasis on personality, learning and perception. Prerequisite: Psy 301 or permission. (winter)

Psy 315 Abnormal Psychology
5 credits
Survey of abnormal mental and emotional life; symptoms, nature and causes of psychological disorders; abnormalities of specific functions; theories of etiology. Prerequisite: Psy 100. (fall)

Psy 322 Psychology of Growth and Development

5 credits
Development from infancy; formative aspects of childhood; puberty; characteristics and special problems of adolescents; emotional maturation. Prerequisite: Psy 100 or equivalent. (fall, winter, spring)

Psy 330 Physiological Psychology
5 credits Biological basis of behavior, cerebrospinal, autonomic and sensory systems; endocrine glands, relation of the brain to behavior. Prerequisites: Psy 100 and human physiology. (spring)

Psy 380 Measurement in Psychology
5 credits Principles of psychological measurement; nature, uses and limitations of psychological testing; reliability, validity. Prerequisite: Psy 201. (winter)

Psy 381 Psychological Tests
3 credits
Survey of commonly used tests; aim, content, administration, scoring and interpretation. Prerequisite: Psy 380. (spring)

Psy 390 Computer Research Methods $\mathbf{3}$ credits
Use of the electronic digital computer in behavioral science research. Laboratory session requires console technique and use of data processing equipment. Three lecture and three laboratory hours per week. Prerequisites: Psy 201. (winter)

Psy 401 Experimental Laboratory Psychology I

5 credits

Psy 402 Experimental Laboratory Psychology II 5 credits I. Nature and interpretation of experimentation, basic experimental design; psychophysical methods; sensory and perceptual processes. II. Learning, student experience with animal conditioning. Three lecture and four laboratory hours per week. Prerequisites: Psy 100 and 201 for 401; 401 for 402. (1-fall, spring, II-winter)

Psy 427 The Counseling Interview
5 credits
Basic theory, principles and dynamics of the counselor-client relationship and the counseling process. Prerequisite: Permission. (spring)

Psy 461 Theory of Group Dynamics
2 credits
Survey of theories and empirical studies of the dynamics of group behavior; emphasis on means of more effective and productive group performance. Prerequisite: Psy 210 or equivalent. (fall, winter, spring)

Psy 462 Experience of Group Dynamics
3 credits Experience of group dynamics through participation in a group; emphasis on experiencing interpersonal communication. Prerequisite: Psy 461. Mandatory C/NC. (fall, winter, spring)

Psy 490 Symposium on Alcoholism
2-5 credits
Psychological, educational, physiological, social, industrial, psychiatric, therapeutic and rehabilitation aspects of the problem of alcoholism. Prerequisite: Junior or senior standing in psychology, sociology, premedicine or nursing, or permission. (winter)

Psy 491 Special Topics in Psychology 2-5 credits
Psy 492 Special Topics in Psychology 2-5 credits
Psy 493 Special Topics in Psychology
2-5 credits By arrangement. Prerequisite: Permission.

Psy 494 Seminar
2-5 credits
Prerequisite: Permission. (fall)
Psy 497 Individual Research
2-5 credits
Psy 498 Individual Research
2-5 credits
2-5 credits


## Rehabilitation

Ekkehard J. Petring, Ph.D., Chairman

## Objectives

The Rehabilitation Program is designed to train students to become vocational rehabilitation professionals who work with mentally and/or physically disabled persons. As rehabilitation professionals, their goal will be to move disabled individuals from a status of dependence to the level of maximum functioning of which they are capable. Accordingly, rehabilitation professionals deal with clients, primarily on a one-to-one basis, who have disabilities preventing them from obtaining or retaining employment. Based on the level of rehabilitative readiness, some of the disability groups rehabilitation professionals might work with include alcoholics, blind, deaf and hard-of-hearing, drug addicts, industrially injured, mentally ill, mentally retarded, public assistance recipients, the severely disabled and parolees, to name a few.

The program prepares students who, upon graduation, might become employed in public and private human service settings such as state vocational rehabilitation agencies, federally sponsored human service agencies, county agencies, social welfare agencies, poverty programs, prisons, evaluation centers, and healthrelated associations, as well as private agencies such as transitional workshops, rehabilitation centers, hospitals, speech and hearing centers, work activity centers (adult development centers) and others.

Emphasis is placed on actual supervised field experiences in a variety of rehabilitation related agencies ( 30 credits), in addition to giving the students knowledge in medical and psychological aspects of disability, the world of work or occupational information and community resources in rehabilitation.

## Degrees Offered

Bachelor of Arts in Rehabilitation
Master of Arts in Rehabilitation-See Graduate Bulletin

## The Rehabilitation Certificate

The Rehabilitation Certificate is a 45 credit program that is offered late afternoons and evenings and has the following components: 10 credits of field experience: 15 credits of foundation courses (RHB 100, RHB 201, RHB 301); 20 credits to be selected by the student and the adviser. The Rehabilitation Certificate program is open to all persons, with or without a degree, who meet the University's entrance requirements. Certificate credits are applicable toward a B.A. degree.

## General Program Requirements

Students in rehabilitation must satisfy the core curriculum requirements of the University as indicated on page 18 of this bulletin plus additional credits in social science as outlined below.

## Degree Requirements

Bachelor of Arts-65 credits in rehabilitation including Rhb 100, 201 (or Psy 380), 203 (or Psy 427), 210, 301, 305, 310, 400, 405, 410; 15 credits in psychology and 10 credits in sociology (Psy 100, 201, 315 , and Sc 101, Sc elective).

## Bachelor of Arts

## Freshman year

English 100 and core option .................. 10 credits
History core option .............................. 10 credits
Philosophy 110................................... 5 credits

Rehabilitation $100 \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . \ldots$ credits
Sociology 101 and Sociology elective .......... 10 credits

## Sophomore year


Philosophy 220 .................................... 5 credits

Rehabilitation 201, 203, 210, $301 \ldots \ldots \ldots . . . . .20$ credits
Theology core option ........................ 5 credits

## Junior year

Philosophy core option ......................... 5 credits

Rehabilitation $305,310,400 \ldots \ldots \ldots \ldots \ldots \ldots .15$ credits
Theology core option.............................. 5 credits
Elective ............................................. 15 credits

## Senior year

Rehabilitation 405 ................................... 5 credits
Rehabilitation $410 \ldots \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . . . . . . . . .20$ credits
Electives ............................................... 20 credits
Total . . . . $\overline{180 \text { credits }}$

## Rehabilitation Courses

Rhb 100 Introduction to Rehabilitation
5 credits Principles of vocational rehabilitation, the historical background, various community rehabilitation resources, the rehabilitation process, and the role and functions of the rehabilitation professional within this process.

Rhb 201 Interviewing and Interpersonal Skills 5 credits Using group and interpersonal communication techniques, the course emphasizes the interaction dynamics between the rehabilitation professional and the disabled client.

Rhb 203 Tests and Measurement in Rehabilitation

5 credits
Analyzes various methods of testing and evaluating disabled people and how the methods relate to the rehabilitation process.

Rhb 210 Field Experience in Rehabilitation 5 credits Actual experience in an agency or institutional setting within a rehabilitation framework. Integration and application of classroom knowledge with live experience in the field. Coordinating seminars are an integral part of each field experience course (one hour of seminar to eight hours of field experience). Prerequisite: Rhb 100.

Rhb 291 Special Topics

## 1-5 credits

Rhb 292 Special Topics
$1-5$ credits
Rhb 293 Special Topics
1-5 credits

Rhb 301 Environmental Impact of Disability 5 credits The impact of mental, physical, and social disabilities as related to the individual, his social environment, the culture and its values, economis, situations and vocational opportunities.

Rhb 305 Medical Aspects of Disability 5 credits
Study of medical terminology and various disabling diseases and conditions for a basic understanding of general medical and specialist examinations; how disabling conditions affect a client's vocational life.

Rhb 310 Field Experience in Rehabilitation
5 credits
See course description for Rhb 210.

| Rhb 391 | Special Topics | 1-5 credits |
| :--- | :--- | ---: |
| Rhb 392 | Special Topics | $1-5$ credits |
| Rhb 393 | Special Topics | $1-5$ credits |
|  | By arrangement with the approval of department |  |
| chairman. |  |  |
|  |  |  |
|  |  |  |
| Rhb 400 | Rehabilitation Resources |  |
| Rehabilitation community organization, its power |  |  |
| structure, and methods of determining, evaluating |  |  |
| and analyzing rehabilitation resources. |  |  |

Rhb 405 Job Placement and Development 5 credits The nature and use of occupational information as applied to job characteristics, job development, job seeking skills, vocational theories and practical experience.

## Rhb 410 Field Experience in Rehabilitation $\mathbf{5 - 1 5}$ credits See course description for Rhb 210.

$\begin{array}{ll}\text { Rhb } 497 & \text { Independent Study } \\ \text { Rhb } 498 & \text { Independent Study } \\ & \text { credits } \\ & \text { Individualized studies by arrangement with the ap- }\end{array}$ proval of department chairman.


## Sociology

James P. Goodwin, SJ, M.A., Chairman

## Objectives

Sociology has the dual capacity of satisfying the need of students for a humane and liberalizing discipline and of providing a sound basis for careers either in the science of sociology or in social research or in the social services. Courses are designed to provide a systematic inquiry into the complex structures of modern society and their many functions. They also investigate the interactions between persons, their groups and culture.

Students may choose sociology for various purposes: Some are interested in making a career of teaching sociology or doing sociological research; others study sociology in preparation for graduate study and a career in social work; still others seek in sociology a broader and deeper understanding of man and his works. With a view to these interests, different combinations of courses are recommended to students. In a separate brochure, combinations of courses are suggested for those interested in the sociology of family relations, in the sociology of deviant behavior, in urban sociology, and in methods of sociological research. Common to all of these are required courses intended to communicate to the student a knowledge of the conceptual tools of analysis and the methods of sociological research.

## Degree Offered

Bachelor of Arts

## General Program Requirements

Students in sociology must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. In addition, 10 credits in a modern language and 15 credits in fine arts are required.

## Departmental Requirements

Bachelor of Arts - 55 credits are required for a major in sociology of which 25 credits are in basic courses, including Sc 101, 200, 201, 380 and 381; and 30 credits are in the upper division courses of one of the following three programs: Preprofessional program for sociologists-30 credits. Sc 497 is required. Students in this program are not permitted to take Sc 300, 376 or 377.

Preprofessional program for social workers - 30 credits. Sc 300,376 and 377 are required. The remaining credits may be selected from any upper division sociology courses. Sc 260 and 262 are recommended.

Liberal sociology major - 30 credits. The student may take any upper division sociology course with the approval of his adviser.

Undergraduate Minor - 30 credits which will include Sc 101, 380 and 20 credits of upper division sociology courses.

## Bachelor of Arts <br> Freshman year

English 100 and core option .................. 10 credits
History core options .................................... 10 credits
Psychology 100................................... 5 credits
Sociology 101, 201................................. 10 credits
Electives ............................................. 10 credits

## Sophomore year

Philosophy 110, 220
10 credits
Philosophy core option................................ 5 credits
Political Science or
Economics core option............................ 5 credits
Sociology 200, 380, $381 \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . . . . . . . . . . . . .$.
Theology core options................................... 10 credits
Elective ............................................ 5 credits

## Junior year

Mathematics/Science core options........... 10 credits
Modern Language 105, $106 \ldots \ldots \ldots \ldots . . . . . . . . . . . . .10$ credits
Philosophy ......................................... 5 credits
Sociology electives................................ 15 credits
Electives ............................................ 5 credits

## Senior year

Fine Arts 101, 102, $103 \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . .15$ credits
Sociology electives.................................... 15 credits
Electives .............................................. 15 credits

## Sociology Courses

Sc 101 Fundamentals of Sociology 5 credits
A description of the science of sociology; an analysis of interpersonal relations, of associations and social institutions, and of the way these affect one another and are affected by culture.

Sc 200 Perspectives in Social Psychology
5 credits Consideration of theories and methods in contemporary explanations of the behavior of individuals in social contexts and social situations. Prerequisites: Sc 101 and Psy 100 recommended. Exceptions with permission of Professor.

Sc 201 Social Statistics
5 credits
(Psy 201) Basic principles and methods for compiling and interpreting data statistically: graphs, frequency distributions, central tendencies, measures of association. Analysis of variance, Chi square, rgression correlations, meaning and application of nonparametric statistics.

Sc 256 Criminology
5 credits
Theoretical overview of the conceptualizations of the causes of criminal behavior; sociological analysis of criminal interactions, criminal systems and their functions.

Sc 257 Juvenile Delinquency
5 credits
Analysis of the offenses of juveniles as distinct from those of adult offenders, and sociological explanations of these behaviors within contemporary conceptual models.


Sc 260 Sociology of the Family
5 credits
The structure and functions of the family as a social system; the use of sociological perspectives to interpret the position of the American family in an era of social change.

Sc 262 Socialization
5 credits
Sociological analysis of the process by which one is inducted into his socio-cultural systems, and a review of the effectiveness of the process in American society. Prerequisite: Upper division standing or permission of instructor.

Sc 266 Interracial and Interethnic Relations

5 credits
Concept of race and ethnic group; analysis of the factors in interracial and interethnic tensions; examination of the programs advocated for reducing tension and producing solidarity. Prerequisite: Upper division standing or permission of instructor.

Sc 280 Urban Community
5 credits
Study of urban community structures and institutions; historic city types; the process of urbanization; world cities; aspects of American urban communities. Prerequisite: Upper division standing or permission of instructor.

Sc 291 Special Topics in Sociology $1-5$ credits
Sc 292 Special Topics in Sociology $\quad \mathbf{1 - 5}$ credits
Sc 293 Special Topics in Sociology $\mathbf{1 - 5}$ credits

Sc 300 Introduction to Social Work
5 credits
(Cs 300) Historical development, structure and function of social welfare services and institutions with emphasis upon the philosophy and methods utilized by professional social work in meeting human needs. Prerequisite: Upper division standing or permission of instructor.

Sc 302 The Black People's Social
Movement

## 5 credits

Theory of social movements applied to the black people's struggle for equality in America. Types of movements, stages of development, style of leadership. The aim is to understand the unfolding of a specific social movement and to test certain hypotheses.

Sc 340 Advanced Social Psychology
5 credits Analysis employing specific socio-psychological conceptual models; tests of propositions derived from these models; Prerequisite: Upper division standing or permission of instructor.

Sc 350
Small Groups
5 credits
Sociological models and methods for analyzing small, interpersonal systems of interaction, their dynamics and structures, as well as their potentials for change and growth. with individuals, groups and community organizations. Analysis of ethnic, cultural and economic differences as factors in the administration of justice; community responsibility for the administration of justice.


Sc 352 Society and Justice
5 credits
(CJP The criminal justice process from arrest through 360) release; the relationships of the police, the prosecutor, the defense, the courts, the prisons and corrections, as each integrates into a system.

Sc 360 Complex Organizations
5 credits
Sociological analysis of large, complex social organizations, the kinds of modern organizations and the relationships among organizations and to the larger social environment both historically and currently.

Sc 362 Deviant Behavior
5 credits
(CJP An overview of what American society generally re362) gards as deviant behavior. Emphasis is placed on the results of stigmatization and the acceptance of low self-esteem.

Sc 363 Population
5 credits
Analysis of population trends, problems and policies. Explanations of relationships demonstrated to exist between demographic and sociological variables. Prerequisite: Upper division standing.

## Probation and Parole

5 credits tion and parole supervision, personne! qualifications, legal aspects, and research on results and prediction of outcome.

Sc 366 Corrections 5 credits
(CJP Analysis of the various post-arrest treatment methods applied to offenders; examination of reha- bilitative versus punishment theories; psychiatric group treatment methods to behavior modification of the correctional institution and community-based corrections. Prerequisite: Upper division standing or permission of instructor.

Sc 376 Factors of Interviewing

## 5 credits

(CS 376) The interview as one of the major methods of helping people; study of the knowledge and skills needed for proficient interviewing to provide a basis for future development. Prerequisite: Sc 300 or permission.

Sc 377 Supervised Field Experience
5 credits
(Cs 377) Direct observation and academic study in a selected community agency with stress placed upon the agency's clientele, its services and its function in the community. Prerequisite: Sc 300 and 376.

Sc 380 Methods of Sociological Research I 5 credits
Sc 381 Methods of Sociological Research II 5 credits I. Logical structure and general procedure of science; specific techniques, both qualitative and quantitative, of gathering data; problems of measurement and data analysis. II. Application of the above methods to a research project of the student. Prerequisites: Sc 101 and 201 for 380; 380 for 381.

Sc 400 Sociology of Religion

## 5 credits

Investigation of the religious institutions in society in terms of their structure, function and change Prerequisite: Upper division standing or permission of instructor

Sc 410 Social Stratification
5 credits
Social differentiation with emphasis upon institutionalized aspects of power, privilege and prestige Generalizations drawn from available studies of rank, social mobility and social classes. Prerequisite Upper division standing or permission of instructor.

Sc 412 Juvenile Justice Systems
3 credits
(CJP Examination and study of contemporary police-
410) juvenile operations; police authority and responsibility. Theory and examination of the juvenile justice system. The development of police juvenile units. Relationship between the juvenile officer, crime prevention, and police-community relations.

Sc 415 Victimology
5 credits
(CJP A survey of the victim-offender relationship; including 415) the origin and scope of victimology, a victim and his society, the victim and the administration of justice, and the social reaction to victimization.

Sc 420 Mass Communication
5 credits
Consideration of message-formation and messagedissemination on the societal level with reference to social structures, social power and social change. Prerequisite: Upper division standing or permission of instructor.

Sc 430 Social Change
5 credits Critical review of attempts to explain transitions within a specific social system and large scale transitions from one societal form to another; discussion of concepts which may relate the two types of change in one general theory of social change. Prerequisite: Upper division standing or permission of instructor.

Sociology of Work 5 credits
Study of the industrial enterprise as a social system and the social and socio-psychological aspects of the individual's position in the industrial organization; relationship of these phenomena to a theory of work. Prerequisite: Upper division standing or permission of instructor.

Sc 491 Special Topics in Sociology
Sc 492 Special Topics in Sociology
Sc 493 Special Topics in Sociology

1-5 credits
$1-5$ credits 1-5 credits

Sc 494 History of Sociological Thought 5 credits Historical survey and evaluation of selected leading thinkers who have contributed to the development of sociology as an independent discipline. Prerequisite: Upper division standing or permission of instructor.

Sc 497 Individual Research
3-5 credits
Required of all sociology majors who are in the scientific program in preparation for graduate study in sociology. Each student must design and execute his own research project under the supervision of a member of the sociology staff.

Sc 498 Directed Reading in Sociology I
$1-5$ credits
Sc 499 Directed Reading in Sociology II 1-5 credits Sociological reading at an advanced undergraduate level in a tutorial relationship with one professor. Prerequisite: Upper division standing.


## Speech

Margaret A. Penne, M.A., Adviser

## Objectives

The Speech program offers background and practice in the skills of oral delivery. It aims at uniting both speakers and auditors into a speech community which shares the highest contemporary standards of both written and oral expression. To accomplish this purpose effectively, the program provides in disciplined fashion opportunities for creative composition and vocal interpretation.

## Program

Speech courses are a valuable adjunct to other degree programs in the general fields of the humanities and social sciences. Students interested in speech should include sequences of speech courses among their electives.

## Speech Courses

Sph 100 Fundamentals in Speech
5 credits
Theory and practice of basic speech communication skills. Introduction to interpersonal communication, public communication and aesthetic communication.

Sph 200 Public Speaking
5 credits
Theory and practice in organizing and delivering a speech.

Sph 201 Interpersonal Speech Communication 5 credits Theory and practice of skills in interpersonal situations. Emphasizes self-awareness, sensitivity to others, and a humanistic approach to communication.

Sph 202 Oral Interpretation
5 credits
Analysis and interpretation of literature. Practice in interpreting prose, poetry and drama.

Sph 204 Persuasion and Argumentation
5 credits Introduction to principles involved in effective argumentation and persuasion, practice in forms of debate.

Sph 291 Special Topics $1-5$ credits
Sph 292 Special Topics $\mathbf{1 - 5}$ credits
Sph 293 Special Topics $1-5$ credits Prerequisite: Permission of instructor.

Sph 310 The American Speaker

## 5 credits

Study and criticism of American public speaking. Practice in contemporary methods of public speaking. Prerequisite: Sph 100 or Sph 200 or permission of instructor.

Sph 320 Speech for the Classroom Teacher

5 credits
Emphasis on the teacher as a communicator and leader in learning communication skills. Discussion, story telling, oral interpretation and drama.


## Theology and Religious Studies

Roger Blanchette, S.J., M.A., Chairman

## Objectives

Theology and Religious Studies has the same fundamental purpose as the other disciplines in the University: intellectual training, the formation of a mature intellect. Within this general framework the department serves a two-fold purpose. It provides the theology and religious studies sequence of the core curriculum and it offers a program of courses leading to a Bachelor of Arts degree in theology and religious studies.
The department also offers post baccalaureate programs designed for priests, men and women religious and laity who are interested in broadening their understanding of and participation in the mission of the Church, to help them achieve a high level of competence in the Church's various evolving ministries.

## Degrees Offered

Bachelor of Arts
Master of Religious Education (SUMORE)-See Graduate Bulletin
Master of Pastoral Ministry-See Graduate Bulletin
Certificate in Pastoral Ministry (CORPUS)-See Graduate Bulletin

## General Program Requirements

Students in theology and religious studies must satisfy core curriculum requirements of the University as given on page 18 of this bulletin. In addition to the core curriculum, students in theology and religious studies must take an added five credits in social science and five credits in philosophy.

## Departmental Requirements

Bachelor of Arts - 50 credits in theology and religious studies beyond the 10 credits required in the core. The student majoring in theology and religious studies is required to take the following courses: RS 200 and any two other Scripture courses; RS 320 and any two courses from among the following: RS 330, 335, 340, 344, 350, 420; RS $355,357,358$ sequence; any three 400 numbered courses. The student who is majoring in theology and religious studies and who wishes to be recommended by the department for graduate studies in theology must demonstrate a reading proficiency in either Latin or Greek and in either French or German. Normally, this requirement will be met by three reading courses in these various languages.
Undergraduate minor - 30 credits in theology and religious studies which must include RS 200 and one other Scripture course; RS 320 and any other three 300 or 400 courses.

Bachelor of Arts

Freshman year

English 100 and core option .................. 10 credits

History core option .................................... 10 credits

Philosophy 110, 220
10 credits

Social Science core options........................ 10 credits

Theology and Religious Studies 200

5 credits

## Sophomore year

Philosophy core option........................... 5 credits
Social Science elective ................................ 5 credits
Theology and Religious Studies ................... 15 credits
Electives .................................................. 20 credits

| Mathematics/Science core options.......... 10 credits |  |
| :---: | :---: |
|  |  |
| Philosophy elective ............................. 5 credits |  |
| Theology and Religious Studies 35 $357,358$ |  |
| ectives | 15 credits |

## Senior year

Theology and religious studies electives .... 25 credits
Electives ................................................ 20 credits
Total . . . . $\overline{180 \text { credits }}$

## Religious Studies Center

Religious Studies Center designates an agency established under the cooperative auspices of Seattle University and the Archdiocesan Office of Religious Education, committed to planning and providing programs in continuing religious formation for adults, professional and lay. Religious Studies Center courses are a continuing education service; credit for these courses are not applicable toward meeting the undergraduate elective, core, or other baccalaureate degree requirements. Courses offered through the Religious Studies Center are RS 201, 202, 203, 204, $205,206,207,300,301,302,303,304,305,306,307$, $308,309,400,401,402,404,405,406,407,408,409$, 410, 411, 412.

## Theology Courses

RS 200 Judaeo-Christian Origins 5 credits
Survey of key books of the Bible and/or themes of the Scriptural tradition and its development. For students with a minimal previous background in biblical studies.

RS 201* Old Testament: Meaning and Values for Today

2 credits
A study of the Old Testament, with a view to understanding its meaning and message for persons of faith in our time.

RS 202* New Testament: Meaning and Values for Today 2 credits
A study of the New Testament, with a view to understanding its meaning and message for persons of faith in our time.

RS 203* The Scriptures: Special Topics (OId Testament)

2-3 credits
RS 204* The Scriptures: Special Topics (New Testament)

RS 205* Special Topics
2-3 credits

RS 206* Special Topics
2-3 credits
RS 207* Special Topics
2-3 credits

RS 210 Synoptic Gospels
5 credits
Investigation of the Gospels of Matthew, Mark and Luke.

RS 215 Johannine Theology
5 credits
Study of John's theological reflections on the Christevent, given witness in his gospel, epistles and the Apocalypse.

RS 220 Pauline Theology
5 credits
Study of Paul's theological development analyzed in his epistles.

RS 240 Prophetic and Wisdom Literature of the Old Testament

5 credits
Study of prophecy in the Ancient Near East and its role in the development of Judaism. Rise of wisdom literature in the Ancient Near East, its expression in Judaism and its role in the Judaic community.

RS 289 Comparative Religion
5 credits Investigation and contrast of the major world religions: Pantheism, Buddhism, Hinduism, Judaism, Christianity and Islam.

RS 290 Religious Experience
East and West

## 5 credits

Anthropological, sociological and psychological perspectives on the phenomenon of religious experience in human history as these reveal the nature and meaning of this experience within human existence.

RS 291 Special Topics
RS 292 Special Topics
RS 293 Special Topics

## 3-5 credits

$3-5$ credits

## RS 300* The Faith Experience Today

2 credits
The event of divine revelation and signs by which we recognize God's presence; personal faith response, grounded in reflection on human experience.


RS 301* Theology of Person: Man
and God in Contemporary Thought 2 credits Study of the person as interpreted by science, literature, and theology; concepts of God as these arise from experience and self understanding.

## RS 303* The Contemporary Jesus:

Person or Movement?
2 credits
The person of Jesus in his historical, redemptive role; how Jesus relates to us today, individually and within the community; the search for Jesus as a dimension of the search for meaning.

RS 304* Contemporary Morality: Freedom and the Christian Conscience 2 credits Basic principles of the Christian moral life framed in the context of lived morality today; Christian freedom as it informs the process of ethical decision-making and conscience formation.

RS 305* Life and Death: Moral Issues and Alternatives
Study of the complex issues related to right to life; human values that are normative in addressing problems raised by medical technology today.

RS 306* Social Justice: Moral Issues and Alternatives

2 credits
Christian response to questions posed by conditions of society today; interrelationship between ethical perspectives and social structure as shown in the American experience.
*Offered through the Archdiocesan Office of Religious Education and Seattle University; not open to regular students.


RS 307* The Church and Christian Mission 2 credits Socio-theological study of the Church, as sign and sacrament of Christ's saving presence among men; priestly and prophetic nature exercised through continuing dialog with all sectors of the society.

RS 308* Sacraments and Religious Experience 2 credits The meaning and role of Christian sacraments in worship; how sacraments in their psychological and social dimensions create and express the community.

RS 309* Prayer and Worship: Person and Community Before God

2 credits
The spirit, forms and function of prayer in JudaeoChristian experience; qualities of prayer as it facilitates and enriches growth toward Christian fulfillment.

RS 320 Fundamental Themes in Theology 5 credits Speculative investigation into the reasonableness of revealed truths as accepted in Faith; the Incarnation, Redemption and their effects in man.

RS 330 The Problem of God

## 5 credits

Reality of God for contemporary man; atheism; man's sense of God's presence and His absence, experience of God in the Bible and the theological reflection on who the God-who-is-with-us is?

RS 335 Christ and Modern Man
5 credits
Biblical foundation for the Christian affirmation of the human and divine in Jesus, and a further investigation and analysis of the Christian community's deepening understanding of this mystery.
*Offered through the Archidiocesan Office of Religious Education and Seattle University; not open to regular students.


## RS 344 The Church as Community

5 credits Central biblical themes bearing on the nature and structure of the Christian Community; understanding of that Community in its dynamic, historical process of growth; authority and freedom, tradition and change.

## RS 347 Black Religious Experience

5 credits
Black religion is a theology of freedom, of proclamation, of power of hope. Each must be developed to show its convergence with religion in general, yet its divergence into Black Religion in particular.

## RS 350 Perspective of Christian Hope

5 credits
The future of man and the cosmos based upon the Christian's faith in the Resurrection and Glorification of Jesus Christ; a theology of hope that confronts modern secularism.

RS 355 Early Christian Theology
5 credits Study of the development of Christian doctrine during the first five centuries of Christianity: theological, historical and literary analysis of the writings of St. Justin, Irenaeus, Tertullian, Origin, St. Athanasius, the Cappadocian Fathers, St. Augustine and St. Cyril of Alexandria. Prerequisite: RS 200.

## RS 357 Scholastic Theology

5 credits
Seminar: the origin and main lines of scholastic theology, its spirit and aim formulated by St. Anselm, Abelard, St. Bernard, Alexander of Hales, St. Albert, St. Bonaventure, Duns Scotus, William of Occam, St. Thomas Aquinas. Prerequisite: RS 355.

RS 358 Reformation Theology
5 credits
The theological dispute of the Reformation on justification by faith alone; controversies among Catholics, Lutherans, Calvinists and Jansenists; the Enlightenment and Vatican Council I. Prerequisite: RS 357.

[^3]RS 400* Theology of Liberation: Christian Hope 2 credits
Christian hope as the power of the future that assists in understanding sources of social and political problems, and directs us in creating alternatives for liberating persons from forms of injustice.

RS 401* Theology of Liberation:
Faith and Secularity
2 credits
The phenomenon of secularization in our time; the historical factors that account for it, and present conditions that favor it: implications of secularization for Christian living.

RS 402* Theology of Liberation:
Christian Praxis
2 credits
Theology as it not only interprets the world, but mobilizes change for the responsibility of Christians to be agents of social change; critique of means through which humanizing social change is effected.

| RS 404* Catechetical Ministry I | 2 credits |
| :--- | :--- | :--- |
| RS 405* Catechetical Ministry II | 2 credits |
| RS 406* Catechetical Ministry III | 2 credits |

A three course sequence for the development and evaluation of a competency approach for the preparation of catechists. Prerequisite: 404 for 405,405 for 406.

