1973

1973-74 Seattle University Bulletin of Information

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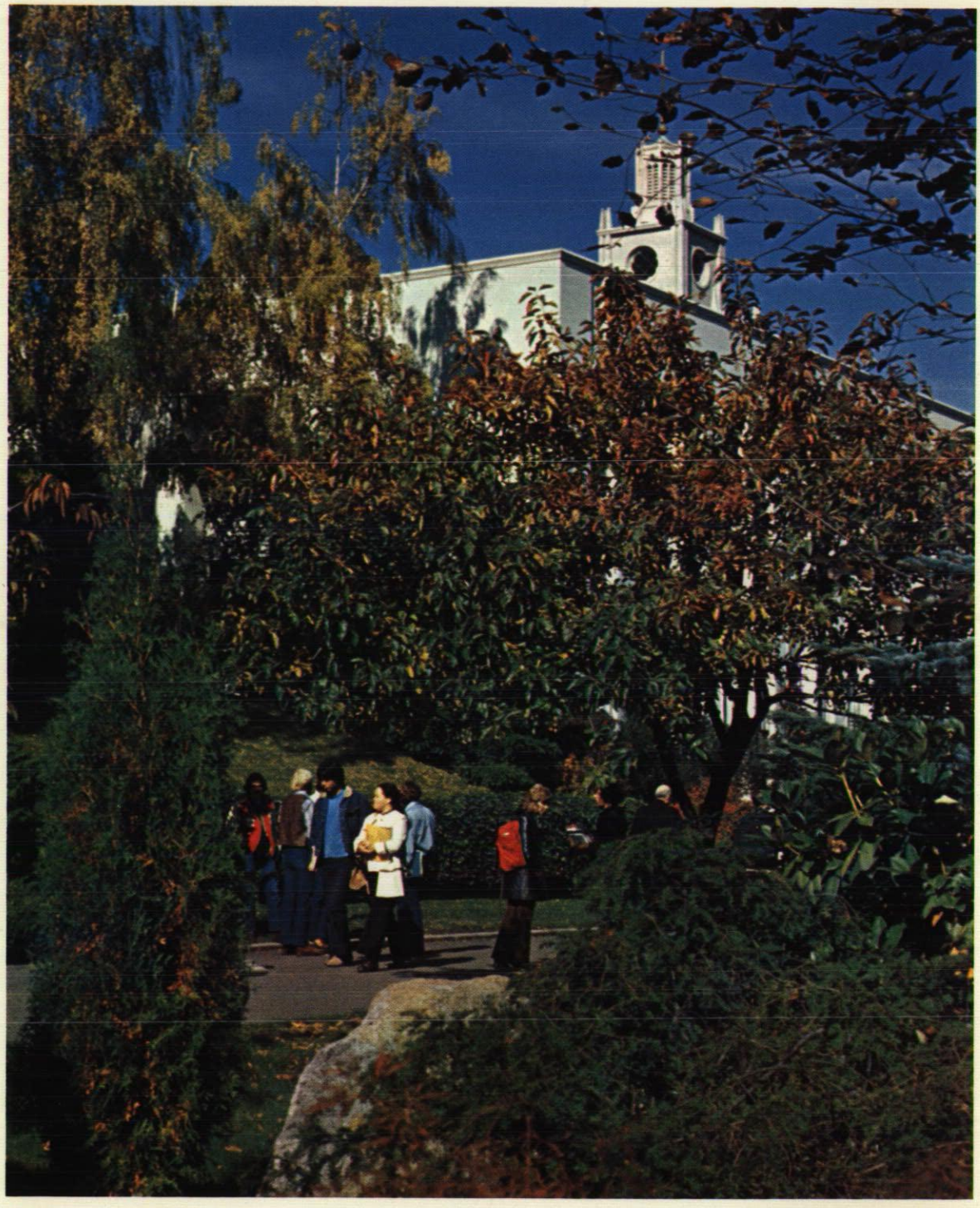

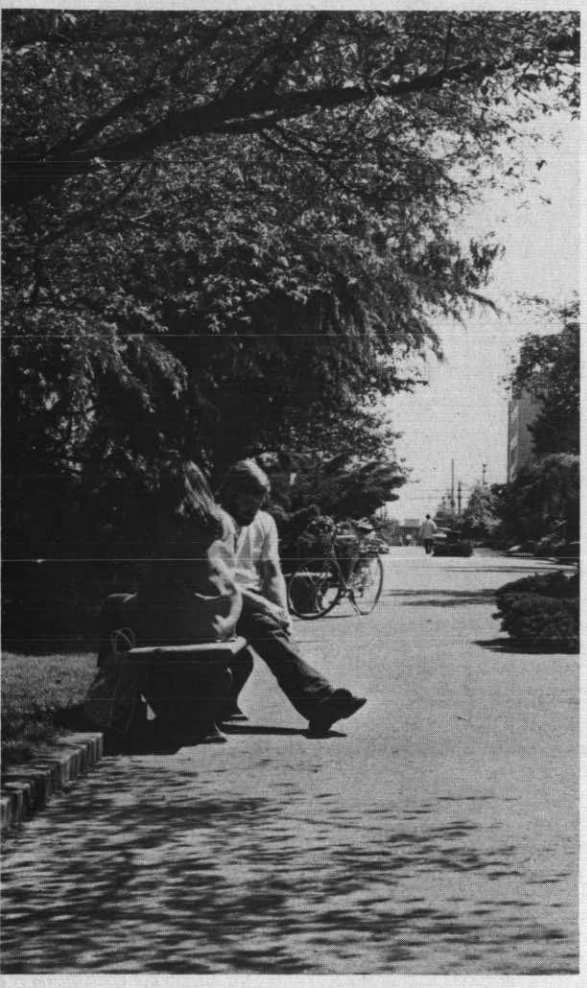

The University reserves the right to change the fees, rules and calendar regulating admission and registration, instruction in, and graduation from the University and its various divisions and to change any other regulations affecting the student body. Changes go into effect whenever the proper authorities 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 of Information in effect at the time of their matriculation.

VOL. 4 **NO. 4**

Chief Photographers Wayne Saiki • Carol Mukasa

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Contents

Academic Calendar

Winter Quarter 1973

Jan. 3—Wednesday	Registration
Jan. 4—Thursday	Classes Begin
Jan. 5—Friday	Last Day to Late Register
Jan. 10—Wednesday	Last Day to Change or Add Classes
Jan. 26—Friday	President's Day—No Classes
Feb. 12-22—Monday-Thursday	Advance Registration—Spring
Feb. 16—Friday	Last Day to Remove Incompletes
March 2—Friday	Last Day to Withdraw with 'W'
Mar. 14-16—Wednesday-Friday	Final Examinations

Spring Quarter 1973

March 26—Monday	Registration
March 27—Tuesday	Classes Begin
March 28—Wednesday	Last Day to Late Register
April 2—Monday	Last Day to Change or Add Classes
April 20—Friday	Good Friday—No Classes
April 30-May 4	Advance Registration—Summer
May 4—Friday	Last Day to Remove Incompletes
May 24—Thursday	Last Day to Withdraw with 'W'
May 28—Monday	Memorial Day—No Classes
June 2—Saturday	Baccalaureate Mass
June 3—Sunday	Commencement
June 6-8—Wednesday-Friday	Final Examinations

Summer Quarter 1973

June 18—Monday	Registration
June 19—Tuesday	Classes Begin
June 22—Friday	Last Day to Late Register
June 25—Monday	Last Day to Change or Add Classes
July 4—Wednesday	Independence Day—No Classes
July 6—Friday	Last Day to Withdraw with 'W'—First Term
July 13—Friday	First Term Ends
July 16—Monday	Registration—Second Term
July 16—Monday	Classes Begin—Second Term
July 17—Tuesday	Last Day to Change or Add—Second Term
July 31—Tuesday	Last Day to Withdraw with 'W'—Full Term
July 31—Tuesday	Last Day to Withdraw with 'W'—Second Term
Aug. 9-10—Thursday-Friday	Final Examinations

Fall Quarter 1973

September 24—Monday	Orientation
September 25—Tuesday	Registration—Returning Students
September 26—Wednesday	Registration—New Students
September 27—Thursday	Classes Begin
September 27—Thursday	Mass of the Holy Spirit
October 3—Wednesday	Last Day to Change or Add Classes
October 22—Monday	Veterans Day—No Classes
November 8—Wednesday	Last Day to Remove Incompletes
November 8—Wednesday	Last Day to Withdraw with "W"
November 12-21—Monday-Wednesday	Advance Registration
November 22-23—Thursday-Friday	Thanksgiving Holiday No Classes
November 30—Friday	Last Day to Withdraw with 'W'
December 12-14—Wednesday-Friday	Final Examinations

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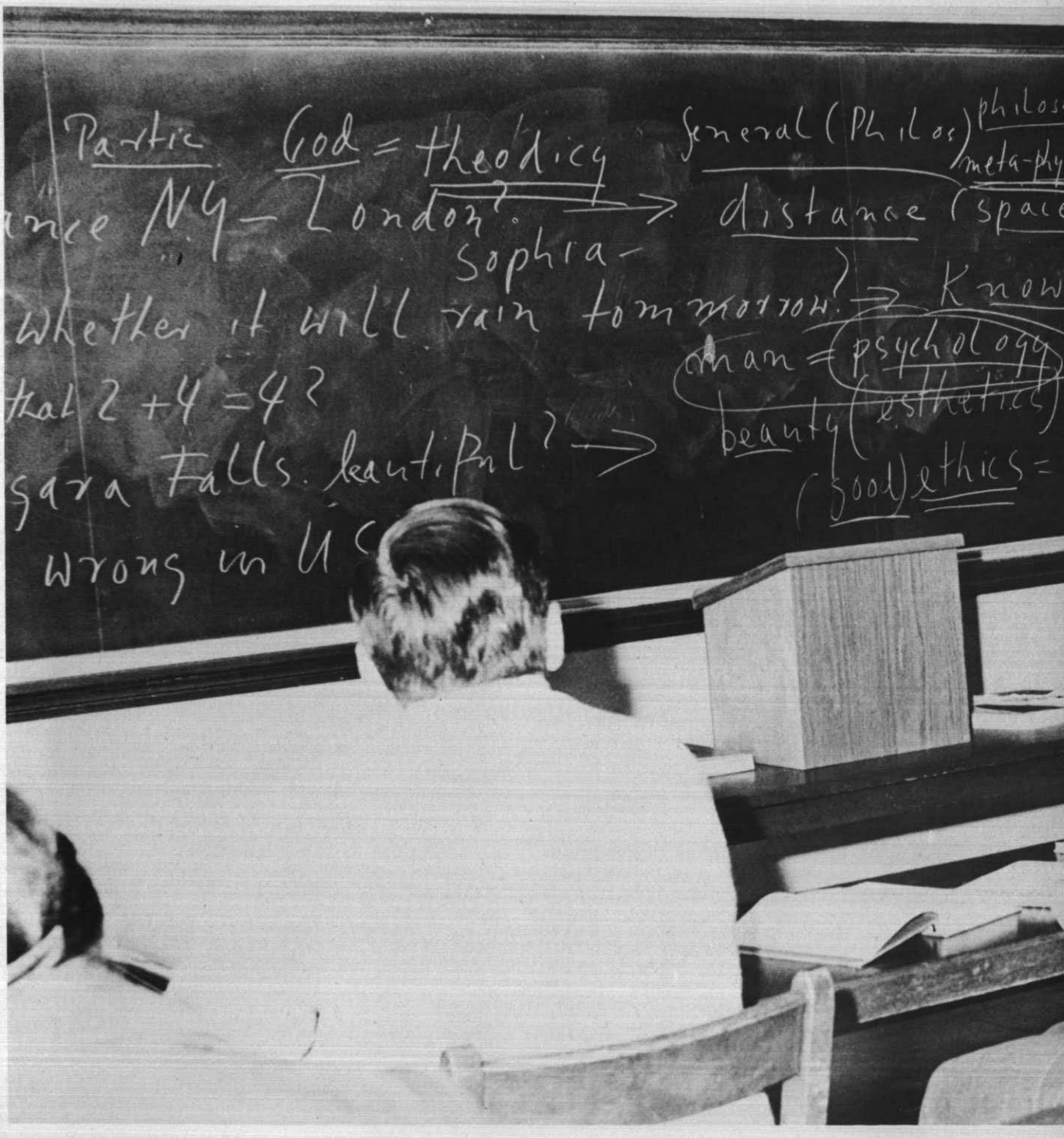
Winter Quarter 1974

January 7—Monday	Registration
January 8—Tuesday	Classes Begin
January 10—Thursday	Last Day to Late Register
January 14—Monday	Last Day to Change or Add Classes
February 18—Monday	Washington's Birthday—No Classes
February 19—Tuesday	Last Day to Remove Incompletes
February 12-22—Tuesday-Friday	Advance Registration—Spring
March 1—Friday	Last Day to Withdraw with 'W'
March 13-15—Wednesday-Friday	Final Examinations

Spring Quarter 1974

March 25—Monday	Registration
March 26—Tuesday	Classes Begin
March 28—Thursday	Last Day to Late Register
April 1—Monday	Last Day to Change or Add Classes
April 12—Friday	Good Friday—No Classes
April 29-May 3—Monday-Friday	Advance Registration—Summer
May 7—Tuesday	Last Day to Remove Incompletes
May 22—Wednesday	Last Day to Withdraw with 'W'
May 27—Monday	Memorial Day—No Classes
June 1—Saturday	Baccalaureate Mass
June 2—Sunday	Commencement
June 5-7—Wednesday-Friday	Final Examinations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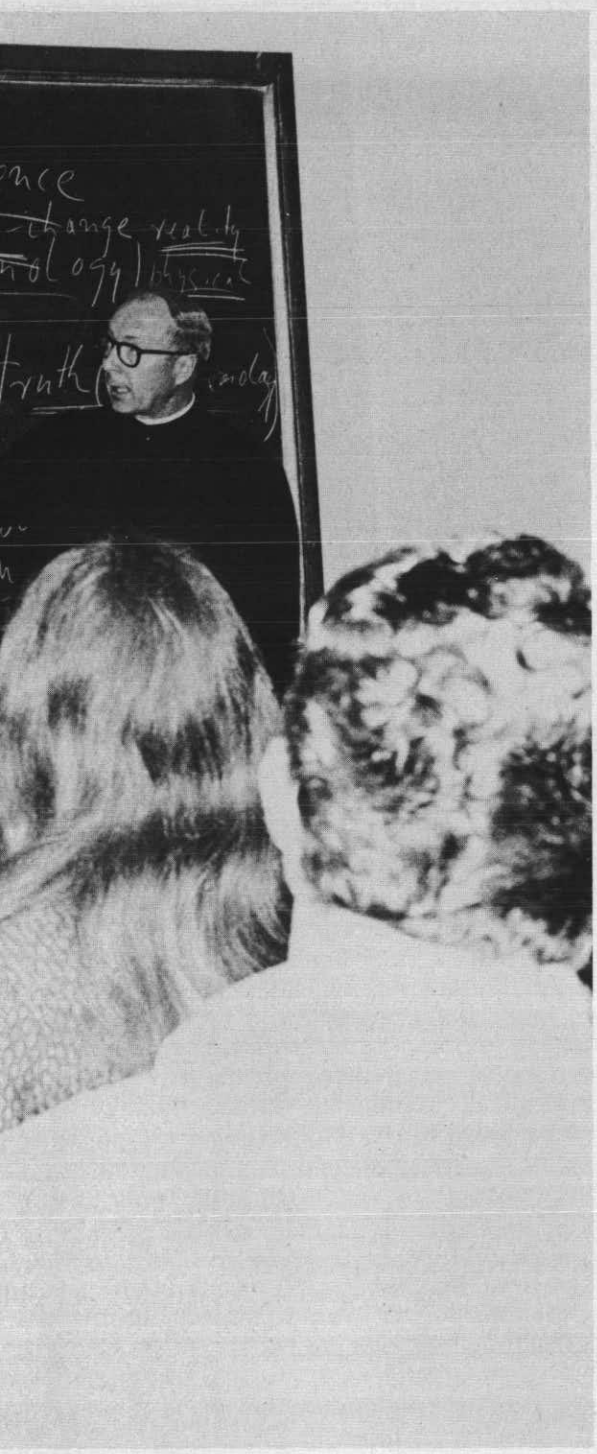


Seattle University, an institution of higher learning, has for its object and purpose:

- 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 throry 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 Province, 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 Science Hall, 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 program in "The Humanities," the forerunner of today's College of Arts and Sciences. The following year graduate studies were introduced and 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.

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 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. In 1957, the first College of Sister Formation in the country incorporated in a regular university was established at 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 11 departments. These are: English, fine arts, foreign languages, history, journalism, military science, philosophy, political science, psychology, sociology and theology. Program divisions are: community services, honors, prelaw, premajor and speech.

The 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: environmental studies, 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 business, education, English, history, natural science and religious education.

Accreditation

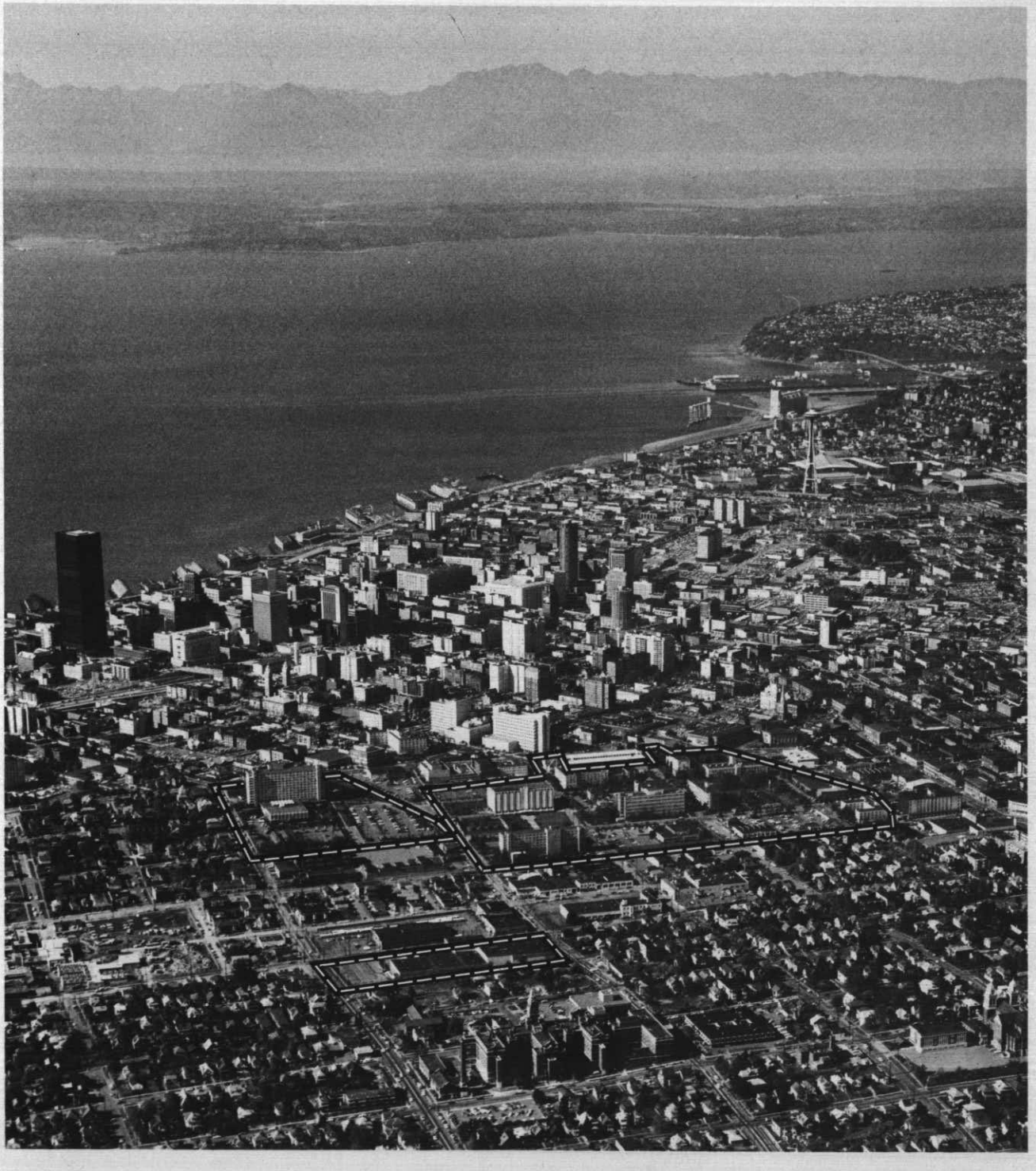
Seattle University enjoys the highest accreditation and its students are accepted for graduate and advanced study by leading colleges and universities in all parts of the country. The University is accredited by:

- Northwest Association of Secondary and Higher Schools
- 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 Training, American Association of University Women, American Council on Education, Association of American Colleges, Association of Higher Education, Association of Jesuit Colleges and Universities, National Catholic Education Association, National Commission on Accrediting, Northwest Association of Colleges, Western Interstate Commission for Higher Education.



Campus

The University is situated on a 41-acre site on Seattle's historic First Hill. It is convenient to the city's major educational, cultural and recreational facilities. These include libraries, museums, art galleries, parks and theatres, as well as agencies of municipal, state and federal government, banks, commercial and shopping centers. All are within easy reach of the student seeking the advantages of urban living. The Seattle area is served by major air, rail, highway and steamship facilities.

To meet the demands of modern education, the University has greatly expanded its physical facilities in recent years. At the present time, the campus includes 22 buildings. Among these are modern classrooms, student and faculty residences and service units.

Major campus structures include the Liberal Arts Building (1945); Student Union (1953); Xavier Hall (1955); William Pigott Building, business and education (1957); Thomas J. Bannan Building, physical sciences and engineering (1961); Bellarmine Hall, student residence (1962); Bookstore Building (1964); A. A. Lemieux Library (1966); Connolly Center, physical education (1969).

Costs

Tuition, Fees, Board and Room are due and payable according to the following schedule:

Fall Term — At registration.

Winter Term — Advanced registration in person or by mail at Treasurer's Office not later than December 29. Others — on registration day only.

Spring Term — Advanced registration in person or by mail at Treasurer's Office not later than March 23. Others — on registration day only.

Students have not completed registration until Tuition, Fees, Board and Room and any outstanding bills are paid. Students requiring financial assistance may inquire at the Financial Aid office. See pages 16-18 for further information. Seattle University reserves the right to change its charges at any time without previous notice, although after the beginning of a quarter no change will be made which is effective within that quarter.

Tuition

Tuition per quarter (10 to 15 hours)
Entering students $560.00

(Covers building fund, library, health fees; yearbook, student newspaper and student organization allotments; admission to athletic events.)

Over hours (per credit hour) ..... $ 25.00
Under 10 hours (per credit hour) ..... $ 56.00
Auditor's tuition (per credit hour) ..... $ 30.00
Graduate courses School of Business (per credit hour) ..... $ 56.00

Residence Charges

Room and Board per academic year $1,025.00
Payment Schedule
Reservation Fee ..... $ 70.00
Fall Quarter ..... $ 295.00
Winter Quarter ..... $ 330.00
Spring Quarter ..... $ 330.00

Occasional Fees (non-refundable)

Application fee — undergraduate and graduate (each paid only once) (must accompany application) ..... $ 10.00
Matriculation fee (paid once, at first registration) ..... $ 15.00
Tuition deposit (applied to first quarter's tuition if student completes registration) ..... $ 50.00
Late registration (added to tuition and fees) $10 per day — two-day maximum ..... $ 20.00
Special examination (per subject) testing ... $ 5.00
Make-up examination (per subject) ..... $ 5.00
Credit by examination (per credit hour) .... $ 5.00
Medical Technology Internship (per credit hour) ..... $ 5.00
Removal of incomplete ..... $ 5.00
Washington Pre-College tests (if not taken in high school) ..... $ 7.00
Thesis binding fee ..... $ 10.00
Graduation fee (bachelor's degree) ..... $ 20.00
($15 additional for each additional degree.)
Graduation fee (master's degree) ..... $ 45.00
Graduation fees are due at the time of application for graduation and graduation forms will be released only upon presentation of a receipt for these fees.
Graduate Record Examination ..... $ 7.00
Nursing Achievement Test ..... $ 1.25

Laboratory Fees

Biology: All laboratory courses ..... $ 10.00
Business 210, 509, 590 (Computer) ..... $ 20.00
Chemistry: All laboratory courses ..... $ 10.00
Education: ED 406 ..... $ 5.00
Engineering:
CE 496, 497; ME 496, 497 ..... $ 5.00
All other laboratory courses ..... $ 10.00
Cooperative Engineering: ..... $ 75.00
Mathematics: MT 114, 214 ..... $ 30.00
Music:
Mu 110, 111, 120, 122 ..... $ 40.00
Piano practice room, one hour daily, per quarter ..... $ 5.00
Physics: All laboratory courses ..... $ 10.00
Psychology:
Psy 381, 401 ..... $ 5.00
Psy 402 ..... $ 10.00
Psy 390 ..... $ 30.00

Refunds

Withdrawals
1-10 class days 80%
11-15 class days 60%
16-20 class days 40%
Thereafter ..... No Refund

Class Load Reduction
1-5 class days 100%
6-10 class days 80%
11-15 class days 60%
16-20 class days 40%
Thereafter ..... No Refund

Refunds are based on the number of consecutive Monday through Friday days (class days) from the first day of classes until the official date of withdrawal or class load reduction according to the above schedules. At least 10 class days must elapse between your payment and date of refund.

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 Treasurer's Office.

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 grown and developed 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.

Orientation

To assist new students in becoming better acquainted with the University and familiar with their academic program, the Academic Vice President, 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 must attend all orientation sessions. Transfer students are responsible for arranging with the Office of Admissions for their participation in any testing program required of all new students.

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. A student is under the academic guidance of the chairman of the department in which the student is taking the most hours.

Personal and Spiritual Guidance

The Jesuit chaplains, faculty members and student service personnel are available for counseling on personal matters and to provide formal and informal guidance. Prefects and housemothers in the residence halls are always available to answer questions and to advise.

Two full-time University chaplains are available to students. The University faculty and staff also includes some 60 Jesuit priests who have dedicated their lives to working with college students. Each is a student counselor, and students may feel free to come to them with any problem. These faculty and staff members are available by appointment or through the informal contact of campus life, since all live on campus.

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. This 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 and supervises the National League for Nursing achievement tests for students in the School of Nursing. At the discretion of the individual instructor, students may make up class examinations at the center.

Minority Affairs Programs

Seattle University offers to students from culturally, economically, and academically deprived backgrounds a special program of supporting services. These services include recruiting, admission and financial aid applications, counseling, tutoring, employment, placement, post graduate and career information and ethnic cultural programs. For information contact Program Director, Minority Affairs.

Religious Program

All students have the opportunity of making a retreat or a spiritual renewal weekend during the year. These weekends, under the direction of the University Chaplains, are organized by the students for the spiritual growth of the University community. Masses are offered daily in the residence halls and in the new Liturgical Center. Five Sunday Masses are scheduled throughout the day and confessions are heard at posted times each week day and before the Sunday Masses. Special Masses during the year, beginning with the Votive Mass of the Holy Spirit and ending with a Baccalaureate Mass for the seniors, are an integral part of the University's attempt to build Christian Community. Services of various denominations and religions are available near the campus.

Christian Activities Program

The Christian Activities Program involves many different activities which try to provide a practical and direct Christian involvement of the student in the University and civic communities in order to promote the ideals of the University in developing Christian leadership. Some of the organizations are:

The Confraternity of Christian Doctrine, with its mandate from the Archbishop of Seattle, is composed of all students interested in bringing the "Good News" of Christ to the handicapped in the Seattle area; the blind, deaf, mentally and physically retarded children and mental patients. Students are also involved in the regular CCD program in many parishes.

The Lay Missions Association fosters student interest in the lay missions by providing mission programs for the entire student body.

Social Action Section effects community involvement by a personal encounter between the student and members of the community—such as the tutoring program at St. Peter Claver Center, Lee House for senior citizens, Ruth Home for girls, the Good Shepherd Home and the Neighborhood House.

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.

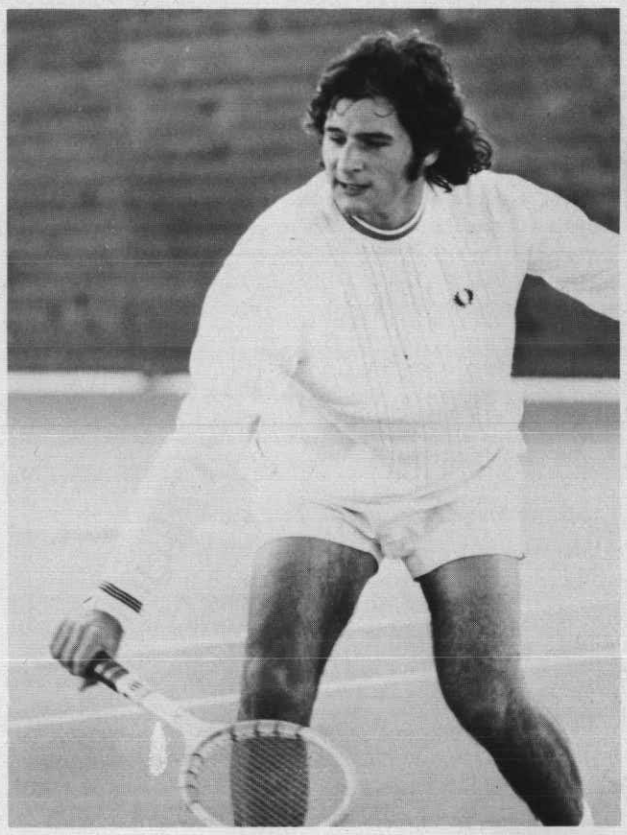
Student Health Insurance

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

Athletic Program

Seattle University is a member of the National Collegiate Athletic Association 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. Major sports at the University are basketball, baseball, golf, tennis, crew and soccer.

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.



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—Semi-weekly student newspaper.
Fragments—Literary publication.

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 publications, scholastic honoraries, religious committees and civic and charitable organizations. A list of authorized organizations may be obtained from the Office of the Director for Student Activities.

Academic Honoraries

Alpha Sigma Nu—National Jesuit honorary for men recognizing outstanding scholastic attainment, loyalty and service.

Gamma Pi Epsilon—National Jesuit honorary for women. Selection is based upon scholastic excellence.

Silver Scroll—Scholastic honorary for upperclasswomen.

Alpha Epsilon Delta—International premedical honorary.

Beta Gamma Sigma—National business school honorary.

Kappa Delta Pi—National education honorary.

Pi Mu Epsilon—National mathematics honorary.

Sigma Theta Tau—National nursing honorary.

Tau Beta Pi—National engineering honorary.

Service Honoraries

Alpha Phi Omega—A national service fraternity open to male students.

Intercollegiate Knights—A national service fraternity open to men.

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.

Mu Sigma—Music service honorary.

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. Sophomores with written parental permission may live off campus. Letters of permission and requests for waivers are to be sent to the Director for Resident Student Services (men) or the Office of the Dean for Women (women). Upperclassmen may live in the residence halls if space is available.

Residence Halls

Bellarmine Hall has a capacity of 434 and houses five floors of women and one floor of men with upperclass standing. It provides study and recreational facilities, a lounge, a snack bar and dining hall. Experienced Directors and Resident Assistants are also in residence. All students living on campus take their meals in the Bellarmine dining room.

Xavier Hall is the major residence for men. Accommodating 206 students, it is equipped with a lounge, a study area and recreational facilities. Jesuit Fathers and Resident Assistants reside in Xavier and serve as prefects and counselors.

Application for Housing

Requests for student housing are made through the Director for Resident Student Services or through the Office of the Dean for Women. A seventy-dollar ($70.00) deposit is required to make reservations. See page 10 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

Aims

The financial aid program at Seattle University is designed to assist academically qualified students who would find it difficult to attend the University without financial assistance. Aid is available to all full-time students without racial or religious discrimination.

Determining Need

To help determine which students are most qualified for aid, Seattle University requires each applicant to submit a Parents' Confidential Statement (PCS), or the American College Testing Program (ACT) Family Financial Statement. These documents reflect the amount the family can reasonably be expected to provide to meet college expenses. The University attempts to supply the balance of needed funds. The financial aid package may consist of a scholarship, grant, student loan or part-time work. All financial assistance is awarded for the academic year. Requests for renewal of assistance and revised Confidential Statements must be submitted annually. Whenever possible, the University will continue assistance each year as long as the need is demonstrated and the student's performance merits it.

How to Apply

These are the steps entering freshmen must follow to apply for all forms of financial aid:

1. Submit either the Parents' Confidential Statement of the College Scholarship Service or the American College Testing Family Financial Statement. Secure a copy from your school counselor and forward it to the address indicated on the form no later than February 15.
2. Apply for admission to the University. The Admissions office will automatically send you an Application for Financial Aid, which should be completed and returned to the University as soon as possible. NO AWARD CAN BE MADE UNTIL THE STUDENT HAS BEEN ACCEPTED FOR ADMISSION.
3. Arrange to take the Scholastic Aptitude Test of the College Entrance Examination Board in December or January.
4. Submit all admission credentials (transcripts, Application for Admission, SAT scores and the application fee) by February 15 to the Admissions Office.

Early and complete submission of all necessary forms is the key to insuring that requests receive maximum consideration. Applications received after February 15 will continue to be processed until available funds are exhausted.

Transfer and currently enrolled students must submit the Parents' Confidential Statement (or Student Confidential Statement if an independent student) and the Application for Financial Aid prior to April 1. These forms are available from the Director of Financial Aid. Students must reapply for aid each year.

Scholarships

A limited number of scholarships are awarded annually to entering freshmen, transfer students and currently enrolled undergraduates. Awards are based on scholastic achievement, financial need, participation in school and community activities and leadership potential. Applicants must have a minimum of 3.00 grade point average on a 4.00 scale to be considered. Awards range from partial to full tuition remission.

Freshman scholarships are normally awarded for four years subject to the maintenance of a cumulative grade point average of 3.25 or above. The amount of the award each succeeding year may be adjusted depending on the financial need of the student. Application for continuation must be made during winter quarter each year.

Applicants for scholarships follow the standard procedure required of all students desiring financial aid and must indicate on the application form that they wish to be considered for a scholarship. February 15 is the deadline for receipt of all scholarship credentials. Awards are announced no later than April 1.

Seattle University

Some scholarships are provided from Seattle University's own funds. The number awarded each year depends on available funds.

Honors Program Scholarships

Tuition scholarships are granted on a one-year basis, renewable on basis of performance. Applicants should contact Chairman, Honors Program, for complete information.

Fine Arts Talent Scholarships

Tuition scholarships are awarded annually by the Fine Arts department to students of outstanding talent in art, music or drama. Students interested in auditioning for these awards should contact the Chairman, Fine Arts department.

Donated Scholarships

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

Father Beezer Memorial

Alumni and friends of the late Father Gerald Beezer, S.J. have established a fund to maintain a scholarship in memory of his many years of devoted service to the University.

The Blume Family

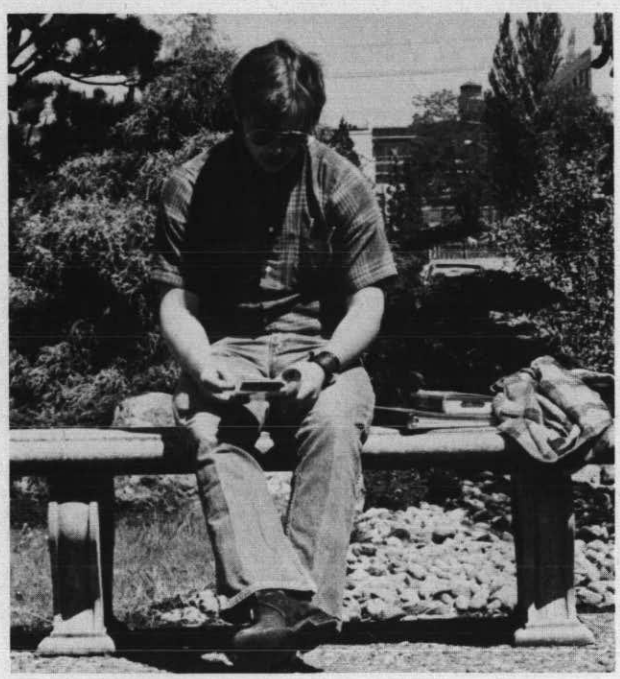
The Boeing Company

Grant given to students majoring in engineering, physics, mathematics, or business.

Louella Cook Foundation

Farmers Insurance Group

Scholarship funds are granted to the University with award going to student majoring in business or mathematics.



Handley Memorial
A one-year partial tuition scholarship established by the late Miss Agnes Handley, former president of the Seattle University Guild.

Italian Club of Seattle
For students whose parents are Italian Club Members.

Laventhol, Krekstein, Horwath & Horwath
An award to a student majoring in accounting.

Harry Kinerk Memorial Scholarship

Rosemary McCone Memorial

James B. McGoldrick, S.J. Scholarship Fund

Charles E. Merrill Trust
A grant to provide annual scholarships for highly qualified but needy students of the Roman Catholic faith.

Paul Pigott Memorial

Pay-N-Save Corporation Scholarship
For a student majoring in marketing.

Albert A. Schafer Memorial

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

Seattle University Guild Scholarships
For scholarships in the Fine Arts department.

William E. Sullivan Memorial

Western Gear Foundation
Awarded to students majoring in engineering in honor of the late Philip L. Bannan, Sr. These scholarships are renewable if the student maintains a high scholastic standing.

Wyman Youth Trust

Army ROTC Scholarships
Four-year scholarships which provide tuition, fees, textbooks, and a subsistence allowance of $100 a month are available through the ROTC program for students desiring a military career. Information is available through high school counselors or by writing directly to Commanding General, Sixth U.S. Army, Attn: AMAGR-5, Presidio of San Francisco, California 94129. Two and three-year scholarships are also available after the freshman year for students who display ability and a desire for a military career. Information on these scholarships may be received by contacting the ROTC Department, Seattle University. Juniors and Seniors in ROTC receive $100 a month even though not on a ROTC scholarship.

Federal Nursing Programs

Information on these programs may be obtained from the Dean of the School of Nursing.

Army Student Nurse Program
Navy Nurse Corps Candidate Program
Programs provide for two years of education.

Mental Health Training Program
Traineeship grants for the final two years of undergraduate study to selected full-time undergraduate students who have an interest in enrolling in a graduate program in psychiatric nursing upon completion of the baccalaureate program. These grants are for the final two years of undergraduate study.

Federal Traineeship Programs
Traineeship grants offering tuition, fees and a monthly stipend for full-time qualified registered nurse students who are completing their final year of undergraduate study.

Loans

Loans are a vital part of the financial aid "package" offered to students. Some loans do not require payment of principal or interest until the student leaves school. At that time, low-interest payments which may be spread over a long period, begin. Loans are an excellent means for the student to assume at least part of the cost of education without relying totally on his parents to meet the costs out of income or savings. Students must be United States citizens or have a permanent visa to be eligible for loans.

National Direct Student Loan
Qualified students are eligible to borrow up to a maximum or $1,000 in one academic year from funds made available under the National Defense Education Act. Three per cent simple interest and repayment on the principal begins nine months after the student has ceased to be a half-time student. Repayment is quarterly and may be spread over a ten-year period. Deferment of repayment is possible and special forgiveness features are included for full-time teachers in schools with a high concentration of low income students.

Federally Insured Loan
Regardless of family income, any student is eligible to apply for a loan up to a maximum of $1,500 for the academic year under this program. Students apply for these loans to their own bank or lending agency.

The Federal government pays the interest charge on the loan while the student is in school, if the family adjusted income is $15,000 or less, and will repay the lender in the event of student default, total disability or death. Nine months after the date of graduation, or withdrawal from school, repayment begins at seven per cent simple interest. Repayment may be deferred while the borrower is a member of the Armed Services, Peace Corps or VISTA. Early application is advised so funds will be available with the start of school.

Nursing Student Loan
Full-time nursing students are eligible for loans from funds furnished by the National Institute of Health. Amount of the loan is in relation to the student's need, up to a yearly maximum of $1,500. No interest is charged while the student is enrolled in the School of Nursing. Repayment begins one year after the borrower ceases to be a full-time student, at three per cent simple interest per year. Repayments are due quarterly but may be spread over a ten-year period, depending on the amount borrowed.

Law Enforcement Education Loan
Full-time students enrolled in a graduate or undergraduate program leading to a degree in a program directly related to law enforcement are eligible for a loan under the Law Enforcement Education Program (LEEP). A LEEP loan will provide up to $1,800 per academic year to cover tuition, fees, and related expenses. Seattle University's Community Services program is among those which have been approved under this program.

Student Short-Term Loans

Students are expected to arrive on registration day with funds required to meet their expenses. In some cases, late applicants for the Federally Insured Loan will not have received their funds. The University grants these students a temporary loan, charging the standard interest rate, plus a service charge, with repayment being required by the end of the quarter. The short-term loan is restricted to upper classmen.

Special Loan Funds

Ravetti Educational Fund. A low-interest loan fund established by Armand J. and Bessie M. Ravetti to assist needy students.

Repayments made by the students are used to perpetuate the fund and help other students.

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 to students.

Repayments made by students on the above loans are designed to perpetuate the funds.

Commercial Tuition Payment Plans
Parents interested in deferred payment plans may contract for loans with Insured Tuition Plan, Inc.

Grants

Several forms of grants are offered as part of the financial aid package. These include non-repayable federal grants and Seattle University tuition grants, which provide partial tuition remission, need rather than grade point average is the primary consideration.

Educational Opportunity Grant
Federal non-repayable grants of $200 to $1,000 may be made to students with exceptional financial need under this federally funded program. The grants may continue for four years if the student's financial situation remains unchanged.

Nursing Scholarship Grant
Federal non-repayable grants of up to $1,500 per year are available to nursing students with exceptional financial need.

Washington State Grant
High school seniors with exceptional financial need are eligible for grants which allow them to attend any institution of higher education in the State. To be eligible a student must be: a resident of the state; planning to attend an institution in the state, and demonstrate need. Names of eligible students will automatically be submitted by the University's Financial Aid office.

Washington State Tuition Supplement
A tuition supplement grant of up to $100 is awarded in the fall quarter for full-time undergraduates (12 or more credit hours per quarter) who are residents of the State of Washington. The grant is made to students regardless of need.