RS 407* Christianity and Culture 2 credits
Christian view of culture today: role of church in both encouraging and challenging American value assumptions.

RS 408* Religion and Technology
2 credits
The effects of technological society upon the environment, the production and consumption of goods; resources within the Judaeo-Christian tradition relevant to the task of humanizing technology.



## RS 409* Environmental Ethics

2 credits
Ethical dimensions of the environmental crises, based on interdisciplinary sources of understanding; e.g., value assumptions and the need to raise new value questions.

RS 410* Special Topics<br>RS 411* Special Topics<br>RS 412* Special Topics

2-3 credits
2-3 credits
2-3 credits

RS 420 Christian Sacraments
5 credits
Dynamism of the sacraments of Christian life; the doctrinal, moral and liturgical aspects of the sacraments in the perspective of public worship and the Christian community.

RS 433 Theology of Human Sexuality and of Marriage 5 credits Meaning of the human love experience, its expression in human sexuality, the conditions within which this value is experienced; the relationship of human sexuality and marriage; marriage as the sign of the unity among men with God.

## RS 450 Theology of Liberation

5 credits
Passages in Old and New Testament which describe Yahweh or Jesus as liberating men; Christ as the end of all creation; Christ viewed as the terminus of all cosmic and human evolutionary development. Liberation according to contemporary theologies of socio-economic and political liberation.

* Offered through the Archdiocesan Office of Religious Education and Seattle University; not open to regular students.


## ARTS \& SCIENCES-Theology \& Religious Studies

RS 475 Contemporary Christian Morality 5 credits Principles of a Christian ethic; contemporary approaches to descisionmaking in matters of morality; problems encountered by the Christian conscience in today's world including issues of life and death.

RS 476 Social Theology
5 credits
Evaluation of the growing socialization of human life and a study of major social issues in the 20th Century in the light of the Vatican II document "The Church in the Modern World" and the encyclicals "Peace on Earth" and "Development of Peoples" and other contemporary Catholic and Protestant social statements.

RS 477 Christian Response to
Some Socio-Legal Problems

## 5 credits

Traditional Christian reverence for life. Contemporary moral and legal problems such as eugenic engineering, artificial insemination, genetic surgery, compulsory sterilization and abortion. Recommended for students majoring in nursing, premedicine and prelaw.

RS 478 Survey of Jewish History
5 credits
Survey of Jewish history up to the contemporary period with special emphasis on the Second Commonwealth and Talmudic Period.

RS 479 Survey of Jewish Theology
5 credits
Study of monotheism versus paganism, sacrifice, reward and punishment, sabbath and holidays, dietary laws, morals and ethics, traced from the biblical period to the present.
RS 481 Psalms and the Community
of Israel 5 credits
Analysis and dating of key Psalms according to literary types; influence of Israelite cultic life upon the composition of the psalms; Psalms as a reflection of the deepening religious life of the Old Testament.



RS 485 Theological Horizons of
Modern Literature
5 credits
Study of selected literary works in terms of their theological implications and religious insights.

RS 486 Catechesis: Vision and Tactics

## 3-5 credits

Historical background and development of rationales and methodologies in religious education related to Vatican II; implication of Council statements on the "faith-formation" goal of catechesis and the consequent application of pedagogical insights from related social sciences to the formation of a knowledgeable faith.

RS 487 Modern Protestant Theology
5 credits
Theological position, history and trends of the major Protestant denominations; principal leaders of modern Protestant thought and their tenents; Bultman, Tillich, Neibuhr. Prerequisite: Approval of department chairman.

Methodology 5 credits
Introduction to the history, methodology and sources of research in theology; conditions for theological development; continuing Christian response in its magisterial and credal functions.

Special Topics-Core 3-5 credits
Under this number, from time to time, there will be provided various courses that are not otherwise available in the core curriculum. Ordinarily the prerequisite will be RS 200 or the approval of the department chairman.

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Albers School of Business
John D. Eshelman, Ph.D., Acting Dean J.W. McLelland, M.A., Associate Dean

## Department Chairpersons

Accounting and Legal Environment: David Tinius, MBA, CPA, Acting Chairperson
Administration: C. Patrick Fleenor, Ph.D., Acting Chairperson
Economics: Hildegard Hendrickson, Ph.D., Acting Chairperson

## Objectives

Collegiate education for business should prepare students for business careers, not simply for jobfinding. A broad, liberal education, comparable to university studies in other professional fields, will not replace practical business experience, but will provide a sound base for development of managerial talents.

The programs of the Albers School of Business implement the purpose of the University by providing professional guidance and instruction for developing those qualities which lead to competent leadership and service in the various fields of economic endeavor. The School seeks to prepare graduates capable of assuming responsible roles in the economic development of the Pacific Northwest, as well as national and international sectors, and in both private enterprise and government.

## Accreditation of Bachelor of Arts in Business Administration

American Assembly of Collegiate Schools of Business.

## Organization

The Albers School of Business has two principal divisions, undergraduate and graduate studies. Undergraduate majors are offered in five business fields: accounting, finance, general business, management and marketing. In addition, the School contains the Economics department which offers a bachelor's degree program and an undergraduate minor.

## Admission Requirements

Admission to undergraduate programs is granted to applicants who have specified an interest in business or economics and who meet the University's entrance requirements described in the admissions section of this bulletin.
Students seeking entrance to graduate studies in business should communicate with the Director of the Master of Business Administration program.

## Degrees Offered

Bachelor of Arts in Business Administration Bachelor of Arts in Economics
Master of Business Administration (evening classes only)-See Graduate Bulletin
Master of Science in Accounting (evening classes only)-See Graduate Bulletin

## Curriculum

The program of required study for the bachelor's degree in business has three principal components: the arts and sciences, the business core and an area of specialization. All students in the baccalaureate degree program fulfill requirements in English, mathematics, philosophy, a natural science, social sciences and theology and religious studies. The business core includes courses in accounting, administrative processes, economics, finance, information systems, legal environment, management, marketing and statistics. Specialization in one of the five major fields is required.

## General Program Requirements

A minimum of 180 credits is required for bachelors' degrees in business or economics. See the degree requirements for specific course requirements.

## Degree Requirements

Bachelor of Arts in Business Administration - Students seeking this degree complete a program with the following components:

1. Requirements in arts and sciences.... 75 credits

English 100 and one of the following English courses: 132, 133, 134, 220, 230, 240 or 383 ; Mathematics 118, 130 and 214; Philosophy 110, 220 and a five-credit philosophy elective; social sciences, 10 credits (Psychology 100 and Sociology 101 recommended); ten credits in theology and religious studies selected from two different areas; five credits in natural science; and ten credits chosen with the direction of an adviser.
2. Business core requirements

60 credits
Business 211, 230, 231, 270, 310, 340, 350, 380, 480, 482; Economics 271, 272.
3. Specialization in a major area of concentration

20 credits
Accounting, finance, general business, management or marketing.
4. Electives from any undergraduate offerings of the University $\qquad$
Total . . . . 180 credits

## Bachelor of Arts in Business Administration Freshman year <br> Business 170 or Economics $100 \ldots \ldots \ldots \ldots$. ........ 5 credits <br> English 100 and 132 or 133 or 134 or 220 or 230 or 240 or 383 <br> 10 credits <br>  <br> Natural Science .................................... 5 credits <br> Philosophy 110 .................................. 5 credits <br> Social Sciences (Psychology 100 and <br> Elective <br> 5 credits

Sophomore year
Business 211, 230, 231, $270 \ldots \ldots \ldots . . . . . . . . . . . . . .$.
Economics 271, 272 .............................. 10 credits

Philosophy 220 ................................... 5 credits
Theology and religious studies .................. 5 credits

## Junior year

Business 310, 340, 350, $380 \ldots \ldots \ldots \ldots . . . . . . . . . . . . .$.
Business major (300-499)............................ 10 credits
Theology and religious studies ................... 5 credits
Electives other than business or economics

10 credits

## Senior year


Business major (300-499) ......................... 10 credits
Philosophy .......................................... 5 credits Electives .............................................. 20 credits


## Accounting

## Objectives

The work of the accountant is firmly established as an indispensable service in the world of business. Professionally trained accountants serve in many areas of private business and government, such as cost determination, financial accounting, budgetary planning and auditing. By passing state examinations the accountant may pursue a career as a certified public accountant.

Minimum requirements for the accounting major are: Bus 330, 332, 333 and 431. Students who wish to prepare for the certified public accountant examination are advised to complete Bus 336,370, 433, 435 and 436.

## Finance

## Objectives

The finance curriculum is designed to afford an understanding of the financial functions in business and the management of assets for financial institutions and individuals.

Requirements for the finance major are: Bus 341, 343, 441 and Ec 372. Ec 472 and 473 are strongly recommended.

## General Business

## Objectives

The general business major provides the opportunity for a broad survey of business subjects. It is designed for students who intend to operate their own business enterprises, those who expect to attain greater specialization through on-the-job programs, or those who plan later to study in a specific area.
General business majors must complete at least 20 credits selected from: Bus 341, 343, 352, 370, 375, 381, 383; Ec 372, 374, 377, 471, 472, 473 and 476.

## Management

## Objectives

The general area of management is concerned with the administration of private business or public enterprise. It includes relating the goals of an enterprise with the goals of those individuals and groups of individuals who make the enterprise a continuing process. The management major is designed for students seeking careers in administration, personnel or industrial relations in business or government.

Requirements for the management majors are: Bus 381,383 and at least 10 credits from Bus 382, 481, 483.

## Marketing

## Objectives

Marketing is the study of the flow of goods and services to ultimate consumers and users. Career opportunities in marketing are found in manufacturing, wholesaling and retailing, marketing research and in the promotional areas of advertising and personal selling.
The requirements for the marketing major are: Bus 352, 353, 451 and 452. Ec 374, 472 and 473 are strongly recommended.



## Business Courses

Bus 170 Economic and Social Environment 5 credits Survey of the significance and effect of economic and social environmental factors on the business sector; role and responsibilities of business in modern society; career opportunities in business; inter-relationships of major functional areas of business.

Bus 211 Business Statistics
5 credits
Basic statistics, probability concepts, probability distributions, expectation, sampling, estimation, hypothesis testing, index numbers and introduction to simple linear models. Prerequisite: Mt 130. (fall, winter, spring)

Bus 230 Principles of Accounting I (Financial) 5 credits Introduction to financial accounting concepts with emphasis on the development of the student's ability to understand and interpret financial statements of business entities. (fall, winter, spring).

Bus 231 Principles of Accounting II (Managerial) 5 credits Introduction to the use of accounting information for planning, control, and decision making in business organizations. Prerequisite: Bus 230 (fall, winter, spring)

Bus 270 Law \& Business
5 credits
Nature and development of law; structure and functions of the courts; civil and criminal procedure; role of attorneys and an introduction to the law of contracts.

Bus 310 Computer-Based Management Information Systems

## 5 credits

Data processing applications for business. Introduction to information systems. Planning, designing and implementing commercial systems. Development of computer-based management information systems and consideration of associated problems. Prerequisite: Mt 214.

Bus 330 Cost Accounting
5 credits Determination of manufacturing costs in job order, process and standard cost systems; introduction to methods of cost control. Prerequisite: Bus 231.

Bus 332 Intermediate Accounting I
5 credits
Examination of the theory and development of generally accepted accounting principles; evolution of theory as relates to the current state of accounting for the assets of the entity and the measurement and reporting of periodic income. Prerequisite: Bus 231. (fall, spring)

Bus 333 Intermediate Accounting II
5 credits Examination of the theory and development of generally accepted accounting principles; evolution of theory as relates to the current state of accounting for liabilities and owners' equities. Prerequisite: Bus 332. (winter, summer)

Bus 336 Federal Income Tax I
5 credits
Tax returns of individuals; gross income and deductions; use of a tax service and research in tax problems. Prerequisite: Bus 332.

Bus 340 Business Finance
5 credits
Study of the financial policies and practices of business firms; planning, control and acquisition of short-term and long-term funds; management of assets; evaluation of alternative uses of funds; capital structure of the firm; cost of capital; financing growth and expansion of business firms. Prerequisites: Ec 271, Bus 231. (fall, winter, spring)

Bus 341 Investment and Security Analysis 5 credits Principles, policies and practices of investing. Analysis of public and private industries and securities, individual and institutional viewpoints. Prerequisite: Bus 340.

Bus 343 Financial Institutions and Markets 5 credits Nature and function of bank and non-bank financial institutions and markets and their relationships and interdependence. Prerequisites: Ec 271, Bus 231.

Bus 350 Introduction to Marketing Survey of institutions and essential functions in the marketing system. Analysis of the marketing mix; product, place, promotion and price strategies. Prerequisites: Junior standing, permission. (fall, winter, spring)

Bus 352 Marketing Communication
5 credits Business firms' methods of communications to their markets and publics. Analysis of the promotional mix; personal selling, advertising, sales promotion and publicity. Promotion strategies. Prerequisite: Bus 350.

Bus 353 Price Practices and Policies
5 credits Methods of price determination and administration of price policies by manufacturers, wholesalers and retailers. Legal aspects of pricing under anti-trust laws. Prequisites: Bus 211, 350.

## Bus 370 Advanced Law and Business

5 credits
Commercial law, including contracts, business structures and property relationships; legal aspects of government and business, including credit and environmental legislation. Prerequisite: Bus 270.

Bus 375 Economics of Profit Sharing
5 credits
Survey of the philosophy, economics and law in the field of profit sharing; analysis of profit sharing plans in use by industry today. Prerequisites: Bus 231, Ec 271.

Bus 380 Organization Behavior
5 credits
Develops understanding of organizational behavior, with a focus on basic processes and methods involved in diagnosing human situations and in taking action. Experiental exercises and analysis of concepts and conceptual schemes. Prerequisite: junior standing

Bus 381 Organization Structure
5 credits
Study of administrative setting and roles of supervisory personnel as determinates of the scope and techniques of management functions; involves interpersonal relations, communication, leadership, organization structure, individual behavior and motivation. Prerequisite: Bus 380.

Bus 382 History, Theory and Practice of Management

5 credits
The origins of current management practices are explored. Theories are developed and then applied to solving real cases and incidents. Prerequisite: junior standing.



Bus 383 Personnel Management
5 credits
Management of human resources to achieve the goals of the firm and its personnel in times of change in technology and personal preferences. Prerequisite: Bus 380.

Bus 431 Advanced Accounting I
5 credits
Special accounting problems associated with partnerships and business combinations. Particular emphasis on consolidated financial statements and price-level adjusted financial statements. Prerequisite: Bus 333.

Bus 433 Seminar in Accounting Theory
5 credits
Critical examination of accounting theories; concepts, postulates and principles related to income measurement, assets, liabilities and equities. Prerequisite: Bus 333 .

Bus 435 Auditing
5 credits
Introduction to the purpose, scope, concepts and methods used in examining and attesting to financial statements, with emphasis upon generally accepted auditing standards and accounting principles. Consideration given to current issues concerning professionalism, and the developing role of the public accountant. Prerequisite: Bus 333.

Bus 436 Federal Income Tax II
3 credits
Tax returns of partnerships and corporations; problems related to installment sales, cash basis and accrual basis. Prerequisite: Bus 336.

Bus 441 Case Problems in Finance
5 credits
Variables relevant to financial problems; skill, techniques and judgment necessary to make financial decisions. Prerequisite: Bus 340. research. Prerequisites: Bus 211, 352, 353.

Bus 452 Marketing Management
5 credits
Case studies of corporate problems and decisionmaking within marketing departments. Student participation in various roles of marketing, executive action involving organization planning, execution and control of marketing programs. Prerequisites: Bus 231 and 451. Seniors only.

Bus 480 Operations Management
5 credits
Survey of systems analysis techniques applied to operational problems for both manufacturing and service organizations. Topics include network analysis, scheduling, inventory control, linear programming and heuristics. Prerequisite: Bus, 211, Mt 214

Bus 481 Small Business Management
5 credits Procedures and problems in starting and operating a successful small business enterprise. Prerequisite: Senior standing.

Bus 482 Business Policy and Organization
5 credits Case studies of formation of policy and administration of business enterprise; intellectual discipline which permits the understanding of a problem, the planning of a program of action and the progression to execution and constant review; original work in analysis and policy decisions. Prerequisite: Senior standing. (fall, winter, spring)

Bus 483 Management Seminar
5 credits
Investigates the development of a specific area of management. Appraises various approaches to the study of organizations, conceptual and analytical models of organization, appraises research methodologies and discusses future trends in management. Prerequisite: Bus 381, 383, 480, senior standing.

Bus 491 Special Topics
2-5 credits
Bus 499 Independent Study Supervised individual research. Open to senior business majors with the approval of the student's adviser.



## Economics

## Objectives

The courses in economics are designed to acquaint the student with the economy in which he lives and to provide for the application of these courses to all other social sciences. The tools of analysis necessary to solve such problems as income distribution, domestic and international finance, economic fluctuations and business organizations are acquired and opportunity is given to apply the various methods of solution. Students who prove especially able in economics courses are encouraged to pursue graduate work in preparation for professional status as economists in government, industry or the academic world.

## Degree Offered

Bachelor of Arts in Economics

## General Program Requirements

Students in economics must satisfy the core curriculum of the University on page 18 of this bulletin. In fulfilling the core, Pls 160, Mt 118 and 130 are required. In addition, students who do not elect Ec 273 as part of their major program must take Hs 231 as one of the history core courses.

## Departmental Requirements

Bachelor of Arts - 55 credits of economics which must include Ec 271, 272, 372, 374, 479 and seven additional economics courses not including Ec 100 (Bus 343 may be substituted for one); Bus 211 and 230.

Undergraduate Minor - 30 credits of economics which must include: Ec 271, 272, 372, 374 and any two courses in economics selected with the assistance of an adviser.

Bachelor of Arts in Economics
Freshman year
English 100 and core option ................... 10 credits
History 231 and core option.................... 10 credits
Mathematics $118,130 \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . .$.
Philosophy 110 .................................... 5 credits
Political Science 160 ............................ 5 credits
Elective
5 credits
Sophomore year

Economics 271, 272 ............................... 10 credits
Philosophy 220 .................................. 5 credits
Social Science core option .................... 5 credits
Electives ................................................. 15 credits
Junior year
Economics 372, 374 and electives ........... 20 credits
Philosophy core option......................... 5 credits
Theology core options.............................. 10 credits
Electives .............................................. 10 credits

## Senior year

Economics 479 and electives .................. 25 credits
Electives ................................................... 20 credits
Total . . . . 180 credits

## Economics Courses

Ec 100 Nature of Economic Society 5 credits Evolution of economic institutions, with emphasis on market capitalism, its critics and problems, past and present. Changing roles and responsibilities of government and the private sector.

Ec 271 Principles of Economics - Macro 5 credits Organization, operation and control of the American economy in its historical and socio-political settings; problems of inflation, unemployment, taxation, the public debt, money and banking, growth.

Ec 272 Principles of Economics - Micro 5 credits Operation of the American economy with emphasis on prices, wages, production and distribution of income and wealth; problems of the world economy.

Ec 273 American Economic History
5 credits
Economic growth of the United States in the light of the political and social trends of the times. Stresses the historical background of contemporary problems.

Ec 275 Economics of Poverty
5 credits
Examination of poverty in the United States with particular emphasis on urban poverty. The roles of technology, region, race, sex and educational level on the incidence of poverty are studied. Also analyzed is the extent of success of various programs, public and private, in the areas of housing, welfare payments and occupational training, as well as the problems of the enactment of legislation related to poverty. Open to majors and non-majors. No prerequisites.

Ec 292 Special Topics
$1-5$ credits
Ec 293

Ec 371 History of Economic Thought
5 credits
Major historical developments in economic thought from ancient to contemporary times. Christian influence on economic thought; mercantilism and laissez faire; German and Austrian schools, Marx and the various socialists; Keynes and neoKeynesian analysis.

Ec 372 National Income Analysis
5 credits Determination of levels of national income, employment and prices. Problems of unemployment and inflation. Policies for stabilization and growth. Prerequisite: Ec 271.

Ec 374 Intermediate Price Theory
5 credits Demand, supply, costs and market prices under competitive and imperfectly competitive market conditions. Relationships between price and costs; income and its functional distributions in a capitalistic society. Prerequisite: Ec 272.

Ec 377 Government and Business
5 credits
Development in the United States of public policy with respect to business. Government regulation and control of industry and commerce and its application to mergers, business concentration and restrictive business practices, regulation of public utilities. Prerequisite: Ec 272.

Ec 378 Urban Economics 5 credits The causes and consequences of the interdependencies of firms, individuals, households and governmental units within the constrained space of urban areas. Problems of land, housing, transportation, labor and public services.


Ec 379 Environmental Economics
5 credits
Economic analysis of man's effect on his physical environment; problems of pollution, maintenance of the ecological balance and conservation of natural resources. Prerequisite: Ec 272.

Ec 471 Government Finance
5 credits
Revenues, expenditures and debts of federal, state and local governments; economic theories; constitutional limitations; government finance as means for social reform; shifting and incidence of taxes. Prerequisites: Ec 271, 272.

Ec 472 International Trade and Development

## 5 credits

Fundamentals of international trade. Balance of payments and the foreign exchange market. Commercial policies and international institutions. European Common Market. Multinational corporations. Centrally planned economies. Developing countries. Possible limits to growth. Prerequisite: Ec 271.

Ec 473 International Finance and Investment 5 credits Balance of payments. International investment. Exchange controls and payments policies. I.M.F., Special Drawing Rights, the reform of the international monetary system and the position of gold. Eurodollar market. Oil prices. Financial problems of multinational corporations. Prerequisite Ec 271. Ec 472 recommended.

Ec 476
Labor Economics
5 credits
Survey of the economics of industrial relations; effects of industrial changes on labor; hours and wages; employment and unemployment; trade unionism and labor legislation. Prerequisite: Ec 272.

Ec 477 Economic Development
5 credits
Requirements for economic growth; growth theory; application to the development of industrial nations; employment prospects and the effect of automation; development of agricultural economies; planning for growth and industrialization; rich nations and poor nations; growth of authoritarian socialist societies. Prerequisite: Ec 271.

Ec 478 Comparative Economic Systems
5 credits
Types of economic systems - capitalist, democratic socialist, totalitarian socialist, fascist, mixed types. Common factors and problems. Differences in structure and operation. Comparative performance. Marxian philosophy and economics. Prerequisites: Ec 271, 272.

Ec 479 Senior Research
5 credits
An advanced course providing the opportunity for students to pursue topics in breadth and depth and apply the tools of economic analysis to current issues in national and international economic policy. Prerequisite: Permission of instructor.

## EDUCATION




School of Education<br>John A. Morford, Ed.D., Dean<br>Gary H. Zarter, Ph.D., Associate Dean

## Objectives

Within the framework of the University's philosophy and principles, the School of Education has as its objectives the attainment of a liberal and humane education, the formation of men and women dedicated to the art of teaching and knowledgeable of its sciences, and a sound preparation in fields or areas of learning applicable to the curriculum of the elementary and secondary school and adult education.

The School offers programs leading to the Washington provisional teaching certificate, standard teaching certificate, provisional principal's credential, standard principal's credential and school counselor's certificates. Also available are programs to train

Montessori school teachers or teachers of the mentally retarded.
Through reciprocal agreements School of Education graduates also qualify for certification in most other states.

## Accreditation

The School is accredited by the Northwest Association of Higher Education and the National Council for Accreditation of Teacher Education and approved by the Washington State Board of Education.

## Organization

The School of Education has two major divisions, undergraduate studies and graduate studies and one department, Health and Physical Education. Close cooperation exists among all departments, schools and colleges of the University in working out a program of preparation for the individual student.

## Degrees Offered

Bachelor of Arts in Education
Bachelor of Education
Master of Arts in Education - See Graduate Bulletin Master of Education - See Graduate Bulletin
Doctor of Education - See Graduate Bulletin

## Undergraduate Programs

## Admission Requirements

All entering freshmen and undergraduate transfer students from accredited institutions of higher learning who aspire to become teachers may be admitted to the School of Education for lower division courses if they meet the University's regular admission standards.

Criteria and Procedure for Admission into Upper-Division Candidacy in the Teacher Training Programs
Requirements for entrance into upper-division candidacy in the teacher training program are higher than those for graduation. Therefore, students must make application for and be accepted into the program prior to registration in Ed 200 and 325, or 436, 437 or 442.

For undergraduates, this application will usually be made during the quarter in which Ed 322 is taken, usually in the sophomore year. Transfer students must complete one quarter at Seattle University before unconditional entrance into upper-division candidacy. Students entering initially as post-bachelor students are evaluated at the time of admission and need not make a separate application for entrance into upperdivision candidacy. An interview with a School of Education adviser is required of all applicants, and a plan for completion of upper-division work must be approved by the adviser and submitted with the application.

Applicants for teacher training are evaluated by the School of Education on the following bases: 1) recommendation of the teaching major department, or adviser in the case of elementary or "undecided" students; 2) academic record; 3) physical qualifications; 4) emotional health; and 5) evidence of interest in teaching as a career.

The School will place each applicant into one of four categories:

1. Accepted - may begin upper-division work toward teaching certificate. Criteria are: Unconditional recommendation from major department or adviser; Cumulative grade point average of 2.5 , and for secondary candidates a 2.5 grade point average in the major or teaching field; physical ability and appearance necessary for teaching; good moral character and evidence of interest in teaching as a career.
2. Accepted conditionally - may begin work toward teaching certification provided the conditions set forth are met. Conditions most commonly, but not always, relate to the achievement or maintenance of certain grades or grade point averages. The Undergraduate Studies Executive Committee retains the right to refuse to accept conditional students in teaching fields in which an extreme surplus of teachers exists.

Criteria are: (Any one is sufficient reason for conditional acceptance.)

Conditional recommendation from major department or adviser; grade point averages below 2.5 but above 2.0 in both cases; a physical defect that makes a teaching career questionable, but not impossible; symptoms of emotional problems or immaturity which make a career in teaching questionable but are currently of a minor nature; evidence of insufficient interest in a career in teaching.
3. Deferred without prejudice - may not begin or continue upper division professional work toward teaching certification but may apply at a later date if certain conditions set forth in the deferral are met.

Criteria are: (Any one is sufficient cause for deferral.)

A recommendation that this be done from the major department or adviser; a grade point average below 2.0 overall or in teaching major; a physical defect which currently would make a teaching career impossible but which is correctable; evidence of an emotional problem or immaturity which may be overcome by time.
4. Rejected - may not begin or continue work toward teaching certification. Ordinarily, rejected applicants will not be reconsidered at a later date.

Criteria are: (Any one is sufficient cause for rejection.)

A recommendation that this be done from the major department or adviser; physical defect making a career in teaching impossible; evidence of lack of the moral character needed for teaching; evidence of emotional and/or mental immaturity or disorder of a type which is not likely to be changed by time and which makes the applicant unsuited for teaching.


Applicants may appeal the classification by the Associate Dean to the Undergraduate Studies Executive Committee. Appeals must be made in writing within one week of notification of classification.

The status of any student is reviewed automatically if the student receives a grade of $D$ or lower in a professional course, drops below the required grade point average or the adviser so recommends.

## Admission to Student Teaching

Acceptance into upper-division candidacy in the teacher training program and completion of prerequisite courses does not guarantee admittance into student teaching. An application must be submitted to the Dean by the end of the fifth week of the quarter prior to the one in which the student wishes to fulfill the student teaching requirement. Specific dates during which forms may be obtained and submitted are announced each quarter.

Categories and criteria for acceptance are the same as those listed above except, recommendation from the faculty in the School of Education is also considered, and the student must have a grade point average of 2.5 in three areas: cumulative, in the teaching field (secondary), and in professional education courses.

## Curriculum

The teacher preparation curriculum at Seattle University encompasses three components:

The liberal core of arts and sciences offered at Seattle University comprises about 35 per cent of the prospective teacher's curriculum. Forty per cent of the program is utilized in gaining a depth of knowledge in a teaching major for the secondary school teacher or two teaching areas for the elementary school teacher. The remaining 25 per cent of the 190 quarter hour basic teaching preparation is received in professional courses in foundations of education, psychology of child and adolescent development and learning, the principles, materials and technology of teaching, and closely supervised and assisted student teaching and appropriate laboratory experience in schools throughout the area.

## General Program Requirements <br> Bachelor of Arts in Education Secondary

Bachelor of Arts in Education (middle school, junior high school, or senior high school teaching) - 1) All University core requirements as found on page 18: 60 credits, 2) A teaching major or of at least 45 credits in any subject commonly taught in secondary schools. (See departmental sections of the bulletin for exact requirements in each teaching major. Where no requirements are shown in a departmental section, an individualized program must be developed jointly). 3) Professional education courses: 45 credits. 4) Electives: 40 credits. Students are advised to use electives to complete additional teaching fields.
For recommendation to Comprehensive Social Studies the following are required: 1) a major in one of the social studies fields, 2) at least 25 hours in history, including American, Western, and nonWestern, and 3) a minimum total of 70 quarter credits in the social studies, including courses in at least three social studies areas in addition to history.

For recommendation in Business Education the following must be completed: 1) Bus 230, 231, 270, 340, and $380 ; 2$ ) Econ. 271 and 272; 3) Ed 430, Teaching Secondary Subjects: Business: 4) proficiency must be demonstrated in two of these skills-typing, shorthand, office machines.

Ten of the 190 credits required for the degree and provisional certification also count toward the standard certificate teachers must earn once they begin teaching.

## Typical Program

## Freshman year

English core options ............................... 10 credits
History core options ................................... 10 credits
Philosophy core options .............................. 5 credits
Social Science core option ....................... 5 credits
Major or electives ...................................... 15 credits

## Sophomore year

Education 322 .................................... 5 credits
Mathematics/Science core options............. 10 credits
Philosophy core options ............................ 10 credits
Theology core options................................. 10 credits
Major or electives .................................. 10 credits

## Junior year

Education 200, 325, 330, $337 \ldots \ldots \ldots \ldots . . . . . . . . . .$.
Physical Education..................................... 5 credits
Major or electives (including
course in teaching of major) ................ 25 credits

Senior yearStudent Teaching ....................................... 12 credits
Major and electives190 credits

## Bachelor of Education <br> Elementary

Bachelor of Education (elementary, middle school, junior high school or Montessori school teaching 1) All University core requirements: 60 credits. The B.Ed. requires certain specific core courses as shown in the program outline. See page 18 for remaining core requirements. 2) Common courses: 25 credits. Includes work in art, music, geography, literature, speech and physical education needed by all elementary and middle school teachers. 3) A teaching major of at least 25 credits and a teaching minor of at least 20 credits in subjects or areas commonly taught in elementary or junior high schools. Junior high candidates must take the 25 hour teaching major in a specific subject taught at the junior high level.
4) Professional education courses: 50 credits.
5) Electives: 10 credits. These vary slightly for students seeking either special education or Montessori training.
Ten of the 190 credits required for the degree and provisional certification also count toward the standard certificate teachers must earn once they begin teaching.
Students interested in Montessori teaching should confer with the Montessori Program Director early in their studies.

## Elementary Typical Program <br> Freshman year

English core (include American Literature) .10 credits History core (include U.S. History) ............ 10 credits
Philosophy core option............................ 5 credits
Social Science core option ........................ 5 credits
Teaching subject or supporting area $. \ldots \ldots . .15$ credits

## Sophomore year

Art 370, Music $114 \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . . . . . . . . . .10$ credits
Biology 205; Mathematics 200 .................... 10 credits
Education 322 5 credits
Philosophy core options .............................. 10 credits
Theology core options............................ 10 credits

## Junior year

Education 200, 325 ................................. 10 credits
Physical Education................................ 5 credits

Teaching subject and electives .................. 20 credits



## Typical Program

Elementary with Montessori Emphasis

## Freshman year

English core (include American Literature) . 10 credits History core (include U.S. History) ............ 10 credits Philosophy core option............................ 5 credits
Social Science core option ........................... 5 credits
Teaching subject or supporting area ........ 15 credits

## Sophomore year

Art 370, Music 114................................ 10 credits
Biology 205; Mathematics 200 .................... 10 credits
Education 322 ...................................... 5 credits
Philosophy core options .......................... 10 credits
Theology core options.............................. 10 credits
Junior year
Education 328, 329 ................................ 10 credits
Physical Education ................................ 5 credits
Education 336 and $340 \ldots \ldots \ldots . . . . . . . . . . . . . . . . . . . . . . . .$.
Teaching subject and electives ................ 22 credits

## Senior year

Student teaching ( $1 / 2$ day for a year) ......... 18 credits

One of Ed 374, Hs 341, or Sph $320 \ldots \ldots \ldots .5$ credits
Teaching subjects.................................... 10 credits
Total . . . . $190 \overline{\text { credits }}$

## Typical Program

Special Education: Teaching Mentally Retarded Freshman year
English core (include American Literature) .... 10 credits
History core (include U.S. History) ............ 10 credits
Philosophy core option............................. 5 credits
Social Science core option ......................... 5 credits
Teaching subject or supporting area ......... 15 credits

## Sophomore year

Art 370, Music 114
.10 credits
Biology 205; Mathematics $200 \ldots \ldots \ldots \ldots . . . . . . . . . . .$.
Education 322 .................................... 5 credits
Philosophy core options ............................. 10 credits
Theology core options........................... 10 credits

## Junior year



## Special Non-Degree Programs

A number of programs may be taken in addition to or separately from degree requirements:

For bachelor's degree holders without teacher training: (at least 30 hours must be completed at Seattle University in these programs to receive our recommendation.)
a) Elementary teaching provisional certification,
b) Secondary teaching provisional certification,
c) Montessori teaching certification.

For bachelor's or master's degree holders with teacher certification or its equivalent:
a) Standard certification (fifth-year); may be either a non-degree program or combined with a master's degree.
b) Provisional principal's credential.
c) Standard principal's credential.
d) School counselor's certification.

See Graduate Bulletin for further details.



## Education Courses

Ed 101 Reading and Study Skills 1
Ed 102 Reading and Study Skills 2
Ed 103 Individual Writing Skills
1-5 credits
1-5 credits

Ed 200 Foundations of American Education 5 credits Foundation study of the philosophy, sociology and history of public, private and Catholic education in the United States; field experience to support classroom theory and laboratory work. Prerequisite: Ed 322; corequisite: Ed 325. (fall, winter)

Ed 291 Special Topics
1-5 credits
Special Topics
1-5 credits
Ed 293 Special Topics
1-5 credits
Ed 322 Psychology of Development
5 credits Developmental changes in the normal human being with emphasis on application to the school age years. Includes observations in the field. (fall, winter, spring)

Ed 325 Psychology of Learning
5 credits
Study of human learning in the classroom; theories of learning; organization and retention of knowledge; statistical measuring and evaluation of mental processes; factors in the economy of learning. Two to four weeks field experience. Prerequisite: Ed 322; corequisite: Ed 200. (fall, winter)

Ed 328 Montessori Orientation
5 credits Basic philosophy, principles and procedures of environmental learning within a "prepared environment." Perceptual-motor education as utilized by everyday living and learning experiences of the young child. (fall)

## Ed 329 Sensorial Education

5 credits Experience with the education of the senses in isolation. Also a study of the acquisition of practical skills within the child through his absorptive and imitative tendencies which lead gradually to abstraction. (fall)

Ed 330 General Methods, Media and Materials 5 credits Application of principles of learning and development to preparing, organizing and presenting learning units. Includes field experience. Prerequisites: Ed 200, 325; corequisites: Ed 340 and 336 or 337. (fall, winter, spring)
Ed 335 Early Childhood - Kindergarten
3 credits Principles, organization and methods of teaching. (summer)

Ed 336 Fundamentals of Reading Instruction Elementary

5 credits
Nature of the reading process, sequence of skills K6, recommended practices, materials, methods of diagnosis and evaluation. Includes field experience. Prerequisites: Ed 322, 325; corequisite: Ed 330. (fall, winter, spring)

Ed 337 Fundamentals of Reading Instruction Secondary 5 credits Development of reading and study skills; reading in content areas; methods of diagnosis and evaluation and study and special reading programs. Includes field experience. Prerequisites: Ed 322, 325; corequisite: Ed 330. (fall, winter, spring)

Ed 340 Fundamentals of Mathematics Instruction Elementary 5 credits Study of number systems including basic operations and properties of numbers; principles of teaching these concepts in kindergarten through grade 6; application in a field experience. Prerequisite: Mt 200. (fall, winter, spring)

Ed 342 Pacific Science Center Internship 3 credits Laboratory experience working with a teaching team in mathematics or science, grades 2-8. Prerequisites: Ed 340 and selective interview by Science Center staff prior to quarter.

Ed 372 Teaching Geography and Social Studies 5 credits Survey of modes, methods, media and materials for instruction in a Social Studies program with basic concepts from geography as the core.

Ed 373 Story Telling - Primary
3 credits Selection and interpretation of kindergarten-primary grade literature. For Kindergarten-primary grade teachers and elementary school librarians.

Ed 374 Literature for Children
5 credits
Selection, introduction and student use of literature for preschool, kindergarten, primary and intermediate grades. (winter)

Ed 375 Literature for Early Childhood 3 credits Survey of the present field of literature for early childhood and primary education. (summer)

Ed 376 Literature for Youth 3 credits Survey of junior books and an analysis of adult books suitable for intermediate grade children and early adolescence. (summer)

Ed 378
Literature for Later Childhood
3 credits Survey of literature for children in grades 4-8.

Ed 391
Special Topics
1-5 credits
Ed 392 Special Topics
1-5 credits
Ed 393

Ed 401 Workshop in Elementary School Methods (summer)

3 credits
Ed 420 Teaching Elementary School Subjects 5 credits General methods of teaching in specific subjects, areas and levels of the elementary school to include the total curriculum. Normally taken concurrently with student teaching. Prerequisite: Ed 330. (fall, winter, spring)

Ed 424 Introduction to Learning Disabilities 3 credits History and current practices in diagnosis and remediation of learning disabilities.

Ed 425 Psychology of the Exceptional Child 3 credits Study of the atypical child who deviates from the normal to well above or below the average; tests for evaluation; consideration of remedial techniques. Prerequisite: Ed 322 or permission of instructor.

Ed 426 Special Education - Teaching Severely Retarded Children 3 credits Materials and techniques for educating the severely retarded child.

Ed 427 Special Education-Teaching Moderately Retarded Children 3 credits Materials and techniques for educating the moderately retarded child.

Ed 428 Special Education - Language Development 3 credits An introduction to critical features of the developmental processes of language both receptive and expressive. Content would be slanted toward the teaching of language to retarded children, diagnosis, curriculum and method.

Ed 430 Teaching Secondary School Subjects 5 credits General methods of teaching in specific subjects, areas and levels of the secondary school. Prerequisite: Ed 330; corequisite: Ed 445.

Ed 434 Montessori Language Arts
Methods \& Materials
5 credits
Development of language and communication skills as the basis of a language program, readiness for reading and writing skills, materials and methods for teaching language arts. Supervised practice. (winter)

Ed 435 Montessori Mathematics
Methods \& Materials
5 credits
Readiness for learning mathematical concepts, orderly progression of skills within the materials, introduction to number and its properties, basic operations leading to abstraction. Supervised practice. (winter)

Ed 437 Comparative and Observational Study of Early Education 5 credits Current trends of Open Classroom structures will be compared and related to the Montessori approach to learning. British Infant and Integrated Day, Free School, Individualized systems. Observation - 30 clock hours. (spring)

Ed 438 Laboratory Experience - Elementary 1-6 credits (fall, winter, spring)

Ed 439 Laboratory Experience - Secondary 1-6 credits (fall, winter, spring)


Ed 440 Student Teaching - Elementary 12 credits One quarter of full-day supervised teaching experience on the elementary school level. Prerequisite: Ed 330 and permission of the Dean. (fall, winter, spring)

Ed 441 Montessori Student Teaching 18 credits
Supervised teaching within a Montessori preschool. Student teaching is done for a half day (daily) session in an approved or credentialed school under an experienced Montessori teacher. ( 8 credits in fall; 5 credits in other quarters.)

Ed 442 Cosmic Environmental Learning
5 credits
Study of the world, past and present, its flora, fauna and inhabitants, emerging through time lines and other concrete materials made by that student in social studies, geography and cultural history. (spring)

Ed 445 Student Teaching - Secondary 12 credits One quarter of full-day supervised teaching experience on the secondary school level. Prerequisite: Ed 330 and permission of the Dean. (fall, winter, spring)

Ed 446


Health and Physical Education
Joseph T. Page, Ph.D., Chairman

## Objectives

The Health and Physical Education department has as its prime objectives the physical and neuromuscular skill development and the recreational welfare of all students. The department fulfills two major functions at Seattle University. These are:

The professional preparation of young men and women as teachers of health and physical education.
The sponsorship of a broad range of physical education instructional service programs designed to meet the physical activity needs of college men and women.

## Degrees Offered

Bachelor of Arts in Education
Master of Education - See Graduate Bulletin
Master of Arts in Education - See Graduate Bulletin

## General Degree Requirements

Students in the fields of health and physical education must satisfy University core curriculum requirements as given on page 18 of this bulletin and those of the School of Education.

All students planning to receive a teaching certificate must be accepted by the School of Education but such acceptance does not imply that the student will be permitted to pursue this teaching field. Students may indicate their interest in this area at the time of application for admission to the School of Education. During the succeeding months their aptitude and promise for the field of physical education will be evaluated.

Counseling, designed to assist the student to develop in ways requisite for successful teaching and leadership in the field, will be offered. Candidates must demonstrate superior physical skills, intellectual competency, and desirable personality and character traits before they will be accepted.

Candidates for teaching certificates will complete the required courses in teacher education. Upon graduation, certified teachers will have, in addition to the general and professional education requirements, a total major area of 55 credits or for the minor, 25 credits in health and physical education.

## Departmental Requirements

Bachelor of Arts in Education (Health and Physical Education) - 55 credits in health and physical education courses which must include: PE 200, 210, 220, 230, 350, 460; 15 credits in selected major activities and 12 credits of approved area electives.
Undergraduate Teaching Minor (Health and Physical Education) - 25 credits which must include PE 220, 230, 350, 460 and 7 credits in approved activities.
Minor in Athletic Coaching - 27 credits which must include PE 210, PE 220, PE 320, 5 credits of approved Major Activities and 8 credits selected from coaching theory classes which must include PE 408 or PE 409. This sequence is recommended for teachers of any subject matter with an interest in assuming coaching responsibilities in elementary or secondary schools.
Master's Degree in Curriculum and Instruction Emphasis in Physical Education - Graduate study is structured within the area of Curriculum and Instruction. A total of 18 credits ( 6 courses) out of 45 required is devoted to the Physical Education course area. For details see Graduate Bulletin.

## Bachelor of Arts in Education <br> Freshman year <br> English 100 and core option ................... 10 credits <br> History core option ................................ 10 credits <br> Major, minor or electives ......................... 21 credits <br> Mathematics/Science core option ............ 5 credits <br> Social Science core option .................... 5 credits

## Sophomore year

Education............................................... 10 credits
Major, minor or electives ......................... 20 credits
Mathematics/Science core option ............. 5 credits
Philosophy 110, $220 . . . . . . . . . . . . . . . . . . . . . . . . . . . .$.

## Junior year

Education......................................................................... 5 credits
Major, minor or electives
Philosophy core option.....................

## Senior year

Education 445 ..................................... 15 credits
Major, minor or electives ............................ 20 credits
Theology core options........................... 10 credits
190 credits

## Health and Physical Education Courses

Basic instructional courses in activities indicated are designed to meet the physical and recreational needs of college men and women.

| PE 120 | Badminton | 1 credit |
| :---: | :---: | :---: |
| PE 121 | Bowling | 1 credit |
| PE 122 | Golf | 1 credit |
| PE 123 | Gymnastics | 1 credit |
| PE 124 | Swimming | 1 credit |
| PE 125 | Tennis | 1 credit |
| PE 126 | Volleyball | 1 credit |
| PE 129 | Skiing | 1 credit |
| PE 130 | Paddle Sports | 1 credit |
| PE 131 | Archery | 1 credit |
| PE 132 | Handball-Squash | 1 credit |
| PE 135 | Fencing | 1 credit |
| PE 138 | Conditioning | 1 credit |
| PE 139 | Basketball-Men | 1 credit |
| PE 140 | Soccer-Men | 1 credit |
| PE 142 | Developmental Physical EducationMen | 1 credit |
| PE 143 | Modern Dance | 1 credit |
| PE 146 | Scúba Diving | 1 credit |
| PE 147 | Folk-Square Dance | 1 credit |
| PE 148 | Self-Defense-Men and Women | 1 credit |
| PE 149 | Synchronized Swimming | 1 credit |
| PE 152 | Golf-Intermediate and Advanced | 1 credit |
| PE 153 | Gymnastics - Intermediate and Advanced | 1 credit |
| PE 154 | Swimming - Intermediate and Advanced | 1 credit |
| PE 155 | Fencing - Intermediate and Advanced | 1 credit |
| PE 200 | Personal and Community Health Comprehensive course covering all ba health education; personal health proble health programs; community health problems. (spring) | 5 credits aspects of s; school cies and |

## PE 210 Anatomy and Kinesiology

5 credits Foundation science course combining structure with function. Emphasis on muscular, circulatory and cardio-respiratory bodily systems. (spring)

PE 220 Physiology of Exercise
5 credits
Study of physical changes as the result of muscular activity; the muscular, circulatory and cardiorespiratory systems. Prerequisite: BI 200. (winter)

PE 230 Instructor-Standard First Aid and
Personal Safety
3 credits
Skills, knowledge, teaching methods. American Red Cross standards and certification. (winter)

Major Activities: Concentrated study of skills, techniques, and teaching methodologies pertinent to elementary and secondary physical education activities.

| PE 250 | Major Activities I <br> Badminton, Volleyball, Golf and Tennis | $\mathbf{5}$ credits |
| :--- | :--- | ---: |
| PE 251 | Major Activities II <br> Movement Exploration, Gymnastics | 5 credits |
| PE 252 | Major Activities III | 5 credits |

Track, Soccer, Football and Speedball
PE 253 Major Activities IV 5 credits
Wrestling and Weight Training, Baseball, Basketball

PE 254 Major Activities V 5 credits
Folk-Square Dancing, Bowling and Archery
PE 255 Major Activities VI 5 credits
Swimming, Life Saving, WSI
PE 256 Major Activities VII 5 credits
Basketball - Women, Track and Field
PE 257 Major Activities VIII 5 credits
Recreational Games
PE 258 Major Activities IX 5 credits
Field Sports - Women
PE 291 Special Topics 1-5 credits
PE 292 Special Topics $1-5$ credits
PE 293 Special Topics $1-5$ credits
PE 320 Care and Prevention of Athletic Injuries

4 credits
Common athletic injuries and problems with emphasis on prevention. Includes pre and post injury care, such as taping and conditioning. (spring)

PE 330 Test and Measurements in Physical Education

3 credits Utilization of available testing procedures in physical education; evaluation of student achievement in terms of objectives. Includes statistical analysis of data. (winter)

PE 350 Principles and Practices in Physical Education

5 credits
Concentrated analysis and study of the foundational principles of physical education. Application of these principles to problems in curriculum, methodology, administration and evaluation. (fall)

PE 352 Orientation to Health and Physical Education - Elementary 3 credits Curriculum purposes, procedures and techniques, includes legal liability, evaluation. Required of all elementary education majors. (fall, winter, spring, summer)


PE 353 Orientation to Health and Physical Education - Secondary

3 credits
Objectives, content services and relationship to the total school program. Required of secondary education majors. (fall, winter, spring)

PE 398 Modern Dance
2 credits
An activity course open to all students. (winter)

PE 408 Officiating of Women's Sports
3 credits
Philosophy and techniques applicable to girls' and women's sports in schools and colleges. (fall)

PE 409 Psychology of Coaching
5 credits Principles and practices applicable to the coaching of sports on any level of learning. Empirical theories resulting from observations of coaches in the handling of youth who are qualifying for school teams. (fall, summer) their application in the education of the exceptional child. (spring)

PE 420 Elementary Physical Education
Workshop
5 credits
Improving the classroom teacher's background in physical education through basic movement skills and rhythmic activities. (summer)

PE 460 Organization and Administration of Physical Education

5 credits Summary professional course in physical education; includes service, intramural and inter-scholastic programs; stresses curriculum, scheduling, facilities. Prerequisites: Upper division standing and departmental approval. (fall)

Coaching Courses: Concentrated study of the philosophy, practice, organization, theory and techniques of coaching interscholastic athletics.

| PE 470 | Football Coaching | 2 credits |
| :--- | :--- | ---: |
| PE 471 | Basketball Coaching | 2 credits |
| PE 472 | Baseball Coaching | 2 credits |
| PE 473 | Track and Field Coaching | 2 credits |
| PE 474 | Gymnastics Coaching | 2 credits |
| PE 475 | Wrestling Coaching | 2 credits |
| PE 476 | Swimming Coaching | 2 credits |
| PE 477 | Golf Coaching | 1 credit |
| PE 478 | Tennis Coaching | 1 credit |
|  |  |  |
|  |  |  |
| PE 480 | Current lssues in Physical Education | 3 credits |
|  | Trends and factors influencing physical education |  |
|  | and other movement-oriented programs; im- |  |
| plications for meeting student and community needs |  |  |
| in implementing relevant programs in schools and |  |  |
|  | colleges. |  |

PE 482 Historical Foundations of Physical Education

3 credits
Traces the historical development of physical education and athletics from the early societies to modern culture. Emphasis on current applications.

PE 484 The Drug Scene
3 credits A survey of the misuse and abuse of licit and illicit drugs. Scientific information for concerned school personnel presented by professional people working with drug problems and users.

PE 486 Women in Sport
3 credits A historical, sociological and biophysical approach to women in sport with emphasis on concepts, impacts and implications related to American and World culture, past, present, and future.

PE 488 Seminar: Sports and American Culture 3 credits Reviews development and purposes of intercollegiate, interscholastic and professional sports. Focuses on issues, problems, opportunities and challenges, particularly for minorities.

## NURSING

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## School of Nursing

Eileen M. Ridgway, Ph.D., Dean

## Objectives

The aim of Seattle University's School of Nursing is to provide the educational preparation for the professional nurse who appreciates both the heritage and responsibilities in nursing and her role in the community; is able to apply to patient care the basic concepts and principles from the humanities, the natural and social sciences within the framework of the University philosophy and principles, and is able to assume nursing responsibility for the promotion, maintenance and restoration of health.

## Organization

The School of Nursing is formally organized within the University structure and is under the direction of its own dean. The School is a distinct and independent degree recommending unit, offering an undergraduate program in nursing.

## Admission Requirements

All entering freshmen, transfer students from accredited institutions of higher learning and registered nurses who wish to complete requirements for the Bachelor of Science degree in Nursing must meet University entrance requirements described in the admissions section of this bulletin. Chemistry is the required laboratory science for entering freshmen. Additional requirements for registered nurses are:

Graduation from an approved school of professional nursing.
Current nursing licensure in the State of Washington
Report of complete physical examination within six months before entrance

Recommendation from the Director of the Nursing Program and from previous employer

## Degree Offered

Bachelor of Science in Nursing

## Curriculum

The baccalaureate degree program is designed for high school graduates, transfer students and registered nurses who wish to complete requirements for the degree. The program is planned to provide the student with a foundation in the liberal arts and nursing, to stimulate students to assume responsibility for selfdirected learning and professional development, and to provide a basis for graduate education and research.

The professional portion of the curriculum includes study of man with a variety of health problems requiring different modalities of care with a focus on the individual, the family and the community.

Clinical experience is provided through cooperating teaching units which include Children's Orthopedic Hospital and Medical center; Group Health Cooperative Hospital and Clinics, Marycrest Villa, the Mason Clinic, Northwest Hospital, Overlake Memorial Hospital, Providence Hospital, Seattle King County Health Department, Seattle King County Visiting Nurse Service, United States Public Health Service Hospital, Swedish Hospital Medical Center, Veterans Administration Hospital, and selected health agencies.

## General Program Requirements

Students in the School of Nursing must satisfy core curriculum requirements of the University given on page 18 of this bulletin. For additional required sequences see the program of study which follows.

A cumulative academic grade point average of 2.50 or above from high school or another college or university is required for admission into the School of Nursing.

A student in the School of Nursing must have achieved a cumulative grade point average of 2.50 or above by the end of the sophomore year, and a grade of C or above in the Nursing courses, for approval to proceed into the upper division nursing courses. The academic and clinical performances of each nursing student are evaluated at the end of each year to determine progression in the program. Specific requirements for progression may be obtained from faculty adviser.

Students are responsible for the expenses of the annual physical examination and health assessment, uniforms, and transportation costs to, from and while in cooperating teaching units. A current driver's license and car covered by insurance as prescribed by state law are recommended for all clinical courses. Professional liability insurance is required for clinical nursing courses. It is strongly recommended that students have adequate health insurance coverage.

## Bachelor of Science in Nursing

Freshman year
Chemistry 101, 102 .............................. 10 credits
English 100 and core option ................... 10 credits
History core option ................................. 10 credits
Philosophy 110 .................................... 5 credits
Social Science core options................... 10 credits
Sophomore year
Biology 200, 210, 220 ............................. 15 credits
Nursing 205, 206, $300 \ldots \ldots \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . . .$.
Philosophy 220 ................................... 5 credits
Psychology or Education 322 ................... 5 credits
Theology core option ................................. 5 credits

## Junior year

Nursing 312, 314, 316, 330, 332, 335, 337, 340, 341
.45 credits

## Senior year

Nursing or Education 408, 409, 432, 433 ... 25 credits
Philosophy core option........................ 5 credits
Theology core option ................................. 5 credits
Electives ............................................. 10 credits
Total . . . . 180 credits

## Nursing Courses

$\begin{array}{lll}\text { N } 205 & \text { Basic Nursing I } & 5 \text { credits } \\ \text { N } 206 & \text { Basic Nursing II } & 5 \text { credits }\end{array}$ Introduction to the scope of nursing practice and role of the nurse in a variety of settings. Utilizing the nursing process, man's health and needs as a consumer of health services are analyzed. Assessment and psychomotor skills to promote safety and comfort are demonstrated. Supervised practice in simulated laboratory settings; and in a variety of health care settings. Principles of pharmacology and drug therapy are integrated.

Study of the functional changes of the body which accompany illness and form the basis for nursing intervention.


Health Appraisal
5 credits
Demonstration and practice in the basic techniques and skills necessary to assess and describe a person's state of health. Draws from a growth and development framework to help understand physiological and behavioral assessment.

Mental Health Concepts
5 creaits
Concepts basic to assisting self and others to cope with reactions to the stress of illness; Organized around behavioral science principles which promote the nursing skills necessary for developing the inherent capabilities of the student and the patient.

Contemporary Nursing Issues
5 credits
Major legal, ethical and professional issues are studied in relation to concepts of power, authority, responsibility in present and emerging health care patterns. The nurse's role as a client advocate is examined.

> Medical-Surgical Nursing I 4 credits Medical-Surgical Nursing II

> 4 credits Nursing problems assocated with physiological dysfunctions at various ages; organized around the nursing care necessary to assist individuals to regain health or adapt to chronic illness.

N 335 Nursing Care of Children 6 credits Experiences are aranged in a variety of settings, selected to provide opportunities to apply concepts and principles from theory courses.

N 337 Nursing Care of Adults 6 credits Experiences are arranged in a variety of settings, selected to provide opportunities to apply concepts and principles from theory courses.

N 340 Maternal-Child Nursing: Family and Community

4 credits
N 341 Maternal-Child Nursing Practice: Family and Community 6 credits
Clinical practice is planned to promote application of concepts from N 340. Requires synthesis of earlier learning to help the family bring about resolution of health-related problems.

Community/Psychiatric Nursing 5 credits Focus is on utilization of behavioral science principles to promote mental health and provide nursing care for individuals and families experiencing emotional problems. Concepts of family and family systems are studied in a framework of growth and development.



N 409 Community/Psychiatric

## Nursing Practice

10 credits
Clinical practice is planned to promote the application of the concepts from N 408 in a manner that facilitates growth and constructive problem solving in client, family and student.

Advanced Nursing Seminar
2 credits
Focus is on the study of interrelated health-illness problems in a framework of nursing judgments and interventions necessary to provide care. Draws heavily on concepts and principles from previous courses in the care of children and adults.

Advanced Clinical Practice
8 credits Clinical practice is planned to provide care in complex situations, including care of the aged; management of pain; drug abuse; triage and rehabilitation.

## SCIENCE \& ENGINEERING

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## School of Science and Engineering

Gary A. Zimmerman, Ph.D., Dean

## Objectives

The programs of the School of Science and Engineering seek to combine a liberal education with preparation for a professional career or graduate school in one of the sciences, mathematics or engineering. More generalized programs are offered for those students who wish a strong scientific or engineering background as part of a liberal education.

## Accreditation

Northwest Association of Secondary and Higher Schools

## American Chemical Society

Engineering Council for Professional Development
American Medical Association
American Society of Clinical Pathologists
American Medical Record Assocation

## Organization

The School of Science and Engineering offers programs in Allied Health Technology, Biology, Chemistry, Clinical Chemistry, General Science, Health Information, Mathematics, Physics, and in Civil, Electrical and Mechanical Engineering. Students interested in other scientific, technical, and health-related careers, such as medicine or dentistry, may enroll for suitable pre-professional programs prior to transfer to the appropriate professional training center.

## Admission Requirements

Students entering the School must satisfy all entrance requirements for the University as outlined in the Admission section of this bulletin. In addition, some departments list further requirements for admission into certain major programs.

## Degrees Offered

Bachelor of Arts with a major in Biology, Chemistry, Mathematics or Physics
Bachelor of Science with a major in Biology, Mathematics or Physics

Bachelor of Science with a major in Biology, Cytotechnology, Mathematics, Medical Technology, Nuclear Physics, or Diagnostic Ultrasound Technology.

Bachelor of Science in Biology, Chemistry, Clinical Chemistry, General Science, Health Information, Mathematics, or Physics.

Bachelor of Engineering
Bachelor of Civil Engineering
Bachelor of Electrical Engineering
Bachelor of Mechanical Engineering

## Co-Operative Work Study Program

Students in good standing may elect to enter the cooperative work study program. Such students will take a reduced academic schedule each quarter, but will attend school eleven months a year (all regular quarters plus summer quarter). The University will assist such students in finding suitable paid industrial employment on an approximately half-time basis. The employment is selected for its educational value as well as financial remuneration.

Students who enter the program at the earliest possible point (summer after the freshman year) and follow it regularly will graduate at the same time as if they had not taken the program, but will have the equivalent of over one year of industrial experience upon graduation.

## General Program Requirements

Students seeking the Bachelor's degree in the School of Science and Engineering must complete 180 credits, including the University core requirements shown on page 18 of this bulletin. The history and social science core requirements have been modified for several of the more technical degrees, as described in the individual departmental sections of this bulletin. Students also must complete the specific departmental requirements for their particular degree.

## SCIENCE \& ENGINEERING-Allied Health Technology



Allied Health Technology<br>George D. Davis, M.S. Adviser

## Objectives

The Allied Health Technology program is designed to prepare students for professional careers as technologists in several medical laboratory disciplines or as laboratory assistants in biological research laboratories. Founded on a concentration in basic sciences, the program affords simultaneous opportunities for receiving a liberal arts education and a practical exposure to the medical laboratory environment. The Bachelor of Science degree is awarded, with a major in a specific allied health field. The student may concentrate studies in cytotechnology, medical technology, nuclear medicine technology, or diagnostic ultrasound technology.

## Degree Offered <br> Bachelor of Science

## General Program Requirements

Students in allied health technology must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy and theology and religious studies. Fifteen credits of history or social science are required.

## Departmental Requirements

Bachelor of Science - Cytotechnology major 45 credits of biology including BI 170, 171; 30 credits of chemistry, including Ch 114, 115, 116; Mt 134; and 45 credits of AH 310, 311, and 312. The cytotechnology internship may be taken after the sophomore year; registration as a cytotechnologist by the American Society for Clinical Pathology is possible upon completion of the internship and prior to completion of the degree.