Law Enforcement Education Grants
Grants of up to $200 per quarter are available for full-time employees of police, corrections agencies or the courts studying full or part-time in a course related to law enforcement.

Social Security Assistance
Full-time, unmarried students, until age 22, may be eligible for social security benefits if one of their parents receives social security disability or retirement benefits or has died after having become eligible for such benefits. Information may be obtained from any Social Security office.

Educational Assistance for Veterans/War Orphans
Any student whose parent has died or is totally disabled as a result of service in the Armed Forces of the United States may be eligible for up to 36 months of educational assistance.

Eligible veterans (or spouses of deceased veterans) may attend Seattle University for up to four years under terms of the Veterans' Readjustment Benefits Act of 1966 (GI Bill). Contact the Veterans Administration for information and procedures.

Student Employment

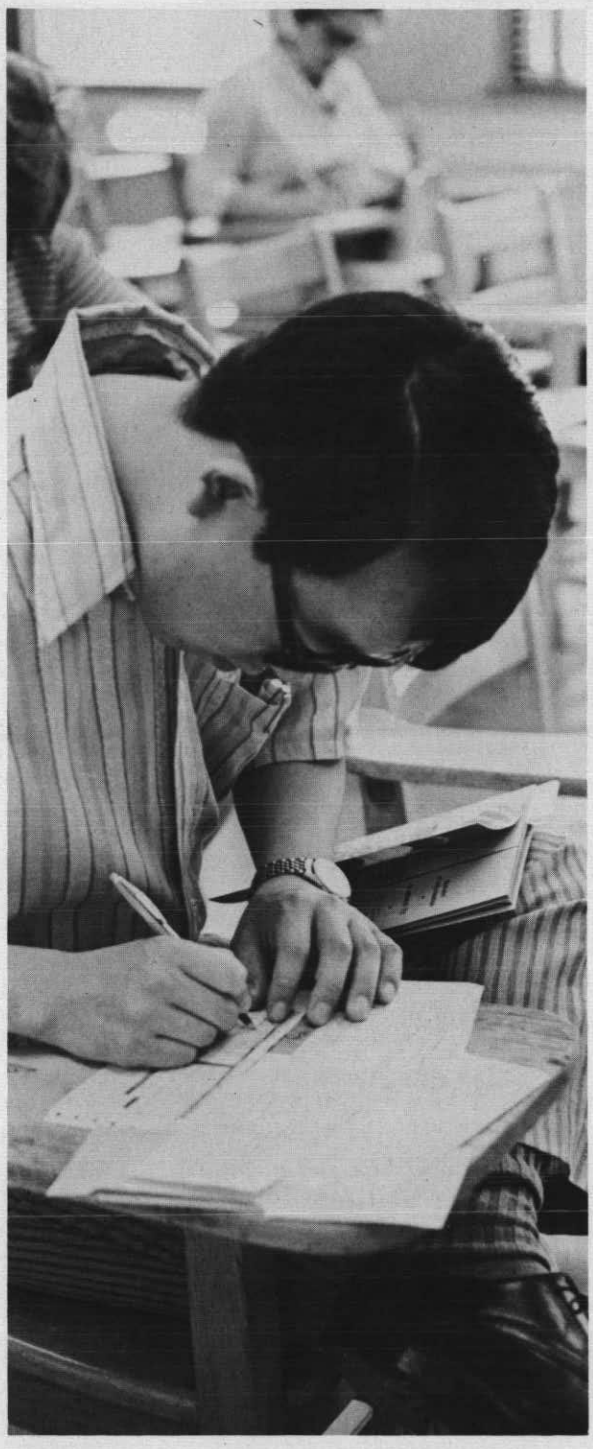
Work-Study Program
Seattle University participates in the Federal College Work-Study program. Based on financial need. Students are given jobs either on or off campus for periods not to exceed 15 hours per week while school is in session.

Part-Time Jobs
Part-time employment opportunities are maintained in the Financial Aid office. Jobs with business firms in the Seattle area are listed as well as those on campus. There is no charge to the student.

Senior Placement Program
Representatives of major business firms and government agencies visit the campus throughout the year to discuss career opportunities with graduating seniors. Interview schedules are publicized well in advance, with personal interviews scheduled through the Alumni office. A library of career information and assistance on career opportunities and preparation of resumes are available.

Alumni Assistance Program
Employers contact qualified and experienced alumni by listing open positions with the Alumni office.

Admission



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 and the Board of Admissions. 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.

Although the fall quarter is the usual and most satisfactory time to begin University studies, admission may be granted to qualified applicants for any of the four quarters of the academic year. All applicants must remit the $10 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.

Have completed 16 units of college preparatory courses.

Applicants with a grade point average between 2.00 and 2.50 as computed by the University admissions office will be reviewed by a special board. In some cases admission may be granted. Applicants with a grade point average below 2.00 will not be admitted to the University on either a regular or probationary status.

Each entering freshman must present evidence of that ability, motivation and sound secondary school education on which success in university work is founded.

Unit Requirements

Admission is granted subject to graduation from an accredited high school and the applicant must present as part of his high school record successful completion of a minimum of 16 units. To count as a unit, a subject must be taught five times a week in periods of not less than 45 minutes for a high school year of 36 weeks. These 16 units must be distributed as follows:

English	3
Mathematics (Algebra, Geometry)	2
History	1
Laboratory Science	1
Electives (approved)	9

If the student lacks one of the above required units, he may be permitted in some cases, by way of exception, to enter with provisional standing, but the deficiency must be removed during the freshman year. A deficiency is considered removed and regular standing is obtained when the student presents evidence of having successfully completed the courses, either at Seattle University, or in approved courses elsewhere.

Two courses of three or more quarter hours each will be considered equal to one high school unit. No college credit is granted for courses taken to remove deficiencies, except the laboratory science unit. Application for a degree may not be accepted until all entrance deficiencies have been removed. 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 will be considered for enrollment after their junior year at high school.

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 page two completed and forwarded directly to the Office of Admissions.
2. Submit an application fee of $10 to the Office of Admissions. Make remittances payable to Seattle University.

3. If University housing is desired, immediately upon receipt of housing material submit an advance room deposit of $70. This deposit is not refundable after August 1.
   Requests for housing from men should be addressed to the Director of Resident Student Services, and those from women to the Dean of Women.
4. Submit the medical form provided by Seattle University after acceptance, properly completed per instruction.
5. Follow carefully any other instructions which are received.

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 who do not apply before May 1 should delay submitting applications until after graduation. All applications for admission must be received no later than one month before the beginning of each quarter.

Early Decision Plan

Students who select Seattle University as their first-choice 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 Premajor Program under the guidance of the Premajor Director. Probation students must gain regular status by the end of the freshman year or be subject to dismissal from the University.

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 Pre-College 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, Iowa. The Washington Pre-College Test will be made available to juniors in all Washington High Schools.

Medical Examination

After notification of their acceptance for entrance to Seattle University, all candidates will receive a medical questionnaire which must be completed and returned to 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.

Advanced Placement

Entering students interested in receiving advanced placement in subject matters 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 fulfill the requirements for credit by examination as stated on page 27 of this bulletin.

Admission by Examination

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. In many cases the student will be directed to the Counseling and Testing Center at Seattle University for guidance and testing.

Auditor

Admission as an auditor must be approved by the dean of the school and 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 standing 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 places students under penalty of immediate dismissal.
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. There is no probation status for applicants with a grade point average below 2.00.
3. Transfer applicants who have completed less than one full year (45 quarter credits or 30 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 $10 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 year has elapsed. At the end of this period, admission can be granted only by the Board of Admissions. In such cases letters of recommendation will be helpful.

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 27).

Advanced Standing

For the purpose of guidance and registration the Admissions Office 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 philosophy 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

Seattle University admits a limited number of students from foreign countries. 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 (I-20) necessary to enter theUnited States is issued to the student upon receipt of proof of financial responsibility.

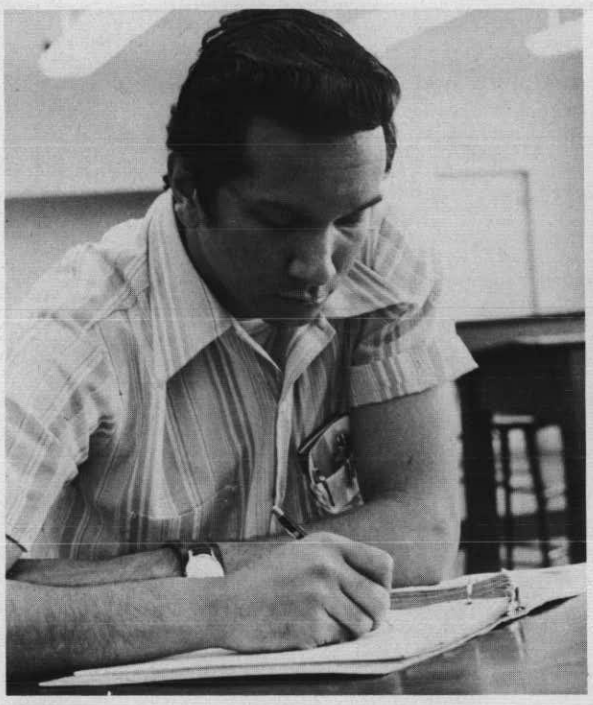
Special Students

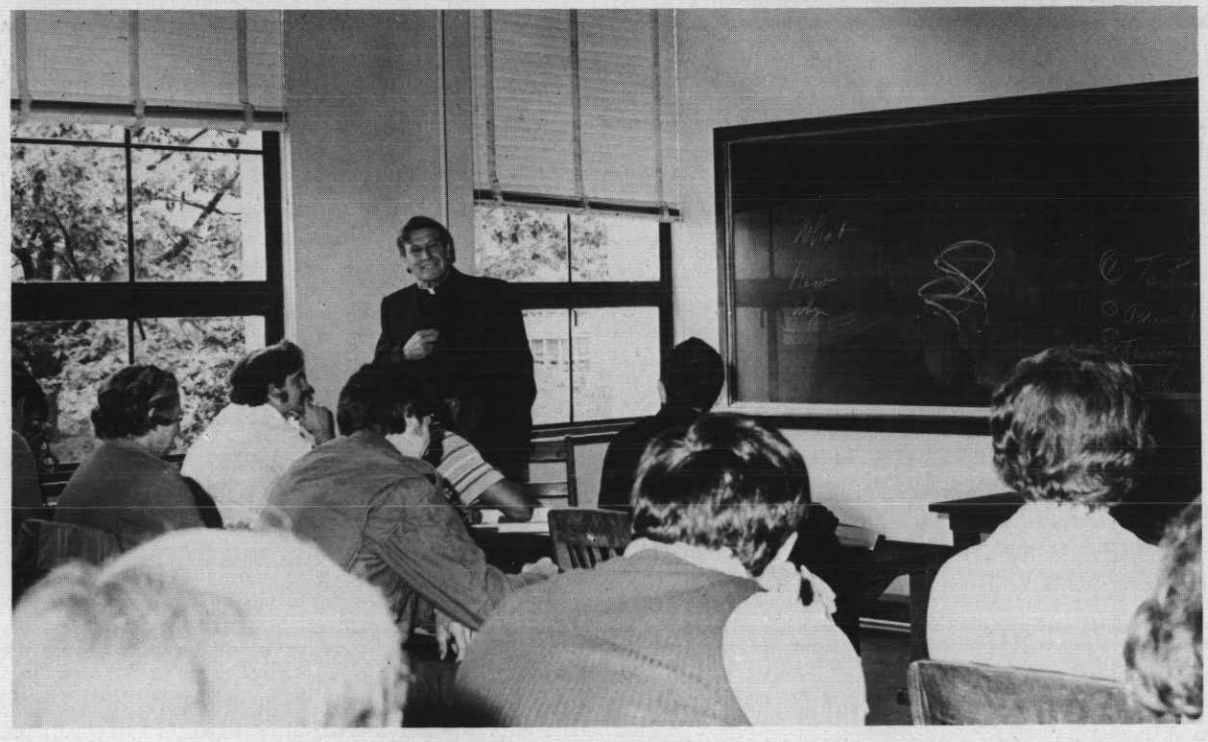
Mature individuals may apply to the Board of Admissions for special standing. A special student may take such regular courses as the dean of his school may determine. A special student may not represent the University, nor is he eligible for a degree. By fulfilling the requirements for admission to the college in which he is enrolled, he may 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 college. Teachers not wishing to work for a degree may be admitted as transient students by presenting a statement of good standing signed by the principal of the school in which they are currently employed in place of a transcript. 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 matriculates in a college or university.

Academics





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 — 10 credits

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 — 5 credits
En 134 Masterpieces of British Literature — 5 credits
En 220 Introduction to Poetry — 5 credits
En 230 Introduction to Fiction — 5 credits
En 240 Introduction to Drama — 5 credits
En 383 Masterpieces of Black Literature — 5 credits

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 non-majors in mathematics and the sciences:

Bl 101 Life Science — 5 credits
Ch 100 Principles of the Physical Sciences — 5 credits
Mt 175 Mathematics for Liberal Arts Students — 5 credits
Ph 100 Modern Physical Science — 5 credits
Ph 110 Fundamentals of Astronomy — 5 credits

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

PHILOSOPHY SEQUENCE — 15 credits

Pl 110 Philosophical Problems — The World — 5 credits
Pl 220 Philosophical Problems — Man — 5 credits

and any other 5-credit course in philosophy which the student is qualified to take. No philosophy courses may be taken in the fall quarter of the Freshman Year. Consult the course listings in the Philosophy department section of this bulletin for third course options.

Transfer students with junior or senior standing (90 or more credits) must take two philosophy courses after transferring. Transfer students with freshman or sophomore standing (89 or fewer credits) must take three philosophy courses.

THEOLOGY SEQUENCE — 10 credits

Students should choose one 5-credit course from any two of the three theology areas listed below:

AREA 1 — SCRIPTURE

Th 200 Judaeo Christian Origins — 5 credits
Th 210 Synoptic Gospels — 5 credits
Th 215 Johannine Theology — 5 credits
Th 220 Pauline Theology — 5 credits
Th 240 Prophetic and Wisdom Literature of the Old Testament — 5 credits
Th 289 Comparative Religion — 5 credits
Th 290 Religious Experience, East and West — 5 credits

AREA 2 — SYSTEMATIC THEOLOGY

Th 320 Fundamental Themes in Theology — 5 credits
Th 330 The Problem of God — 5 credits
Th 335 Christ and Modern Man — 5 credits
Th 340 Theology of Man — 5 credits
Th 344 Church as Community — 5 credits
Th 350 Perspective of Christian Hope — 5 credits

AREA 3 — TOPICS IN THEOLOGY

Th 420 Christian Sacraments — 5 credits
Th 433 Theology of Human Sexuality and Marriage — 5 credits
Th 443 Vatican II and Future — 5 credits
Th 475 Contemporary Christian Morality — 5 credits
Th 476 Social Theology — 5 credits
Th 477 Christian Response to Some Socio-Legal Problems — 5 credits
Th 495 Black Religious Experience — 5 credits

Students should begin their theology sequence in the Sophomore Year or later and should have taken some philosophy courses. Courses should be taken in proper numerical sequence, i.e., 200s before 300s.

Transfer students with junior or senior standing (90 or more credits) must take one theology course. Transfer students with freshman or sophomore standing (89 or fewer credits) must take two theology courses.

HISTORY SEQUENCE — 10 credits

Plan 1

Any two of the following courses in sequence: Hs 101 and 102 or 102 and 103.

Plan 2

Hs 103, Western Culture III, and any one of the following: Hs 231, 251, 271, 381, 347 or 348.

SOCIAL SCIENCE SEQUENCE — 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 491 Asian-American Experience — 5 credits
Ec 100 Nature of Economic Society — 5 credits
Ec 271 Principles of Economics I — 5 credits
Ec 272 Principles of Economics II — 5 credits
Ec 273 American Economic History — 5 credits
Ec 274 History of Economic Thought — 5 credits
Pls 150 Introduction to Political Science — 5 credits
Pls 160 American National Government — 5 credits
Pls 200 Comparative European Democracies — 5 credits
Pls 214 Government and the Economy — 5 credits
Pls 242 American Political Thought — 5 credits
Pls 249 Introduction to International Politics — 5 credits
Pls 340 Comparative Asian Systems — 5 credits
Pls 341 Comparative African Systems — 5 credits
Pls 375 Minority Politics in the United States — 5 credits
Psy 100 Introductory Psychology — 5 credits
Psy 210 Personality Adjustment — 5 credits

Psy 315	**Abnormal Psychology**	**5 credits**
Psy 322	**Psychology of Growth and Development**	**5 credits**
Sc 101	**Fundamentals of Sociology I**	**5 credits**
Sc 102	**Fundamentals of Sociology II**	**5 credits**
Sc 200	**Perspectives in Social Psychology**	**5 credits**
Sc 266	**Interracial and Interethnic Relations**	**5 credits**
Sc 302	**The Black People's Social Movement**	**5 credits**

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

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 School of Business must consult that section of this bulletin for required courses.

Academic Regulations

Each student is responsible for informing himself 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.

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 — Granted through the School of Education to graduates who have met State of Washington requirements for teaching in elementary or secondary schools.

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 instructors 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 in 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, his advisory board, the faculty of the college and the students registered in this 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 minimum of eleven weeks. A two-hour laboratory period is considered the equivalent of one hour of lecture and/or recitation work, except in the School of Science and Engineering. To earn five credits a student attends the class five hours each week for eleven weeks.

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 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 9 credits full-time for graduate students.

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.

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 major or some special interest within his major field.

LOW SCHOLARSHIP LIST — A warning list published quarterly of 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.

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 9 credits part-time for graduate students.

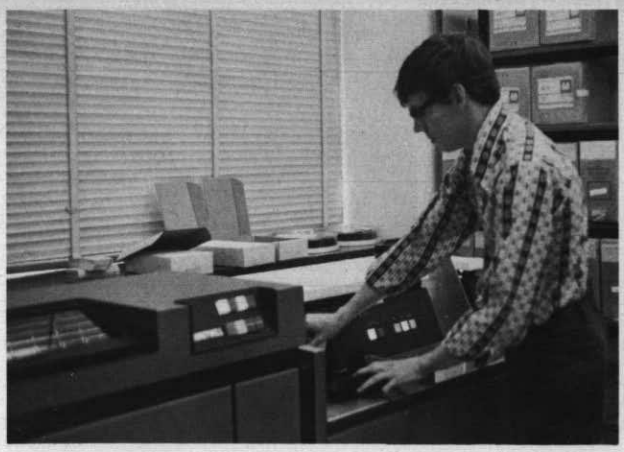
PERMANENT RECORD — The University record of all courses for which a student registers.

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

PREMAJOR — The classification of students who enter the University without a specific major.

PREREQUISITE — A required course which must be completed 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 ten or eleven 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 his courses each quarter.

REGULAR STUDENT — A fully matriculated student pursuing a degree program.

SPECIAL STUDENT — A non-matriculated student taking course work which is not applicable toward a degree until regular standing is achieved.

SCHOOL — An academic and administrative division of the University consisting of a dean, his 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. There is no fee for a transcript unless the student has a financial obligation outstanding in which case the fee is the full amount outstanding.

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 Quarter Hour.

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

Attendance

The instructor has the option to fail a student who by the end of the quarter has missed 15 per cent or more of classes and laboratory sessions. Absence is counted from the first scheduled class day.

Student Classification

Regular undergraduate students of the University are classified as follows:

Freshmen — less than 45 credits completed

Sophomore — at least 45 but less than 90 credits completed

Junior — at least 90 but less than 135 credits completed

Senior — more than 135 credits completed.

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 non-accredited 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 103 language course only.
9. Students who wish to qualify for credit by examination must apply to the Dean, Registrar and Treasurer 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 his 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 his dean for judging the correct ratio between credit load, cocurricular activities and outside employment so that he has adequate time for academic preparation.

Dismissal

Any student who fails eight credits or more in any one quarter is subject to dismissal from the University. The Academic Council shall decide when a student on probation, because of continued low scholarship or I grades shall be dropped. In order to be reinstated the student must petition the dean of his school. A student withdrawing voluntarily from the University is entitled to a statement of honorable dismissal if he 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. In no case will the grade be changed after 30 days following the issue of the student's quarterly grade report.

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 ..... 4 quality points
B ..... 3 quality points
C ..... 2 quality points
D ..... 1 quality point
E ..... 0 quality points

The grades of CR, NC, I, W, S, N or Y 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. Students may obtain copies of their transcripts on request to the Registrar. The University does not hold itself responsible for grade report errors unless the Registrar is notified of the error within six months after the issue of a grade report.

Grading System

The University follows the letter grading system shown below.

Grade	Descriptive Value
A	**Superior student** — shows ability to use factual knowledge in reaching independent conclusions and can synthesize facts into a logical and coherent pattern; shows interest in relating collateral reading to the principles developed in course work; scholarship exceeds requirements.
B	**Above average student** — knowledge is very good, scholarship meets all requirements, information is complete but not detailed.
C	**Average student** — knowledge is good; scholarship meets assignments, but information is incomplete.
D	**Below average student** — knowledge is fair, scholarship does not meet assignments; essential information is lacking or false information given.
E	**Failing student.**
W	**Withdrawal** — official withdrawal during the first six weeks of the quarter.
CR	**Credit** — grade assigned under credit/no credit option if work meets or is above minimum passing level.
NC	**No Credit** — grade assigned under credit/no credit option if work is below minimum passing level.
E	**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 I's in consecutive quarters will be considered on probation.
N	**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 assigned prior to Summer 1971 may be removed through August 1973 without re-registration.