Bachelor of Science - Medical Technology major - 57 credits of biology including BI 170, 171, 270, 271, 275, 280, 300 and $350 ; 30$ credits in chemistry, including Ch 114, 115, 219, 470, 471, and 472; 15 credits in physics; and AH 410, 415. Professional certification requires one year of internship in an approved laboratory training program after completion of this degree. Certification of this type is required by most employers of medical technologists.
Bachelor of Science - Nuclear Medicine Technology major - 45 credits of AH 440, 441, 442, 447, 448, $449,450,451,452,453,456,457,458,459 ; 35$ credits in physics and mathematics, including either Ph 107 or 202, Ph 375 or Ch 461, and Mt 135 ; and 25 credits each in biology and chemistry.
Bachelor of Science - Diagnostic Ultrasound Technology major - 40 credits in physics and mathematics, including either Ph 107 or 202, Mt 114, 134, Ph 290 , and Ph 350. 40 credits in biology, including BI 170, 171, 190, and 445, and 10 credits in ultrasound technology, AH 470 and 471 , are required. A one-year internship will be necessary for entry into professional employment as an ultrasound technologist. This is available as a postbaccalaureate curriculum of $\mathrm{AH} 475,476,477,478,480$, $481,482,486,487$, and 488 for 46 credits.

## Bachelor of Science in Allied Health Technology Cytotechnology Major

## Freshman year



## Junior year

Allied Health $310,311,312 \ldots \ldots \ldots \ldots \ldots \ldots . .45$ credits

## Senior year

Biology 300 and electives ...................... 15 credits
Chemistry 219, 235, $236 \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . . . . .$.
History/Social Science core option............ 5 credits
Philosophy core option........................... 5 credits
Theology core option ................................ 5 credits Total 180 credits

## Bachelor of Science in Allied Health Technology Medical Technology Major

## Freshman year

Biology 170, 171 and elective ................... 15 credits
English 100 and core option .................... 10 credits

History/Social Science core options .......... 10 credits

## Sophomore year



Philosophy 110, 220 ............................... 10 credits
Theology core option ........................... 5 credits

## Junior year

Biology 270, 271, $300 \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . . \ldots \ldots$ credits
Chemistry 219, 235, 236, $455 \ldots \ldots \ldots \ldots . . . . . . . . . . .$.
History/Social Science core option............. 5 credits
Theology core option ............................ 5 credits

## Senior year


Biology 274, 350 and elective .................. 12 credits
Chemistry $470,471,472,475,476 \ldots \ldots \ldots .18$ credits
Physics 105, 106, $107 \ldots \ldots \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . . . .$.
Total 180 credits

## Bachelor of Science in Allied Health Technology Nuclear Medical Technology Major

## Freshman year

Biology 170, 171 .................................. 10 credits
English 100............................................. 5 credits
Mathematics 112, $134,135 \ldots \ldots \ldots \ldots \ldots \ldots .15$ credits


## Sophomore year

Biology electives .................................. 10 credits

Philosophy 110, 220 and elective ................ 15 credits
Theology core option ............................ 5 credits

## Junior year

Biology elective ........................................ 5 credits
Chemistry 235, $236 \ldots \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . .10$ credits
English core option ...................................... 5 credits
History/Social Science core options ......... 15 credits
Physics 375 (or Ch 461 elective) ............... 5 credits
Theology core option........................... 5 credits

## Senior year

Allied Health $440,441,442 \ldots \ldots \ldots \ldots \ldots \ldots .9$ credits
Allied Health $447,448,449 \ldots \ldots \ldots \ldots \ldots . . . . . . . . . .$.
Allied Health $450,451,452,453 \ldots \ldots \ldots \ldots . .26$ credits
Allied Health $456,457,458,459 \ldots \ldots \ldots \ldots .7$ credits

## Bachelor of Science in Allied Health Technology Diagnostic Ultrasound Technology Major

## Freshman year

|  |
| :---: |
|  |  |

English 100 and core option ...................... 10 credits
History/Social Science core option............. 5 credits
Mathematics $112,114,116,134 \ldots \ldots \ldots \ldots .15$ credits

## Sophomore year

Chemistry $101,102 \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . . \ldots \ldots$ credits
Philosophy 110, 220, elective ..................... 15 credits
Physics 105, 106, $107 \ldots \ldots \ldots . . . . . . . . . . . . . . . . . . . . . . .15$ credits
Theology core option .............................. 5 credits

## Junior year

Biology 200, 210, 274, $300 \ldots \ldots \ldots \ldots \ldots . . . . . . . . . .$.

Health Information $425,426 \ldots \ldots \ldots \ldots \ldots . .6$ credits
Psychology $100 \ldots \ldots \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . . .$.
Electives ........................................... 9 credits

Senior year

Biology 445 ........................................... 5 credits
History/Social Science core ..................... 5 credits
Physics 290, 350 .................................... 8 credits
Theology core option .............................. 5 credits
Electives ............................................. 12 credits
Total 180 credits

## Allied Health Courses

| AH 310 | Cytotechnology Internship I | 5 credits |
| :--- | :--- | :--- |
| AH 311 | Cytotechnology Internship II | 5 credits |
| AH 312 | Cytotechnology Internship III | 5 credits |
|  |  |  |
| AH 410 | Clinical Hematology | 5 credits |

Automated and manual cell counting; cellular morphology; testing procedures related to red and white cell disorders. Prerequisite: permission.

AH 415 Fundamentals of Immunology 5 credits Properties and occurrence of antigens and haptens; nature of antibodies, blood groups, and autoimmune response; transfusions; tumor specialties.

AH 440 Basic Science of Nuclear Medicine I 5 credits AH 441 Basic Science of Nuclear Medicine II 2 credits AH 442 Basic Science of Nuclear Medicine III 2 credits 1. Review of basic principles of radioactive decay, interaction of radiation with matter, radiation detection. Rectilinear and Anger-type imaging devices; collimaters, resolution, sensitivity, contrast and modulation transfer function. II. Radiopharmaceuticals and radiopharmacy: drugs, drug distribution, radionuclide production, radiopharmaceutical dosimetry. Radiation biology. III. Tracer methodology and non-imaging uses of radionuclides: invivo function studies, in-vitro tests. Prerequisites for I, II, III: permission. (Offered in sequence: I-fall; IIwinter; Ill-spring.)

AH 446 Clinical Nuclear Medicine II Clinical Nuclear Medicine II

## 1 credit

 1 credit Applications of nuclear medicine procedur medical diagnosis. Relative role of in-vivo and invitro radionuclide studies in diagnostic process. Prerequisite: permission. (I-fall; Il-winter; III-spring.)AH 450 Applied Nuclear Medicine Technology I 5 credits AH 451 Applied Nuclear Medicine Technology II 7 credits AH 452 Applied Nuclear Medicine Technology III 7 credits AH 453 Applied Nuclear Medicine Technology IV 7 credits Practical experience in static organ imaging, dynamic radionuclide studies, in-vivo and in-vitro testing, hematologic studies, gastro-intestinal absorption, and radioassay procedures. Prerequisite: permission. (Offered in sequence: fall, winter, spring, summer.)

AH 456 Nuclear Medicine Seminar I
1 credit
AH 457 Nuclear Medicine Seminar II
AH 458 Nuclear Medicine Seminar III
AH 459 Nuclear Medicine Seminar IV 2 credits 2 credits 2 credits Student and faculty discussions of topics of professional interest; critical examination of current literature. Prerequisite: permission. (Offered in sequence: fall, winter, spring, summer.)

Diagnostic Ultrasound I
5 credits
AH 471 Diagnostic Ultrasound II 5 credits I. Review of acoustical physics; propagation of sound in human tissue; transducers; sound beams; modes of display. II. Basic echo systems; signal processing; applications to medical ultrasound; recording techniques; equipment calibration; Doppler systems. Prerequisites: I, Ph 350, permission; I for II. (I-winter, II-spring.)

AH 475
AH 476
AH 477

Basic Science of Ultrasound I
10 credits
Basic Science of Ultrasound II 2 credits Basic Science of Ultrasound III 2 credits Techniques of scanning; detailed cross sectional anatomy of heart, abdomen, brain, pregnant uterus, male and female pelvis; pathological distortions of anatomy; ultrasound in patient management; and medical-ethics in ultrasound. Prerequisites: BI 445 Ph 350, AH 481 and permission. (I-fall; Il-winter; IIIspring.)

AH 478 Clinical Orientation to Ultrasound 2 credits One day per week spent in hospital environment, learning patient care, practical medical ethics, observing ultrasound techniques and other diagnostic modalities. Prerequisite: permission.

AH 480

Clinical Experience in Ultrasound I 8 credits Clinical Experience in Ultrasound II 8 credits Clinical Experience in Ultrasound III 8 credits Five 8-hour days per week in approved ultrasound department of hospital. Prerequisite: permission. (Iwinter; II-spring; III-summer.)

AH 486
AH 487
AH 488

Ultrasound Seminar I Ultrasound Seminar II

2 credits

Seminars to review cases performed by students. Seattle based students will meet one day per week. Students based outside of Seattle will return to campus for two days per month for seminars and review of work as evaluated by clinical instructor. Prerequisite: permission. (I-winter; II-spring; III-summer.)


## Biology

Lewis E. Aldrich, Jr., Ph.D., Chairman

## Objectives

The programs in the department are designed to provide a liberal education and to prepare a student for graduate studies or for professional work in basic and applied biology.

## Degrees Offered

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Biology

## General Program Requirements

Students in biology must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy, and theology and religious studies. Core requirements for history and social science are as follows: for the Bachelor of Arts degree, 20 credits in history or social science, including Psychology 100; Bachelor of Science degree, 15 credits in history or social science; and Bachelor of Science in Biology degree, 15 credits in history or social science, including Psychology 100.

## Departmental Requirements

Bachelor of Arts - 50 credits of biology which must include BI 160, 170 and 171 with additional credits, which must include at least one credit of Seminar (three credits is the maximum that can be applied toward the degree), selected in consultation with the biology adviser; and 25 credits of chemistry. A year of physics and a course in calculus are recommended.
Bachelor of Science - 60 credits of biology which must include BI 160, 170, and 171 and at least one seminar credit (three credits is the maximum that can be applied toward the degree); 30 credits of mathematics or science electives.

Bachelor of Science in Biology - 60 credits of biology which must include BI 160, 170 and 171; at least 30 credits of biology courses at the 300-499 level; additional credits in consultation with the biology adviser, which must include at least one credit of Seminar (three credits is the maximum that can be applied toward the degree). Also required are 25 credits of chemistry; 15 credits of physics; reading knowledge of a modern language (equivalent to 106, as determined by examination); Psy 100 and Mt 112. Additional courses in biology, calculus, biochemistry and statistics are recommended. Students with 3 units of high school chemistry may elect to begin their chemistry sequence during the freshman year.

Teaching Major (School of Education) - Secondary: 45 credits in biology which must include BI 160, 170 and 171 and 30 credits of approved electives. Elementary: 25 credits in biology which must include BI 160, 170, 171, 370 and 275.
Undergraduate Minor - 30 credits of biology selected at direction of a biology adviser.

## Bachelor of Arts

## Freshman year

Biology 160, 170, $171 \ldots \ldots \ldots \ldots \ldots \ldots . . . . \ldots$ credits
English 100 and core option ................... 10 credits

Philosophy 110, 220 ................................. 10 credits
Psychology 100................................................... 5 credits
Electives ............................................. 5 credits

## Sophomore year

Biology electives $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . . \ldots \ldots$ credits
Chemistry $114,115,116 \ldots \ldots \ldots \ldots \ldots \ldots .15$ credits
History or Social Science core options ...... 10 credits
Philosophy core option.......................... 5 credits

## Junior year

Biology electives .................................. 10 credits
Chemistry 235, 236 10 credits
Social Science or History core option ........ 5 credits
Theology core options.............................. 10 credits
Electives ................................................. 10 credits
Senior year
Biology electives ................................. 10 credits
Electives ..... 35 credits


## Bachelor of Science

## Freshman year

Biology 160, 170, $171 \ldots \ldots \ldots \ldots \ldots \ldots . .15$ credits
English 100 and core option .................... 10 credits

Mathematics or science electives.............. 10 credits

## Sophomore year

Biology electives ............................. 15 credits
History or Social Science core options ....... 15 credits
Science or mathematics electives ............ 10 credits
Philosophy elective ................................... 5 credits

## Junior year

Biology electives ................................... 15 credits
Science or mathematics electives ............... 10 credits
Theology core options.............................. 10 credits
Electives ........................................................ 10 credits

## Senior year

Biology electives .............................. 15 credits
Electives .............................................. 30 credits
Total . . . . 180 credits
Bachelor of Science in Biology
Freshman year
Biology 160, 170, 171 ..... 15 credits
English 100 and core option ..... 10 credits
Mathematics 112 ..... 5 credits
Modern Language 105, 106 ..... 10 credits
Electives ..... 5 credits
Sophomore year
Biology electives15 credits
Chemistry 114, 115, 116 ..... 15 credits
History or Social Science core options ..... 10 credits
Psychology 100 5 credits
Junior year
Biology electives ..... 15 credits
Chemistry 235, 236 ..... 10 credits
Philosophy 110, 220 and core option ..... 15 credits
Theology core option ..... 5 credits
Senior year
Biology electives ..... 15 credits
Physics 105, 106, 107 ..... 15 credits
Theology core option ..... 5 credits
Electives ..... 10 credits

## Biology Courses

## Bl 101 Life Science

5 credits
Important areas of biology, beginning at the cellular level and culminating with a consideration of interactions and changes in natural populations. Five lecture hours per week. (spring)

BI 160 General Botany
5 credits
Structure, function, taxonomy and ecology of plants. Three lecture and four laboratory hours per week. (spring)

BI 170 General Zoology I
5 credits
Bl 171 General Zoology II
5 credits
A two quarter, sequential introduction to the animal kingdom. Examples of the phyla and major classes will be examined, with special attention to those types which best illustrate animal activities and relationships. Prerequisite: 170 for 171. (I-fall, IIwinter)

BI 180 Human Genetics
5 credits
The pattern of biological inheritance in man. Credits not applicable for biology major. (summer)

BI 190 Principles of Physical Anthropology 5 credits The evidence for primate evolution from the fossil record and from the morphological, physiological, genetic and behavioral variability of living primate forms. Relationships of human genetics to the evolution of modern populations is also presented. Two 3 hour lecture-laboratory sessions per week. (fall)

BI 200 Anatomy
5 credits
Structure of the human organism. Credits not applicable for biology major. Three lecture and four laboratory hours per week. (fall)



BI 205 Biophysical Principles 5 credits Lecture and laboratory method to show the interrelationships between biology, earth science and physical science as applied to the teaching of elementary level science. Credits not applicable for biology major. Three lecture and four laboratory hours per week. (fall, winter)

Physiology
5 credits
Functions of the human organism. Three lecture and four laboratory hours per week. Credits not applicable for biology major. Prerequisite: BI 200. (winter)

BI 220
Microbiology
5 credits
Introduction to medical microbiology. Three lecture and four laboratory hours per week. Credits not applicable for biology major. (spring)

Invertebrate Zoology I
5 credits
Invertebrate Zoology II
5 credits
I. Integrated study of the anatomy, morphology, taxonomy, natural history and ecology of invertebrate phyla from protozoa through the pseudocoelomate minor phyla. II. The coelomate phyla. Three lecture and four laboratory hours per week. Prerequisite: BI 171; 231 for 232. (I-fall, II-winter)

Structure, physiology, ecology and behavior of Hemichordata and Chordata. Three lecture and four laboratory hours per week. Prerequisite: BI 171. (fall, 1977)

Plant Morphology
5 credits
Study of plant form, structure and development. Three lecture and four laboratory hours per week. Prerequisite: BI 160 (spring, 1978)

BI 252 Taxonomy of Flowering Plants 5 credits Native flora as an introduction to taxonomy, involving the principal orders and families of flowerplants. Three lecture and four laboratory hours per week. Prerequisite: BI 160. (spring, 1979)

BI 270 Human Structure and Function I 5 credits
BI 271 Human Structure and Function II 5 credits I. Integrated study of microscopic and gross structure and the functions of the human organism; basic tissues, skeletal, muscular, nervous, circulatory and respiratory systems. II. Digestion and metabolism, the excretory, endocrine and reproductive systems. Introduction to regional anatomy. Prerequisites: BI 171, Ch 101, 102 for 270; 270 for 271. (I-fall, II-winter)

BI 274 Growth and Development
5 credits Physical and biological development of the whole individual from birth through old age, including neonatal adaptation, nutrition, development milestones in childhood, and the problem of senescence.

General Physiology
5 credits
Chemical and physical processes inherent in living organisms. Three lecture and four laboratory hours per week. Prerequisite: BI 171 or permission. (fall)

BI 280
Cell Physiology
5 credits
Fundamental life processes in plant and animal cells. Three lecture and four laboratory hours per week. Prerequisite: BI 275. (winter)

BI 291
BI 292
BI 293
Special Topics in Biology
1-5 credits $1-5$ credits Special Topics in Biology 1-5 credits Directed reading and/or lectures and/or laboratories on topics at the lower division level. Prerequisite: Permission of instructor. (fall, winter, spring)

BI 300
Microbiology
5 credits
Morphology, physiology and distribution of microorganisms. Three lecture and four laboratory hours per week. Prerequisite: Permission of instructor. (winter)

Modern Biology for Teachers
5 credits
Principles and concepts in modern biology structured to fit the classroom environment for teachers, grades 1 through 12. Lectures and demonstrations geared to the everyday problems of the classroom teacher. (summer)

BI 310 Comparative Vertebrate Embryology 5 credits Early development of the frog and chick with consideration of the early development of the human. Three lecture and four laboratory hours per week. Prerequisite: BI 171. (fall) toward questions for which solutions are currently being sought. Lectures, discussions and directed readings. (summer)


BI 321 Vertebrate Natural History 5 credits Ecology, behavior, life history and taxonomy of vertebrate animals, with emphasis on those in the Pacific Northwest. Three lecture and four laboratory hours per week. Prerequisite: BI 171. (spring)

BI 325 History of Biology 5 credits
Consideration of the development of biology from its philosophical origins to the present systems of scientific technologies. Human development, historical relationships of biology and man.

## BI 326 Comparative Anatomy of

 the Vertebrates I5 credits
BI 327 Comparative Anatomy of the Vertebrates II

5 credits
I. Comparative study of the skin, skeletal system and muscular systems of selected vertebrates. II. Comparative study of the digestive, respiratory, excretory and reproductive systems, circulatory and nervous systems and sense organs of selected vertebrates. Three lecture and four laboratory hours per week. Prerequisite: BI 171. (I-winter, II-spring)

BI 330 Comparative Vertebrate Histology 5 credits Study of fundamental body tissues. Three lecture and four laboratory hours per week. Prerequsite: Permission of instructor. (spring)

BI 340
Microtechnique
3 credits
Preparation of slides of animal tissue by the paraffin method; techniques of staining procedures. One lecture and four laboratory hours per week. Prerequisite: BI 330 or concurrently.

BI 350 Genetics
3 credits
Classical and molecular principles of the transfer of hereditary information. Three lecture hours per week. Prerequisite: One year of biology. (winter)

BI 352 Biophysical Chemistry

## 5 credits

Introduction to physical chemistry. Application of the principles of thermodynamics, kinetics, molecular structure and radioactivity, to topics of biological interest. Four lecture and three laboratory hours per week. Prerequisite: Ch 219 or permission of instructor.

5 credits
Parasitology
Study of parasitic protozoa, helminths and arthropods. Three lecture and four laboratory hours per week. Prerequisite: BI 171 ; Recommended: BI 232. (spring, 1979)

BI 365 Introduction to Oceanography 5 credits A nontechnical course designed to give a broad general background, and to demonstrate the relationship between this field and others. Prerequisite: Sophomore standing. (fall)

BI 370 Population Biology: Ecology 5 credits
The interrelationships of life forms with their physical and biotic environments. Five lectures per week. Prerequisite: One year of biology. (winter)

Field Ecology
2 credits
Field studies including techniques used in ecological research and analysis. One lecture per week and three weekend field trips. Prerequisite: One year of biology including botany, and permission of instructor. (spring, 1978)

Marine Biology
5 credits
Study of the marine environment and the animals and plants inhabiting it. Three lecture and four laboratory hours per week. Prerequisites: BI 232. (spring, 1978)

## Endocrinology

4 credits Structure and function of the glands of internal secretion of vertebrates. Prerequisite: Advanced standing in biology and Ch 236. (fall, 1977)


Comparative Neurology
4 credits
Study of the phylogenetic history of the central nervous systems. Prerequisite: BI 310 or 326.

Neurobiology
5 credits
Principal pathways of the vertebrate nervous system including a gross and microscopic study of the human brain and spinal cord. Three lecture and four laboratory hours per week. Prerequisites: BI 200, 210 or 270,271 or 310 or 326. Permission of instructor. (fall, 1978)

Bl 445 Human Cross Sectional Anatomy 5 credits Survey of cross sectional anatomy with emphasis on organs of body amenable to ultrasound diagnostic techniques. Prerequisites: BI 171, and BI 270 or equivalent.

Biochemistry
Composition and metabolism of carbohydrates, lipids, proteins, enzymes and body fluids. Four lecture and three laboratory hours per week. Prerequisite: Ch 236. (spring)

Limnology
5 credits
Study of freshwater systems and the plants and animals inhabiting them, with emphasis on the invertebrate animals. Three lecture and four laboratory hours per week. Prerequisite: BI 171; recommended: BI 470. (fall, 1978)

Population Biology: Evolution 5 credits Causes and mechanisms of genetic adaptation of organisms. Five lectures per week. Prerequisite: BI 350 or permission. (spring)

BI 470
Entomology
5 credits
Structure, function, classification, ecology, behavior and economic importance of insects. Three lecture and four laboratory hours per week. Prerequisite: BI 171. (fall, 1977)

BI 480
Nuclear Medical Technology Internship I

15 credits
BI 481
BI 482 Nuclear Medical Technology
Internship III
15 credits

Clinical practicum for nuclear medical 15 credits
Clinical practicum for nuclear medical technology. Prerequsite; Permission of the Medical Technology Program Director. (fall, winter, spring)

Bl 491 Special Topics in Biology $\mathbf{1 - 5}$ credits
BI 492 Special Topics in Biology $\mathbf{1 - 5}$ credits
BI 493 Special Topics in Biology $\quad \mathbf{1 - 5}$ credits
Directed reading and/or lectures and/or laboratories on topics at the advanced undergraduate level. Prerequisite: Permission of instructor. (fall, winter, spring)

BI 494
BI 495
Seminar
1 credit
Seminar 1 credit
Bl 496 Seminar 1 credit
Problems in modern biology. Prerequisite: Junior or senior standing. (fall, winter, spring)

1-5 credits
Research
1-5 credits
BI 498
BI 499
Research
1-5 credits Literature and laboratory investigation of a basic research problem. Preparation of a written report. Prerequisite: Permission of instructor. (fall, winter, spring)

## SCIENCE \& ENGINEERING-Chemistry



## Chemistry

David L. Thorsell, Ph.D., Chairman

## Objectives

Programs offered by the Chemistry department are designed to prepare the student for professional work in the various fields of basic and applied chemistry. The Bachelor of Science in Chemistry degree program is recommended to students who wish to prepare themselves for graduate studies in chemistry. By completion of 11 additional credits in chemistry, beyond the minimum requirements for this degree, the student may receive certification of the degree by the Committee on Professional Training of the American Chemical Society.

The Clinical Chemistry degree program is suited to those students interested in a career in the rapidly developing field of clinical chemistry. This degree may also provide adequate preparation for graduate studies in clinical chemistry, biochemistry, or (with additional biology) medicine or dentistry.

The Bachelor of Arts degree is recommended for those desiring a solid foundation in chemistry but with greater freedom of choice for elective courses from programs such as education, business, engineering or other fields within the University.

## Degrees Offered

Bachelor of Arts
Bachelor of Science in Chemistry
Bachelor of Science in Clinical Chemistry

## General Program Requirements

Students in chemistry must satisfy the core requirements of the University given on page 18 of this Bulletin for English, philosophy and theology and religious studies. Core requirements for history and social science are as follows: Bachelor of Arts degree, 10 credits in history and 10 credits in social science; Bachelor of Science in Chemistry degree, 10 credits in history or social science; and Bachelor of Science in Clinical Chemistry, 10 credits in history or social science.

## Departmental Requirements

Bachelor of Arts-45 credits of chemistry which must include Ch 114, 115, 116, 219, 235, 236 and either 352 or 361-364, plus electives from the following: Ch 237, 238, 291, 292, 293, 360, 362, 364, 415, $436,455,461,491,492,493,497,498$ and 499. Fifteen credits of mathematics in sequence including calculus. For students interested in biochemistry, the following courses are recommended: BI 170, 171, 275 and 300.

Bachelor of Science in Chemistry-60 credits in chemistry which must include Ch 114, 115, 116, 219, 235, 236, 237, 326, 360, 361, 362, 363, 364, one year of calculus (Mt 134, 135, 136), computer programming (Mt 114), and one year of calculusbased physics. A student is eligible for certification of the degree by the American Chemical Society if Ch 238 and 415 are taken and nine additional credits of advanced work from the following courses: Ch 436,461,497,498, and 499. This certification is recommended for students planning graduate work. The following courses are strongly recommended as electives. Mt 116, Ph 290, Mt 233 and Mt 234.

Bachelor of Science in Clinical Chemistry-65 credits in chemistry which must include Ch 114, 115, 116, $219,235,236,361,362,363,364,455,461,470$, $471,472,475,476,481,482,483 ; 18$ credits in mathematics which must include two quarters of calculus and Mt 114, one year of introductory physics and Ph 290 . Recommended electives: Ch 237, 238, 360; BI 280, 300, 330 and 350.

Teaching major (School of Education) - Secondary: 45 hours of chemistry are required which must include Ch 114, 115, 116, 219, 235, 236 and either 352 or 361-364. Additional courses in physics (Ph 105, 106, 107) a year of college mathematics and courses in biology are highly recommended.

## Bachelor of Arts

Freshman year
Chemistry $114,115,116 \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . . . .15$ credits
English 100 and core option .................... 10 credits

Electives ............................................... 15 credits
Sophomore year

Mathematics $112,134,135 \ldots \ldots \ldots \ldots \ldots . .15$ credits
Philosophy 220 and core option ................. 10 credits
Theology core option ........................... 5 credits

## Junior year

Chemistry 352 and elective .................... 10 credits
History core options ............................... 10 credits

Social Science core option .................... 5 credits
Theology core option................................ 5 credits

## Senior year

Chemistry elective ............................... 5 credits
Social Science core option ....................... 5 credits
Electives ............................................ 35 credits
Total . . . . 180 credits

## Bachelor of Science in Chemistry

## Freshman year

Chemistry 114, 115, 116 ....................... 15 credits
English 100 and core option ..................... 10 credits
Mathematics 134, 135, $136 \ldots \ldots \ldots \ldots \ldots \ldots .15$ credits
Physics 200 ............................................. 5 credits

## Sophomore year




Physics 201, 202 ..................................... 10 credits
Electives ........................................... 14 credits

## Junior year

Chemistry 219, 360, 361, 362, 363, $364 \ldots . .18$ credits
History or Social Science ......................... 5 credits
Philosophy 220 ......................................... 5 credits
Theology core options............................. 10 credits
Electives ................................................ 7 credits

## Senior year


Bachelor of Science in Clinical Chemistry Freshman year
Biology ..... 5 credits
Chemistry 114, 115, 116 ..... 15 credits
English 100 and core option ..... 10 credits
Mathematics 134, 135, 136 ..... 15 credits
Sophomore year
Chemistry 235, 236, 455 ..... 15 credits
Physics 105, 106, 107 ..... 15 credits
Philosophy 110, 220 ..... 0 credits
Mathematics 114 ..... 3 credits
Elective ..... 2 credits
Junior year
Biology 270, 271 ..... 10 credits
Chemistry $219,361,362,363,364$ ..... 15 credits
History or Social Science elective ..... 5 credits
Physics 290 ..... 5 credits
Theology core options 10 credits


## Senior year

Chemistry 461, 470, 471, 472, 475, 476, 481, 482, 483 20 credits
History or Social Science elective ............... 10 credits
Philosophy elective ............................. 5 credits
Electives ................................................... 10 credits
Total . . . . $\overline{180 \text { credits }}$

## Chemistry Courses

Ch 100 Science, Technology and the Quality of Life
Study of selected scientific information and the opportunities and responsibilities for its generation and application, selected facts, laws, principles and theories of chemistry and physics that relate to a general understanding of scientific activity; scientific information and technologies that demonstrate the need for public involvement in the conduct of science and technology. Five lectures per week; seminars, papers, individual or group projects. (fall, spring, summer)

Ch 101 Introductory General Chemistry 5 credits Survey of inorganic chemistry treating the basic principles and descriptive material relevant to the health sciences. Four lecture and three laboratory hours per week. (fall)

5 credits Survey of organic and biological chemistry treating the basic principles and descriptive material relevant to the health sciences. Four lecture and three laboratory hours per week. Prerequisite: Ch 101. (winter)

Ch 110 Fundamentals of Chemistry
5 credits
An introduction to Chemistry designed for students with little or no preparation in science. Also for students desiring a review of high school chemistry prior to enrolling in Ch 101 or Ch 114. (fall)

Ch 114 General Inorganic Chemistry I 5 credits
Ch 115 General Inorganic Chemistry II 5 credits
Ch 116 General Inorganic Chemistry III 5 credits I. Atomic structure, weight relationships, states of matter, solutions. II. Kinetics, chemical equilibrium, electrochemistry, hydrogen, oxygen, water and the nontransition metals. III. Transition metals, carbon compounds and an introduction to the principles of reactions in ionized systems. The laboratory covers elementary qualitative analysis. Four lecture and three laboratory hours per week. Prerequisites: High School chemistry or permission for 114; 114 for laboratory hours per week for 116 . Prerequisites: High School chemistry or permission for 114; 114 for 115; 115 for 116. (114, fall, winter; 115 , winter, spring; 116, spring)

Ch 219 Quantitative Analysis
5 credits
Theory, methods and techniques of gravimetric and volumetric procedures in quantitative analysis. Three lecture and six laboratory hours per week. Prerequisite: Ch 116. (fall)

Ch 235 Organic Chemistry I
5 credits
Structural theory; functional groups; nomenclature; structure, properties and reactions of monofunctional organic compounds; stereochemistry; thermodynamic and kinetic aspects of reactions of selected groups; organic reaction mechanisms; theory and practice of laboratory techniques. Four lecture and three laboratory hours per week. Prerequisite: Ch 115. (fall, summer)

Ch 236
Organic Chemistry II 5 credits Properties, reactions and applications of polyfunctional compounds with emphasis on those of biochemical interest-natural products, biopolymers, enzyme chemistry; introduction to organic synthesis; introduction to the literature; laboratory work in functional group reactions, synthesis and thermodynamic and kinetic investigations. Four lecture and three laboratory hours per week. Prerequisite: Ch 235. (winter, summer)


Ch 237 Organic Chemistry III
3 credits
Synthesis of organic compounds; synthetic polymers; advanced mechanistic and theoretical concepts; polynuclear aromatic compounds; ultraviolet, visible, infra-red and nuclear magnetic resonance spectra; laboratory work in problemoriented, literature-based investigations; practical applications of spectroscopy in laboratory work. Two lecture and three laboratory hours per week. Prerequisite: Ch 236. (spring)

Ch 238 Qualitative Organic Analysis
3 credits Methods of identification or organic compounds as simple and mixed unknowns; preparation of derivatives; discussion and use of modern spectroscopic methods. Six laboratory hours per week, plus discussion of principles. Prerequisite: Ch 236. (spring)
Ch 291
Ch 292
Ch 293
Special Topics
1-5 credits
Special Topics
$1-5$ credits
Special Topics 1-5 credits Directed reading and/or lectures at a lower division level. Prerequisite: Permission of instructor.

Ch 324 Analytical Chemistry I

## 3 credits

Analytical Chemistry II
5 credits
I. A laboratory course designed to give additional applications of the theory, prediction and control of reactions in ionized systems. Application of these principles to a variety of qualitative analysis problems. Two three-hour laboratory sessions per week. II. Principles and practice of modern methods of quantitative analysis including gravimetric procedures. Three lecture and two three-hour laboratory sessions per week. Prerequisite: Ch 116.

Ch 326 Instrumental Analysis
5 credits
Theory and techniques of instrumental methods representative of spectrophotometric electroanalytical and chromatographic techniques. Two four-hour laboratory periods including discussion of principles. Prerequisite: One year of physical chemistry or permission.

Ch 352 Biophysical Chemistry
5 credits
Introduction to physical chemistry. Application of the principles of thermodynamics, kinetics, molecular structure and radioactivity, to topics of biological interest. Four lecture and three laboratory hours per week. Prerequisite: Ch 219 or permission of instructor.

Ch 360
Ch 361
Physical Chemistry I
3 credits
Physical Chemistry II
3 credits
Physical Chemistry III
3 credits
I. Quantum chemistry, spectroscopy, photochemistry. II. Gases, thermodynamics, changes of state, solutions. III. Chemical equilibrium, electrochemistry, kinetic molecular theory, reaction kinetics. Three lectures per week. I may be taken either before or after II and III. Prerequisites: Ch 116, Mt 135 and one year of physics for 360 and $361 ; 361$ for 362 . (I-fall, II-winter, III-spring)

Ch 363
Ch 364
Physical Chemistry Laboratory I 2 credits Physical Chemistry Laboratory II 2 credits Quantitative measurements of physical chemical phenomena, detailed data analysis, evaluation. Four laboratory hours per week. Prerequisites: Ch 219 for 363; 363 for 364. Ch 361 is a pre- or co-requisite for 363 ; Ch 362 is a pre- or co-requisite for 364.


Ch 415 Advanced Inorganic Chemistry 3 credits Advanced topics in inorganic chemistry with particular attention to bonding, thermodynamics, spectral and magnetic properties of the transition metals and their compounds, the interesting and unusual chemistry and bonding of boron and its compounds, the electron bond theory of solids, and their compounds. Prerequisites: $\mathrm{Ch} 360,361$ or permission.

Ch 436 Advanced Organic Chemistry
3 credits
Spectrometric identification of organic compounds: mass spectrometry; nuclear magnetic resonance; infrared; ultraviolet and visible; physical organic treatment of factors influencing evaluation and significance of thermodynamic variables. Directed reading and/or lectures. Prerequisite: One year of physical chemistry or permission.

Ch 455 Biochemistry 5 credits Composition and metabolism of carbohydrates, lipids, proteins, enzymes and body fluids. Four lecture and three laboratory hours per week. Prerequisite: Ch 236 (spring)

Ch 460 Advanced Physical Chemistry
3 credits Quantum chemistry, vibrational and rotational energies, absorption and emission of radiation, molecular symmetry, group theory, electronic spectra. Prerequisite: One year of physical chemistry.

Ch 461 Radiochemistry
3 credits
Theory of radioactivity, use of radioisotopes in studying chemical reactions and structure. Two lecture and four laboratory hours per week. Prerequisite; One year of physical chemistry or permission. (fall)

| Ch 470 | Clinical Chemistry I | 3 credits |
| :--- | :--- | :--- |
| Ch 471 | Clinical Chemistry II | 3 credits |
| Ch 472 | Clinical Chemistry III | 3 credits |

Ch 472
I. Theory and techniques of spectrophotometry, atomic absorption spectroscopy, flame photometry, fluorimetry and infrared analysis; electrophoretic techniques and densitometry; specific ion electrodes; automated analysis in clinical laboratory use. II. Critical comparison of analytical methodologies for carbohydrates, lipids, electrolytes, enzymes, hemoglobins and porphyrins, with an emphasis on the biosynthesis, metabolism, analytical methods of importance, normal ranges, and pathological conditions leading to abnormalities. Statistics and normal values. III. Toxicology, steroids, catecholamines, gas chromatographic and radioimmunoassay techniques, renal and hepatic function assessment. Two lectures per week. Prerequisites: Ch 362,364 or permission. (Offered in sequence: fall, winter, spring)

Ch 475
Ch 476
Clinical Chemistry Laboratory I
1 credit Clinical Chemistry Laboratory II 1 credit Practical experience in instrumental techniques and analytical methodologies of importance to the clinical chemist, including colorimetry, atomic absorption, gas chromatography, infrared, enzymatic assays and statistical treatment of data. Three laboratory hours per week. Prerequisite: Simultaneous enrollment in Ch 470 or Ch 471. (Offered in sequence: fall, winter)

Practical experience in approved hospital clinical laboratory. Six laboratory hours per week. Prerequisite: Permission of instructor.

Ch 491
Ch 492
Ch 493
Special Topics
2-5 credits
Topics
2-5 credits
Special Topics $\quad \mathbf{2 - 5}$ credits Directed reading and/or lectures at an advanced level. Prerequisite: Permission of the instructor.

Ch 497
Ch 498
Ch 499
Undergraduate Research
2 credits Undergraduate Reseach Undergraduate Research 2 credits 2 credits Literature and laboratory investigation of a basic research problem. Six laboratory hours per week. Prerequisite! Permission of department chairman.



## Civil Engineering

Richard T. Schwaegler, Ph.D., Chairman

## Objectives

The principal objectives of the Civil Engineering department are to provide trained engineers to work in the various areas of the civil engineering profession and to provide a firm foundation for graduate study.

To accomplish these ends, analysis and design courses in the fields of hydraulic, structural, transportation and sanitary engineering are offered in addition to preparatory courses in sciences and basic mechanics. A broad base of theory is provided along with sufficient quantity of current practices of the profession.

## Degrees Offered

Bachelor of Civil Engineering
Bachelor of Engineering

## General Program Requirements

Students in Civil Engineering must satisfy the core curriculum requirements of the University as given on page 18 of this Bulletin for English, philosophy and theology and religious studies. Ten credits of humanities electives satisfy the core requirements in history and social science.

## Departmental Requirements

Bachelor of Civil Engineering - 65 credits in civil engineering which must include CE 210, 211, 321, $323,331,335,337,351,353,381,401,402,492$, 496, 497, and 498. Also required are Mt 134, 135, 136, 233, and 234; ME 105, 113, and 281; Ph 200, 201; and 10 credits of additional electives in engineering or science, as approved by an adviser. With approval, qualified students may substitute equivalent or more advanced courses for those listed.
Bachelor of Engineering - 55 credits in engineering, 25 credits in mathematics, and at least 10 credits in physics, chemistry, or biology. Not intended to be an entry-level degree into the engineering profession.

## Bachelor of Civil Engineering

## Freshman year

English 100 and core option ..... 10 credits
Mathematics 134, 135, 136 ..... 15 credits
Mechanical Engineering 105, 113 10 credits
Philosophy 110 ..... 5 credits
Physics 200 ..... 5 credits
Sophomore year
Chemistry 114 ..... 5 credits
Civil Engineering 210, 211
Civil Engineering 210, 211 ..... 10 credits ..... 10 credits
Humanities Electives ..... 5 credits
Mathematics 233, 234 ..... 10 credits
Mechanical Engineering 281 ..... 5 credits
Philosophy 220 ..... 5 credits
Physics 201 ..... 5 credits
Junior year
Civil Engineering 321, 323, 331, 335,$337,351,353,381$31 credits
Philosophy elective ..... 5 credits
Theology electives ..... 10 credits
Senior year
Civil Engineering 401, 402, 492, 496,497, 498 and electives24-34 credits
Engineering or Science electives ..... $0-10$ credits
Humanities elective ..... 5 credits
Total 180 credits

## Civil Engineering Courses

CE 200 Cooperative Work Study Assignment 0 credits Field experience in an approved job assignment in industry or government. The assignment will be selected for its value in advancing the professional education to the student. May be taken four times.

CE 210 Man and His Environment 5 credits Study of the relationship of man to his environment with particular emphasis on the role of technology in the deterioration of the environment and in its restoration. Prerequisite: One year laboratory science in high school or two quarters of science in college or permission. (winter)

CE 211 Engineering Measurements

## 5 credits

Engineering measurements as applied to civil engineering projects. Planning for surveys. Introduction to photogrammetry and extent of its use. U.S. Public Land and State Plane Coordinate Systems. Prerequisite; Sophomore standing. Four lecture and one laboratory period per week. (spring)

CE 291 Special Topics
CE 292 Special Topics
CE 293 Special Topics

## 1-5 credits 1-5 credits <br> 1-5 credits

CE 300 Cooperative Work Study Assignment 0 credits Field experience in an approved job assignment in industry or government. The assignment will be selected for its value in advancing the professional education of the student. May be taken four times.

CE 321 Strength of Materials I
5 credits
Introduction to the mechanics of solid deformable bodies covering the relationships that exist between the external forces acting on elastic bodies and the stresses and deformations produced. Members subjected to tension, compression, flexure and torsion are studied. Five lecture and one laboratory period per week. Prerequisite: ME 113, Ph 200. (fall)

CE 323 Strength of Materials II 5 credits
Continuation of the mechanics of solid deformable bodies. Additional beam topics, stability of columns, combined stresses and strains, fatigue and energy relationships are considered. Five lecture and one laboratory period per week. Prerequisite: CE 321. (winter)

CE 331 Fluid Mechanics
5 credits Introduction to fluid mechanics, including fluid properties, the continuity equation, stream functions and stream lines; Euler's equation for an ideal fluid, rotational and irrotational flow concepts; development and application of the Navier-Stokes equations, the energy and momentum equations; laminar and turbulent flow and an introduction to boundary layer theory, similarity parameters and dimensional analysis; vector and Cartesian tensor notation. Prerequisites: ME 281, Mt 136. (fall)

CE 335 Applied Hydraulics
3 credits
Weekly student projects in the field of incompressible flow; pump design, hydrographic studies, graphical analysis of overflow or spillway design, model studies, varying flow analysis, economic design of pipeline projects. Prerequisite: CE 331. (winter)

Fluids Laboratory
2 credits
Experimental calibration of various flow meters, loss coefficients, and pipe friction factors. Experimental verification of various principles of fluid mechanics. One lecture and one four-hour laboratory per week. Prerequisite: CE 331. (spring)

CE 351 Engineering Geology
3 credits
Elementary study of the material structure and internal condition of the earth and of the physical and chemical processes at work upon and within it. Three lecture hours per week. Prerequisite: Sophomore standing. (winter)

CE 353 Soil Mechanics and Foundations
5 credits Soil as a structural material; physical properties, bearing capacity and current theories of stress distribution of different types of soil; compaction and behavior under short and long duration loading. Four lecture and one laboratory session per week. Prerequisites: CE 323, 351. (spring)

CE 381 Elements of Water Supply 3 credits
History, current status, legal considerations and projected problems of water supply. Water requirements based on population, industrial, commercial and agricultural use. Development of surface and ground water supplies. Transportation and distribution of water. Prerequisite: CE 331. (spring)

## CE 400 Cooperative Work Study Assignment 0 credits

 Field experience in an approved job assignment in industry or government. The assignment will be selected for its value in advancing the professional education of the student. May be taken four times.
## CE 401 Contracts and Specifications

3 credits
Elements of estimating; types and elements of contracts; specifications for material and construction. (winter)

CE 402 Engineering Economy
3 credits Elements of immediate and long-term economy of design and maintenance; interest rates, present rates, present worth and prospective return on investment; depreciation and replacement studies. Introduction to critical path method of project scheduling. (spring)


CE 445 Structural Mechanics

## 5 credits

 Classical and matrix methods in structural mechanics. Basic structural theory in both classical and matrix notation. Development of basic matrix force (flexibility) and displacement (stiffness) methods of structural analysis. Prerequisite: CE 323. (fall)$\begin{array}{lll}\text { CE } 447 & \text { Structural Design I } & 5 \text { credits } \\ \text { CE } 449 & \text { Structural Design II } & 5 \text { credits }\end{array}$ I. Introduction to the design of wood, steel and concrete members and connections. Familiarization with various building codes governing structural design. II. Design of structural systems of buildings, including roofs, floors, walls, columns, and foundations. Basic design for earthquake forces and the fundamentals of prestressed concrete design. Four hours of lecture and one 3-hour laboratory per week. Prerequisites: CE 445 for 447 ; 447 for 449 . (I. winter, II. spring)

CE 471 Environmental Law I 3 credits
CE 472 Environmental Law II 3 credits
I. Detailed survey of Federal legislation and case history as it relates to land use and development in the State of Washington. II. State legislation and case history as it relates to land use and development in the State of Washington. Local, county, and municipal legislation.

CE 485 Sanitary Engineering I 5 credits
CE 486 Sanitary Engineering II
5 credits
I. Examination of water and waste. Physical treatment processes. Laboratory experiments in microbial, bacteriological and chemical examination of water and wastes. Chemical and biological treatment, sludge disposal, disinfection, reuse of water, comprehensive planning. Four lectures and one laboratory per week. II. Stream pollution and selfpurification. Analysis of industrial wastes. Four lectures per week plus selected field trips. Prerequisites: Ch 114 for $485 ; 485$ for 486 . (I. fall, II. spring)

CE 491 Special Topics
1-5 credits

CE 492 Transportation Systems
3 credits
Development of transportation systems and social and economic effects. Planning present and future systems. Methods of public and private financing. (fall)

CE 495 Advanced Studies
2-5 credits Independent study or research under the direction of a member of the faculty, to be carried out in one specific area of civil engineering.

CE 496 Seminar I 2 credits
CE 497 Seminar II 2 credits
CE 498 Seminar III
2 credits
Development of oral and written communication skills through preparation and presentation of a technical paper. Prerequisite: Senior standing (I. fall, II. winter, III. spring.)

CE 499 Thesis
1-5 credits Problem in analysis or design at the level of undergraduate research. Prerequisite: Senior standing.


## Electrical Engineering

Francis P. Wood, SJ, M.S., Chairman

## Objectives

Electrical engineering deals with the applications of electricity to the generation, transmission, distribution and utilization of electric power, to measurement, to control, to computation and to communication by wire and electromagnetic waves.

The specific objective of the department does not provide for undergraduate specialization in various fields but strives to provide a broad foundation based on mathematical and scientific principles that will prepare the graduate to take his/her place in any of the various fields of study.

The curriculum includes material in networks, electronics, radio, communication, and power apparatus and systems. Hence the student interested in electronics, in automatic control, or in any other specialty is given adequate scientific training in a well-balanced educational program.

## Degrees Offered <br> Bachelor of Electrical Engineering <br> Bachelor of Engineering

## General Program Requirements

Students in electrical engineering must satisfy the specific core curriculum requirements of the University as given on page 18 of this Bulletin for English, philosophy and theology and religious studies. Ten credits of humanities electives satisfy the core requirements in history and social science.


#### Abstract

Departmental Requirements Bachelor of Electrical Engineering - 65 credits in electrical engineering which must include EE 105, 301, 303, 311, 341, 351, 411, 421, 433, 435, 443, 446, 448, 449, 455, 461, and 485. Also required are Mt 134, 135, 136, 233, and 234; ME 105, 113, and either ME 281 or Ph 310 ; and $\mathrm{Ph} 200,201$, 202, 203, 330 and 361 . With approval, qualified students may substitute advanced courses in nuclear physics for electrical engineering courses. This degree is approved by the Engineers' Council for Professional Development. Bachelor of Engineering - 55 credits in engineering, 25 credits in mathematics, and at least 10 credits in physics, chemistry, or biology. Not intended to be an entry-level degree into the engineering profession.


## Bachelor of Electrical Engineering

## Freshman year



## Sophomore year

Mathematics 233, $234 \ldots \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . . . . . .10$ credits
Mechanical Engineering 281 or
Physics 310
5 credits

Philosophy 110, 220 and core option........ 15 credits
Physics 201, 202, 203 .......................... 15 credits
Junior year
Electrical Engineering 233, 301, 303,
$311,341,351 \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$

Theology core options............................... 10 credits
Humanities elective .............................. 5 credits

## Senior year

Electrical Engineering 411, 421, 433, 435,
$443,446,448,449,455,461,485$
and electives .................................. 40 credits
Humanities elective ............................. 5 credits
Total . . . . 180 credits

## Electrical Engineering Courses

EE 105 Digital Operations and Computation 5 credits Processing of information and data in digital forms. Number systems, logic variables and Boolean Algebra, registers, counting and arithmetic operations, organization of computers, storage and memory. Includes simple programming at machine language level and an introduction to FORTRAN programming. Five one-hour lectures per week. Important and useful for anyone in science or engineering areas. (winter)

EE 200 Cooperative Work Study Assignment 0 credits Field experience in an approved job assignment in industry or government. The assignment will be selected for its value in advancing the professional education of the student. May be taken four times.

EE 291
EE 292
EE 293
Special Topics
Special Topics
Special Topics

Cooperative Work Study Assignment
0 credits
Field experience in an approved job assignment in industry or government. The assignment, will be selected for its value in advancing the professional education of the student. May be taken four times.

## EE 301 Electrical Circuits I <br> 5 credits <br> 5 credits

Fundamental concepts and units; energy and power; Kirchoff's laws, nodal and mesh analysis; steadystate solutions; coupled circuits and transformers; Fourier series and integral; transient response and Laplace transformation; polyphase circuits. I. Four lectures and one two-hour quiz per week. II. Four lectures and one four-hour laboratory per week. Prerequisites: Ph 201 for 301, 301 for 303. (1-fall, IIwinter)

## Seminar

0 credits
Attendance required for junior year Electrical Engineering students. (winter)



EE 341 Semiconductor Circuits I
5 credits Linear equivalent circuit models of solid state and vacuum circuit elements. Elementary amplifiers; biasing techniques, thermal stability, s-plane frequency characteristics, frequency compensation, coupling and by-passing circuits. Cascaded amplifier circuits; gain-frequency characteristics and bandwidth control. Prerequisite: EE 303. (spring)

## EE 351 Distributed Systems

5 credits
Analysis of distributed systems by circuit and field methods; steady-state and transient behavior of lossless transmission systems; propagation or dissipative systems. Four lectures and one four-hour laboratory per week. Prerequisites: Ph 330, EE 303. (spring)