N Grades Received	Must be Removed Before
Summer term	August of the following calendar year
Fall term	December 1 of the following calendar year
Winter term	March 1 of the following calendar year
Spring term	May 1 of the following calendar year

S	**Satisfactory** — a satisfactory grade given for thesis or in non-credit courses.
Y	**Audit** — course for which no credit is given.
M	**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 his 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-& 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.
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 6.
6. All P.E. activity courses and music practice courses shall be credit/no credit.
7. All courses elected as credit/no credit will appear on the student's permanent record and will be graded:
   CR (credit) — PASS
   NC (no credit) — NO/PASS

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.

Probation

If a student falls below the standard he must maintain in order to graduate, he may be placed on probation and given the opportunity to improve the quality of his work before final dismissal. A student will be placed on probation if his cumulative grade point average falls below 2.00.

At the discretion of his 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 his withdrawal from Seattle University must arrange for two copies of his transcript to be submitted to the Registrar before his application for admission can be considered.

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. All students, including auditors, transfer students and those readmitted after a lapse in attendance, must register in person.

No registrations are permitted after the second class day. Payment of the late registration fee of $10 for the first day and the further fee of $10 for the second day 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 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 Controller 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 I.

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. Parents or guardians may receive a copy of the student's record on written request to the Registrar's office.

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

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.
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 are required in all degree programs. See page 24 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 (5 credits) is required. Students completing this minimum of 10 credits in philosophy and theology 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.

Graduation with Honors

Graduation with honors requires the earning of at least 90 credits in residence as a junior and senior at Seattle University.

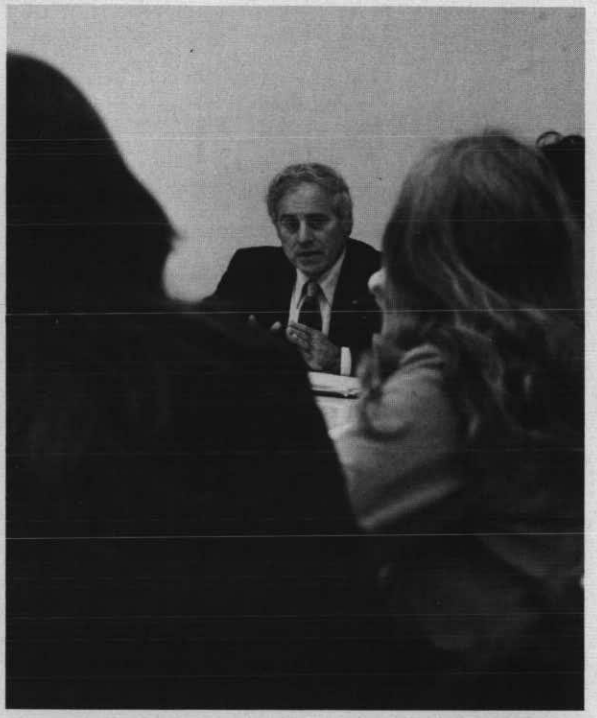
	Through 1975	1976 and After
Cum Laude	3.25	3.40
Magna Cum Laude	3.50	3.65
Summa Cum Laude	3.75	3.90

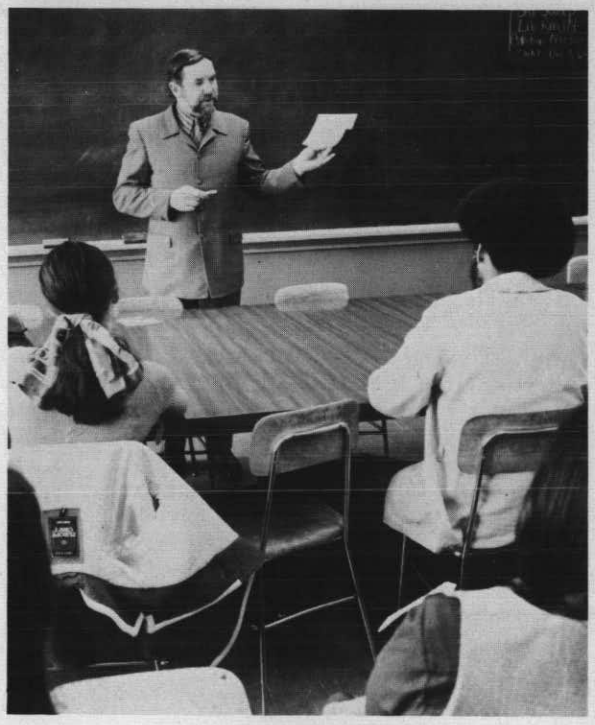
Special Awards

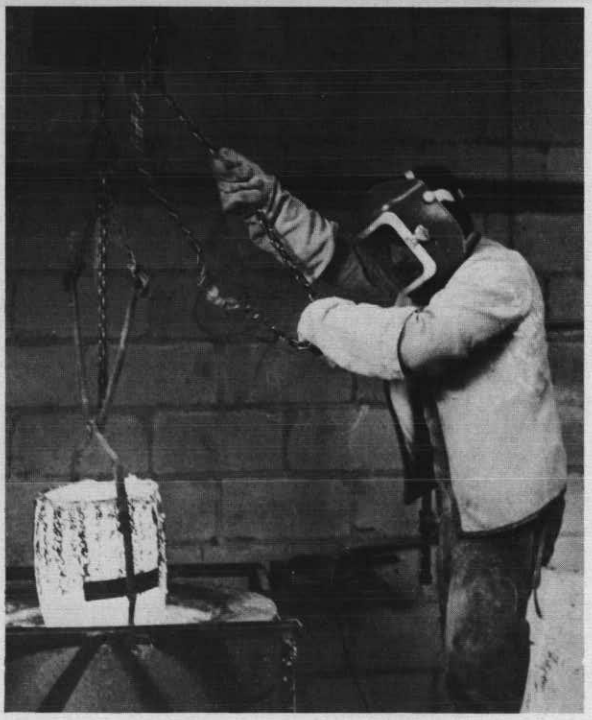
The President's Award — Awarded to the graduating senior who has maintained the highest scholarship throughout the four years of college work.

College of Arts and Sciences

James E. Royce S.J., Ph.D., Dean







Objective

The College of Arts and Sciences has for its objective the development of personality — integral and liberal, Christian and humane. The instrumentalities 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 instrumentalities 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 15 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 and Theology.

The program divisions are: Community Services, Honors, Prelaw and Premajor.

Each department chairman or program director, in collaboration with his 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 chairman or program director.

Accreditation

Northwest Association of Secondary and Higher Schools

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.

Degrees Offered

Bachelor of Arts (Classical)

Bachelor of Arts

with a major in: Communtiy Services, Drama, English, Fine Arts, Foreign Languages, History, Humanities, Journalism, Music, Philosophy, Political Science, Psychology, Rehabilitation, Social Science, Sociology and Theology.

Bachelor of Science

with a major in : Military Science and Psychology.

General Program Requirements

Students in the College of Arts and Sciences must satisfy the core curriculum requirements of the University given on page 24 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 numbered 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.

Interdisciplinary Studies

Rather than in a specific major, Bachelor of Arts programs are offered in fine arts, humanities or social sciences. For such degrees, the normal requirement is 60 hours beyond core curriculum requirements in some combination of related subjects.

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 definitive combination is the responsibility of the department chairman in which the greatest number of courses will be taken.

Community Services

Eugene M. Corr, M.P.A., Director

Objectives

Community Services is an interdepartmental undertaking involving social work courses and the departments of economics, political science, psychology and sociology. The three primary objectives in the program's undergraduate education for the social services are: to contribute to the liberal education of all students; to enhance the employability of those students seeking work in the field immediately after the bachelor's degree; and to prepare students for admission to graduate schools. Secondary objectives are to assist students in deciding on a career choice by making known the nature of and opportunities in the social service field and to provide 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 more deeply and acquire a broad perspective of community services.

Degree Offered

Bachelor of Arts in Community Services

General Program Requirements

Candidates must satisfy the core curriculum requirements of the University as given on page 24 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 — 85 credits which must include CS 375, 376, 378, 379, 478 and 479; 20 credits in sociology; 15 credits in psychology; 15 credits in political science; 10 credits in economics; 5 credits in statistics courses, in either the sociology or psychology departments; and 5 credits of Fine Arts.

Bachelor of Arts in Community Services

Freshman year

English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Mathematics/Science core option	5 credits
Philosophy 110	5 credits
Psychology 100	5 credits
Sociology 101 and Political Science core option	10 credits

Sophomore year

Economics 271	5 credits
Mathematics/Science core option	5 credits
Philosophy 220 and core option	10 credits
Sociology 102, 260 and 201 or Psychology 201	15 credits
Theology core options	10 credits

Junior year

Community Services 375, 376	10 credits
Economics 272	5 credits
Fine Arts	5 credits
Political Science 372 and 370 or 371	10 credits
Psychology 210	5 credits
Sociology 280	5 credits
Elective	5 credits

Senior year

Community Services 378, 379, 478, 479	20 credits
Psychology 460	5 credits
Electives	20 credits
Total	180 credits

Community Services Courses

CS 360 **Society and Justice** **5 credits**
Examination of the sanctions and processes of criminal law as related to the ethical implementations of social justice. Prerequisite: Upper division standing.

CS 375 **Introduction to Community Services** **5 credits**
(Sc 375) 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. (fall)

CS 376 **Factors of Interviewing** **5 credits**
(Sc 376) 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 375 or permission. (winter)

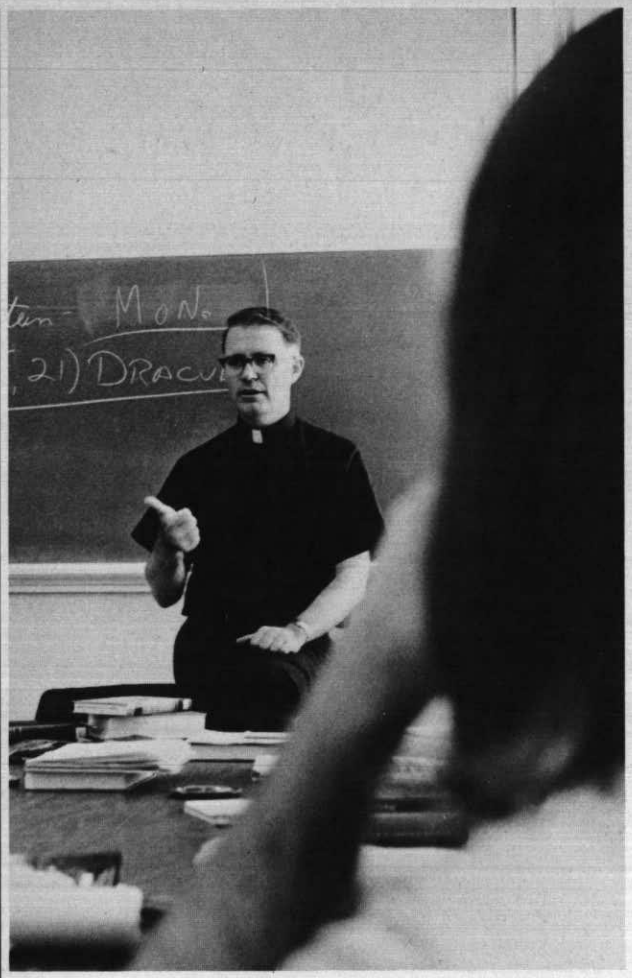
CS 377 **Field Experience** **5 credits**
(Sc 377) For sociology majors only. (spring)

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 function in the community. Must be taken as credit/no credit. Prerequisite: 376 or permission. Corequisites: 478 with 378; 479 with 379.

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

CS 491 **Special Topics** **2-5 credits**
Prerequisite: Upper division standing.

CS 497 **Individual Research** **3-5 credits**
By arrangement, with professional supervision. Prerequisites: Upper division standing and permission.



English

Joseph B. Monda, Ph.D., 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
Master of Arts (Teaching)

General Program Requirements

Students in English must satisfy the core curriculum requirements of the University as given on page 24 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 15 credits of one of those languages.

Departmental Requirements

Bachelor of Arts — 60 credits of English which must include the following basic courses: En 100, 250, 264, 265 and 266. The remaining 35 credits must be taken in courses in the 300 and 400 series. The nature of these courses is to be determined by the student and his adviser and approved by the department chairman. A comprehensive examination, covering major literary works, will be required for graduation.

Teaching Major (School of Education) — 60 credits of English which must include En 100, 220 or 230 or 240, 250, 264, 265, 266 or 280, 301, 330 407 and 3 additional literature courses in the 300 or 400 series.

Undergraduate Minor — 20 credits of English beyond En 100, 264, 265, 266 or 280. Three of these courses should be in the 300 series and one course in the 400 series, as specified by the department.

Master of Arts — 35 credits of English of which 25 must be in courses numbered 500 or above. In addition, a final written and oral examination, reading knowledge of a foreign language (normally French or German) and a master's essay are required. Consult the Graduate School section of this bulletin for additional requirements. Details of this program can be obtained from the English department.

Master of Arts-Teaching — 40 credits of English of which 25 must be in graduate courses. En 501, 505, 507 (or their equivalents) are required. Neither a language nor thesis is required, and there is no final comprehensive examination.

Bachelor of Arts

Freshman year

English 100, 250	10 credits
Fine Arts 101, 102, 103	15 credits
History 101-102 or 102-103	10 credits
Philosophy 110, 220	10 credits

Sophomore year

English 264, 265, 266	15 credits
Mathematics/Science core option	5 credits
Philosophy core option	5 credits
Social Science core options	10 credits
Theology core options	10 credits

Junior year

English 300 series courses	20 credits
French or German 101, 102, 103	15 credits
Mathematics/Science core option	5 credits
Elective	5 credits

Senior year

English 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 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 200 Advanced Composition — **5 credits**
Advanced study and practice in expository writing.

En 201 Report and Technical Writing — **5 credits**
Skills and techniques of business and other technical writing.

En 203 Vocabulary — **5 credits**
A practical course in vocabulary building. Emphasis on etymology, Latin and Greek roots, prefixes and suffixes.

En 220 Introduction to Poetry — **5 credits**
Introduction to the study of poetry with special 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 — **5 credits**
Introduction to the terminology and techniques of literary analysis. Required of English majors.

En 264 Great English Authors I — **5 credits**
En 265 Great English Authors II — **5 credits**
En 266 Great English Authors III — **5 credits**
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 Romanticism (1640-1832). III. Study of major British writers from the Victorian period to the Moderns (1832-present). Required of English majors.

En 280 Survey of American Literature — **5 credits**
Study of major American writing from its beginnings.

En 301 Advanced Rhetoric and the Teaching of English — **5 credits**
Study of rhetorical theory and techniques and their application to writing, with emphasis on methods of teaching composition.

En 302 Special Topics — **1-5 credits**
En 303 Special Topics — **1-5 credits**
En 304 Special Topics — **1-5 credits**

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.

En 310 Introduction to Chaucer — **5 credits**
Study of Chaucer's "Canterbury Tales."

En 311 Introduction to Medieval Literature — **5 credits**
Literary selections, in modern English, representative of the life and thought of the European Middle Ages.

En 313 Mythology — **5 credits**
Study of the mythological backgrounds of English and American literature.

En 314 World Literature I — **5 credits**
En 315 World Literature II — **5 credits**
I. Classical to Renaissance: Homer, Aeschylus, Sophocles, Virgil, Dante, Rabelais, Cervantes and others. II. Neo-Classicism, Romanticism and Realism: Racine, Moliere, Voltaire, Rousseau, Goethe, Stendhal, Flaubert, Dostoevsky, Tolstoy and others.

En 320 Sixteenth Century Poetry and Prose — **5 credits**
Wyatt, Surrey, Sidney, Spenser, the Humanists, Elizabethan prose.

En 330 Introduction to Shakespeare — **5 credits**
Readings in the comedies, tragedies and histories.

En 345 Seventeenth Century Poetry and Prose — **5 credits**
Donne and the metaphysical poets; shorter poetry of Milton, Jonson, Bacon, Burton and contemporaries.

En 350 Eighteenth Century Poetry and Prose — **5 credits**
Dryden, Pope, Swift, Johnson, Gray and contemporaries.

En 360 Romantic Poetry and Prose — **5 credits**
Blake, Wordsworth, Coleridge, Byron, Shelley, Keats and contemporaries.

En 370 Victorian Poetry and Prose — **5 credits**
Tennyson, Arnold, Browning, Hopkins, Carlyle, Ruskin and contemporaries.

En 380 Major American Poets — **5 credits**
From the Puritans to modern times: Taylor, Bryant, Poe, Whitman, Dickinson, Frost, Stevens and others.

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 Afro-Americans, with emphasis on the moderns: Jones, Wright, Cleaver, Baldwin, Ellison and others, in the context of general American literature.

En 390 Eighteenth Century Novel — **5 credits**
Defoe, Richardson, Fielding, Sterne, Smollett and contemporaries.

En 392 Nineteenth Century Novel — **5 credits**
Austen, Bronte, Dickens, Thackeray, Eliot, Hardy and contemporaries.

En 394 Twentieth Century Novel — **5 credits**
Conrad, Joyce, Lawrence, Gide, Mann, Hesse, Kafka, Camus and others.

En 395 Modern Poetry — **5 credits**
Yeats, Rilke, French Symbolists, Eliot, Pound, Stevens and others.

En 398 Modern Drama — **5 credits**
Ibsen, Strindberg, Pirandello, O'Neill, Brecht, Genet and others.

En 406 Structure of the English Language — **5 credits**
Introduction to linguistic theory and the comparison of traditional and modern descriptions of English.

En 407 History of the English Language — **5 credits**
Study of the historical development of English.

En 410 Chaucer — **5 credits**

En 411 Medieval Literature — **5 credits**

En 420 Renaissance Literature — **5 credits**

En 422 Renaissance Drama — **5 credits**
Non-Shakespearean dramatists between 1550 and 1642.

En 430 Shakespeare I — **5 credits**
En 431 Shakespeare II — **5 credits**
I. Tragedies. II. Comedies/histories.

En 440 Milton — **5 credits**

En 445 Seventeenth Century Literature — **5 credits**

En 450 Restoration and Eighteenth Century Literature — **5 credits**

En 460 Romantic Literature I — **5 credits**

En 475 Victorian Literature — **5 credits**

En 480 Seventeenth and Eighteenth Century American Literature — **5 credits**

En 482 Nineteenth Century American Literature — **5 credits**

En 484 Twentieth Century American Literature — **5 credits**

En 485 Modern Literature — **5 credits**

En 487 Contemporary Literature — **5 credits**

En 488 The Film and Literature — **5 credits**

En 490 Literary Criticism — **5 credits**

En 491	Special Topics	1-5 credits
En 492	Special Topics	1-5 credits
En 493	Special Topics	1-5 credits
En 497	Individual Research	5 credits
En 498	Individual Research	5 credits

Graduate Courses

En 500	Introduction to Graduate English Studies	5 credits
En 501	Studies in Rhetoric	5 credits
En 505	Comparative Grammars	5 credits
En 507	History of the English Language	5 credits
En 508	Old English	5 credits
En 510	Chaucer	5 credits
En 512	Medieval Literature	5 credits
En 520	The English Renaissance	5 credits
En 522	Elizabethan Drama (non-Shakespearean)	5 credits
En 535	Shakespeare (Comedies and Histories)	5 credits
En 536	Shakespeare (Tragedies)	5 credits
En 540	Milton	5 credits
En 545	Seventeenth Century Literature	5 credits
En 550	Eighteenth Century Literature	5 credits
En 560	English Romanticism	5 credits
En 570	Victorian Literature	5 credits
En 580	Colonial American Literature	5 credits
En 581	American Transcendentalists	5 credits
En 582	Modern American Literature	5 credits
En 584	The English Novel	5 credits
En 586	Modern Poets	5 credits
En 588	Modern Dramatists	5 credits
En 590	Theories of Criticism	5 credits
En 593	Special Topics	5 credits
En 594	Special Topics	5 credits
En 595	Special Topics	5 credits
En 596	Individual Research	5-10 credits
En 597	Individual Research	5-10 credits
En 598	Individual Research	5-10 credits
En 599	Thesis	10 credits

Fine Arts

William J. Dore, Jr., M.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.

Degree Offered

Bachelor of Arts

General Program Requirements

Students in fine arts must satisfy the core curriculum requirements of the University given on page 24 of this bulletin. Fifteen credits of fine arts courses are required. Because of the interdisciplinary nature of the department, majors are required to attend a quarterly assembly.

Scholarships

The Fine Arts department maintains an active scholarship program in order to aid students towards graduation from Seattle University. Applicants must demonstrate talent in their chosen field as well as academic competency. Students applying for these scholarships should contact the chairman of the department for an application form.

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; Dr. 220 and 7 elective credits in drama.

Bachelor of Arts — Major in Drama — 82 credits which must include Dr 101, 102, 160, 220, 221, 222, 260, 265, 270, 321, 351, 352, 353, 420, 451, 452, 453, 461, 462, 463, 496; En 430, 431; and 10 credits to be divided between the areas of art and music. Each student in this program must participate in at least one major production per year.

Bachelor of Arts — Major in Music — 83 credits which must include Mu 115, 116, 117, 215, 216, 217, 315, 316, 372, 373; any two groups of 370-415, 371-416, 374-417; 418; 6 credits of ensembles 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 160, 220, 221, 260, 325 and 6 elective credits in drama; 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, Music (School of Education) — 24 credits which must include FA 103, 115, 116, 117, 215; 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 376. 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
Music elective	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, 102, 160, 260, 265	17 credits
English 100, 134	10 credits
History 101-102 or 102-103	10 credits
Philosophy 110	5 credits
Electives	3 credits

Sophomore year

Art electives	4 credits
Drama 220, 221, 222, 270	11 credits
Mathematics/Science core options	10 credits
Philosophy 220 and core option	10 credits
Social Science core options	10 credits

Junior year

Drama 321, 461, 462, 463	11 credits
Fine Arts sequence	15 credits
Music elective	5 credits
Theology core option	5 credits
Electives	9 credits

Senior year

Drama 351, 352, 353, 420, 451, 452, 453, 496	23 credits
English 430, 431	10 credits
Music elective	3 credits
Theology core option	5 credits
Electives	4 credits
Total	180 credits

Bachelor of Arts — Major in Music

Freshman year

English 100 and core option	10 credits
Fine Arts 103	5 credits
History 101-102 or 102-103	10 credits
Music 115, 116, 117	9 credits
Music 130 or 131 or 135	3 credits
Music 110	3 credits
Social Science core option	5 credits

Sophomore year

Fine Arts 101, 102	10 credits
Mathematics/Science core option	10 credits
Music 215, 216, 217	15 credits
Music 130 or 131 or 135	3 credits
Philosophy 110	5 credits
Social Science core option	5 credits

Junior year

Art electives	4 credits
Drama 220 and electives	10 credits
Music 110 or 111 and 315, 316, 372, 373	15 credits
Theology core option	5 credits
Electives	11 credits

Senior year

Art 221, 231 and elective	6 credits
Music 418; 12 credits from 370-415 or 371-416 or 374-417	15 credits
Philosophy 220, option	10 credits
Theology	5 credits
Electives	6 credits
Total	180 credits

Bachelor of Arts — Area major in Fine Arts

Freshman year

English 100 and core option	10 credits
Fine Arts sequence	15 credits
History 101-102 or 102-103	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 160 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
Total	180 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 101 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 330 Introduction to Film Art and Film Making **5 credits**
Nature of motion picture art over the past 60 years. Ways in which film expression can be creative. Differences in technique and structure between movies and theatre. Movie values, principles, and doctrines. Each student will also produce a film.

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 forms.

Art 231 Design **2 credits**
Art 232 Design **2 credits**
Art 233 Design **2 credits**
Primary concepts and analysis of structure; problems of contemporary design; form in three-dimensional design.

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.

Art 331 **Advanced Design** **3 credits**
Art 332 **Advanced Design** **3 credits**
Art 333 **Advanced Design** **3 credits**
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; special problems; synthesis and research.

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 **Sculpture** **2 credits**
Art 352 **Sculpture** **2 credits**
Art 353 **Sculpture** **2 credits**
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 497 **Independent Study** **1-5 credits**
Art 498 **Independent Study** **1-5 credits**
Art 499 **Independent Study** **1-5 credits**
Advanced work in academic or experimental research. Prerequisites: Advanced standing in art and permission of department chairman.

Drama Courses

Dr 101 **Speech for the Theatre** **3 credits**
Dr 102 **Speech for the Theatre** **3 credits**
Speech used in the theatre. Theory, practice and technique. Prerequisite: Dr 101 for 102.

Dr 160 **Introduction to Technical Theatre** **3 credits**
Study of the specific technical areas of theatre and their inter-relation in production.

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 **Acting I** **3 credits**
Dr 222 **Acting II** **3 credits**
Introduction to the art of acting and the relationship between the actor and the director. I. Principles and practice in basic acting details and character development. II. Study and practice in modern realistic acting. Prerequisites: Dr 102, 220 for 221; 221 for 222.

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. Prerequisites: Dr 225 for 226; 226 for 227, or permission of instructor.

Dr 260 **Fundamentals of Scenery Construction** **4 credits**
Lecture-discussion of the technical aspects of dramatic productions accompanied by a laboratory period in building and painting stage equipment and properties. Prerequisite: Dr 160.

Dr 265 **Lighting** **4 credits**
Theory and application of light to all types of productions. Prerequisite: Dr 260.

Dr 270 **Makeup** **2 credits**
Theory and application of all types of stage makeup.

Dr 321 **Advanced Acting** **3 credits**
Theory and practice in period style; Shakespearean Tragedy, Restoration, comedy and slapstick. Prerequisite: Dr 222.

Dr 325 **Rehearsal and Performance Technique** **1 credit**
For performers and crew chief members of official University productions. No more than two credits may be received in any four quarter period. Maximum, eight credits. Prerequisite: Permission of instructor.

Dr 351 **Representative Plays I** **3 credits**
Dr 352 **Representative Plays II** **3 credits**
Dr 353 **Representative Plays III** **3 credits**
Great playwrights and representative plays presented in a chronological order. I. The Golden Age of Greece to the Elizabethan era. II. Restoration to the 19th Century. III. 19th and 20th Century.

Dr 376 **Creative Dramatics I** **3 credits**
Dr 377 **Creative Dramatics II** **3 credits**
Dr 378 **Creative Dramatics III** **3 credits**
Fundamentals of informal children's drama with emphasis on the philosophy of child drama,

practical guidance technique and suitable material. I. Nature of the child drama, its place and use in the classroom and in extracurricular activities. Discussion participation, class guidance and observation of creative drama with children. II. Theory technique of guidance and material given for practical classwork. Students will attend demonstration classes. III. Laboratory course in which each student leads a group of eight in creative development and development of drama. Prerequisites: Dr 376 for 377; 377 for 378, or permission of instructor.

Dr 420 Directing **3 credits**
Theory and practice in directing various styles of drama; practical application. Prerequisite: Dr 321.

Dr 451 Theatre History I **2 credits**
Dr 452 Theatre History II **2 credits**
Dr 453 Theatre History III **2 credits**
I. Primitive to Elizabethan era. II. Restoration to 19th Century. III. 19th and 20th Century.

Dr 461 Scene Design **3 credits**
Theory and creation of design for all types of stage production. Prerequisite: Dr 265.

Dr 462 Costume Design **3 credits**
History of dress as related to the history of theatre design.

Dr 463 Costume Construction **2 credits**
Technique and equipment used for constructing theatre costume ensembles. Use of laboratory.

Dr 476 Assembly and Play Production for Teachers **6 credits**
Lecture-laboratory approach to problem-solving for the primary and secondary teacher faced with organizing an assembly presentation, pageant or class play. Production types demonstrated range from cafatorium multi-purpose room to formal stage presentation. Teachers are encouraged to bring specific problems and plans. For non-drama majors.

Dr 491 Special Topics **1-5 credits**
Dr 492 Special Topics **1-5 credits**
Dr 493 Special Topics **1-5 credits**

Dr 494 Production Seminar **1-5 credits**
Dr 495 Production Seminar **1-5 credits**
Dr 496 Production Seminar **1-5 credits**
Prerequisites: Drama majors only, senior status and permission of advisers.

Dr 497 Undergraduate Research **1-5 credits**
Dr 498 Undergraduate Research **1-5 credits**
Dr 499 Undergraduate Research **1-5 credits**
Prerequisites: Drama majors only, senior status and permission of advisers.

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 **3 credits**
Mu 116 Theory II **3 credits**
Mu 117 Theory III **3 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 **1 credit**
Mu 122 Cello **1 credit**
Mu 125 Organ **1 credit**
Mu 130 University Chorus **1 credit**
Mu 131 Vocal Ensemble **1 credit**
Mu 135 Instrumental Ensemble **1 credit**
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 203 Chamber Music **2 credits**
Selected topics in the chamber literature of the Classic, Romantic and Contemporary periods, with analysis of the special characteristics and qualities of the small instrumental ensemble. 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** **3 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 credits**
Mu 216 **Theory V** **5 credits**
Mu 217 **Theory VI** **5 credits**
Advanced musicianship, beginning part writing and analysis.

Mu 315 **Theory VII** **3 credits**
Mu 316 **Theory VIII** **3 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. Corequisites: Mu 315 with 372; 316 with 373.

Mu 370 **History and Literature of Music I** **3 credits**
Mu 371 **History and Literature of Music II** **3 credits**
Mu 372 **History and Literature of Music III** **3 credits**
Mu 373 **History and Literature of Music IV** **3 credits**
Mu 374 **History and Literature of Music V** **3 credits**
I. Medieval and Renaissance Periods. II. Baroque Period. III. Classic Period. IV. Romantic Period. V. 20th Century. For music majors. Corequisites: Mu 415 with 370; 416 with 371; 315 with 372; 316 with 373; 417 with 374.

Mu 415 **Modal Counterpoint** **3 credits**
Sixteenth-century contrapuntal style as found in the music of Palestrina and his contemporaries. For music majors. Corequisite: Mu 370.

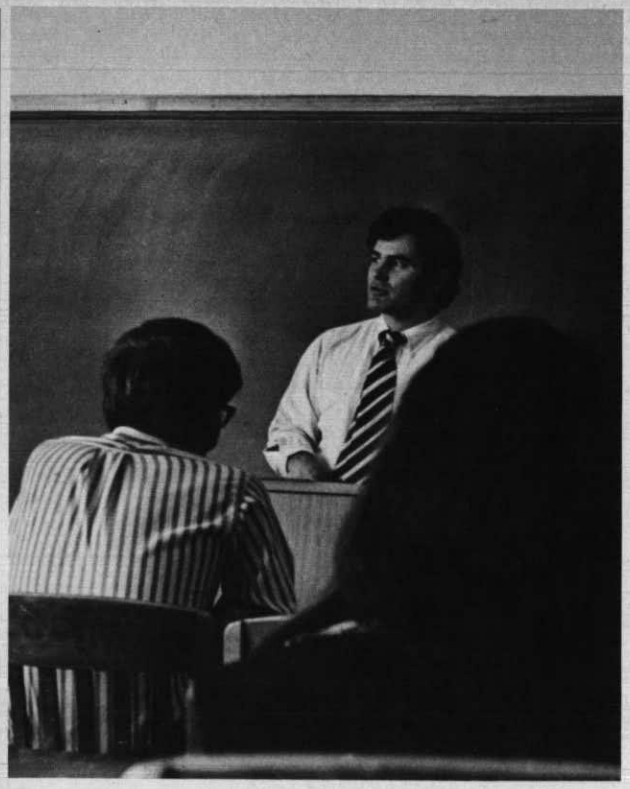
Mu 416 **Tonal Counterpoint** **3 credits**
Eighteenth-century contrapuntal style as found in the music of Bach and his contemporaries. For music majors. Corequisite: Mu 371.

Mu 417 **Contemporary Counterpoint** **3 credits**
Contrapuntal techniques as used by composers in the Twentieth Century. For music majors. Corequisite: Mu 374.

Mu 418 **Orchestration** **3 credits**
Practical application or study of the instruments and their creative use. Prerequisite: Permission of adviser.

Mu 451 **Soundcraft** **3 credits**
Creative modification of electronic sound. Lectures and individual laboratory work. Recommended for public school teachers.

Mu 491 **Special Topics** **1-4 credits**
Mu 492 **Special Topics** **1-4 credits**
Mu 493 **Special Topics** **1-4 credits**



Foreign Languages

Gerald Ricard, M.A., Chairman

Objectives

The foreign language programs in French, German, Italian, Spanish, Latin and Greek 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 of another culture and civilization, its history, geography, literature and arts through the medium of its language leads to a better understanding of one's self and of the world. Consequently, 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 have never been greater. 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.

Degrees Offered

Bachelor of Arts
Bachelor of Arts in Education—F/L Teaching
Master of Education—F/L Teaching (French)
Master of Arts in Education—F/L Teaching (French)

General Program Requirements

Students majoring in language must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin.

Departmental Requirements

Bachelor of Arts (modern languages)—40 credits beyond elementary language courses, including major language 215, 225, 235, 315, 325 and three courses from 415, 425, 435, 440 and 445.

Bachelor of Arts (classical languages) — 45 credits which must include 101, 102, 103, 204, 205, 206 and three courses from Sequence I (307, 308, 309) or Sequence II (410, 420, 430).

Bachelor of Arts in Education—F/L Teaching—satisfying the degree requirements of the School of Education and 45 credits beyond elementary language courses including major language 215, 225, 235, 315, 450, 451, 452 and 455.

Undergraduate Minor (modern languages)—20 credits beyond elementary language courses including 215, 225, 235 and 315.

Undergraduate Minor (classical languages) — 25 credits which must include 101, 102, 103, 204 and 205.

Master of Education—F/L Teaching (French)—must meet the general requirements of the Graduate School and those of the School of Education. The foreign language requirements comprise an internship as a teaching assistant in the University's French-in-France Institute in Grenoble (Fr 460, 461, 462) and Fr 465.

Master of Arts in Education—F/L Teaching (French)—Requirements are similar to those of the M.Ed. with a thesis required in place of the graduate project.

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

Reading Programs (sequences of 3 courses: 101, 102, 103) 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.

Bachelor of Arts — Modern Languages

Freshman year

English 100, 133, 134 or 200	15 credits
History 101, 102, 103 or 321	15 credits
Major Language 115, 125, 135	15 credits

Sophomore year

Major Language 215, 225, 235	15 credits
Philosophy 110, 220 and core option	15 credits
Social science core options	10 credits
Theology core option	5 credits

Junior year

Major Language 315, 325, 415	15 credits
Mathematics/Science core options	10 credits
Minor Language 115, 125, 135	15 credits
Theology core option	5 credits

Senior year

Major Language 425 or 435, 440 or 445	10 credits
Minor Language 215, 225, 235, 315	20 credits
Electives	15 credits
Total	180 credits

Bachelor of Arts—Classical Languages

Consult Classics adviser or department chairman.

Modern Language Courses
French Courses

Fr 101	**Reading French I**	5 credits
Fr 102	**Reading II**	5 credits
Fr 103	**Reading French III**	5 credits
	Intensive study of written French for reading and translation with accuracy and comprehension.	

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

Fr 115	**French Language I**	5 credits
Fr 125	**French Language II**	5 credits
Fr 130	**French Language I, II**	15 credits
Fr 135	**French Language III**	5 credits
Fr 140	**French Language I, II, III**	15 credits
Fr 215	**French Language IV**	5 credits
Fr 220	**French Language III, IV**	10 credits
Fr 225	**French Language V**	5 credits

Fr 235	**French Language VI**	5 credits
Fr 239	**French Language V, VI**	10 credits
Fr 240	**French Language IV, V, VI**	15 credits
Fr 291	**Special Topics**	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**	5 credits
Fr 325	**Introduction to French Literature**	5 credits
Fr 390	**French Literature in Translation** (for non-majors and non-minors only)	2-5 credits
Fr 415	**XIXth Century, Literary Movements**	5 credits
Fr 425	**XVIIth Century, Classicism**	5 credits
Fr 435	**XVIIIth Century, The Enlightment**	5 credits
Fr 444	**XVIth Century, The Renaissance**	5 credits
Fr 445	**XXth Century, Comtemporary Literature**	5 credits
Fr 450	**Methodology of Teaching the French Language**	5 credits
Fr 451	**Teaching French Culture and Civilization**	5 credits
Fr 452	**Language Improvement**	5 credits

These three courses form part of the requirements for the BA in Education — F/L teaching (French).

Fr 455	**Methodology of Teaching Foreign Languages (French)**	2-5 credits
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**	5 credits
Fr 462	**Teaching Internship**	5 credits

These three courses form part of the graduate teaching internship of the French-in-France Institute.

Fr 465	**Comparative Methods, Techniques and Performance Objectives of Foreign Language Teaching**	3 credits
Fr 491	**Supervised studies**	2-5 credits
Fr 492	**Supervised studies**	2-5 credits
Fr 493	**Supervised studies**	2-5 credits

German Courses

Gr 101	**Reading German I**	5 credits
Gr 102	**Reading German II**	5 credits
Gr 103	**Reading German III**	5 credits

Intensive study of written German for reading and translation with accuracy and comprehension

Gr 115	**German Language I**	5 credits
Gr 125	**German Language II**	5 credits
Gr 130	**German Language I, II**	10 credits
Gr 135	**German Language III**	5 credits
Gr 140	**German Language I, II, III**	15 credits
Gr 215	**German Language IV**	5 credits
Gr 220	**German Language III, IV**	10 credits
Gr 225	**German Language V**	5 credits
Gr 235	**German Language VI**	5 credits
Gr 239	**German Language V, VI**	10 credits
Gr 240	**German Language IV, V, VI**	15 credits
Gr 291	**Special Topics**	2-5 credits
Gr 292	**Special Topics**	2-5 credits
Gr 293	**Special Topics**	2-5 credits
Gr 315	**Introduction to German Literature**	5 credits
Gr 325	**German Culture, Civilization, History and Geography**	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	**ContemporaryGermanLiterature**(Prose)	5 credits
Gr 455	**Methodology of Teaching Foreign Languages** (German)	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.

Spanish Courses

Sp 101	**Reading Spanish I**	5 credits
Sp 102	**Reading Spanish II**	5 credits
Sp 103	**Reading Spanish III**	5 credits

Intensive 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 130 **Spanish Language I, II** 10 credits
Sp 135 **Spanish Language III** 5 credits
Sp 140 **Spanish Language I, II, III** 15 credits
Sp 215 **Spanish Language IV** 5 credits
Sp 220 **Spanish Language III, IV** 10 credits
Sp 225 **Spanish Language V** 5 credits
Sp 235 **Spanish Language VI** 5 credits
Sp 239 **Spanish Language V, VI** 10 credits
Sp 240 **Spanish Language IV, V, VI** 15 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
Sp 325 **Introduction to Spanish Literature** 5 credits
Sp 390 **Spanish Literature in Translation** (for non-majors and non-minors only) 2-5 credits
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 Theater** 5 credits
Sp 445 **Contemporary Spanish American Literature** 5 credits
Sp 455 **Methodology of Teaching Foreign Languages** (Spanish) 5 credits
Sp 491 **Supervised Studies** 2-5 credits
Sp 492 **Supervised Studies** 2-5 credits
Sp 493 **Supervised Studies** 2-5 credits

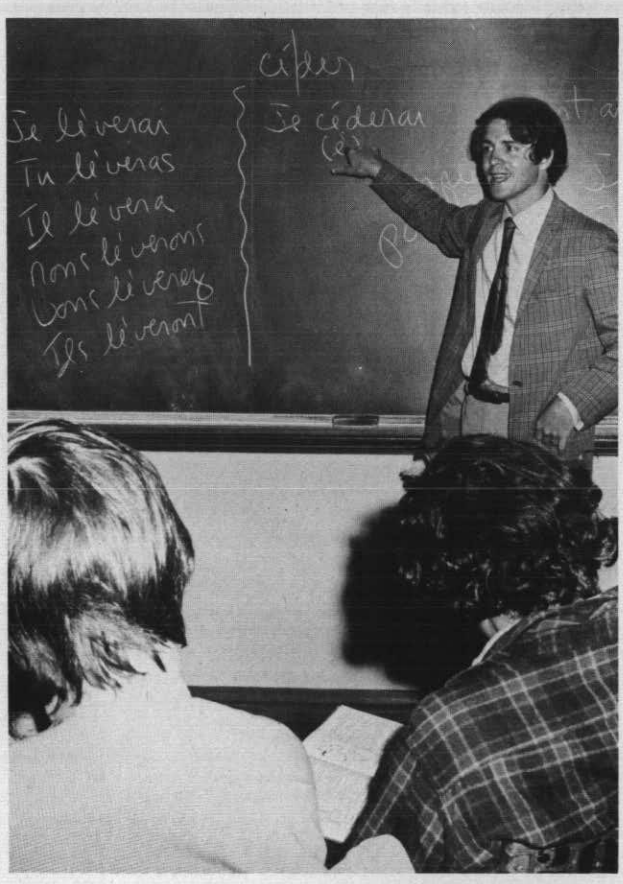
Classical Language Courses

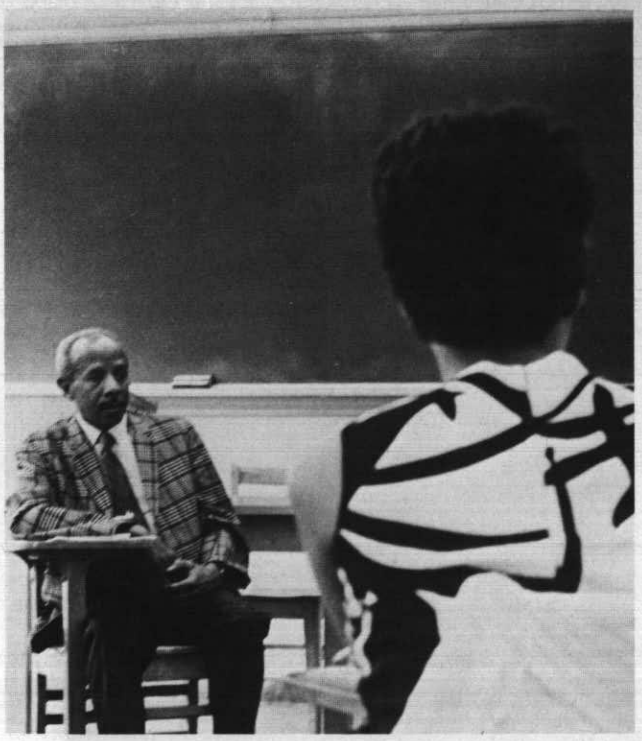
Greek Courses

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. (I-fall, II-winter, III-spring)
Gk 204 **Attic Greek**
A transitional course to the Attic dialect with selections from Xenophon and Herodotus 5 credits
Gk 205 **Greek Oratory** 5 credits
Gk 206 **Greek Lyric Poetry** 5 credits
Gk 291 **Special Topics** 2-5 credits
Gk 292 **Special Topics** 2-5 credits
Gk 293 **Special Topics** 2-5 credits
Gk 307 **Plato** 5 credits
Gk 308 **Greek Drama** 5 credits
Gk 309 **Greek Epic Poetry** 5 credits
Gk 390 **Greek Literature in Translation** (for non-majors and non-minors only) 2-5 credits
Gk 410 **History of the Athenian Constitution** 5 credits
Gk 420 **Biographies of Famous Greek Leaders** 5 credits
Gk 430 **Greek Mythology and Religion** 5 credits
Gk 491 **Supervised Studies** 2-5 credits
Gk 492 **Supervised Studies** 2-5 credits
Gk 493 **Supervised Studies** 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
Phonology, morphology, syntax and lexicon of Classical Latin. (I-fall, II-winter, III-spring)
Lt 204 **Cicero's Essays** 5 credits
Lt 205 **Roman Oratory** 5 credits
Lt 206 **Roman Poetry** 5 credits
Lt 291 **Special Topics** 2-5 credits
Lt 292 **Special Topics** 2-5 credits
Lt 293 **Special Topics** 2-5 credits
Lt 307 **Roman Philosophers** 5 credits
Lt 308 **Roman Comedy** 5 credits
Lt 309 **Vergil's Aenied** 5 credits
Lt 390 **Latin Literature in Translation** (for non-majors and non-minors only) 2-5 credits
Lt 410 **Roman Satire** 5 credits
Lt 420 **Roman-Alexandrian Poets** 5 credits
Lt 430 **Roman Tradition and Religion** 5 credits
Lt 491 **Supervised Study** 2-5 credits
Lt 492 **Supervised Study** 2-5 credits
Lt 493 **Supervised Study** 2-5 credits





History

Robert D. Saltvig, Ph.D., Chairman

Objectives

The objectives of the History department are to provide an essential background to the study of Western Europe, the United States, Latin America and Russia-China-Japan for all students in the University and to deepen and broaden these studies for those majoring in history or those intending further study at the graduate level.