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EE 391 Special Topics
1-5 credits
EE 392 Special Topics \(\mathbf{1 - 5}\) credits
EE 393 Special Topics
1-5 credits
```

EE 400 Cooperative Work Study Assignment 0 credits Field experience in an approved job assignment in industry or government. The assignment will be selected for its value in advancing the professional education of the student. May be taken four times.

EE 411 Seminar
2 credits
Each student is required to prepare a technical paper and to present it orally to the class. Prerequisite: senior standing in electrical engineering. (winter)

EE 421 Linear Analysis I 3 credits
Laplace transform techniques; functions in the complex frequency place; analytic functions; the inversion integral; expansion of functions in series; inversion integral evaluation by residues; conformal field mapping. Application of frequency plane analysis to electronic networks; introduction to network synthesis. Prerequisite: EE 303 (fall)

EE 433 Introduction to Discrete Systems
5 credits
Linear, time invariant, discrete systems; finite moving average and recursive digital filters; Z-transform; discrete Fourier transform; fast Fourier transform. (fall)

EE 435 Electromechanics
5 credits
Electromechanical energy conversion principles; tranformers, rotating machines, electromechnical energy conversion devices such as electromagnets, loud speakers. Four lectures and one four-hour laboratory per week. Corequisite: EE 421. (fall)

EE 443 Semiconductor Circuits II 5 credits Linear power amplifiers; push-pull, complimentary symmetry and load coupling circuits. Feedback amplifiers; gain-frequency characteristics and frequency compensation. Class $A B, C$ and $C$ amplifiers and tuned amplifiers. Oscillators; various basic forms and their frequency and amplitude stability characteristics. Prerequisite: EE 341. (fall)

EE 446 Electrical Engineering Laboratory I 2 credits EE 448 Electrical Engineering Laboratory II 2 credits Laboratory problems in analysis and design for electronic communication and control for electrical engineering seniors. Fundamental application of semiconductor devices and integrated circuits to both analog and digital systems. One hour lecture and one four-hour laboratory per week. Prerequisite: EE 341. (I-fall, II-spring)

EE 449 Digital System Design
2 credits
Fundamentals of electronic components and integrated circuits as applied to digital information handling systems and computers; characteristics of logic types (TTL, MOS, CMOS, ITL, etc.) in small and medium scale integrated circuits; conversion between analog and digital signals and introducing computer architecture. Two lecture hours per week. Prerequisite: EE 105, 341. (fall)

EE 455 Microwave Devices and Applications 3 credits Microwave sources and amplifiers; tube and solidstate, guided waves and free-space propagation, microwave circuit components, fundamentals of antennas. Three one-hour lectures per week. Prerequisites: EE 351, Ph 330. (fall)

EE 461 Control Systems
5 credits Fundamentals of classical and modern system theory; analysis and design of closed-loop systems with emphasis on stability and transient response using Nyquist, Bode, s-plane and state-space techniques. Prerequisite: EE 321. (fall)

EE 485 Modulation and Noise
3 credits
Signal transmission through electrical networks; amplitude modulation; phase modulation; frequency modulation; periodic sampling and pulse modulation; characterization of noise; noise sources; effects of noise on electronic systems; comparative analysis of information transmission systems. Prerequisite: EE 321. (winter)

Special Topics
1-5 credits 1-5 credits


## General Science

Ernest P. Bertin, S.J., Ph.D., Program Director

## Objective

The objective of the program in general science is to offer the student a liberal education with sufficient background in science to enable the graduate to work in easy liaison with scientists and engineers in industry or government. Judicious use of elective hours permits the student to specialize in other technical areas or in business. Students expecting to transfer to a professional training program in an allied health field, such as dental hygiene, occupational therapy, or physical therapy, after several years of basic science background, may receive special counseling and guidance within the General Science program. This service also is available to students in premedical, predental, preveterinary, and prechiropractic studies.

## Degree Offered

Bachelor of Science in General Science

## General Program Requirements

Students in general science must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy and theology and religious studies. At least 15 credits in humanities or social science electives are required.

## Degree Requirements

This degree requires 90 credits chosen from the following fields: biology, chemistry, mathematics, physics, psychology and engineering. For this purpose all engineering courses are considered as being in one field. At least 30 credits must be in one of these fields, 20 credits in a second field, and 10 credits in mathematics. Two other fields must be represented by at least one course. At least 15 credits must be from 300 - or 400 -level courses


Health Information
Mary Alice Hanken, R.R.A., Chairman

## Objectives

The Health Information program is designed to prepare the student for a career in an administrative health care profession by providing a comprehensive four-year program of liberal arts and science. In the fourth year emphasis is on professional activities and interaction with the health care industry. Special attention is given to computerization of health information. Students who complete the program are eligible for registration with the American Medical Record Association.

## Degree Offered

Bachelor of Science in Health Information

## General Program Requirements

Degree candidates in health information must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy, and theology and religious studies. Additional core requirements are 15 credits in history or social science.

## Certificate Program

Students who already possess a baccalaureate degree in any field may be eligible for the Certificate in Health Information Services Program, as fifth year students. Prerequisites for admission to the certificate program are acceptable college credits in human anatomy and physiology (with laboratory), principles of digital computers, statistics, and management practices.

## Departmental Requirements

Bachelor of Science in Health Information - 50 credits in Health Information which must include HI 401 , $402,403,422,425,426,430,440,441,455,470$, 475 , and $495 ; 25$ credits of science or mathematics, excluding computer courses; and 10 credits of computer courses, excluding HI 475.
Students who have completed a program for medical technicians, approved by the American Medical Association, may be placed in appropriate advanced courses with waiver of specific HI course requirements.
Certificate in Health Information - 46 credits in Health Information, equivalent to HI 401, 402, 403, 422, $425,426,430,440,441,455,475$, and 495.

## Bachelor of Science in Health Information

Freshman Year
Biology or Chemistry elective 5 credits
English 100 and core option ..... 10 credits
History or social science electives ..... 15 credits
Mathematics ..... 5 credits
Philosophy 110 ..... 5 credits
Elective ..... 5 credits
Sophomore Year
Biology or Chemistry elective ................... 5 credits
Speech 200 or 201 ..... 5 credits
Health Information 430 ..... 5 credits
Mathematics 214 ..... 5 credits
Philosophy 220 ..... 5 credits
Theology and Religious Studies options ..... 10 credits
Electives ..... 10 credits
Junior Year
Biology 200, 210 ..... 10 credits
Business 380 ..... 5 credits
Business 310 or HI Computer elective ..... 5 credits
Health Information 401 ..... 5 credits
Philosophy core option ..... 5 credits
Psychology 201 or Sociology 201 ..... 5 credits
Electives ..... 10 credits
Senior Year
Health Information 402, 403, 422, 425, 426,$440,441,455,470$, and 49536 credits
Health Information electives ..... 4 credits
Elective ..... 5 credits
Total ..... 180 credits


## Health Information Services Courses

HI 401 Introduction to Health Records 5 credits Introduction to the development, present scope and future direction of health records and the health record profession. Initial development of the skills of record analysis and control, compilation of medical statistics, record retrieval and disease coding. Prerequisite: BI 200, 210 or permission of instructor. (fall, spring)

HI 402 Management of Health Information Systems I

5 credits
HI 403 Management of Health Information Systems II 5 credits
I. Coordination of record systems and information centers in health facilities. II. Use of standards designed by JCAH, AMA, DHEW, and other agencies to raise level of health care quality; effects of standards on health record administration. Prerequisites: HI 401 for I; I for II. (I-fall, winter; II-winter, spring)

Medical Terminology
3 credits
Prerequisite Bl 200, 210 or permission of instructor. (fall, spring)

HI 425 Medical Science I 3 credits
HI 426 Medical Science II 3 credits
I. The problem-oriented approach to nature and cause, treatment and management of patients covering circulatory, respiratory, hemic and lymphatic, musculoskeletal, integumentary, urogenital and female reproductive systems. II. Diseases of endocrine and nervous systems, special senses, psychobiologic units, treatment of disease including drugs, laboratory tests and anesthesia. Prerequisite BI 200, 210 or permission of instructor. (I. winter II. spring)

Health Care Delivery System
5 credits
Study of the organization, delivery and financing of health care in the United States. Interdisciplinary exploration of the relationships of personnel, facilities and organizations in the health field. (winter, spring)

Practicum
1-5 credits
Practicum
1-5 credits
Practicum is designed to help students develop themselves through utilizing opportunities to participate in current health information activities with professional medical record administrators and other professionals in the health field. Prerequisite to $\mathrm{HI} 440-\mathrm{HI}$ 401. (fall, winter, spring, summer)

HI 450 Development of Management

## Resources

Utilization of management methods and resources in the effective direction of a department, system or function with emphasis on budget, layout, work simplification, job analysis and equipment selection. Prerequisite HI 401. (fall, winter)

HI 455 Comprehensive Communication Skills $\mathbf{3}$ credits Study and development of skills needed to select and use communications media in effective leadership. Areas of particular study will include personnel selection and evaluation, educational and training programs for health personnel or related groups, skill in relating information to a wide range of individuals or groups. (winter, spring)

HI 470 Legal Concepts for Health Fields 3 credits Principles of law as applied to the health field, with particular reference to all phases of medical record practice. (fall, spring)

HI 475 Health Information Computer Systems 5 credits Data processing with stress on the important aspects of computer science and their relationship to problem solving in health information science.

## HI 491

## 2-5 credits

 2-5 credits2 credits
Organizational patterns in health facilities and their role in the community, career opportunities. (winter)

Problem Solving and Decision
Making-Seminar
2 credits
(winter, spring)
HI 497 Independent Study 1-6 credits Prerequisites: Senior standing; permission. (fall, winter, spring)



## Mathematics

Andre L. YandI, Ph.D., Chairman

## Objectives

The Mathematics Department offers training in three distinct programs. The first, leading to the Bachelor of Science in Mathematics, prepares the student for advanced study and professional work in mathematics. The others are more flexible programs which provide for work in a secondary field and lead to either the Bachelor of Arts or the Bachelor of Science degree.

## Degrees Offered

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Mathematics

## General Program Requirements

Students in mathematics must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy and theology and religious studies. Additional core requirements are as follows: for the Bachelor of Arts degree, 10 credits in history, 10 credits in social science and 15 credits in physical or life science, psychology or economics; Bachelor of Science degree, 15 credits in history or social science; and Bachelor of Science in Mathematics degree, 15 credits in history or social science. Either French or German may be taken to fulfill the language requirement. A minimum grade of $C$ is required in all mathematics courses applied toward the major. See programs of study for additional requirements.

## SCIENCE \& ENGINEERING-Mathematics

## Advanced Placement in Calculus

Students who have completed a college level course in calculus in high school and have taken the Advanced Placement test in calculus of the College Entrance Examination Board may petition the department for placement on the basis of their test results. Advanced placement and credit may be granted to students whose test scores are 3 or above. Advanced placement may also be obtained through departmental testing.

## Honors Work in Mathematics

For superior students the department offers honors work consisting of a year of independent study under the supervision of a senior faculty member. Normally the work will be done during the senior year at a level beyond that of the regular undergraduate courses and will culminate in the writing of a term paper or senior thesis. Students who wish to undertake this program will be encouraged to take Mt 315 or 381 in the sophomore year and a 400-level series in their junior year in order to have the background sufficient to conduct their independent study. The independent study is an addition to the regular course requirements for the Bachelor of Science in Mathematics degree. No special distinction will be made in the degree earned by students completing the program.

## Departmental Requirements

Bachelor of Arts - 50 credits in mathematics which must include Mt 134, 135, 136, 233, 234, 315 or 381,411 or 431 and 15 additional credits of approved upper division mathematics. General physics and the fine arts sequence are recommended.
Bachelor of Science - 60 credits of mathematics and 30 credits of physical science, psychology or economics.

Bachelor of Science in Mathematics - 70 credits in mathematics which must include Mt 134, 135, 136, 233, 234, 411, 412, 413, 431, 432, 433; 15 additional credits in upper division mathematics; and 15 credits of physics. In certain circumstances, with the approval of the program director, 15 credits of upper division work in a physical science may be substituted for 15 credits in mathematics. Students in this program must maintain a cumulative grade point average and a mathematics grade point average of 2.50 . The fine arts sequence is recommended.

Undergraduate Minor - 30 credits in mathematics which must include Mt 134, 135, 136 and 15 credits of approved electives beyond college algebra.

Teaching Major (School of Education) - 45 credits in mathematics which must include Mt 134, 135, $136,233,300,321$ or 322 and 15 credits of approved electives beyond college algebra (Mt 114 and 116 are included among approved electives).

## Bachelor of Arts

Freshman year
English 100 and core option .................. 10 credits
History core option .................................... 10 credits
Mathematics $134,135,136 \ldots \ldots \ldots \ldots \ldots \ldots . \ldots$ credits
Philosophy $110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~ 5$ credits
Social Science core option ..................... 5 credits
Sophomore year
Mathematics 233, 234 and elective ..... 15 credits
Philosophy 220 and core option ..... 10 credits
Physical or Biological Science, Psychology or Economics ..... 15 credits
Social Science core option ..... 5 credits
Junior year
French or German 105, 106 ..... 10 credits
Mathematics 315 or 381 and electives ..... 15 credits
Theology core options ..... 10 credits
Electives ..... 10 credits
Senior year
Mathematics 411 or 431 ..... 5 credits
Electives
Electives ..... 40 credits ..... 40 credits
Total 180 credits
Bachelor of Science
Freshman year
Mathematics ..... 15 credits
English 100 and core option ..... 10 credits
Philosophy 110 and 220 ..... 10 credits
Physical Science, Psychology or Economics. ..... 10 credits
Sophomore yearMathematics15 credits
History or Social Science core option ..... 15 credits
Physical Science, Psychology or
10 credits
Philosophy core option ..... 5 credits
Junior year
Mathematics 15 credits
Physical Science, Psychology or
Economics 10 credits
Theology core options ..... 10 credits
Electives ..... 10 credits
Senior year
Mathematics ..... 15 credits
Electives ..... 30 credits
Total 180 credits
Bachelor of Science in Mathematics
Freshman year
English 100 and core option 10 credits
History/Social Science core options ..... 15 credits
Mathematics 134, 135, 136 ..... credits
Philosophy 110 5 credits
Sophomore year
Mathematics 233,234 , and 315 or 381 ..... 15 credits
Philosophy 220 and core option ..... 10 credits
Physics 200 ..... 5 credits
Electives ..... 15 credits
Junior year
French or German 105, 106 ..... 10 credits
Mathematics 411, 412, 413 or 431, 432, 433Physics 201, 20210 credits
Theology core options ..... 10 credits
Senior year
Mathematics 431-432-433 or 411-412-413and electives25 credits
Electives ..... 20 credits


## Proper Sequence for Taking Courses

The normal sequence of elementary mathematics courses is Mt 101; Mt 112 or Mt 118; Mt 130 or Mt 134; Mt 135; Mt 136; Mt 233; and Mt 234. A student, who has received a C or better in any course of this sequence or its equivalent, cannot receive credit for a course which appears before it in the sequence. Mt 114 and Mt 116 may be taken at any time. A student may not receive credit for more than two courses among Mt 101, Mt 175, and Mt 200. A student may not receive credit for more than one course from each of the following pairs: Mt 114 and Mt 214; Mt 112 and Mt 118; Mt 130 and Mt 134.

## Mathematics Courses

Mt 101 Intermediate Algebra
5 credits
Introduction to logic and sets; laws of exponents; linear and quadratic equations; inequalities; systems of equations. Prerequisite: one year each of high school algebra and geometry. (fall, winter, spring) verse trigonometric functions; identities; equations; graphs. Prerequisite: Mt 101 or one-and-one-half years of high school algebra. (fall, winter, spring)

Mt 114 Elementary Electronic Computer Programming

## 3 credits

Fundamentals of digital computing. FORTRAN language basic instruction; flow charts, loops, subroutines. One two-hour laboratory period per week. Prerequisite: Mt 101 or equivalent. (winter, spring)

Mt 116 Computer Applications
2 credits
Techniques for problem solving; implementation of various formulas of mathematics, statistics, and the sciences. Assignments will require use of Computer Center equipment. Corequisite: Mt 114. (winter, spring)

College Algebra for Business
5 credits
Sets; relations and functions, graphing; linear, quadratic, exponential, logarithmic functions; systems of linear equations; inequalities; linear programming; applications to business. Prerequisite: Mt 101 or equivalent. (fall, winter, spring)

Mt 130 Elements of Calculus for Business 5 credits Rate of change; derivative, basic differentiation formulas, extrema; area under a curve; limits of sequences; the definite integral and applications. Prerequisite: Mt 118. (fall, winter, spring)

Mt 134 Calculus and Analytic Geometry I 5 credits Calculus and Analytic Geometry II 5 credits Calculus and Analytic Geometry III 5 credits I. Review of precalculus subjects; limits and derivatives; applications of limits and derivatives. II. Theory, technique, and applications of integration; differentiation and integration of trigonometric, exponential and logarithmic functions. III. Indeterminate forms; improper integrals; infinite series; Taylor's theorem; vectors, polar coordinates; solid analytic geometry. Prerequisites: Mt 112 or qualifying examination for 134; 134 for $135 ; 135$ for 136 . (All three offered fall, winter, spring)

## Mt 175 Mathematics for the

Liberal Arts Student
5 credits
Elementary logic; sets, relations and functions; topics chosen from geometry, abstract algebra, linear algebra and computer science; statistics and probability. (fall, winter, spring)

Theory of Arithmetic
5 credits
Systems of numeration; elementary logic; sets; relations, equivalence classes; number systems and the integration of these concepts. Prerequisite: Mt 101 or 175 , or equivalent. (fall, winter, spring)

## Mt 214 Principles of Digital Computers

 and Coding5 credits Fundamentals of commercial and scientific computer programming. Laboratory assignments will require the use of Computer Center equipment. Prerequisite: Mt 101 or equivalent. (fall, winter, spring)

Multivariable Calculus and Linear Algebra
Partial derivatives, multiple integration and applications; introduction to differential equations; matrices and determinants. Prerequisite: Mt 136. (fall, winter, spring)


Mt 234 Vector Calculus and Differential Equations

5 credits
Vector spaces; linear transformations; eigenvalues; linear differential equations; systems of differential equations; power series solutions. Prerequisite: Mt 233 (winter, spring)

| Mt 291 | Special Topics | 1-5 credits |
| :---: | :---: | :---: |
| Mt 292 | Special Topics | 1-5 credits |
| Mt 293 | Special Topics | 1-5 credits |
| Mt 300 | Methods for Secondary School Mathematics <br> Special topics in mathematics relevant to the high |  |
|  |  |  |
|  |  |  | Special topics in mathematics relevant to the high school curriculum; emphasis on basic concepts and foundations. Prerequisite: Mt 136 or permission of instructor. (spring of alternate years)

Mt 315 Number Theory

## 5 credits

Divisibility and the Euclidean algorithm; congruences; quadratic reciprocity law; numerical functions; the Mobius inversion formula. Prerequisite: Mt 135. (spring of alternate years)

Mt 321 Foundations of Euclidean Geometry

5 credits
Axiomatic foundations of Euclidean geometry; ruler and compass constructions; problems of antiquity; the 5 th postulate and non-Euclidean geometries. Prerequisite: Mt 135. (winter of alternate years)

Mt 322 Topics in Geometry
5 credits
Selected topics in Advanced Geometry. May be repeated for credit with permission. Prerequisite: Mt 233 or permission. (winter of alternate years)

Mt 351 Probability
5 credits
Basic concepts and theorems in probability theory; the binomial, Poisson, normal and other fundamental probability distributions; moments; limit theorems. Prerequisite: Mt 233. (fall)

Mt 371 Introduction to Numerical
Methods
5 credits
Approximation and errors; finite differences, numerical integration; numerical solution of differential equations. Three lecture and two computer laboratory hours per week. Prerequisites: Mt 114 and 136 or permission.

Mt 381 Elementary Topology
5 credits
Set theory; topology of the real line; topological spaces; compactness; connectedness; product spaces; metric spaces. Prerequisite: Mt 233. (spring of alternate years)

Mt 411 Introduction to Abstract Algebra I 5 credits
Mt 412 Introduction to Abstract Algebra II 5 credits
Mt 413 Introduction to Abstract Algebra III 5 credits Theory of groups, rings, fields and field extensions; vector spaces and linear transformations; special topics. Prerequisites: Permission for $411 ; 411$ for $412 ; 412$ for 413 . (offered in sequence: fall, winter, spring of alternate years)

Mt 431 Introduction to Real Analysis I 5 credits
Mt 432 Introduction to Real Analysis II 5 credits
Mt 433 Introduction to Real Analysis III 5 credits Rigorous introduction to real analysis; limits, continuity, differentiation of real functions; functions on metric spaces; applications of compactness and connectedness; Riemann-Stieltjes integrals; sequences and series of functions; elements of Lebesque theory. Prerequisites: Permission for 431; 431 for 432; 432 for 433. (Offered in sequence: fall, winter, spring of alternate years)

Mt 437 Introduction to Complex Variables 5 credits The complex number system, analytic functions, integrations, series, residues, conformal mapping. Prerequisite: Mt 234.

Mt 471 Numerical Analysis
5 credits
Matrix inversion; systems of linear equations; a fixed point theorem and its applications; initial and boundary value problems; methods of Runge-Kutta and Hermite; finite differences.

Mt 491
Mt 492
Mt 493
Special Topics in Mathematics
Special Topics in Mathematics
Special Topics in Mathematics
2-5 credits May be repeated for a maximum of 12 credits. Prerequisite: Permission.

Mt 497

Independent Study Independent Study Independent Study 1-5 credits 1-5 credits May be repeated for a maximum of 10 credits. Prerequisite: Permission.


Mechanical Engineering<br>Harry Majors, Jr., M.S., Chairman

## Objectives

The mechanical engineer is concerned with the fundamental properties of solids, liquids and gases related to the creative design and manufacture of machines, heat engines, electro-mechanical devices and control systems. He is concerned with the broad area of energy conversion as related to the design of machines. This requires working with the processes of combustion, nuclear and chemical reactions, solar radiations, propulsion systems for sea, land and space and all types of materials under a vast array of conditions.

A mechanical engineer may enter positions in research and development, design engineering, salesmanship, and, with experience, executive positions in industry.

## Degrees Offered

Bachelor of Engineering Bachelor of Mechanical Engineering

## General Program Requirements

Students in mechanical engineering must satisfy core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy and theology and religious studies. Ten credits of humanities electives satisfy the core requirements in history and social science.

## Departmental Requirements

Bachelor of Mechanical Engineering - 65 credits in mechanical engineering which must include ME 105, 113, 281, 321 (or Ch 361, 363), 371, 380, 425, 426, 430, 472, 473, 484, 485, 496, 497, and 498. Also required are Mt 134, 135, 136, 233 and 234; CE 321, 323, 331, 337 and 402; EE 301; Ph 200, 201, and either Ph 202 or Ch 115; and Ch 114. With approval, qualified students may substitute equivalent or more advanced courses for those listed. This degree is approved by the Engineers' Council for Professional Development.

Bachelor of Engineering - 55 credits in engineering, 25 credits in mathematics, and at least 10 credits in physics, chemistry or biology. Not intended to be an entry-level degree into the engineering profession.

## Bachelor of Mechanical Engineering

## Freshman year

English 100 and core option .................. 10 credits
Mathematics $134,135,136 \ldots \ldots \ldots \ldots \ldots \ldots .15$ credits
Mechanical Engineering $105,113 \ldots \ldots . . . . . .10$ credits

Philosophy 110 ......................................... 5 credits

## Sophomore year

Chemistry 114 ......................................... 5 credits
Humanities Elective ................................. 5 credits

Mechanical Engineering 281 .................. 5 credits
Philosophy 220 ...................................... 5 credits
Physics 201 ...................................... 5 credits
Physics 202 or Chemistry $115 \ldots \ldots \ldots \ldots . . .$.
Theology core option ............................. 5 credits

## Junior year

Civil Engineering 321, 323, 331, $337 \ldots \ldots \ldots .17$ credits

Mechanical Engineering 321 or
Chemistry 361,363 , and ME $371,380 \ldots \ldots .13$ credits
Philosophy core option........................ 5 credits
Theology core option ................................. 5 credits

## Senior year

Civil Engineering $402 \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . .3$ credits
Humanities Elective .............................. 5 credits
Mechanical Engineering 425, 426, 430, 472,
$473,484,485,496,497,498 \ldots \ldots \ldots \ldots .37$ credits
Total . . . . 180 credits

## Mechanical Engineering Courses

ME 105 Engineering Graphics \& Analysis 5 credits Methods of Engineering Communication. Use of drafting instruments, lettering, orthographics, isometrics, free-hand sketching, and dimensioning. Introduction to descriptive geometry. Application of scaled vectors to solutions of problems in statics, kinematics, and electricity. Students must attend offday sessions until they are able to pass examinations on engineering computations. Four two-hour sessions per week. (fall)

ME 113 Statics
5 credits
Application of vectors to equilibrium of forces and moments on bodies, trusses, and frames. Introduction to distributed forces on bodies, beams, cables.
and hydrostatics, friction and virtual work. Four lectures and a one-hour problem session per week. Prerequisite: Mt 135 (or concurrent).

ME 200 Cooperative Work Study Assignment 0 credits Field experience in an approved job assignment in industry or government. The assignment will be selected for its value in advancing the professional education of the student. May be taken four times.

ME 269 Production Processes I
1 credit
ME 270 Production Processes II
1 credit Study of the processes used in forming and shaping engineering materials; lectures, demonstrations and laboratory work on machining processes. One lecture and three laboratory hours per week. Prerequisite: Sophomore standing, ME 269 for 270 . (l-fall, II-winter)

ME 281 Dynamics
5 credits Application of vectors to solutions of problems in kinematics and kinetics. Translation, rotation, and plane motion of a particle, system of particles and rigid bodies; relative motion. Analysis of forces on particles and bodies in motion. Impulse-momentum laws, work and energy. Four lecture hours and onehour problem session. Prerequisites: ME 113, Mt 135. (winter)

ME 291 Special Topics
ME 292 Special Topics
ME 293 Special Topics

1-5 credits
1-5 credits
1-5 credits

ME 300 Cooperative Work Study Assignment 0 credits Field experience in an approved job assignment in industry or government. The assignment will be selected for its value in advancing the professional education of the student. May be taken four times.

ME 321 Engineering Thermodynamics I
5 credits Introduction to the law of conservation of energy as applied to ideal and real gases, liquids, vapors, and mixtures of gases and vapors. Property relations associated with processes and cycles. Conversion of thermal energy to work in heat engines and heat pumps. Concept of power and efficiency in Otto, Diesel, Brayton, and Rankine cycles. Flow of compressible gases. Prerequisite: CE 331. (winter)

ME 371 Machine Design I 3 credits
Relation of engineering fundamentals and properties of materials to the design, layout and details of specific machines; computation techniques and use of digital and analogue computers. Prerequisites: ME 281, CE 323, 331. (spring)

ME 380 Heat Transfer I
5 credits Introduction to transfer of heat by conduction in one and two dimensional flow, steady state; and transient. Principles of thermal radiation heat exchange. Analysis of convection-natural, forced, and with change of phase, with application to design of heat exchangers. Four lecture hours and four hour laboratory per week. Prerequisite: ME 321. (spring)

ME 400 Cooperative Work Study Assignment 0 credits Field experience in an approved job assignment in industry or government. The assignment will be selected for its value in advancing the professional education of the student. May be taken four times.


ME 425 Power Plants I
5 credits Application of thermodynamics to the analysis of ideal and actual power cycles. Study of internal and external combustion engines, fans, blowers, compressors, and nozzles. Design of gas and vapor refrigeration systems; liquifaction of gases, and air conditioning systems. Four lecture and one four hour laboratory periods per week. Prerequisite: ME 321. (fall)

ME 426 Power Plants II
5 credits
Application of thermodynamics, heat transfer and fluid mechanics to selection, location, and design of a modern thermal power station and auxiliaries with economic and ecologic integration into the Pacific Northwest Power System. Four lectures and one four-hour laboratory periods per week. Prerequisite: ME 425. (winter)

ME 428 Environmental Engineering
4 credits Man-machine systems; psychological and physiological principles of the interrelation between a human and his surroundings; environmental requirements for equipment and human habitation; engineer's approach to the multi-disciplinary aspects of environmental control. Three lecture and four laboratory hours per week. Prerequisite: ME 426.

ME 430 Principles of the Properties of Materials I 5 credits Atomic structure of elements. The metallic bond. Structure of metals and non-metals. Equilibrium diagrams. Time-dependent transformations. Elastic and plastic deformations. Relation of structure to properties. Three lecture and four laboratory hours per week.

ME 472 Machine Design II

## 3 credits <br> 3 credits

ME 473 Machine Design III
ME 474 Machine Design IV
1-5 credits
II. Philosophy of design, a creative approach, and a comprehensive design project; planning, organizing and leading an engineering project; exercising judgment and considering economic factors. III. Instruction and experience in the integrated aspects of creative design and analysis; case studies; design of a novel device or system; electro-mechanical, hydraulic and pneumatic systems; energy conversion. IV. Project work. Prerequisites: ME 371 for 472; 472 for $473 ; 473$ for 474 . (II-fall, III-winter)

ME 477 Experimental Mechanics
1-5 credits
Study of experimental methods; instrumentation; use of sensing devices; measurements by means of mechanical, electrical, magnetic and optical methods; control systems; vibrations; shock and impact measurements; emphasis on the interpretation of results. Arranged. Prerequisites: CE 337, ME 371.

ME 478 Compressible Flow I
5 credits