Degrees Offered

Bachelor of Arts
Master of Arts

General Program Requirements

Students in history must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin. Required sequences are 15 credits each of philosophy and language and 10 credits each of English, theology, social science and mathematics/science.

Departmental Requirements

Bachelor of Arts — 60 credits including Hs 101, 102, 103, 200, 400 and 499. Of the remaining 30 credits, a combination of three 300-numbered courses and two 400-numbered courses is to be taken in a general area (Western Europe, United States, Latin America or Russia-China-Japan) recommended by the student's adviser. An oral comprehensive examination covering the candidate's area of concentration will be required for graduation. Fifteen credits of language or their equivalent are required (may be taken in junior year). Further study in the same language or a second language is recommended for students contemplating graduate school.

Undergraduate Minor — 35 credits of history of which Hs 101, 102 and 103 are required.

Teaching Major (School of Education) — 45 credits of history including Hs 101, 102, 103, 231, 341 and four 300-numbered courses, exclusive of Hs 300. Those planning on secondary teaching take Hs 300. Those planning on elementary teaching take Ed 420 in lieu of Hs 300.

Master of Arts — 45 credits of history including Hs 500, 501, 502 and six field courses. Of the latter 15 credits are to be taken in a special area (Western Europe, United States, Latin America) and up to 20 credits may be taken from undergraduate courses numbered 405-498. In place of two of the 400-numbered courses a student may substitute a thesis, but he must register for Hs 599 the quarter in which he completes his work. A reading knowledge of a foreign language is required and an examination will be conducted before completion of one-half of the program. A final comprehensive examination, written and oral, covering all fields taken, but with emphasis on the special area, will be required.

Bachelor of Arts

Freshman year

English 100 and core option	10 credits
History 101, 102, 103	15 credits
Philosophy 110	5 credits
Electives	15 credits

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	15 credits
History 400, 499 and elective	15 credits
Social Science core option	5 credits
Electives	10 credits
Total	180 credits

History Courses

Hs 101 Western Culture I — 5 credits
Hs 102 Western Culture II — 5 credits
Hs 103 Western Culture III — 5 credits
I. Topical studies in the civilizations of Western man from antiquity through the early Middle Ages. II. Western man from the High Middle Ages through the Napoleonic world. III. Western

man through the 19th and 20th centuries. Prerequisite: Hs 102 for 103.

Hs 200 Methodology **5 credits**
Techniques of historical research, criticism and writing. Prerequisites: Hs 101, 102, 103.

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

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

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

Hs 281 Survey of the Modern Eastern World **5 credits**
The Arabian, Indian and East Asian world from Age of Imperialism; conflicts of Western and non-Western traditions.

Hs 300 Teaching of History **5 credits**
Techniques of instruction in historical awareness and in basic historical content for the secondary level of education. Limited to history majors and and minors in the School of Education.

Hs 304 Europe of the Early Middle Ages **5 credits**
European origins of Western civilization from Constantine to Charlemagne. Prerequisite: Hs 101.

Hs 305 Europe of the 11th and 12th Centuries **5 credits**
Cultural, social and political institutions of Europe from the Ottonian Renaissance through the 17th century Renaissance. Prerequisite: Hs 102.

Hs 306 Europe of the High Middle Ages **5 credits**
Analysis of the cultural, social and political institutions of 13th century Europe. Prerequisite: Hs 102.

Hs 307 Europe of the Renaissance **5 credits**
Movements and institutions from Italy to the rest of Europe; from the 14th through the early 16th centuries. Prerequisite: Hs 102.

Hs 309 Europe of the 16th Century **5 credits**
The Protestant and Catholic Reformation. Prerequisite: Hs 102.

Hs 310 Europe of the 17th Century **5 credits**
The Scientific Revolution, baroque synthesis and European state system to Utrecht. Prerequisite: Hs 102.

Hs 311 Europe of the 18th Century **5 credits**
Cultural and political ferment of Western civilization in the century from Utrecht to Waterloo. Prerequisite: Hs 102.

Hs 313 Europe of the 19th Century **5 credits**
The era of revolutions, in ideas and society, from the Napolenoic wars to the beginning of World War I. Prerequisite: Hs 103.

Hs 315 Europe of the 20th Century **5 credits**
Contemporary movements and institutions in the home base of Western civilization, through war and peace. Prerequisite: Hs 103.

Hs 321 Modern France **5 credits**
Development of cultural and political France from Francis I to the present. Prerequisite: Hs 103.

Hs 323 Modern Spain **5 credits**
Development of cultural and political Spain from Isabella to the present. Prerequisite: Hs 103.

Hs 324 Church History I **5 credits**
Hs 325 Church History II **5 credits**
I. Topics in early Church history from the birth of Christ through the High Middle Ages. II. Topics in Church history from William of Occam through Vatican II. Prerequisites: Hs 101, 102 for 324; 103 for 325.

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 and the Constitution, the first continental expansion and the first world contacts to the era of Monroe.

Hs 335 The Expansion and Crisis of the Union **5 credits**
The United States from the era of Jackson through the Civil War and Reconstruction.

Hs 337 The United States - Expansion and World Power **5 credits**
Domestic and foreign development of American power from the end of Reconstruction to the Great Depression.

Hs 339 Recent United States **5 credits**
Development of American culture from the stock market crash of 1929 to the present with emphasis on political, social, diplomatic and economic affairs.

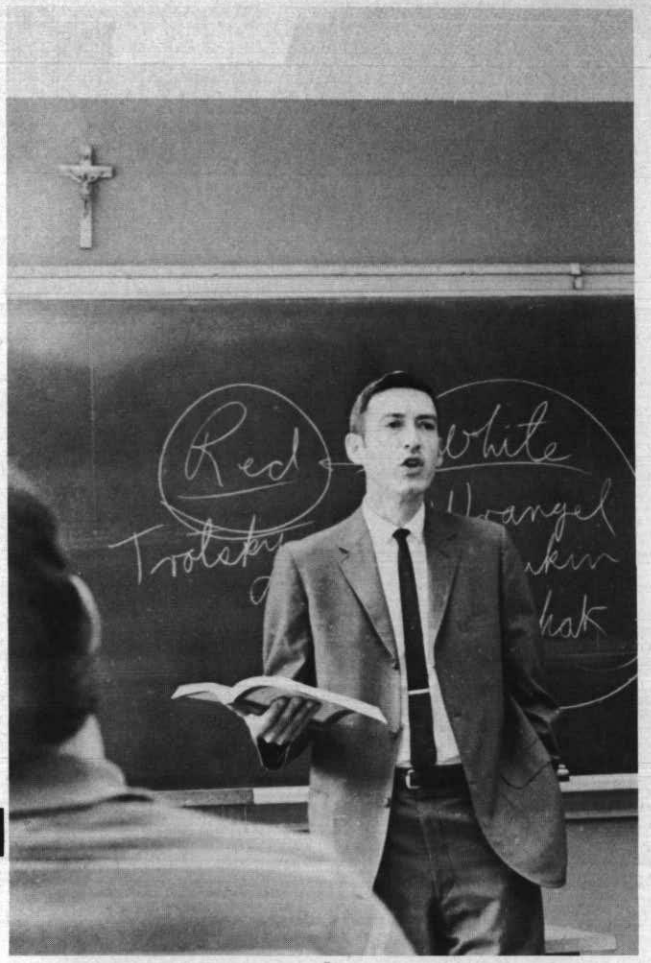
Hs 341 The Pacific Northwest **5 credits**
Past development and present problems of the states comprising the United States Pacific Northwest with emphasis on Washington State.

Hs 347 Afro-American History I **5 credits**
Hs 348 Afro-American History II **5 credits**
I. African origins, slave trade, and the Afro-American experience to Emancipation. II. History of the Afro-American from Reconstruction to the present. Prerequisites: Hs 102 for 347; 103 or 231 for 348.

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

Hs 353 Brazil **5 credits**
Development, under Portuguese and other influences, of the Brazilian nationality and culture to the present.

Hs 355 Argentina and Chile **5 credits**
History and culture of the southern South American republics from the first European settlements to the present.



Hs 357 **Central America and the Caribbean** **5 credits**
The strategic center of the Americas from the Columbian beginnings to the present cluster of colonies and republics.

Hs 359 **The Andean Republics** **5 credits**
History and culture of Peru, Bolivia, Equador and Colombia from the Spanish Conquest to the present.

Hs 362 **Tudor England** **5 credits**
Rule of the Tudor monarchs from Henry VII through Elizabeth I and the English Reformation. Prerequisite: Hs 102.

Hs 363 **Stuart England** **5 credits**
Rule of the Stuart monarchs and the constitutional and religious crises of the 17th Century. Prerequisite: Hs 102.

Hs 365 **Modern Britain** **5 credits**
History of the great island kingdom, from the 18th through the 20th centuries. Prerequisite: Hs 103.

Hs 372 **Early Russia** **5 credits**
Origins and development of Russia from the Kievan period through the era of Peter the Great. Prerequisite: Hs 102.

Hs 373 **Modern Russia** **5 credits**
History and culture of the Russian people in 19th and 20th centuries. Prerequisite: Hs 103.

Hs 381 **China — to the 10th Century** **5 credits**
Foundations and fortunes of the Chinese nation and culture from the earliest times to the end of the T'ang Dynasty.

Hs 382 **China — 10th through the 19th Centuries** **5 credits**
The thousand years of Chinese empire and civilization from the end of the T'ang to the Ch'ing dynasties.

Hs 383 **China — 20th Century** **5 credits**
Successive revolutions of the Chinese republics and the contemporary situation of the Chinese people and culture.

Hs 386 **Traditional Japan** **5 credits**
Japanese history and culture, from earliest times to the Meiji restoration.

Hs 387 **Modern Japan** **5 credits**
Japanese history and culture, with emphasis on the last hundred years of western contact and world power.

Hs 391 **Special Topics** **1-5 credits**
Hs 392 **Special Topics** **1-5 credits**
Hs 393 **Special Topics** **1-5 credits**
Private work by arrangement with 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. Prerequisite: Hs 200.

Hs 401 **American Historians** **5 credits**
Historical study and writing in the United States. Recommended for U.S. history majors. With permission of instructor. Prerequisite: Hs 200 and permission of instructor.

Hs 404 **Studies in the Early Middle Ages** **5 credits**
Prerequisite: Hs 304.

Hs 405 **The 12th Century Renaissance** **5 credits**
Prerequisite: Hs 305.

Hs 406 **Studies in the Europe of the High Middle Ages** **5 credits**
Prerequisite: Hs 306.

Hs 408 **Expansion of Europe** **5 credits**
Studies in the impingement of Europe on the new and old worlds from the 15th through the 18th centuries. Prerequisite: Hs 309.

Hs 411 **France: Ancien Regime** **5 credits**
Studies in the institutions and events of the century preluding the fall of old France. Prerequisite: Hs 311.

Hs 412 **The French Revolution and Napoleon** **5 credits**
Studies in revolutionary thought and action. Prerequisite: Hs 311.

Hs 414 **Modern Germany** **5 credits**
Studies in German history and culture from Stein to Adenauer. Prerequisite: Hs 313 or 315.

Hs 415 **Western Christian Culture** **5 credits**
Studies centered around classical secondary literature investigating the rise and decline of of the classical Christian synthesis. Prerequisite: Permission of instructor.

Hs 431 **The Westward Movement** **5 credits**
Studies in American frontier history from colonial times to the end of the 19th Century. Prerequisite: Hs 333 or 335.

Hs 432 **American Diplomacy I** **5 credits**
Hs 433 **American Diplomacy II** **5 credits**
I. Diplomatic history of the United States from Independence through the 19th Century. II. Diplomatic history of the United States during the 20th Century. Prerequisites: Hs 231 or 333 or 337 for 432; 231 or 337 or 339 for 433.

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 the Confederated United States. Prerequisite: Hs 331.

Hs 435 **American Reconstruction** **5 credits**
Political, social and economic aspects in the post-Civil War Reconstruction of the United States. Prerequisite: Hs 335.

Hs 437 **The Progressive Movement** **5 credits**
An American political and social phenomenon. Prerequisite: Hs 337.

Hs 451 **Pre-Columbian America** **5 credits**
Mayan, Aztec, Incan and other civilizations in subsequent Latin America. Prerequisite: Hs 351 or 353 or 355 or 357 or 359.

Hs 453 **Colonial Institutions in Latin America** **5 credits**
Various aspects, political, social, economic and religious. Prerequisite: Hs 351 or 353 or 355 357 or 359.

Hs 462 **English Reformation** **5 credits**
Analysis of the many aspects of the Act of State from the King's "Great Matter" through the Elizabethan Settlement. Prerequisite: Hs 362.

Hs 464 **Puritans and Parliament-Men** **5 credits**
Crises of the 17th Century English church and state. Prerequisite: Hs 363.

Hs 479 **Problems in Modern Asian Revolution** **5 credits**
Historical, political and social theory of Marxism from the origins to the present, in Europe, Asia and the Americas. Prerequisite: Hs 313 or 315 or 373 or 381.

Hs 480 **Problemes in Chinese Intellectual History** **5 credits**
Chinese philosophy, religious thought, political doctrine and historiography. Prerequisite: Hs 381 or 382.

Hs 491 **Special Topics** **1-5 credits**
Hs 492 **Special Topics** **1-5 credits**
Hs 493 **Special Topics** **1-5 credits**

Hs 494 **Seminar** **5 credits**
Hs 495 **Seminar** **5 credits**
Hs 496 **Seminar** **5 credits**

Hs 497 **Independent Study** **1-5 credits**
Hs 498 **Independent Study** **1-5 credits**
Private studies by arrangement with approval of department chairman. Prerequisite: Completion of 300-series courses in related areas.

Hs 499 **Senior Seminar** **5 credits**
Specially directed projects in research and composition. Limited to seniors in Arts and Sciences. Prerequisites: Hs 200 and at least one course in the 400 series.

Graduate Courses

Hs 500 **Historical Methodology** **5 credits**

Hs 501 **Historiography I** **5 credits**
Hs 502 **Historiography II** **5 credits**
I. Antiquity to the Enlightenment. Analysis of the theses and techniques of the major historians from Herodotus to Gibbon. II. The Enlightenment to the present. Gibbon to contemporary historians.

Hs 505 **Medieval History** **5 credits**
Studies in Medieval history and culture.

Hs 507 **Renaissance and Reformation** **5 credits**
Studies in the cultural and religious history of Europe from the 14th through the 17th centuries.

Hs 512 **Early Modern Europe** **5 credits**
From the Renaissance through the Enlightenment.

Hs 513 **Revolutionary Europe** **5 credits**
Studies in continental revolutions at the end of the 18th and during the first half of the 19th centuries.

Hs 531 **United States — Colonial** **5 credits**
The British colonies in North America through the War for Independence.

Hs 532 **United States — National** **5 credits**
The new nation to the end of the Civil War.

Hs 533 **United States — Reconstruction, Populism and Progressivism** **5 credits**
The expanding nation to World War I.

Hs 534 **United States — 20th Century Domestic** **5 credits**
The contemporary nation from Wilson through Johnson.

Hs 535 **United States — World Relations** **5 credits**
Topics in the nation's diplomatic history.

Hs 536 **United States — Frontier America** **5 credits**
Studies in the nation's diplomatic history.

Hs 551 **Latin America — Colonial** **5 credits**
Spanish and Portuguese colonies to the Revolution.

Hs 552 **Latin America — National** **5 credits**
The 19th and 20th centuries.

Hs 553 **Mexico** **5 credits**
Topics in Mexican history from the Spanish explorations to the present.

Hs 554 **Brazil** **5 credits**
Topics in Brazilian history from the Portuguese explorers to the present.

Hs 598 **Special Topics** **1-5 credits**

Hs 599 **Thesis** **5 credits**

Honors Program

Rosaleen Trainor, CSJ, Ph.D., Director

Objectives

The Honors Program is a two-year program designed to produce the student who can think, read, write and speak integratively across various university disciplines. For that 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 areas of study. The various disciplines, thought, literature, history 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 dialog method in seminars. In addition, each quarter the student must write at least one paper in each course he is taking 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

Scholarships are granted on a one-year basis, renewable on proof of competence. They may cover full or partial tuition. 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.

Program Requirements

Students register for and complete each of the course sequences numbered Hu 101 through 233. Completion of the Honors Program satisfies University core requirements in philosophy, science, English, history and theology. En 220 and Pl 440 may be completed for additional credit in summer study or by special examination prior to entering the major field. 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. After completing the Honors Program, students may elect to take Hu 398 or 499 while completing their major.

Honors Program Courses

Hu 101 Humanities Seminar - Thought 5 credits
Hu 102 Humanities Seminar - Thought 5 credits
Hu 103 Humanities Seminar - Thought 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, Epictetus, New Testament, St. Augustine, St. Thomas.

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, St. Paul, St. Augustine, 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 designed to furnish background discipline for humanities-thought and humanities-literature, covering Hebrew, Greek, Roman and Medieval Christian history.

Hu 131 Humanities Seminar - Science 2 credits
Hu 132 Humanities Seminar - Science 2 credits
Hu 133 Humanities Seminar - Science 2 credits
The history and nature of the physical sciences.

Hu 201 Humanities Seminar - Thought 6 credits
Hu 202 Humanities Seminar - Thought 6 credits
Hu 203 Humanities Seminar - Thought 6 credits
Three quarters of critical reading and discussion, including Descartes, Bacon, Hobbes, Locke, Spinoza, Leibnitz, Rousseau, Hume, Kant, Hegel, J.S. Mill, Newman, Marx, Whitehead and the Existentialists.

Hu 211 Humanities Seminar - Literature 4 credits
Hu 212 Humanities Seminar - Literature 4 credits
Hu 213 Humanities Seminar - Literature 4 credits
Shakespeare, Donne, Racine, Moliere, Corneille, 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
The Reformation to the present.

Hu 231 Humanities Seminar - Science 2 credits
Hu 232 Humanities Seminar - Science 2 credits
Hu 233 Humanities Seminar - Science 2 credits
The history and nature of the physical and life sciences.

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

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

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 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 24 of this bulletin. 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 or as a staff member of a student publication.

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 core social science; 10 credits of upper division United States history courses (or approved substitutes); 15 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, 406, 407, 488 and 490.

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 456 or approved substitute.