Review of concepts of fluid dynamics and thermodynamics; introduction to the concepts of compressible flow; one-dimensional gas dynamics including flow in nozzles and diffusers, normal shocks, frictional flows and flows with heat transfer and energy release. Prerequisite: CE 331, ME 322.

ME 479 Theoretical Hydrodynamics 5 credits Ideal fluid motions; Euler's equation of motion and continuity equation, boundary conditions. Potential flow; velocity potential stream function, Laplace equation, hydrodynamic sigularities, two and three dimensional flow examples. Conformal transformation: complex potential, complex celocity, Blasius theorem, flow about cylinders and air foils. Free streamline flow; Schwartz-Christoffel theorem. Vortex motion. Prerequisite: Permission of instructor.



ME 481 Heat Tranfer II
5 credits
Advanced topics in conduction, convection, and radiation with emphasis on computer applications to multi-dimensional and transient problems. Introduction to mass transfer and diffusion. Four lecture and four laboratory hours per week. Prerequisite: ME 380. (fall)

ME 484 Linear Systems Analysis
5 credits
A study of the dynamics of linear systems. Topics include: Derivation of differential equations; classical and transform methods of differential equation analysis; experimental methods including similarity and dimensional analysis; and analog and digital computer methods. Four lecture and four laboratory hours per week. Prerequisites: ME 321, 371. (winter)

ME 485 Control Systems I
5 credits
A first course in feedback control system analysis designed to follow "Linear Systems Analysis". Topics include: Typical system elements and their transfer functions; block diagram and signal flow graph manipulatin; root locus; Nyquist criterion; Bode plots; analog and digital computer simulation Four lecture and four laboratory hours per week Prerequisite: ME 484. (spring)

2-5 credits $2-5$ credits
ME 492 Special Studies 2-5 credits Special Studies Selected subjects of current interest in mechanical engineering. Assigned reading and/or experiments will be arranged on an individual basis in consultation with the instructor. Written report and oral delivery are required. Prerequisite: Senior standing.

ME 496 Seminar 2 credits
ME 497 Seminar
ME 498 Seminar
2 credits
2 credits
Prerequisite: Senior standing. (fall, winter, spring)
ME 499 Thesis
2 credits
In special cases a thesis may be substituted in place of seminar with the approval of the department chairman. Prerequisite: Senior standing.


## Physics

David Ehlers, Ph.D., Chairman

## Objectives

The Physics department offers three programs leading to degrees. For those who wish a career in physics, the Bachelor of Science in Physics program takes the student from classical mechanics through quantum mechanics, including advanced laboratory courses emphasizing nuclear and nuclear reactor physics. This curriculum is designed to prepare students for advanced work in pure and applied physics or for graduate study. For those who wish a broader training in the sciences in addition to a rigorous program in physics, the Bachelor of Science program offers the flexibility that is required. The Bachelor of Arts program is ideal for those who desire a solid background in physics along with a broad liberal arts education.

## Degrees Offered

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Physics

## General Program Requirements

Students majoring in physics must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin, except that for the Bachelor of Science and Bachelor of Science in Physics degrees, 15 credits of history and/or social science are required.

Bachelor of Arts - 45 credits in physics which must include Ph 200, 201, 202, 203, 290, 310, 330 and 375. A minimum of 15 additional credits in a related science is required.

Bachelor of Science - 60 credits in physics which must include Ph 200, 201, 202 and 203; 30 credits in mathematics or science electives.

Bachelor of Science in Physics - 70 credits in physics consisting of Ph 200, 201, 202, 203, 290, 310, 311 , $330,331,361,375,481,485$ and 470 or 475 . Mathematics 134, 135, 136, 233 and 234 are required.

Teaching Major (School of Education) - 45 credits in physics and mathematics; 30 credits in physics which must include Ph 105, 106, 107, 110, and 10 elective credits. Ph 290 and 375 are recommended electives, and Ph 200, 201, 202 may be taken in place of 105, 106, 107 for those students who desire a more rigorous background in general physics. The required 15 credits in mathematics must include 10 credits in calculus and computer. (Mt. 114, 116, 134).

Undergraduate Minor - 30 credits in physics which must include either Ph 105, 106, 107 or Ph 200, 201, 202, 203. Ph 101, 110, and 111 may not be counted toward the minor.

## Bachelor of Science in Physics

## Freshman Year

Physics 200...................................... 5 credits
Mathematics $134,135,136 \ldots \ldots \ldots \ldots \ldots . .15$ credits
Core options .................................... 20 credits
Elective .............................................. 5 credits

## Sophomore Year



Core options ........................................... 10 credits
Elective ............................................... 5 credits
Junior Year
Physics $310,311,330,331,361,375 \ldots \ldots \ldots .30$ credits
Core options ........................................ 10 credits
Elective ............................................ 5 credits

## Senior Year

Physics 481,485 , and 470 or $475 \ldots \ldots \ldots \ldots .15$ credits
Core options ....................................... 10 credits
Electives ........................................... 20 credits

## Physics Courses

Note: Ph 105, 106, 107, 200, 201, 202, 290, and 475 have four lectures and one three-hour laboratory per week. All other physics courses have five lectures per week except as noted.

Ph 101 Energy Sources and Uses 5 credits
The demand for energy; methods of power generation; energy resources; end uses of energy; energy conservation principles; environmental and economic factors; energy in the Pacific Northwest. Core science option.

Ph 105 Mechanics and Sound
5 credits
Non-calculus survey of classical mechanics. Statics, kinematics, and dynamics of particles and systems; harmonic motion, waves, and sound. Prerequisite: Mt 112 or equivalent. (fall)

Ph 106 Electricity and Magnetism
5 credits
Survey of electromagnetism. Electrostatics, magnetostatics, electromagnetic fields, dc and ac circuits. Prerequisite: Ph 105. (winter)

Ph 107 Survey of Modern Physics
5 credits
Introduction to thermodynamics and optics. Selected topics in atomic, nuclear, solid state, and biological physics. Prerequisite: Ph 106. (spring)

Ph 110 Introduction to Astronomy of the

## Solar System

## 5 credits

Apparent motions of heavenly bodies. Survey of the real motions and physical properties of the sun, moon, planets, and minor bodies of the solar system; telescopic observation available. Core science option.

Ph 111 Introductory Stellar Astronomy
5 credits Survey of the nature and evolution of the stars; neutron stars, pulsars, black holes; nebulae, galaxies, quasars and the origin of the universe; telescopic observation available. Core science option.

Ph 200 Mechanics 5 credits
Vector mathematics; kinematics; conservation of momentum and collisions; relative motion and reference frames; force and Newton's laws; work, energy, and power; rotational dynamics; rigid body motion, gravitation. Prerequisite: Mt 134. (spring)

Electric charge, forces, and fields; electric flux and Gauss' law; electric potential; conductors, dielectrics, and capacitance; electric current and resistance; DC circuits; magnetic forces and fields; inductance; AC circuits. Prerequisites: Ph 200 and Mt 135. (fall)

Waves, Optics and Thermodynamics 5 credits Harmonic Motion; mechanical and electromagnetic waves; reflection, refraction, dispersion, interference, diffraction and polarization. Temperature, ideal gases, kinetic theory, second law of thermodynamics. Prerequisite: Ph 201. (winter)

Ph 203 Modern Physics
5 credits
Special relativity; particle aspects of radiation; wave aspects of matter; uncertainty principle; Schrodinger equation; atoms, nuclei, and elementary particles. Prerequisites: Ph 202, Mt 136. (spring)

Ph 290 Measurement and Instrumentation Fundamentals

5 credits
Measurement of quantities such as flow, position, strain, radiation, velocity, current, power, temperature, voltage. Conversion by transducers into electrical signals and processing for recording, observation or control. Prerequisites: Mt 134 and Ph 106 or 201. (spring)

Ph 291
Ph 292 Special Topics
Special Topics
$1-5$ credits
$1-5$ credits
Ph 293 Special Topics
1-5 credits
Directed reading and/or lectures at a lower division level. Prerequisite: Permission of instructor.

Ph 300 Cooperative Work Study Assignment 0 credits Field experience in an approved job assignment in industry or government. The assignment will be selected for its value in advancing the professional education of the student. Prerequisite: Permission of the Dean

Ph 310 Intermediate Mechanics I
5 credits
Vector calculus; kinematics of a particle; one-dimensional motion of a particle; two and three dimensional dynamics of a particle; moving reference systems; central forces and celestial mechanics. Prerequisites: Ph 200, Mt 234. (fall)

Ph 311 Intermediate Mechanics II
5 credits
Systems of particles; rigid body motion in a plane; general motion of a rigid body; Lagrange's equations; Hamilton's equations; small vibrations. Prerequisite: Ph 310 . (winter)


Ph 330
Electricity and Magnetism I 5 credits Static electric fields in vacuum and material media; solutions of Laplace's and Poisson's equations in curvilinear coordinates; static magnetic fields; timevarying fields and Maxwell's equations. Prerequisites: Ph 201, Mt 234. (winter)

Ph 331
Electricity and Magnetism II
5 credits
Magnetic materials; derivation and solutions of wave equations; plane waves in vacuum and material media; fields of a moving charge; accelerated charges and radiation; covariant formulation of electrodynamics. Prerequisite: Ph 330. (spring)

3 credits
Oscillation; waves; reflection and refraction of sound waves; attenuation; superposition of acoustical waves; ultrasonics. Prerequisites: Ph 107, Mt 134, 114, 116. (fall)

Solid State Physics and Devices 5 credits Crystal structure and defects; interatomic binding; thermal and electrical properties; energy bands, carrier statistics and carrier transport phenomena. Semiconductor devices. Prerequisite: Ph 203. (fall)

Nuclear Instrumentation
5 credits
lonizing radiation. Nuclear decay processes, interaction of radiation with matter, instrumentation for the detection of photons, charged particles, and neutrons. Three lectures and two laboratories per week. Prerequisite: Ph 107 or Ph 202. (spring)

Ph 391
Ph 392
Ph 393
Special Topics
1-5 credits
Special Topics
$1-5$ credits
Special Topics
1-5 credits

Nuclear Physics
5 credits
Structure and properties of nuclei and elementary particles; symmetries and conservation laws; electromagnetic, weak, and hadronic interactions; nuclear models. Prerequisite: Ph 485. (spring)

Nuclear Fission and Fusion Reactors 5 credits Basic physics of nuclear fission and fusion reactors; experiments on the essential operational parameters of nuclear fission reactors. Brief discussion of Environmental impact. Four lectures and one three-hour laboratory per week. Prerequisites: Ph 203 and junior standing or permission.

Theoretical Physics
5 credits Matrices, determinants, Fourier series, integral transforms, tensor analysis, complex variables, coordinate transformations, partial differential equations, special functions. Prerequisite: Mt 234. (fall)

Quantum Mechanics

## 5 credits

Wave-particle duality, the state function, the Schrodinger equation, one-dimensional problems, the operator formalism, matrices, central forces, angular momentum, spin, identical particles. Prerequisite: Ph 481. (winter)

Special Topics Special Topics Special Topics
Undergraduate Research Undergraduate Research Undergraduate Research

1-5 credits
1-5 credits
1-5 credits
1-5 credits
$1-5$ credits
$1-5$ credits

## Premedical and Predental

George A. Santisteban, Ph.D., Adviser
Students wishing to enter professional schools of human, dental, or veterinary medicine or graduate school in biomedical studies, should matriculate in a program of studies leading to a bachelor's degree in any academic field which will give a broad training in the liberal arts and allow them to fulfill the proper premedical requirements in the physical and biological sciences. Premedical students may choose any academic major; most students elect biology, chemistry, physics, general science or psychology. Within the framework of any one of the degree programs, students obtain strong backgrounds in the liberal arts and humanities, as set up in the core curriculum. For further clarification of degree requirements and the core curriculum, see page 18 of this bulletin.

Most medical, dental or veterinary schools require the following undergraduate science sequences: Chemistry 114, 115, 116, 235, 236; Biology 170, 175, 310 and 326, 327 or 280,330 ( BI 300 is required for predental students); and Physics 105, 106, 107. Professional schools also recommend calculus, biochemistry, or physical chemistry. Students are advised to consult the bulletins of the professional schools to which they wish to apply to acquaint themselves with specific requirements other than those listed. Students should plan to complete preprofessional requirements by the end of their junior year. Students should apply to the professional school during the summer or fall of the senior year. The Committee for premedical and predental studies at Seattle University interviews the student following receipt of the MCAT or DAT scores and prepares a composite recommendation which is sent to the school to which the student has sent an application.

## Preoptometry

## Ernest P. Bertin, S.J., Ph.D., Adviser

Preoptometry is a preparatory program for a career in optometry and is not a field of concentration. The basic requirement of the American Optometric Association is a two-year program,although the best preparation, and the one preferred by most professional schools, is a four-year undergraduate program leading to a bachelor's degree in one of the basic sciences.

## Program

All students who desire a career in optometry should consult with the preoptometry adviser before their first registration in the program and as needed thereafter. There are several choices of fields open to the students, but in general, a broad background in biology, chemistry, mathematics and physics is required. Typically, 10 to 15 hours in each of these fields is desirable, with more emphasis placed on biology and physics. Should the student desire a bachelor's degree prior to pursuing the professional training, any of these fields would be acceptable if certain electives are taken, although the Bachelor of Science in General Science offers the best combination of courses.

## GRADUATE SCHOOL




## Graduate School

James J. Cowgill, S.J., Ph.D., Dean
(For detailed information on the Graduate programs see the separate Graduate School Bulletin)

## Graduate School

Graduate studies directed toward the master's degree were first offered at Seattle University in 1901 in a division of its College of Arts and Sciences. In 1935 graduate courses became an integral part of the University's teaching education program. In 1976 the first doctoral program began.

## Objectives

Graduate School programs are not merely more courses in undergraduate study; they involve courses advancing by gradation into greater complexity and profundity. The content of graduate courses is of a more advanced nature, the requirements in terms of bibliography, quantity and quality of thinking and writing are higher, and the degree of initiative, the organizing ability and originality expected is greater.

Only a limited number of undergraduate courses may be accepted for credit. Graduate students should not consider the mere literal fulfillment of requirements as conferring the right upon them to continued registration. Academic advancement and eligibility for degrees are contingent also upon recommendation and approval of the Graduate Committee of the school or department and the University Graduate Council.

## Organization

Administration of the Graduate School and supervision of all programs leading to the master's and doctor's degrees lies with the Dean of the Graduate School and the Graduate Council. The Dean of the Graduate School and his Council establish and maintain requirements for degrees according to the recommendations of the graduate committee of each school of the University.

The component schools and various departments provide courses of instruction for graduate students, direct their studies, conduct examinations, maintain requirements and make recommendations. Academic transactions involving admission, registration and awarding of degrees are supervised by the University's Registrar. Actual admission to graduate study is granted through the Dean of the Graduate School in consultation with the appropriate graduate program director involved in the counseling of the applicant.

## Classification of Students

A graduate student is one who has been admitted to the Graduate School to pursue a program of study leading to a specific master's or doctoral degree. Graduate students are classified as regular, on probation or visiting. A student admitted on probation must demonstrate in the first quarter ability to do work of graduate quality. A visiting graduate student may take graduate courses for a single quarter only. In special circumstances, an undergraduate senior or fifth year student may be allowed to enroll in a graduate course with prior approval of the director of the graduate program in the area of the course in question or of the Dean of the College or School in which the course is taught.

Students pursuing course work beyond the bachelor's degree, who are not admitted to the Graduate School for a specific advanced degree are granted status as fifth year students and are under the jurisdiction of the dean of the college in which they are taking courses. A student pursuing certification in education is not a graduate student unless in addition to this study supervised by the School of Education he/she has been accepted by the Graduate School in a master's degree program.

## General Program Requirements

The candidate for the master's degree must present a minimum of 35 credits beyond the bachelor's degree. $\mathrm{He} /$ she must satisfy any additional requirements imposed by the major department and the Graduate Council. In those programs which require over 35 credits, only 35 credits are required for those candidates who already have earned a master's degree in a related area. See Graduate Bulletin for Doctor of Education degree requirements.

All work must be of distinctly advanced character but, with the approval of the department and the Graduate Council, 15 credits in programs requiring only the

minimum of 35 credits and 20 credits in those requiring 40 or more credits may be earned in courses numbered 300 to 499, if the subjects are suitable to the student's program. A maximum of 10 credits may be transferred from another institution if they are earned with a grade of " A " or " B " and approved by the department and Dean of the Graduate School.

Distribution of course work will be according to a program approved by the Dean of the Graduate School.

Every candidate for a master's degree must take a comprehensive examination in the major field of study. This examination shall be written and/or oral at the judgment of the department and the approval of the Graduate Council. A " B " average is required for work done toward the master's degree.

The student may be required to complete a thesis on a topic approved by his/her major department and the Dean of the Graduate School. For this work, no more than 10 credits are granted. The thesis is not necessarily a work of original research but it must, however, demonstrate the candidate's ability to collect facts, interpret them in a critical manner and organize and express them in an original, lucid way.

The topic of the thesis is to be approved by the student's mentor, graduate program adviser and the Dean of the Graduate School and filed with the Graduate School when 30 credits of the graduate program have been completed.

All thesis work must be done under the direct supervision of an assigned adviser.

Four unbound copies of the approved thesis are to be filed in the office of the dean four weeks before the date of graduation. Two of these copies will be bound and placed on file in the University's library; one copy will go to the department chairman and one copy to the student.

An oral examination on the content of the thesis, cognate literature and available source material may be held before a board appointed by the departmental chairman and approved by the Dean of the Graduate School.

All requirements for the master's or doctor's degree must be completed within six years after course work is begun, including the time of any courses for which the candidate applies for transfer of credit. The application for the degree must be filed with the University Registrar by February 1 preceding the June in which the degree is to be received. Ordinarily each candidate for the Master of Arts degree will give evidence of a reading knowledge of a foreign language. Application for this examination must be made with the departmental office not later than April 15 preceding the June in which the degree is to be received. The Graduate School alone has the power to recommend a candidate for a Master's or Doctor's degree.

## Admission Requirements

Admission to the degree program is granted to applicants who have received the bachelor's degree from an approved college or professional school, and whose scholarship records and credentials indicate ability to pursue graduate work. An undergraduate major and an undergraduate minor or their fair equivalents are required in the same departments or areas from which the student selects his/her graduate work.

Application for admission should be submitted as early as possible before the opening of the term in which the student wishes to begin work. Prospective students must file an official application form and fee with the Office of Admissions. In addition, two official transcripts of academic credits from the institution granting the bachelor's degree and all schools attended since the undergraduate degree was granted are to be sent directly to Seattle University by each institution. Failure to file complete records of previous school attendance renders the student liable to dismissal or cancellation of credit. A student is not regarded as a duly qualified graduate student until he/she has received a letter of acceptance from the Dean of the Graduate School. For specific degree requirements, consult the graduate publications of the department concerned and the Graduate School Bulletin.

Admission to the Master of Pastoral Ministry Program is granted only to those who have completed the certifi-
cate in Pastoral Ministry. For other requirements, see section on Pastoral Ministry in the Graduate School Bulletin.

Admission requirements for the Doctoral Program in Educational Leadership are found in the Graduate School Bulletin.

Foreign students who meet admission requirements, can demonstrate their English proficiency and are in the United States on a permanent visa will be considered for admission since no $\mathrm{I}-20$ form is necessary.

Some students are admitted to the Graduate School on probation. This designation may be used when (1) the previous academic record is marginal or when there is a lack of adequate prerequisite course work in the chosen field or (2) when the applicant has majored in another area with a satisfactory record, but there is some doubt about ability to pursue the program in question. A program to correct these deficiencies will be designed by the department and the student is expected to become qualified within a specified time limit. When all conditions have been fulfilled the department may recommend that the student be advanced to regular graduate status. Students who are unable to qualify for admission to regular graduate status will either be considered for another graduate program or dismissed.

Provisional admission to the Graduate School is granted to an applicant who must fulfill a special requirement to qualify for formal admission to graduate standing.

## Admission to Candidacy

Application for admission to candidacy for a master's degree should be filed after the student has completed from 10 to 20 credits in courses applicable to the graduate program of the department, with a grade average of no less than B in these courses. Admission to candidacy for the master's degree in Pastoral Ministry is applied for after completion of the certificate program. At this time the complete Program of Studies and Candidacy form must be filed.



## Degrees Offered

Graduate Degrees offered by the University are:

## ARTS AND SCIENCES

Master of Arts-English
Master of Arts-History
Master of Arts-Philosophy
Master of Arts-Rehabilitation
Master of Arts in Teaching-English
Master of Pastoral Ministry
Master of Religious Education (summer only)

BUSINESS
Master of Business Administration
Master of Science in Accounting

EDUCATION
Master of Arts in Education
Master of Education
These two degrees may be earned with specialization in the following areas: administration, curriculum and instruction, curriculum and instruction (with emphasis in physical education), guidance and counseling and adult education administration.
Doctor of Education

PUBLIC SERVICE
Master of Public Service

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Kelly Waller, President, Safeco Life Insurance Company
William P. Woods, Chairman, Washington Natural Gas Company
Mrs. T. Evans (Ann) Wyckoff, Seattle Washington


Edwin Weihe, Ph.D., Director, Matteo Ricci Form II
Lt. Col. Archille O. Bourque, Jr., M.B.A., Commanding Officer, ROTC

## Student Life Administration

Donna Vaudrin, M.A., Dean for Women Oneal J. McGowan, S.J., M.A., Acting Director, Minority Student Affairs
Charles E. Schmitz, S.J., M.A., Director Campus Ministry
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## Administrative Services

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Kip Toner, B.C.S., Director, Financial Aid
Anna E. Dillon, Director of Personnel
John B. Marlow, Manager, Plant and General Services
Genevieve Weston, B.A., Director, University Bookstore

## University Relations

Mary Ann Bastasch, M.Ed., Director of Admissions
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Jean Merlino, B.A., Director of Publications

## FACULTY

The dates following faculty names indicate initial and subsequent appointments or return from leave to the University faculty. Asterisks preceding names denote faculty members on leave of absence. Daggers ( $\dagger$ ) following names indicate Graduate School faculty members.

Clarence L. Abello, B.Econ. (1953)
Associate Professor of Spanish
B.Econ., 1933, University of London; Contrador Publico Nacional, 1937, Universidad Nacional de Buenos Aires, Facultad de Ciencias Economicas.

Josef C. Afanador, Ed.D., (1975) $\dagger$
Assistant Professor of Rehabilitation
B.A., 1963, Butler University; M.S., 1967, Purdue University; Ed.D., 1971, University of Arizona.

Lewis E. Aldrich, Jr., Ph.D. (1968)
Chairman, Biology Department
Professor of Biology
B.A., 1950, Linfield College; M.S., 1954, Ph.D., 1960, Oregon State College.

Irene Allen, M.L., (1970)
Assistant Librarian
B.A., 1968, M.L., 1969, University of Washington.

Julian B. Andersen, Ph.D. (1970) ${ }^{\dagger}$
Associate Professor of Business
A.S., 1958, Weber State College; B.S., 1960, Ph.D., 1966, Utah State University.
Englebert M. Axer, S.J., Ph.D. (1941; 1955; 1971) $\dagger$
Acting Chairman, Foreign Languages
Professor Emeritus
A.B., 1930, Valkenburg, Holland; S.T.L., 1940, St. Louis University; M.A., 1941, Gonzaga University; Ph.D., 1949, Georgetown University.

Mary C. Bartholet, M.S. $(1958$; 1965)
Associate Professor of Nursing
B.S., 1949, College of St. Teresa; M.S., 1958, St. Louis University.
Ernest P. Bertin, S.J., Ph.D. (1957; 1963; 1971)
Professor of Chemistry
A.B., 1944, M.A., 1945, Gonzaga University; S.T.L., 1952, Alma

College; Ph.D., 1957, University of Notre Dame.
William N. Bischoff, S.J., Ph.D. (1969) $\dagger$
Research Professor of History
B.A., 1940, M.A., 1942, Gonzaga University; S.T.B., 1948, Alma

College; Ph.D., 1950, Loyola University, Chicago.
Francis X. Bisciglia, S.J., M.A. (1963)
Associate Professor of Classical Languages
A.B., 1938, M.A., 1939, Gonzaga University; S.T.L., 1947, St. Louis University; M.A., 1952, Fordham University.

Roger E. Blanchette, S.J., M.A. (1966) $\dagger$
Chairman, Theology and Religious Studies
Assistant Professor of Theology and Religious Studies
A.B., 1957, M.A., 1959, Gonzaga University; S.T.B., 1965, Alma College; M.A., 1965, University of Santa Clara.

Dorothy G. Blystad, B.A. (1963)
Assistant Professor of Education
B.A., 1947, Colorado University.

Hamida H. Bosmajian, Ph.D. (1966; 1974) $\dagger$
Associate Professor of English
B.A., 1961, University of Idaho; M.A., 1962, Ph.D., 1968, University of Connecticut.

Archille O. Bourque, Jr., Lt. Col., M.B.A. (1974)
Chairman, Military Science Department
Professor of Military Science
B.S.B.A., 1969, St. Benedict's College; M.B.A., 1972, University of Kansas.
Jack L. Brown, SSG (1975)
Supply Sergeant
Robert Michael Brown, Ph.D. (1974)
Assistant Professor of Psychology
B.A., 1967, Seattle University; M.Sc., 1971, University of Calgary; Ph.D., 1975, University of Wisconsin.

Susanne M. Bruyere, Ph.D. (1975)
Assistant Professor of Rehabilitation
B.A., 1970, D'Youville College; M.S.Ed., 1972, University of Southern California; Ph.D., 1975, University of Wisconsin.

John P. Burke, M.A. (1967) $\dagger$
Assistant Professor of Philosophy
B.A., 1965, Gonzaga University; M.A., 1967, St. Louis University.
Norma Jean Bushman, M.N. (1960)
Associate Professor of Nursing
B.S.N., 1959, M.N., 1960, University of Washington.
J. Gerard Bussy, S.J., Ph.D. (1948)

Professor Emeritus
L.Ph., 1933, S.T.L., 1937, Gregorian; M.A., 1952, Seattle University; Ph.D., 1957, University of Washington.

David Michael Butler, M.A. (1975)
Assistant Professor of Drama
B.A., 1966, Seattle University; M.A., 1970, University of Washington.

Robert J. Carmody, S.J., Ph.D. (1943) $\dagger$
Professor Emeritus
A.B., 1931, M.A., 1932, Gonzaga University; S.T.L., 1939, Alma College; Ph.D., 1949, University of Washington.

Walter R. Carmody, Ph.D. (1947)
Professor Emeritus
B.S., 1923, University of Washington; M.S., 1924, Ph.D., 1926, Catholic University.

Emmett H. Carroll, S.J., M.A. (1973)
Assistant Professor of English
B.A., 1955, Gonzaga University; M.A., 1963, Gregorian University; M.A., 1966, Rutgers University.

Frank E. Case, S.J., M.A. (1975) $\dagger$
Assistant Professor of Business
A.B., 1962, M.A., 1965, Ph.L., 1965, St. Louis University; S.T.M., 1970, University of Santa Clara.

Ben Cashman, Ph.D. (1962; 1967)
Chairman, Political Science Department Professor of Political Science
B.A., 1949, University of Washington; M.A., 1950, Fletcher School of Law and Diplomacy; Ph.D., 1969, University of Washington.

Chu Chiu Chang, M.A. (1956)
Associate Professor of Mathematics
A.B., 1942, Central Political Institute, Chungking, China; M.A., 1956, University of Washington.

Percy H. Chien, Ph.D. (1976)
Associate Professor of Civil Engineering
B.S.C.E., 1962, National Taiwan University; M.S.C.E., 1967, University of Houston; Ph.D., 1972, Clemson University.

## Louis K. Christensen, Ph.D. (1965)

Professor of Music
B.A., 1954, M.A. (Mus.) 1956, Ph.D., 1961, University of Washington.

Alene B. Cisney, M.L. (1966)
Associate Librarian
B.A., 1962, Reed College; M.L., 1966, University of Washington.

## Janet M. Claypool, M.N. (1966)

Associate Professor of Nursing
B.S.N., 1959, M.N., 1960, University of Washington.

Sister Mary Cobelens, O.P., M.L., (1971)
Assistant Librarian
B.A., 1959, Central Washington State; M.L., 1971, University of Washington.

William J. Codd, S.J., Ph.D. (1947)
Director, Montessori Studies Center
Professor of Education
A.B., 1936, M.A., 1938, Gonzaga University; S.T.B., 1944, Alma College; Ph.D. 1958, University of Washington.

James V. Connors, S.J., M.A. (1961; 1972)
Associate Professor of Drama
A.B., 1953, Gonzaga University; S.T.B., 1958, University of Santa Clara; M.A., 1960, San Francisco State College.

Paul P. Cook, Jr., Ph.D. (1962)
Associate Professor of Biology
B.A., 1951, M.A., 1952, University of Kansas; Ph.D., 1962, University of California.

Robert H. Cousineau, S.J., Docteur (1975) $\dagger$
Associate Professor of Philosophy
B.A., 1953, M.A., 1954, Boston College; Ph.L., 1954, Weston College; S.T.L., Woodstock College; Docteur, 1969, University of Paris.
*Marie J. Cowan, M.S. (1972)
Assistant Professor of Nursing
B.S., 1964, M.S., 1972, University of Washington.

James J. Cowgill, S.J., Ph.D. (1950; 1953)
Dean, Graduate School
Professor of Physics
B.S., 1938, M.S., 1939, Gonzaga University; S.T.L., 1946, Alma

College; Ph.D., 1957, University of Notre Dame.
Kenneth W. Cubbage, D.B.A. (1974)
Associate Professor of Business
B.B.A., 1952, M.B.A., 1957, University of Washington; D.B.A., 1968, University of Colorado.
Thomas W. Cunningham, Ph.D. $(1959 ; 1965)$
Professor of Psychology
B.A., 1956, Seattle University; M.S., 1959, Ph.D., 1966, University of Portland.

Nikolas J. Damascus, M.F.A. (1951)
Professor of Art
B.F.A., 1944, M.F.A., 1947, Art Institute of Chicago.

## Margaret Mary Davies, Ph.D. (1955; 1971)

Professor of Economics
A.B., 1938, Ph.D., 1960, University of Washington.

## George D. Davis, M.S. (1969)

Associate Professor of Biology
Adviser, Allied Health Technology
B.S., 1956, M.S., 1960, University of Tulsa.

Verelle M. Davis, M.S. (1972)
Assistant Professor of Nursing
B.S., 1959, University of Washington; M.S., 1970, Catholic University.

William H. Davis, SSG, A.A. (1975)
Sergeant Major
A.A., 1974, Fort Steilacoom Community College.

Rosario T. DeGracia, M.S. (1963)
Associate Professor of Nursing
B.S.N., 1954, University of the Philippines; M.S., 1959, Western Reserve University.

Bonnie Jean Denoon, Ph.D. (1975) $\dagger$
Assistant Professor of Education
B.A., 1961, M.Ed., 1966, Wichita State University; Ph.D., 1975,

Peabody College.
Khalil (Charles) Dibee, Ph.D. (1964) $\dagger$
Professor of Finance
B.S., 1956, University of Detroit; M.B.A., 1958, Ph.D., 1962, University of Texas.

Joseph P. Donovan, S.J., Ph.D. (1948; 1966) $\dagger$
Professor Emeritus
A.B., 1938, Gonzaga University; M.A., 1940, Georgetown University; Ph.D., 1948, University of Pennsylvania.

William J. Dore, Jr., M.A. (1963)
Associate Professor of Drama
B.A., 1954, M.A., 1957, University of Washington.

Thomas E. Downey, Ph.D. (1957) ${ }^{\dagger}$
Professor Emeritus
A.B., 1932, M.A., 1934, Loyola University, Chicago; Ph.D., 1944, University of California.

Jerome R. Dunham, Ph.D. (1974)
Assistant Professor of Rehabilitation
B.A., 1946, M.A., 1947, University of Michigan; Ph.D., 1964, Texas Technological College.
Arthur C. Earl, S.J., M.A. (1944)
Professor Emeritus
B.S., 1929, Creighton University; M.A., 1937, Gonzaga University.

Robert J. Egan, S.J., Ph.D. (1964; 1972)
Assistant Professor of Theology and Religious Studies
B.A., 1955, Gonzaga University; S.T.L., 1963, College of the Immaculate Conception; M.A., 1963, St. Mary's University; Ph.D., 1973, Fordham University.
David H. Ehlers, Ph.D. (1973)
Chairman, Physics Department
Assistant Professor of Physics
B.A., 1964, Western Washington State College; Ph.D., 1970, Washington State University.

Mary B. Ehlers, Ph.D. (1974)
Assistant Professor of Mathematics
B.A., B.A. in Ed., 1964, Western Washington State College; M.A., 1966, Ph.D., 1969, Washington State University.

Kenneth F. Enslow, S.J., M.L. (1972)
University Librarian
B.A., 1952, Gonzaga University; B.A., 1960, University of Santa Clara; M.L., 1965, University of Washington.
John D. Eshelman, Ph.D. (1969) $\dagger$
Acting Dean, Albers School of Business
Associate Professor of Economics
B.S., 1963, Harding College; M.A., 1967, Ph.D., 1971, University of Washington.

Patricia Ann Ferris, Ph.D., (1967)
Associate Professor of Nursing
B.S., 1951, St. Mary's College, Indiana; M.S., 1958, Western Reserve University; Ph.D., 1972, University of Washington.
*Lewis Filler, D. Eng. Sci. (1962)
Professor of Mechanical Engineering
B. Aero. Eng., 1953, M. Aero. Eng., 1954, D. Eng. Sci., 1958, New York University.

John A. Fischer, Major, B.S. (1976)
Assistant Professor of Military Science
B.S., 1962, Loyola College.

Alice L. Fisher, M.S.P.H. (1950)
Professor Emeritus
B.S.N., 1930, University of Minnesota; M.S.P.H., 1936, University of Michigan.
C. Patrick Fleenor, Ph.D. (1973) $\dagger$

Assistant Professor of Business
B.A., 1969, Boise State College; M.B.A., 1970, Ph.D., 1975, University of Washington.

Donald J. Foran, S.J., Ph.D. (1975) $\dagger$
Assistant Professor of English
A.B., 1966, M.A., 1967, Gonzaga University; S.T.M., 1975, Jesuit School of Theology; Ph.D., 1973, University of Southern California.

Winfield S. Fountain, Ed.D. (1957) $\dagger$
Professor of Education
B.A., 1939, North Idaho College of Education; M.Ed., 1953, Ed.D., 1956, University of Washington.

Louis Gaffney, S.J., Ph.D. (1956; 1976)
Professor of Psychology
A.B., 1942, M.A., 1943, Gonzaga University; S.T.L., 1950, Alma College; Ph.D., 1956, University of Minnesota.

Brenda J. Geyer, M.A. (1976)
Instructor in Nursing
B.S., 1970, Seattle Pacific College; M.A., 1976, University of Washington.

Sister Suzanne Giblin, C.S.J., M.A. (1976) $\dagger$
Co-director, CORPUS/SUMORE Programs
Instructor in Theology/Religious Studies
B.A., 1958, College of St. Teresa; M.A., 1967, Marquette University.

James P. Goodwin, S.J., M.A. (1950; 1966)
Chairman, Sociology Department
Professor of Sociology
B.A., 1937, M.A., 1938, Gonzaga University; M.A., 1950, Harvard University.

Gary I. Green, Ph.D. (1974)
Assistant Professor of Business
B.A., 1966, University of Colorado; M.B.A. 1970, Seattle University; Ph.D., 1976, University of Washington.

James K. Griffin, Capt., B.Ed. (1975)
Assistant Professor of Military Science
B.Ed., 1968, Seattle University.

William A. Guppy, Ph.D. (1952)
Academic Vice President
Professor of Psychology
Ph.B., 1950, Seattle University; M.A., 1953, Ph.D., 1959, Loyola University, Chicago.

Reed A. Guy, Ph.D. (1975)
Assistant Professor of Physics
B.S., 1966, University of Alabama; Ph.D., 1970, University of Virginia.

Karen G. Guyot, M.S.L.S. (1969)
Associate Librarian
B.A., 1966, State University of New York, Harpur College; M.S.L.S., 1968, University of North Carolina.

Margaret M. Haggerty, Ph.D. (1971) $\dagger$
Associate Professor of Education
B.S., 1957, College of St. Teresa; M.A., 1964, Ph.D., 1967, Catholic University.

Steen Halling, Ph.D. (1976)
Assistant Professor of Psychology
B.A., 1967, York University; M.A., 1970, Ph.D., 1976, Duquesne University.

Thomas B. Hamilton, M.A. (1963)
Assistant Professor of Psychology
B.A., 1961, Seattle University; M.A., 1963, University of Portland.

Gerald Hampton, Ph.D. (1976) $\dagger$
Assistant Professor of Marketing
B.A., 1962, University of Washington; M.B.A., 1967, Ohio State

University; Ph.D., 1973, University of Washington.

## J. Hutchinson Haney, M.S. (1963)

Assistant Professor of Rehabilitation
B.A., 1966, University of Denver; M.S., 1968, University of Arizona.

Mary Alice Hanken, M.Ed. (1972)
Chairman, Health Information
Assistant Professor of Health Information
B.S., 1963, M.Ed., 1973, Seattle University.

Kathye Jean Hanson, M.N. (1976)
Instructor in Nursing
B.S., 1965, University of Wisconsin; M.N., 1967, University of Washington.

John M. Harding, J.D. (1975)
Assistant Professor of Business
B.A., 1942, Yale University; J.D., 1948, Yale Law School.

Vernon J. Harkins, S.J., B.A., S.T.L. (1958; 1963)
Assistant Professor of Philosophy
B.A., 1951, Gonzaga University; S.T.L., 1957, Alma College.

Charles R. Harmon, M.A. (1953) $\dagger$
Associate Professor of History
B.S.S., 1950, Seattle University; M.A. 1957, University of Washington.
Eugene A. Healy, S.J., Ph.D. (1952; 1967)
Professor of Biology
A.B., 1936, M.A., 1937, B.S., 1945, Gonzaga University; S.T.L., 1944, Alma College; M.S., 1948, Fordham University; Ph.D., 1952, Columbia University.

Susan Helbig, B.S. (1976)
Instructor in Health Information
B.S., 1974, Whitworth College.

Hildegard R. Hendrickson, Ph.D., (1967) $\dagger$
Professor of Economics and Finance
B.A., 1958, M.B.A., 1959, Ph.D., 1966, University of Washington.

Marvin T. Herard, M.F.A. (1960)
Chairman, Fine Arts Department
Associate Professor of Art
B.A., 1954, University of Washington; M.F.A., 1960, Cranbrook Academy of Art.

Montie T. Hess, Capt., M.A. (1976)
Assistant Professor of Military Science
B.G.S., 1974, Chaminade College; M.A., 1975, Central Michigan University.

Helon E. Hewitt, M.N. (1965)
Associate Professor of Nursing
B.S., 1959, M.N., 1961, University of Washington.

Shirley Hikogawa, M.S.W. (1976)
Instructor in Community Services
B.A., 1967, M.S.W., 1969, University of Washington.

Lee Hodson, M.L.S. (1957)

## Assistant Librarian

B.A., 1939, University of Redlands; M.L.S., 1942, University of California.

## James B. Hogan, Ph.D. (1976)

Assistant Professor of Political Science
A.B., 1957, Long Beach State; M.A., 1958, University of California at Los Angeles; Ph.D., 1970, Cornell University.

Ray W. Howard, Ph.D. (1967)

## Professor Emeritus

B.A., 1931, M.A., 1940, Ph.D., 1949, University of Washington.

Margaret L. Hudson, Ph.D. (1974)
Assistant Professor of Biology
B.S., 1968, Ph.D., 1974, University of Washington.

Jeanette A. Hulburt, M.L. (1964)
Associate Librarian
B.A., 1950, Seattle University; M.L., 1964, University of Washington.

## Gladys M. Hunter, M.Ed. (1955)

Professor Emeritus
B.A., 1936, Valley City Teachers College; M.Ed., 1947, Teachers College, Columbia University.

Dolly Ito, D.N.S. (1959; 1970; 1976)
Associate Professor of Nursing
B.S., 1951, Gonzaga University; M.A., 1958, University of Washington; D.N.S., 1970, University of California at San Francisco.

Louis G. Jeannot, M.A. (1966)
Assistant Professor of Theology and Religious Studies
A.B., 1953, University of Portland; M.A., 1971, Marquette University.

Dolores M. Johnson, Ph.D. (1964) $\dagger$
Assistant Professor of English
B.A., 1960, M.A., 1964, Ph.D., 1971, University of Washington.

Warren B. Johnson, Ph.D. (1962) $\dagger$
Associate Professor of History
B.A., 1947, M.A., 1952, Ph.D., 1962, University of Washington.

Andrew J. Judd, B.A., CPA (1976) $\dagger$
Instructor in Accounting
B.A., 1972, University of Washington.

Herbert M. Kagi, Ph.D. (1974)
Director, Community Services
and Criminal Justice/Police Science
Assistant Professor of Community Services
and Criminal Justice/Police Science
A.B., 1955, M.A., 1963, Ph.D., 1963, Syracuse University.

Leo B. Kaufmann, S.J., Ph.D. (1967) $\dagger$
Professor of Philosophy
B.A., 1944, M.A., 1945, Gonzaga University; S.T.L., 1952, Alma College; Ph.D., 1957, St. Louis University.

Michael M. Kelliher, S.J., D. Crim. (1972
Assistant Professor of Sociology
A.B., 1960, Gonzaga University; S.T.B., 1968, University of Santa Clara; M.Crim., 1969, D. Crim., 1972, University of California at Berkeley.

James W. King, S.J., S.T.D. (1959; 1972)
Associate Professor of Community Services
Diploma, Voice, 1942, Sherwood Music School, Chicago; M.A., 1952, Gonzaga University; S.T.B., 1957, Alma College; Diplome, 1958, Institut Gregorien de Paris; S.T.D., 1971, San Francisco Theological Seminary.
John L. Kite, Ph.D. (1974)
Assistant Professor of Rehabilitation
B.S., 1966, M.Ed., 1968, Trinity University; Ph.D., 1974, University of Arizona.

Harry H. Kohls, S.J., Ph.D. (1966) $\dagger$
Associate Professor of Philosophy
A.B., 1935, M.A., 1936, Gonzaga University; Ph.D., 1952, Georgetown University.
Stephen R. Kuder, S.J., Ph.D. (1975)
Assistant Professor of English
A.B., 1966, Gonzaga University; M.A., 1970, Boston College; Ph.D., 1975, Graduate Theological Union, Berkeley.
George D. Kunz, Ph.D. (1971)
Chairman, Psychology Department
Assistant Professor of Psychology
A.B., 1960, Gonzaga University; M.A., 1964, Marquette University; Ph.D., 1975, Duquesne University.

Charles S. LaCugna, Ph.D. (1947)
Professor of Political Science
A.B., 1937, Manhattan College; M.A., 1944, Fordham University; Ph.D., 1960, University of Washington.

Jane P. LaFargue, M.N. (1969)
Assistant Professor of Nursing
B.S., 1968, Boston University; M.N., 1969, University of Washington.

Val M. Laigo, M.F.A. (1965)
Assistant Professor of Art
B.Ed., 1954, Seattle University; M.F.A., 1964, University of Washington.

James Robert Larson, Ph.D. (1952) $\dagger$
Professor of Sociology
A.B., 1949, Seattle University; Ph.D., 1958, University of Washington.

## Mary Alice Lee, A.B. (1957)

Registrar
A.B., 1949, Saint Louis University.

Albert A. Lemieux, S.J., Ph.D. (1948; 1968)
Professor of Philosophy
B.A., 1931, M.A., 1932, Gonzaga University; S.T.L., 1939, Alma

College; Ph.D., 1945, University of Toronto.
James A. LePenske, Jr., Capt., M.P.S. (1976)
Assistant Professor of Military Science
B.S., 1970, Troy State University; M.P.S., 1975, Western Kentucky University.

William F. LeRoux, S.J., M.A., S.T.D. (1958)
Assistant Dean for College Planning
Professor of Theology and Religious Studies
B.A., 1946, M.A., 1947, Gonzaga University; S.T.L., 1954, Alma College; S.T.D., 1959, Gregorian.

Francis J. Lindekugel, S.J., M.A., S.T.L. (1946) $\dagger$
Associate Professor of Theology and Religious Studies A.B., 1937, M.A., 1938, Gonzaga University; S.T.L., 1945, Alma College.

## Francis A. Logan, S.J., M.A. (1939)

Professor Emeritus
A.B., 1925, M.A., 1926, Gonzaga University; Diplome, 1955, de I'Institut de Phonetique de I'Universite de Paris.

Reba Y. Lucey, M.Ed. (1969)
Assistant Professor of Physical Education
B.S., 1949, M.Ed., 1957, Sam Houston State Teachers College.

Kenneth D. MacLean, M.A. (1961) $\dagger$
Associate Professor of English
B.A., 1952, M.A., 1957, University of Washington.

Harry Majors, Jr., M.S. (1958)
Chairman, Mechanical Engineering Professor of Mechanical Engineering
B.S., 1935, University of California; M.S., 1939, California Institute of Technology; Registered Professional Engineer.

Donaid C. Malins, Ph.D. (1971)
Research Professor of Chemistry
B.A., 1953, University of Washington; B.S., 1956, Seattle University; Ph.D., 1967, University of Aberdeen.

Leonard B. Mandelbaum, Ph.D. (1973) $\dagger$
Director, Institute of Public Service
Associate Professor of Business
B.A., 1954, Washington Square College; J.D., 1957, Yale Law School; M.A. 1966, Ph.D., 1974, American University.

Albert B. Mann, M.A. (1960) $\dagger$
Associate Professor of History
A.B., 1951, Gonzaga University; M.A., 1957, University of Washington.

## R. Maxime Marinoni, Ph.D. (1964) $\dagger$

Associate Professor of French
Licence, 1961, Universite de Grenoble; M.A., 1965, Ph.D., 1975, University of Washington.

Karla J. Marken, M.A. (1975)
Instructor in Education
Director, Montessori Teacher Training
B.A., 1961, Hamline University; M.A., 1975, Seattle University.
*David D. McCloskey, Ph.D. (1971; 1975)
Assistant Professor of Sociology
B.S., 1968, University of Oregon; M.A., 1970, Ph.D., 1975, New School-Social Research.

Alexander F. McDonald, S.J., M.A. (Oxon) (1969) $\dagger$
Chairman, English Department
Associate Professor of English
M.A., 1941, Gonzaga University; M.A., 1942, University of Detroit; S.T.L., 1948, Alma College; M.A., 1952, Oxford University.
Kevin P. McGinley, S.J., M.A. (1976)
Instructor in Philosophy
A.B., 1975, Gonzaga University; M.A., 1976, Boston College.

James B. McGoldrick, S.J., Ph.D. (1931)
Professor Emeritus
A.B., 1923, M.A., 1924, Gonzaga University; S.T.D., 1931, Gregorian; Ph.D., 1935, University of Washington.

James T. McGuigan, S.J., M.A., S.T.L. (1946; 1965) Professor Emeritus
A.B., 1929, M.A., 1930, Gonzaga University; S.T.L., 1937, Alma College.
J.W. McLelland, M.A. (1947)

Associate Dean, Albers School of Business
Professor of Finance
B.S., 1941, Seattle College; M.A., 1949, University of Washington.
Sister Mary Roberta McMahon, O.P., Ph.D. (1962) $\dagger$
Associate Professor of Philosophy
B.A., 1936, M.Ed., 1953, University of Washington.; Ph.D., 1963, St. Louis University.

Darrell A. McNabb, Ph.D. (1972) $\dagger$
Assistant Professor of Business
B.S.B.A., 1962, M.P.A., 1963, University of Denver; Ph.D., 1976, University of Washington.
Arthur L. McNeil, S.J., Ph.D. (1970)
Professor Emeritus
A.B., 1931, M.A., 1932, Gonzaga University; Ph.D., 1936, Catholic University of America; S.T.B., 1946, Alma College.

James C. McWaters, MSG (1972)
Operations Sergeant
Paul B. Milan, Ph.D. (1966) $\dagger$
Associate Professor of French
B.A., 1964, Seattle University; M.A., 1966, Ph.D., 1972, University of Washington.

Derek M. Mills, M.P.A. (1975) $\dagger$
Instructor in Public Service
B.A., 1973; M.P.A., 1976, University of Washington.

Joseph B. Monda, Ph.D. $(1955 ; 1968) \dagger$
Director, Summer School
Professor of English
A.B., 1949, St. Martin's College; M.A., 1950, Marquette University; Ph.D., 1968, University of Colorado.

John A. Morford, Ed.D. (1973) $\dagger$
Dean, School of Education
Professor of Education
B.Ed., 1955, Gonzaga University; M.Ed., 1961, Ed.D., 1963, University of Idaho.
George O. Morris, S.J., Docteur (1973; 1976)
Assistant Professor of French
B.A., 1961, Gonzaga University; M.A., 1969, University of Notre

Dame; M.A., 1970, St. Mary's Halifax; Docteur, 1973, Universite de Paris.

Gail Nank, M.A. (1974)
Instructor in Nursing
B.S., 1964, Columbia University; M.A., 1968, University of Washington.
Edward J. O'Brien B.C.S. (1958)
Director of Athletics
B.C.S., 1953, Seattle University.

Ralph K. O'Brien, Ed.D. (1953)
Professor of Education
B.S., 1939, Cortland State Teachers College; M.S.Ed., 1941,

Syracuse University; Ed.D., 1954, University of Washington.
R. Michael O'Connor, Ph.D. (1974) $\dagger$

Assistant Professor of Education
B.A., 1962, M.Ed., 1969, University of Washington; Ph.D., 1974, University of Minnesota.
Susan B. Ogden, M.B.A. (1975)
Assistant Professor of Business
B.S., 1966, M.B.A., 1968, University of Southern California.

Cornelius J. O'Leary, S.J., M.A., S.T.B. (1953; 1971)
Associate Professor of Theology and Religious Studies
A.B., 1943, M.A., 1944, Gonzaga University; S.T.B., 1951, Alma College.

Joseph T. Page, Ph.D. (1955)
Chairman, Physical Education Department Associate Professor of Physical Education B.A., 1950, M.S., 1951, Springfield College, Mass.; Ph.D. 1965, University of Oregon.

Adele T. Palmberg, Ph.D. (1974)
Assistant Professor of Foreign Languages
B.A., 1964, Michigan State University; B.A., 1965, Middlebury

College; Ph.D., 1974, University of Illinois.
Virginia L. Parks, Ph.D. (1974) $\dagger$
Vice President for Finance and Business
Professor of Accounting and Economics
B.B.A., 1961, University of Texas; M.B.A., 1966, Ph.D., 1971, University of Houston.

James E. Parry, M.A. $(1961,1968) \dagger$
Associate Professor of History
B.A., 1960, Seattle University; M.A., 1963, University of Washington.
Giuseppe G. Patelli, D.C.S., C.P.A. (1950)
Professor Emeritus
D.C.S., 1925, Bocconi University, Milan, Italy.

Anna Marie Payne, M.N. (1972)
Assistant Professor of Nursing
B.S.N., 1968, University of Arkansas; M.N., 1972, University of Washington.

Margaret Penne, M.A. (1971)
Director, Speech Program
Assistant Professor of Speech
B.A., 1967, M.A., 1972, Seattle University.

Ronald A. Peterson, J.D. (1950; 1963) $\dagger$
Associate Professor of Business and Law
A.B., 1943, University of Omaha; J.D., 1948, Creighton University; Member, Nebraska and Washington Bar.
Ekkehard J. Petring, Ph.D. (1972)
Chairman, Rehabilitation
Assistant Professor of Rehabilitation
B.A., 1961, University of California at Santa Barbara; M.S., 1964, California State University, Los Angeles; Ph.D., 1972, University of Arizona.

Mary C. Pirrung, M.A. (1962) $\dagger$
Associate Professor of Education
B.A., 1947, Western Washington State College; M.A., 1953, Columbia University.

Vincent S. Podbielancik, Ph.D. (1947)
Professor of Chemistry
B.S., 1938, Seattle University; M.S., 1958, Ph.D., 1966, University of Washington.

James G. Powers, S.J., Ph.D. (1966) $\dagger$
Dean, College of Arts and Sciences
Associate Professor of English
B.A., 1956, Ph.L., 1956, M.A., 1960, Gonzaga University; S.T.M., 1963, S.T.L., 1963, University of Santa Clara; Ph.D., 1966, University of Colorado.

Sister Christopher Querin, S.P., Ph.D. (1960)
Professor of Political Science
B.S.S., 1950, Seattle University; Ph.D., 1961, St. Louis University.

David H. Read, Ph.D. (1948; 1954)
Professor of Chemistry
B.S., 1942, Seattle University; M.S., 1944, University of Illinois; Ph.D., 1949, University of Notre Dame.

## James B. Reichmann, S.J., Ph.D. (1955; 1965) $\dagger$ <br> Chairman, Philosophy Department

Professor of Philosophy
B.A., 1946, M.A., 1948, Gonzaga University; S.T.L., 1954, Ph.D., 1960, Gregorian.

## *Eileen M. Ridgway, Ph.D. (1963)

Dean, School of Nursing
Professor of Nursing
B.S.N.E., 1944, St. Mary College, Kansas; M.S.N.E., 1957, St. Louis University; Ph.D., 1963, Catholic University.
James Riley, S.J., M.A. (1973; 1977) $\dagger$
Instructor in Philosophy
B.A., 1961, M.A., 1963, Gonzaga University; M.A., 1969, St.

Mary's University; M.A., 1973, Northwestern University.

Stephen B. Robel, M.S. (1948)
Professor of Mechanical Engineering
B.S., 1948, Seattle University; M.S., 1951, University of Notre Dame.

Wanda Lee Roberts, M.N. (1976)
Instructor in Nursing
B.S., 1975, M.N., 1976, University of Washington.

Marilyn J. Robertson, M.A. (1976)
Instructor in Nursing
B.Sc., 1970, M.A., 1973, University of Washington.

Theodore J. Ross, M.B.A., C.P.A. (1947)
Professor Emeritus
B.S., 1932, University of California; M.B.A., 1946, University of Chicago.

James E. Royce, S.J., Ph.D. (1948)
Director, Alcohol Studies Program
Professor of Psychology
A.B., 1939, M.A., 1940, Gonzaga University; S.T.L., 1948, Alma

College; Ph.D., 1945, Loyola University, Chicago.
Erlinda F. Rustia, Litt.D. (1972) $\dagger$
Associate Professor of English
Litt. B., 1941, M.A., 1948, Litt.D., 1969, University of Santo Tomas.

Robert D. Saltvig, Ph.D. (1962) $\dagger$
Chairman, History Department
Associate Professor of History
A.B., 1954, University of Portland; M.A., 1959, Ph.D., 1966, University of Washington.

George A. Santisteban, Ph.D. (1964)
Professor of Biology
B.A., 1945, Montana State University; M.A., 1949, Ph.D., 1951, University of Utah.

Louis A. Sauvain, S.J., M.A., S.T.B. (1955; 1965) $\dagger$
Campus Ministry
Associate Professor of Theology and Religious Studies
A.B., 1940, Seattle University; M.A., 1948, Gonzaga University; S.T.B., 1953, Alma College.

Leo A. Schmid, S.J., Ph.D. (1934; 1947)
Professor Emeritus
A.B., 1932, M.A. 1933, Gonzaga University; S.T.B., 1941, Alma

College; M.S., 1942, Marquette University; Ph.D., 1947,
Fordham University.
Richard T. Schwaegler, Ph.D. (1959; 1967)
Chairman, Civil Engineering
Professor of Civil Engineering
B.S., 1957, M.S., 1958, Massachusetts Institute of Technology; Ph.D., 1968, University of Washington.

John S. Schwarz, S.J., M.A. (1970; 1972)
Assistant Professor of History
B.A., 1951, M.A:, 1958, Gonzaga University; M.A., 1964, University of Santa Clara.

Mary A. Linden Sepulveda, M.L. (1973)
Junior Librarian
B.A., 1972, M.L., 1973, University of Washington.

Richard F. Sherburne, S.J., Ph.D. (1977)
Associate Professor of Theology/Religious Studies
B.A., 1949, M.A., 1950, Ph.L., 1950, S.T.B., 1958, Saint Louis University; Ph.D., 1976, University of Washington.

Francis J. Smedley, B.S. (1949)
Associate Professor Emeritus
B.S., 1933, U.S. Naval Academy.

Mary T. Soulier, M.B.A. (1976)
Instructor in Accounting
B.A., 1973, M.B.A., 1975, University of Washington.

## Edward H. Spiers, M.A. (1949) $\dagger$

Professor of English
Ph.B., 1948, Seattle University; M.A., 1949, University of Washington.

Jerry T. Standal, Ph.D. (1975) $\dagger$
Assistant Professor of Business
B.A., 1959, Washington State University; M.A., 1967, Ph.D., 1974, University of Washington.

Leo P. Stanford, Ph.D. (1976) $\dagger$
Director, CORPUS/SUMORE Programs
Associate Professor of Theology and Religious Studies
B.S., 1964, University of San Francisco; Ph.D., 1969, Marquette University.

James L. Stark, D.A. (1972)
Assistant Professor of German
B.A., 1964, University of Portland; M.A., 1968, D.A., 1972, University of Washington.

Bernard M. Steckler, Ph.D. (1961)
Professor of Chemistry
B.S., 1953, St. Martin's College; Ph.D., 1957, University of Washington.

Harriet B. Stephenson, Ph.D. (1967) $\dagger$
Associate Professor of Management
B.A., 1961, M.B.A., 1962, Ph.D., 1966, University of Washington.

Janet L. Stevenson, B.H.I.S. (1974)
Instructor in Health Information
B.H.I.S., 1974, Seattle University.

## William J. Sullivan, S.J., Ph.D. (1975)

President
A.B., 1948, Ph.L., 1955, A.M., 1955, Saint Louis University; S.T.L., 1962, Faculte de Theologie; M.A., 1967, M. Phil.-Religious Studies, 1967, Ph.D., 1971, Yale University.

Carl E. Swenson, Ph.D. (1976)
Assistant Professor of Mathematics
B.Ed., 1966, Pacific Lutheran University; M.A., 1970, Ph.D., 1972, Washington State University.

John R. Talevich, M.A., (1955)
Chairman, Journalism Department
Associate Professor of Journalism
A.B., 1949, Seattle University; M.A., 1952, Marquette University.

Ronald R. Talmage, Ph.D. (1975) $\dagger$
Assistant Professor of Philosophy
B.A., 1969, Seattle University; Ph.D., 1974, St. Louis University.
Michael J. Taylor, S.J., S.T.D. (1961; 1965; 1971; 1977)
Professor of Theology and Religious Studies
A.B., 1947, M.A., 1949, Gonzaga University; S.T.L., 1955, Alma College; S.T.D., 1961, Woodstock College, Lilly Post-Doctoral Fellowship, 1964-65.

William Taylor, M.A. (1953; 1969) $\dagger$
Associate Professor of English
B.A., 1956, Seattle University; M.A., 1966, University of Washington.

John K. Thompson, Ph.D. (1973)
Assistant Professor of Rehabilitation
B.A., 1966, Muskingum College; M.S., 1970, San Diego State College; Ph.D., 1972, University of Arizona.

David L. Thorsell, Ph.D. (1974)
Chairman, Chemistry Department
Assistant Professor of Chemistry
B.A., 1964, University of Minnesota; Ph.D., 1971, Ohio State University.

David E. Tinius, M.B.A., C.P.A. (1970) $\dagger$
Assistant Professor of Accounting
B.S.M.E., 1960, M.B.A., 1964, University of Washington.

Henrietta B. Tolson, M.S.W. (1971)
Assistant Professor of Community Services
B.A., 1960, Seattle University; M.S.W., 1962, University of Washington.
L. John Topel, S.J., Ph.D. (1971) $\dagger$

Associate Professor of Theology and Religious Studies
B.A., 1958, M.A., 1959, Gonzaga University; S.T.M., 1966, Santa Clara University; S.S.L., 1969, Pontifical Biblical Institute; Ph.D., 1973, Marquette University.

Burnett R. Toskey, Ph.D. $(1958$; 1968)
Professor of Mathematics
B.S., 1952, M.A., 1958, Ph.D., 1959, University of Washington.

John P. Toutonghi, Ph.D. (1963)
Associate Professor of Physics
B.S., 1957, Seattle University; Ph.D., 1963, University of Washington.

Sister Rosaleen Trainor, CSJ, Ph.D. (1965) $\dagger$
Director, Honors Program
Associate Professor of Philosophy
B.Ed., 1958, Seattle University; M.A., 1963, Ph.D., 1966, St. John's University.

Thomas J. Trebon, M.A. (1969; 1976)
Assistant Professor of Political Science
B.A., 1965, Seattle University; M.A., 1968, University of Denver.

Kathleen M. Treseler, M.N. (1968)
Assistant Professor of Nursing
B.S., 1946, Seattle College; M.N., 1965, University of Washington.

Alan Troy, Ph.D. (1970)
Associate Professor of Mathematics
B.A., 1950, B.S., 1953, University of Chicago; M.S., 1956, Ph.D., 1961, University of Illinois.

Richard L.Turner, Ph.D. (1963)
Associate Professor of Electrical Engineering
B.S.E.E., 1946, M.S.E.E., 1952, Drexel Institute of Technology; Ph.D., 1962, University of Washington.

Frank A. Valente, Ph.D. (1966)
Research Professor Emeritus
B.S., 1922, M.Sc., 1924, Ph.D., 1939, New York University.

Lawrence E. Vance, M.S. (1973)
Assistant Professor of Physical Education
B.S., 1961, Bradley University; M.S., 1967, Indiana State University.

Usha S. Varanasi, Ph.D. (1971)
Research Professor of Chemistry
B.SC., 1961, Bombay University; M.S., 1963, California Institute of Technology; Ph.D., 1967, University of Washington.
Robert F. Viggers, M.S. (1949)
Professor of Mechanical Engineering
B.S., 1944, University of Washington; M.S., 1950, Oregon State College; Registered Professional Engineer.

## John E. Vinson, M.S. (1969)

Assistant Professor of Mathematics
B.A:, 1958, M.A., 1961, Oregon State University; M.S., 1965, Stanford University.
Donald B. Walter, M.B.A. (1975)
Admissions Officer, Graduate Business Programs Instructor in Business
B.S., 1969, Ohio State University; M.B.A., 1974, Seattle University.
J. Kevin Waters, S.J., D. Mus. Arts (1969)

Associate Professor of Music
A.B., 1957, M.A., 1958, Gonzaga University; B.A., 1964, University of Washington; M.A., 1965, Santa Clara University; D.Mus.Arts, 1970, University of Washington.

Kathleen A. Waters, M.Ed. (1969)
Assistant Professor of Health Information
B.S., 1958, M.Ed., 1973, Seattle University.

Edwin H. Weihe, Ph.D. (1972)
Assistant Professor of English
B.A., 1963, Brown University; M.A., 1965, M.F.A., 1966, Ph.D., 1972, University of lowa.
William L. Weis, M.B.A. (1973) $\dagger$
Assistant Professor of Business
B.S.B.A., 1969, M.B.A., 1971, Bowling Green State University.

Charles A. Wollesen, S.J., Ph.D. (1960) $\dagger$
Associate Professor of English
A.B., 1945, M.A., 1946, Gonzaga University; S.T.L., 1953, Alma College; M.A., 1959, Fordham University; Ph.D., 1970, University of Washington.

Francis P. Wood, S.J., M.S. (1952)
Chairman, Electrical Engineering
Professor of Electrical Engineering
A.B., 1940, Gonzaga University; S.T.L., 1948, Alma College;
M.S., 1952, Stanford University.

Marylou Wyse, Ph.D. (1965; 1969) $\dagger$
Associate Professor of Education
B.A., 1953, M.Ed., 1965, Seattle University; Ph.D. 1969, Western Reserve University.
Charles A. Yackulic, M.A. (1964) $\dagger$
Associate Professor of Education
B.Sc., 1948, B.Ed., 1950, University of Alberta; M.A., 1951, Eastern Washington College.

## William L. Yam, S.J., M.S.L.S. (1972)

Associate Librarian
A.B., 1963, Ateneo de Manila; M.S.L.S., 1968, Catholic University of America.

Andre L. Yandl, Ph.D. (1956; 1966)
Chairman, Mathematics
Professor of Mathematics
B.S., 1954, M.A., 1956, Ph.D., 1965, University of Washington.

Barbara M. Yates, Ph.D. (1970) ${ }^{\dagger}$
Associate Professor of Economics
B.A., 1962, College of Wooster; M.A., 1963, Ph.D., 1969, University of Michigan.

James Young, SSG (1975)
Operations Sergeant
Anita Yourglich, Ph.D. (1946) $\dagger$
Professor of Sociology
B.S., 1945, Seattle University; M.A., 1948, St. Louis University; Ph.D., 1961, University of Oregon.

Gary H. Zarter, Ph.D. (1973) $\dagger$
Associate Dean, School of Education
Assistant Professor of Education
B.A., 1960, St. Norbert College; M.A., 1969, San Francisco State; Ph.D., 1973, University of Washington.
Gary A. Zimmerman, Ph.D. (1964)
Dean, School of Science and Engineering
Professor of Chemistry
B.S., 1960, California Institute of Technology; Ph.D., 1965, University of Wisconsin.

## University Lecturers

## Lawrence A. Clarke, M.S.W. (1975)

Lecturer in History
B.S., 1964, Wilberforce University; M.S.W., 1967, Wayne State University.

Calvin Crow, Ph.D. (1973)
Lecturer-Supervisor
B.Ed., 1957, M.Ed., 1965, Seattle University; Ph.D., 1973, Arizona State University.

John D. Denney, M.D. (1972)
Clinical Assistant Professor in Nuclear Medical Technology B.A., 1962, University of Washington; M.D., 1966, Cornell University Medical College.

Arthur A. Jacobovitz, Rabbi, B.A. (1961)
Lecturer in Theology and Religious Studies
B.A., 1953, Yeshiva University.

Jean Keeffe, B.A. (1974)
Lecturer in Alcohol Studies
B.A., 1945, DePauw University.

Dora Lange, M.A.T. (1975)
Lecturer-Supervisor
B.A., 1968, Smith College; M.A.T., 1969, Antioch Graduate School of Education.

Raymond Marty, M.D. (1972)
Clinical Assistant Professor in Nuclear Medical Technology B.A., 1952, University of California; M.D., 1959, University of Lausanne, Switzerland.

Michael R. McKamey, Ph.D. (1972)
Clinical Assistant Professor in Nuclear Medical Technology B.S., 1965, Seattle University; Ph.D., 1973, University of Washington.

Gretchen C. Murphy, M.Ed. (1973)
Lecturer in Health Information
B.S., 1964, Seattle University; M.Ed., 1973, University of Washington.

## Rosella Roff, M.A. (1975)

Lecturer-Supervisor
B.S. in Ed., 1939, M.A., 1954, Ohio State University.
H.E. Slape, M.S.W. (1975)

Lecturer in Community Services
B.A., 1961, Texas Wesleyan; M.S.W., 1971, University of Washington.

Thomas W. Steinburn, Ph.D. (1974)
Lecturer in Health information
B.A., 1951, M.A., 1958, Ph.D., 1965, University of Washington.

William C. Towner, M.S. (1969)
Lecturer-Supervisor
B.S., 1947, M.S., 1950, University of Washington.

John R.W. Wilby, M.Sc. (1967) $\dagger$
Lecturer in Business
B.Sc., 1928, M.Sc., 1929, University of Leeds.

Michael W. Wyne, B.A. (1974)
Lecturer in Criminal Justice/Police Science
B.A., 1959, University of Washington.

James A. Wyse, S.J., M.Ps. (1975)
Lecturer in Psychology
B.A., 1952, Gonzaga University; M.A., 1960, University of Santa Clara; M.Ps., 1966, University of Ottawa.

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## WHERE TO WRITE

There is a central mail room on the campus. Information on specific items may be obtained by writing to the offices listed below and adding: Seattle University Seattle, Washington 98122
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## Bulletins and Catalogs

Director of Admissions

## Campus Ministry

Director of Campus Ministry

## Correspondence relating to the general interest of the University <br> President <br> Curriculum, scholastic problems, degree programs

The Dean of the particular school or Academic Vice President

## Admission

Director of Admissions

## Alumni

Executive Director of Alumni Relations
Athletic Program
Director of Athletics

| Career Planning, Placement, and |
| :--- |
| job finding assistance |
| Director of Career Planning and |
| Placement |
| Continuing Education |
| Director of Continuing Education |
| Counseling and Testing |
| Director, Counseling and Testing |
| Center |
| Degrees and Graduation |
| Registrar |
| Financial Aid, Scholarships, Grants, |
| Loans, Work-Study Eligibility |
| Financial Aid Counselor |
| Foreign Students |
| Director of Admissions or |
| International Student Adviser |
| Gifts, Grants and Bequests |
| Director of Development |

Grades, Readmissions, Student Records, Transcripts
Registrar

## Graduate Study

Dean, Graduate School
Jesuit Faculty Residence
Father Minister

## Minority Students

Director of Minority Student Affairs
Personal Welfare and Health
Vice President for Student Life
Publications
Publications Director
Public Information
Public Relations Director
Student Housing
Director for Resident Student Services

Teachers Certification and Teacher Placement
Dean, School of Education
Tuition, Payment of Bills, Refunds Controller

The University reserves the right to change the fees, rules and calendar regulating admission and registration, instruction in, and graduation from the University and its various divisions and to change any other regulations affecting the student body. Changes go into effect whenever the proper authorities so determine and apply not only to prospective students but also to those who at that time are matriculated in the University. The University also reserves the right to discontinue courses at any time.

As a general rule, students follow the academic programs contained in the Bulletin in Information in effect at the time of their matriculation.

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SEATTLE, WASHINGTON 98122
(206) 626-6200




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[^1]:    Advance Registration (Summer 1977)
    Registration Classes Begin Last Day to Register Last Day to Add or Change Independence Day-No Class
    Close of First Term
    Registration Second Term
    Final Examinations

[^2]:    Senior year
    Community Services 378, 379, 478, $479 \ldots .20$ credits
    Community Services Elective.................. 5 credits
    Statistics or Research Methods .................. 5 credits
    Electives ............................................. 15 credits
    Total . . . 180 credits

[^3]:    *Offered through the Archidiocesan Office of Religious Education and Seattle University; not open to regular students.