Bachelor of Arts

Freshman year

English 100 and core option	10 credits
History 101, 102	10 credits
Journalism 100	5 credits
Philosophy 110, 220	10 credits
Social Science core options	10 credits

Sophomore year

Journalism 200, 210, 250	15 credits
Modern Language, Fine Arts or Speech/Drama options	15 credits
Philosophy core option	5 credits
Social Science option	5 credits
Theology core options	5 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 substitute	10 credits
Journalism 330 and 300/400 options	15 credits
Theology core option	5 credits
Electives	10 credits

Senior year

Journalism 300/400 options	15 credits
Mathematics/Science core options	10 credits
Electives	15 credits
Total	180 credits

Journalism Courses

Jr 100 Introduction to Journalism — 5 credits
Review of grammar for journalists. Introduction to journalistic style. Study of contemporary media content. Elements of media analysis. (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; responsibility of the reader. (fall)

Jr 210 Newswriting — 5 credits
Elements of the news story; practice in gathering data for and writing news stories. Four classroom and one publication's laboratory session per week. Prerequisite: Jr 100 (winter)

Jr 250 Newsediting — 5 credits
Copy and proof editing procedures; headline writing, layout and makeup of the newspaper; photographic editing techniques. Four classroom and one publication's laboratory session per week. (spring)

Jr 291 Special Topics — 1-5 credits
Jr 292 Special Topics — 1-5 credits
Jr 293 Special Topics — 1-5 credits

Jr 310 Reporting Public Affairs — 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)

Jr 320 Photojournalism I — 2 credits
Jr 321 Photojournalism II — 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 American press from colonial to modern times. Prerequisite: Jr 200. (Biennially, winter)

Jr 345 **Law of the Press** **3 credits**
Constitutional guarantees and restrictions on freedom of information, with a study of significant cases; libel, copyright, privacy, postal regulations. (Biennially, spring)

Jr 350 **Feature Writing** **5 credits**
Elements of non-fiction articles for newspapers and magazines; actual writing for sale. (Biennially, fall)

Jr 355 **Communications Graphics** **5 credits**
Basic typographic, layout and design concepts. Editing techniques for organizational publications. Planning and purchasing printing. (Bienially, winter)

Jr 370 **Editorial Writing** **5 credits**
Nature, function and structure of persuasive writing; analysis of media editorials; practice in editorial writing. (Biennially, spring)

Jr 380 **Publication's Laboratory I** **1 credit**
Jr 381 **Publication's Laboratory II** **1 credit**
Jr 382 **Publication's Laboratory III** **1 credit**
Supervised editorial work on The Spectator and The Aegis. Prerequisite: Permission of department chairman. (I-fall, II-winter, III-spring)

Jr 430 **Critical Writing** **5 credits**
Reading, discussion and writing of newspaper and magazine style reviews of books, movies, television and musical and theatrical presentations. (Biennially, winter)

Jr 440 **Literature of Journalism** **2 credits**
Written and oral reports on selected works in journalism. Prerequisite: Permission of department chairman.

Jr 460 **Public Relations** **5 credits**
Public relations as a management function; policies, procedures and problems; program analysis and case study. (Biennially, spring)

Jr 465 **Publication's Advising** **5 credits**
Policies, techniques and problems in advising high school publications. (summer)

Jr 480 **Publication's Laboratory IV** **1 credit**
Jr 481 **Publication's Laboratory V** **1 credit**
Jr 482 **Publication's Laboratory 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. (Biennially, fall)

Jr 491 **Special Topics** **1-5 credits**
Jr 492 **Special Topics** **1-5 credits**
Jr 493 **Special Topics** **1-5 credits**
Supervised research in communications; special projects; internships on media and affiliated agencies. For journalism majors only. Prerequisite: Permission of department chairman.

Military Science

Col. Florian O. Cornay, M.S., Chairman

Objectives

The mission of the United States Army Detachment of Military Science is to train and ultimately commission as junior officers in the Army Reserve and Regular Army those male students who fulfill the academic and leadership requirements prescribed in the advanced program in conformance with the principles and educational aims of Seattle University. The program of instruction covers military fundamentals common to all branches of the service with particular emphasis on the application of the principles of leadership.

Degree Offered

Bachelor of Science in Military Science

General Program Requirements

Students in military science must satisfy core curriculum requirements of the University as given on page 24 of this bulletin. See programs of study below for additional requirements.

Programs

Three distinct programs are administered by the Military Science department: the basic course; the advanced course, through which the student may receive a commission in the army; and the degree program in military science.

Basic Program — The basic course is elective for all physically fit male students at the University. The course consists of two hours of classroom instruction and one drill period of one hour per week for six academic quarters. Students may volunteer for the Army Reserve but will not be required to perform ready service training in excess of ROTC training. Participation in ROTC training alone is not creditable toward longevity for retirement or pay in the military service.

Advanced Program — The advanced program is elective for qualified (male) students who have successfully completed the two-year basic course or who have successfully completed a summer camp of approximately six weeks in duration prior to their junior year. Applicants for the program are required to achieve a satisfactory grade on the ROTC qualifying examination, be eligible for graduation and commissioning prior to reaching their 28th birthday, fulfill the medical requirements of the Army physical examination and satisfy the academic requirements of the University in the major field they have selected. Final selection of candidates will be accomplished by a board of military staff officers. The advanced course consists of three hours of classroom instruction and one drill period per week for six academic quarters.

Students in the advanced program receive $100 per month subsistence allowance during the two years in the program. Transfer students and other students who have not completed the basic program may be enrolled in the advanced course after successfully completing a summer camp of approximately six weeks in duration prior to their junior year This camp will serve as a substitute for the two-year basic course.

Degree Programs — Requirements for the three degree programs in military science are listed below.

Departmental Requirements

Bachelor of Science in Military Science (Humanities and Social Science option) — 40 credits of military science courses as listed below with a 25-credit minor concentration in humanities and/or social science.

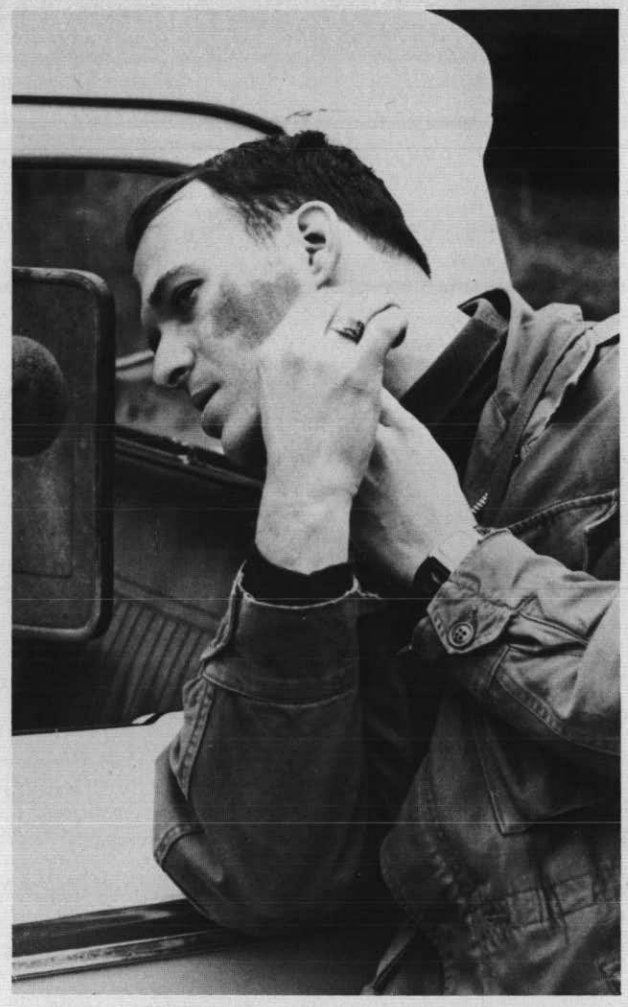
Bachelor of Science in Military Science (Science option) — 40 credits of military science courses as listed below with a minor concentration in biology, chemistry, physics or psychology.

Bachelor of Science in Military Science (Engineering option) — 40 credits of military science courses with a concentration in engineering as listed below.

Undergraduate Minor — 40 credits for four-year students which must include MS 101, 102, 103 201, 202, 203, 301, 302, 303, 304, 401, 402 and 403. Thirty-two credits for two-year ROTC program students which must include MS 204, 301, 302, 303, 304, 401, 402 and 403. In addition, attendance at seminars in map reading and military history while enrolled in 300 and 400 level courses is required in the two-year program.

Scholarships

Full tuition, fees and book scholarships for either one, two, three or four years are offered to selected students who desire a military career. In addition, scholarship students are paid $100 per month. Further information concerning scholarships can be obtained by writing to Professor of Military Science, Seattle University.



Bachelor of Science in Military Science
Humanities and Social Sciences Option

Freshman year

English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Humanities/Social Science elective	5 credits
Military Science 101, 102, 103	6 credits
Philosophy 110, 220	10 credits

Sophomore year

Military Science 201, 202, 203	6 credits
Modern Language 101, 102, 103	15 credits
Philosophy core option	5 credits
Political Science 160 and Social Science core option	10 credits
Theology core options	10 credits

Junior year

Humanities/Social Science electives	10 credits
Mathematics 101 or 175 and 112 or 200	10 credits
Mathematics/Science core option	5 credits
Military Science 301, 302, 303, 304	16 credits
Political Science 418	5 credits

Senior year

Humanities/Social Science electives	15 credits
Mathematics/Science core option	5 credits
Military Science 401, 402, 403	12 credits
Electives	15 credits
Total	180 credits

Bachelor of Science in Military Science
Science Option

Freshman year

English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Military Science 101, 102, 103	6 credits
Philosophy 110, 220	10 credits
Elective	5 credits

Sophomore year

Military Science 201, 202, 203	6 credits
Modern Language 101, 102, 103	15 credits
Philosophy core option	5 credits
Political Science 160 and Social Science core option	10 credits
Theology core options	10 credits

Junior year

Mathematics 101 or 175 and 112 or 200	10 credits
Military Science 301, 302, 303, 304	16 credits
Political Science 418	5 credits
Science electives	15 credits

Senior year

Military Science 401, 402, 403	12 credits
Science electives	25 credits
Electives	10 credits
Total	180 credits

Bachelor of Science in Military Science
Engineering Option

Freshman year

English 100 and core option	10 credits
Mathematics 112 (or elective), 114, 134	13 credits
Mechanical Engineering 102, 111, 112, 113	12 credits
Military Science 101, 102, 103	6 credits
Philosophy 110, 220	10 credits

Sophomore year

History 101-102 or 102-103	10 credits
Mathematics 135, 136	10 credits
Mechanical Engineering 281	5 credits
Military Science 201, 202, 203	6 credits
Physics 200, 201, 202	15 credits

Junior year

Chemistry 114	5 credits
Electrical Engineering 290	5 credits
Military Science 301, 302, 303, 304	16 credits
Philosophy core option	5 credits
Political Science 160 and Social Science core option	10 credits

Senior year

Engineering electives	15 credits
Military Science 401, 402, 403	12 credits
Political Science 418	5 credits
Theology core options	10 credits
Total	180 credits

Military Science Courses

MS 101 Preparation for Leadership — **2 credits**
Leadership and supervisory techniques. An analysis of leadership problems focusing on the leader, the led and the situation. Basic marksmanship and other selected military subjects. Two one-hour conferences and one leadership laboratory per week. (fall)

MS 102 Analysis of Conflict — **2 credits**
Definition and causes of war. The principles of warfare. Introduction to American military history focusing on its contribution to the development of the military art from the American Revolution to the conclusion of the Civil War. Two one-hour conferences and one leadership laboratory per week. (winter)

MS 103 American Military History — **2 credits**
United States military history from 1865 to the present. A detailed study of the application of the military art in significant battles from the Indian Wars through the conflict in Viet Nam. Two one-hour conferences and one leadership laboratory per week. (spring)

MS 201 Military Topographical Analysis — **2 credits**
Principles of land navigation, emphasizing terrain appreciation and evaluation, methods of orientation and aerial photography. Two one-hour conferences and one leadership laboratory per week. (fall)

MS 202 Introduction to Tactical Training of the Individual Soldier — **2 credits**
Emphasis on combat formations and battle drill. An in-depth appraisal of the fire power and maneuverability of combat units, including mortars, artillery, tanks, anti-tank systems, air defense elements and helicopter support available to maneuver elements in tactical operations. Two one-hour conferences and one leadership laboratory per week. (winter)

MS 203 Concepts of Military Operations — **2 credits**
Small unit tactics oriented towards the responsibilities and duties of the leaders of squad size units. Study of principles of the offense, defense, and patrolling operations. Two one-hour conferences and one leadership laboratory per week. (spring)

MS 204 Basic Summer Camp — **4 credits**
Map reading, United States arms and national security, military history and training in various military subjects. Six weeks during the summer at a military reservation designated by the Department of the Army. A substitute for the basic course for selected two-year program students. (summer)

MS 301 Military Leadership and Teaching Principles — **4 credits**
Educational psychology as it pertains to the five stages of instructional techniques. Methods of

instruction used in training, including preparation and use of training aids. Branches of the Army and selected military subjects. Student presentations. Three one-hour conferences and one leadership laboratory per week. (fall)

MS 302 Small Unit Tactics, Leadership and Communication **4 credits**
Principles of offensive and defensive combat and their application to subordinate units of the infantry division. Insurgency and internal defense and development. Selected military subjects. Three one-hour conferences and one leadership laboratory per week. (winter)

MS 303 Military Psychology and Leadership, Tactics **4 credits**
Responsibilities and basic qualities of leadership, human behavior and adjustment to military life. Functions and special problems of military leadership. Preparation for advanced summer camp. Selected military subjects. Three one-hour conferences and one leadership laboratory per week. (spring)

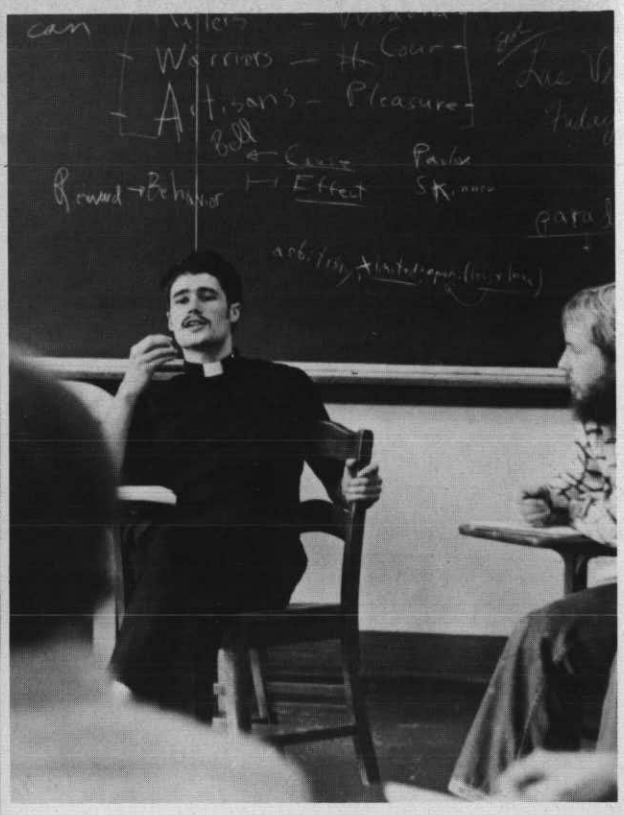
MS 304 Advanced Summer Camp **4 credits**
Arms qualification; practical application of tactics; leadership training and practice. Six weeks during the summer at a military reservation designated by the Department of the Army. Prerequisite: MS 303. (summer)

MS 401 Military Logistics **4 credits**
Staff operations at battalion and division levels. Review of small unit tactics. Tactics used at infantry battalion level. Advanced military topographical analysis. Three one-hour conferences and one 80-minute leadership laboratory per week. (fall)

MS 402 Military Law and United States Role in World Affairs **4 credits**
Provisions of the Uniform Code of Military Justice. Procedure prior to trial; apprehension and restraint, preferring action and investigating charges. Duties of the junior officer in the application of military justice and its role in military discipline. Analysis of the United States' interrelationship with other nations with emphasis on the military establishment. Three one-hour conferences and one leadership laboratory per week. (winter)

MS 403 Army Administration **4 credits**
Role of the junior officer in unit administration and familiarization with Department of the Army publications. Pre-commissioning orientation. Three one-hour conferences and one leadership laboratory per week. (spring)

MS 404 Flight Training **4 credits**
Consists of 36 hours ground school and 35½ hours 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 an MS IV in the Military Science program and meet physical requirements. Credit only when course is completed spring quarter. (fall, winter, spring)



Philosophy

James B. Reichmann, S.J., Ph.D., Chairman

Objectives

The task of philosophy is to study the world and man in terms of that which constitutes their innermost 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 might translate the complex manifold of human experience into relevant and creative meaning for himself 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 his 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.

Degree Offered

Bachelor of Arts

General Program Requirements

Students in philosophy must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin. In addition, students in philosophy must take 15 credits of language; 10 credits of fine arts; and 5 additional credits each of the following: English, history, mathematics/science, social science and theology.

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 101-102 or 102-103	10 credits
Philosophy 110, 220	10 credits
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 101, 102, 103	15 credits
Philosophy seminars	15 credits
Theology core option	5 credits
Elective	5 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 — The World **5 credits**
Introduction to the nature of philosophic inquiry and its justification; examination of the basic metaphysical problems of language, logic, cause, movement, knowledge, reality, human existence and God. Presented within a global historical context by examining these problems as experienced by the pre-Socratics, Plato, Aristotle and selected medieval, modern and contemporary philosophers.

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 **4 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.

PI 255 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.

PI 260 Logic I **5 credits**
PI 261 Logic II **5 credits**
I. Systematic treatment of traditional logic. The themes of communication and language, division and definition, propositions, syllogisms and the

nature of science will be examined. II. 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. Boolean algebra. For philosophy and mathematics majors.

PI 280 **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.

PI 290 **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** **5 credits**
PI 292 **Special Topics** **5 credits**
PI 293 **Special Topics** **5 credits**
Prerequisite: PI 220

PI 295 **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.

PI 300 **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.

PI 303 **Philosophy of Science** **5 credits**
Philosophical reflections on the historical development of scientific views of the cosmos. Readings from significant sources. Prerequisite: PI 220.

PI 305 **Philosophy of Science — The Behavioral Sciences** **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 320 **19th Century Positivism — Comte and Mill** **5 credits**
Intensive analysis of the positivist turn in philosophy from the viewpoint of Comte's "System of Positive Polity" and Mill's "A System of Logic" and "Principles of Political Economy." 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 330 **Philosophy of Education** **5 credits**
Study of the nature of education, its significance for man and for society with emphasis on the several philosophies of education that have been influential in the American schools. Prerequisite: PI 220.

PI 335 **The Philosophy of History** **5 credits**
Consideration of the aim and scope of history, the meaning of the historical event, the nature of historical explanation and the criterion for historical truth from the points of view of leading representatives of both the speculative and analytical schools. 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 17th 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.

PI 350 **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** **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 Scotus Erigena, the Arab and Jewish philosophers, Abelard, John of Salisbury, Roger Bacon, Anselm, Albert the Great and Bonaventure. Prerequisite: PI 220.

PI 420 **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**
Introduction to the dialectical materialism of Karl Marx through a study of "Economic and Philosophical Manuscripts," "Das Kapital," and "The Communist Manifesto;" historical background and philosophical origins of Marxism; 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 482 **Husserl** **5 credits**
Study of his phenomenology from representative readings from the "Ideen," "Cartesian Meditations" and "Formal and Transcendental Logic." 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, 460 and 465.

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.

PI 487 **Contemporary Atheism** **5 credits**
Selected readings from Feuerbach and Nietzsche and from such existentialists as Sartre and Camus. Prerequisite: PI 220.

PI 488 **Early Existentialism** **5 credits**
Philosophies of Kierkegaard, Nietzsche and Dostoevsky, 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.

PI 490 **Jean-Paul Sartre** **5 credits**
Analysis of Sartre's phenomenological ontology of "Being and Nothingness" and its contribution to existential phenomenology. Prerequisite: PI 220.

PI 491 **Special Topics in Philosophy** **5 credits**
PI 492 **Special Topics in Philosophy** **5 credits**
PI 493 **Special Topics in Philosophy** **5 credits**
Prerequisite: PI 220

PI 494 **Contemporary Ethical Theory** **5 credits**
Selected readings from contemporary moral philosophers such as Hare, Stevenson and Fletcher. Prerequisite: PI 220.

PI 495 **Contemporary Social Ethics** **5 credits**
Moral problems facing urbanized man in his contemporary setting. Prerequisite: PI 220.

PI 496 **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 497 **Thesis** **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 him in political analysis and informs him 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 designed to give the academic and professional background for beginning level staff, professional and research positions in departments and agencies of the city, county, state and national government. These positions would be on the junior management level and the expectation is that normal progression would lead to leadership roles.

Degree 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 24 of this bulletin. Political science majors are strongly encouraged to take additional courses in English, history, philosophy and theology 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, 418, 419.

International Relations and Foreign Policy — Pls 249, 350, 360, 361, 362, 385, 390, 391, 435, 436, 437.

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

Political Thought and Theory — Pls 242, 351, 352, 353, 354, 355, 490.

Bachelor of Public Affairs — 60 credits of political science which must include Pls 150 and 160; one course from three of the departmental subdivisions; 6 to 15 credits in internship (Pls 488 or 489) in a public governmental agency; remaining credits in the area of specialization (American Government or International Relations). See Bachelor of Arts program above for departmental subdivisions and appropriate courses.

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 101-102 or 102-103	10 credits
Philosophy 110, 220	10 credits
Political Science 150, 160	10 credits
Social Science core option	5 credits

Sophomore year

Philosophy core option	5 credits
Political Science 200 series	10 credits
Social Science core option	5 credits
Theology core options	10 credits
Electives	15 credits

Junior year

Mathematics/Science core options	10 credits
Political Science 300 series	20 credits
Electives	15 credits

Senior year

Political Science 400 series	20 credits
Electives	25 credits
Total	180 credits

Bachelor of Public Affairs

Freshman year

English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Philosophy 110, 220	10 credits
Political Science 150, 160	10 credits
Psychology 100 or Sociology 101	5 credits

Sophomore year

Economics 271	5 credits
Philosophy core option	5 credits
Political Science 200, 214	10 credits
Theology core options	10 credits
Electives	15 credits

Junior year

Mathematics/Science core options	10 credits
Political Science 249, 324, 353, 370	20 credits
Electives	15 credits

Senior year

Political Science 325 or 371 or 372 or 374 or 418 or 419 (any four)	20 credits
Political Science 488 or 489	10 credits
Electives	15 credits
Total	180 credits

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.

Pls 160 American National Government 5 credits
Study of the foundations, structures, functions of the executive, legislative and judicial branches of the national government and their interrelations with the popular processes of government.

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

Pls 211 Model United Nations 1 credit
Pls 212 Model United Nations 1 credit
Pls 213 Model United Nations 1 credit
For students who participate in the campus Model United Nations. Freshman and sophomores only. (Maximum of 3 credits.) (fall, winter, spring)

Pls 214 Government and the Economy 5 credits
Role of government in economic regulation, promotion and services in contemporary America.

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.

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

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

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.

Pls 311 Model United Nations 1 credit
Pls 312 Model United Nations 1 credit
Pls 313 Model United Nations 1 credit
For students who participate in the campus Model United Nations. Juniors and seniors only. (Maximum of 3 credits.) (fall, winter, spring)

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 of 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
Selected problems in the area of state and/or national legislative problems; organization and procedures of Congress; the role of the lobbyist. Prerequisite: Permission of instructor.

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 Asian Systems 5 credits
Analysis of selected Asian systems; the generality and diversity of forms and ideology and problems of nation building.

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 Ancient Political Thought 5 credits
Critical examination of political ideas from the pre-Socratics to St. Augustine including Hebrew and Islamic philosophies. Emphasis on reading the sources.

Pls 352 Political Thought from the Middle Ages to the Reformation 5 credits
Critical examination of the political ideas of the Church Fathers, the Church-State Controversies, Scholasticism, and the Renaissance and Reformation periods.

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.

Pls 355 Recent Political Theory 5 credits
Critical analysis of political theories from Marx to the present.

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 361 Contemporary International Relations in Asia **5 credits**
Asian diplomacy and international relations from World War I to the present; the Western powers in Asia; the Far East in world politics.

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 and function of the bureaucracy in modern American government.

Pls 371 State Government and Politics **5 credits**
Analysis of the unifying principles and the great diversities of the 50 states; emphasis on national-state intergovernmental relationships.

Pls 372 Urban and Metropolitan Government and Politics **5 credits**
Study of governmental role in urbanization, reform ideology; formal organization, external relations; structure and distribution of influence and leadership.

Pls 374 The American Presidency **5 credits**
Study of the presidential office and its powers; special treatment of the President's relations with the Congress and with bureaucratic structure.

Pls 375 Minority Politics in the United States **5 credits**
Examination 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 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.

Pls 400 Comparative Political Institutions **5 credits**
Comparative study of the nature, structure and function of the major institutions of government through 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 Regionalism and World Government **5 credits**
An analysis of the theoretical basis for 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.

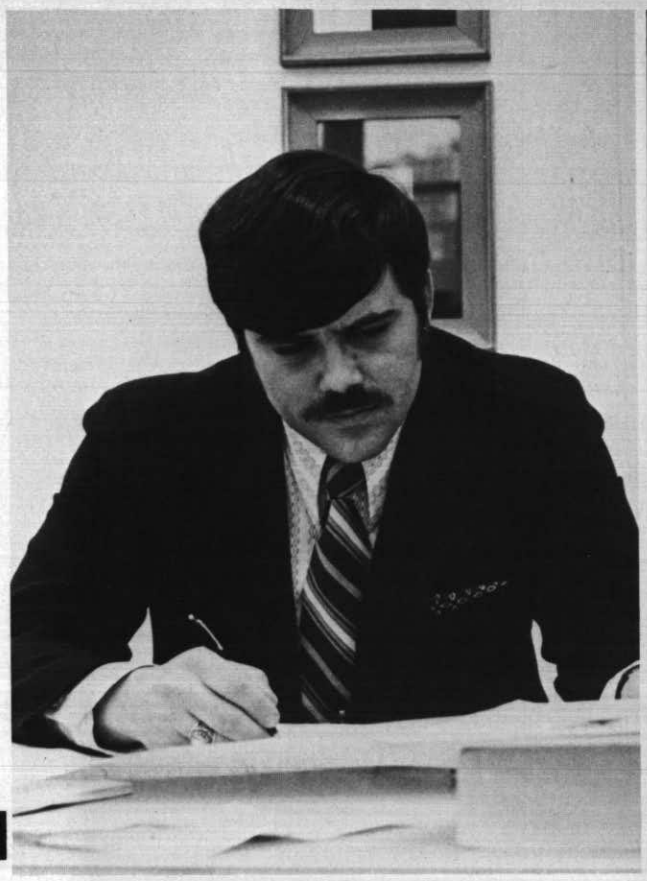
Pls 488 Internship—American Government **2-15 credits**
Pls 489 Internship—International **2-15 credits**
On-the-job experience with an appropriate governmental agency required for the BPA degree. Students may register for two or more credits per quarter; however, no more than 15 total intern credits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

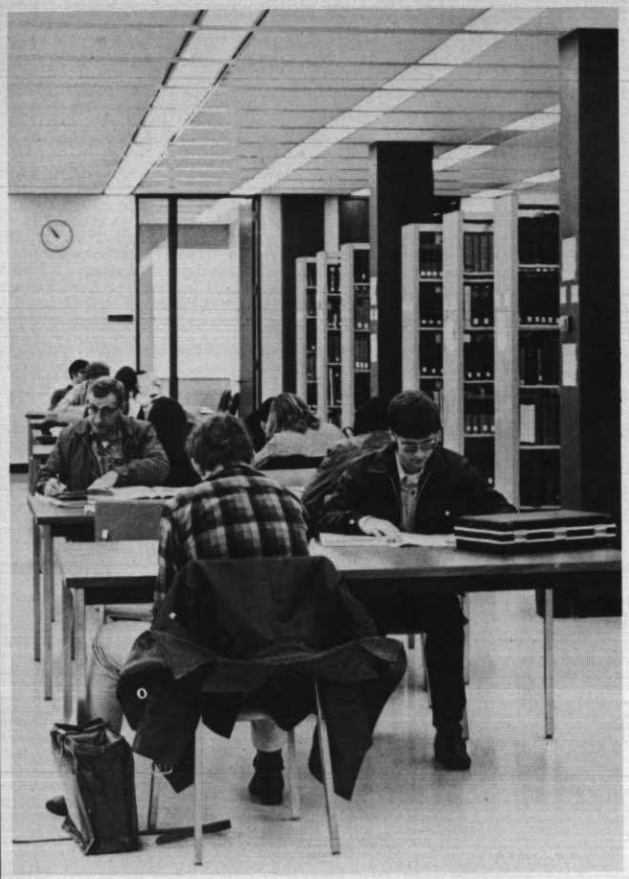
Pls 490 Scope and Methods of Political Science **2-5 credits**
Analysis of the history, methodology and focus of research in political science. Current state of the discipline. Prerequisite: Permission of instructor.

Pls 491 Special Topics **2-5 credits**
Pls 492 Special Topics **2-5 credits**
Pls 493 Special Topics **2-5 credits**

Pls 494 Seminars **2-5 credits**
Pls 495 Seminars **2-5 credits**
Pls 496 Seminars **2-5 credits**

Pls 497 Independent Study **2-5 credits**
Pls 498 Independent Study **2-5 credits**
Pls 499 Independent Study **2-5 credits**
(During 1970-1971 academic year the following numbers were used for independent study: Pls 440, 441, 450, 460, 461 and 470.)





Prelaw

Ben Cashman, Ph.D., Adviser
Sr. M. Christopher Querin, FCSP, 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 Schools. 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 Premajor 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.

Premajor

Mary Margaret Ridge, B.A., Director

Objectives

Freshmen and sophomore students who have not yet selected a major field may enroll in the two-year Premajor program. The emphasis in this program is on core curriculum subjects which are required for all degrees. Students are encouraged to explore fields of study in which they have an interest, whether arts, science or professional, and at the same time to complete course requirements basic to every program. A major must be selected by the end of the sophomore year, although Premajor status may be terminated at any time by declaring a major field, provided the student is academically in good standing.

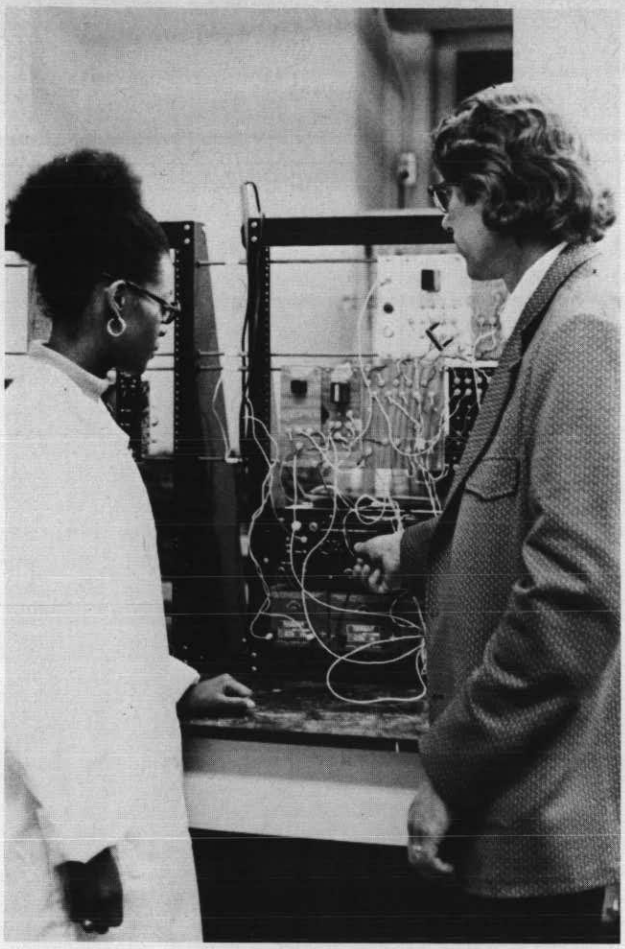
Premajor Program

Freshman year

English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Mathematics/Science and/or Social Science core options	15 credits
Philosophy 110, 220	10 credits

Sophomore year

Philosophy core option	5 credits
Theology core options	10 credits
Major and electives	25 credits
Mathematics/Science or Social Science core option	5 credits
Total	90 credits



Psychology

Thomas W. Cunningham, 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 behavior. The specific and unique role of the Psychology department is to provide a solid knowledge of psychology as an empirical 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 24 of this bulletin. See programs of study below for additional requirements.

Psychology majors may choose any minor but are advised to take mathematics, biology or sociology. 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 departmental 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

English 100	5 credits
History 101-102 or 102-103	10 credits
Mathematics/Science core option	5 credits
Psychology 100, 201	10 credits
Electives	15 credits

Sophomore year

Mathematics/Science core option	5 credits
Philosophy 110, 220	10 credits
Psychology elective	5 credits
Social Science core option	5 credits
Electives	20 credits

Junior year

English core option	5 credits
Psychology 301, 401 and electives	20 credits
Social Science core option	5 credits
Theology core options	10 credits
Elective	5 credits

Senior year

Philosophy core option	5 credits
Psychology electives	10 credits
Electives	30 credits
Total	180 credits

Bachelor of Science

Freshman year

English 100	5 credits
History 101-102 or 102-103	10 credits
Mathematics/Science electives	15 credits
Psychology 100	5 credits
Electives	10 credits

Sophomore year

Mathematics/Science electives	10 credits
Philosophy 110, 220	10 credits
Psychology 201, 202 and elective	12 credits
Social Science core option	5 credits
Electives	8 credits

Junior year

English core option	5 credits
Mathematics/Science electives	10 credits
Psychology 301, 330 and elective	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
Psychology 401, 402 and elective	15 credits
Electives	20 credits
Total	180 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 2 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. (I-fall, winter, spring, II-winter)

Psy 210 Personality Adjustment 5 credits
The normal personality; self-knowledge and self-actualization; personality adjustment problems; various inadequate reactions, escape and defense mechanisms; positive mental health. Prerequisite: Psy 100 (winter, spring)

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 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. (I-fall, spring, II-winter)

Psy 409 The Psychology of School Adjustment 3 credits
Study of non-psychiatric personality dynamics from the mental health viewpoint and with particular reference to school adjustment. (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)

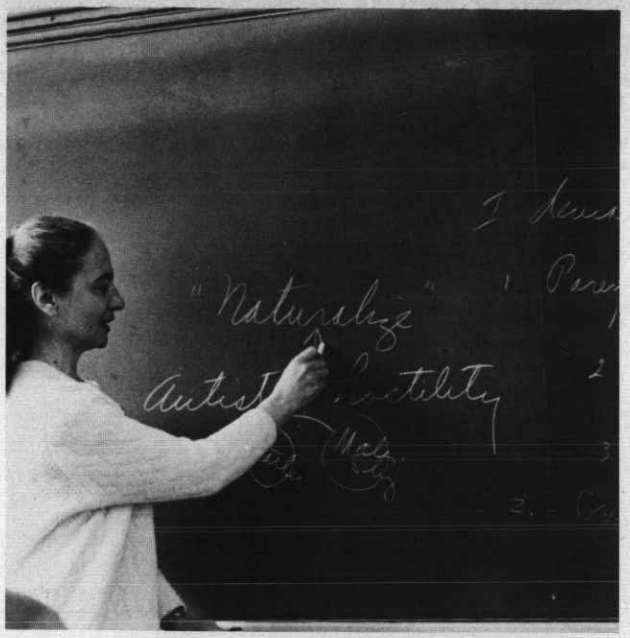
Psy 460 Group Dynamics 5 credits
Survey of theories and empirical studies of the dynamics of group behavior; emphasis on means of more effective and productive group performance. Prerequisite: Psy 210 or equivalent. (fall, winter)

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
Psy 499 Individual Research 2-5 credits
By arrangement. Prerequisite: Permission.



Sociology

James P. Goodwin, S.J., M.A., Chairman

Objectives

Sociology has the dual capacity of satisfying the need of students for a liberalizing discipline and of providing a sound basis for career preparation. Courses are designed to provide a systematic inquiry into the complex structure and dynamic function of modern society and to inquire into the social product of social living, culture. These courses further investigate the social and cultural influences affecting the development of the human personality.

Students who major in sociology may be broadly classified in three groups: those interested in pursuing sociology as a career for teaching or for research; those interested in pursuing sociology as a preparation for a career in social work; and those interested in sociology for its liberalizing character, for its value in humane learning. Three programs terminating in the Bachelor of Arts degree are offered. Common to these is a series of required courses whose purpose is to give a proper grounding in the conceptual tools of analysis and to equip the student to appreciate the techniques by which an empirical body of knowledge is established.

Degree Offered

Bachelor of Arts

General Program Requirements

Students in sociology must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin. In addition, 15 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 30 credits are in basic courses, including Sc 101, 102, 200, 201, 202, 380 and 381; and 25 credits are in the upper division courses of one of the following three programs:

Preprofessional program for sociologists — 25 credits. Sc 496 and 497 are required. Students in this program are not permitted to take Sc 375, 376 or 377.

Preprofessional program for social workers — 25 credits. Sc 375, 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 — 25 credits. The student may take any upper division sociology course with the approval of his adviser. He may not take Sc 375, 376 or 377.

Majors in all three programs will be required to take a written and an oral comprehensive examination (Sc 496, 0 credits) in the field of their concentration within sociology. The student must register for the examination in the quarter in which he plans to graduate.

Undergraduate Minor — 30 credits which will include Sc 101, 102, 201, 380 and 12 to 15 credits of upper division sociology courses.

Bachelor of Arts

Freshman year

English 100 and core option	10 credits
Philosophy 110, 220	10 credits
Psychology 100	5 credits
Sociology 101, 102, 201, 202	15 credits
Elective	5 credits

Sophomore year

History 101-102 or 102-103	10 credits
Philosophy core option	5 credits
Political Science or Economics core option	5 credits
Sociology 200, 380, 381	15 credits
Theology core options	10 credits
Elective	5 credits

Junior year

Mathematics/Science core options	10 credits
Modern Language 101, 102, 103	15 credits
Sociology electives	15 credits
Elective	5 credits

Senior year

Fine Arts 101, 102, 103	15 credits
Sociology electives	10 credits
Sociology 496	0 credits
Electives	15 credits
Total	180 credits

Sociology Courses

Sc 101 Fundamentals of Sociology I 5 credits
Sc 102 Fundamentals of Sociology II 5 credits
I. Nature of science as it applies to human social relationships; patterns of human relations

in the formation of groups, the development of culture and the impact of these in the formation of the human person; ways in which interaction patterns emerge, become normative and result in integrated social structures. Stress is on microsociological analysis. II. Analysis of demographic and ecological principles as a basis for consideration of major institutional structures in human society, such as religious, economic, educational, political, and familial; social change and deviant behavior. Stress is on macrosociological analysis.

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 I** **3 credits**
Sc 202 **Social Statistics II** **2 credits**
I. Basic principles and methods for compiling and interpreting data statistically: graphs, frequency distributions, central tendencies, measures of association; II. Analysis of variance, Chi square, regression correlations, meaning and application of nonparametric statistics. Prerequisite: Sc 201 for 202.

Sc 256 **Criminology** **5 credits**
Theoretical overview of the conceptualizations of human behavior as criminal behavior; sociological analysis of criminal interactions, their systemic structures and functions. Prerequisite: Upper division standing.

Sc 257 **Juvenile Delinquency** **5 credits**
Analysis of deviations and delinquencies of juveniles as distinct from those of adult offenders, and sociological explanations of these behaviors within contemporary conceptual models. Prerequisite: Upper division standing.

Sc 260 **Sociology of Family** **5 credits**
Explanation of family as a social system with structure and function; differential analysis of the family system as a group and as an institution; utilization of modern sociological frames of reference to interpret the position of the American family in an era of social change. Prerequisite: Upper division standing.

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.

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.

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.

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 in each. The aim is to understand the unfolding of a specific social movement and to test certain derivative hypotheses.

Sc 340 **Advanced Social Psychology** **5 credits**
Analysis with specific socio-psychological conceptual models; tests of propositions derived from these models. Prerequisite: Upper division standing.

Sc 350 **Small Groups** **5 credits**
Introduction to the sociological models and methods for analyzing small, interpersonal interactional systems of behavior, their dynamics and structures, as well as their potentials for change and growth.

Sc 360 **Complex Organizations** **5 credits**
Sociological analysis of large, complex social organizations, the kinds of modern organization as structures, and the relationships among organizations and to the larger social environment historically and currently.

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.

Sc 375 **Introduction to Social Work** **5 credits**
(CS375) 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.

Sc 376 **Factors of Interviewing** **5 credits**
(CS 376) 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: Sc 375 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 375 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, analysis of specific techniques of data gathering applied to sociology; observation, questionnaire, interview and case study; problems of measurement, including qualitative and quantitative techniques such as scaling; problem of data analysis, including tests of hypotheses through statistical techniques. II. Application of methods learned in Sc 380 to the design and execution of a research project by the student. Prerequisites: Upper division standing or Sc 201, 202 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.

Sc 410 **Social Stratification** **5 credits**
Study of social differentiation with emphasis upon institutionalized aspects of power, privilege and prestige. Generalizations drawn from available studies of status, rank, mobility and social classes. Prerequisite: Upper division standing.

Sc 420 **Mass Communication** **5 credits**
Consideration of message-formation and message-dissemination on the societal level with reference to social structures, social power and social change. Prerequisite: Upper division standing.

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.

Sc 457 **Institute or Workshop** **5 credits**
Special topics of current relevance in the nation or local community treated from a sociological perspective as a community service. Prerequisite: Upper division standing.

Sc 480 **Special Topics in Sociology** **1-5 credits**
Sc 481 **Special Topics in Sociology** **1-5 credits**
Sc 482 **Special Topics in Sociology** **1-5 credits**
Prerequisite: Upper division standing.

Sc 491 **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.

Sc 494 **History of Sociological Thought** **5 credits**
Historical survey and evaluation of selected leading figures in the rise and development of sociology as an independent discipline. Sociological thought from Comte through the social Darwinists and the analytical sociologists of Europe to major contemporary thinkers. Prerequisite: Upper division standing.

Sc 496 **Comprehensive Examination** **0 credits**
Each graduating senior will be required to pass a written and an oral examination in the quarter in which he qualifies for graduation.

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

Albert R. Haven, S.J., 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, as well as for their testing in an atmosphere of friendly and knowledgeable criticism.

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**
Basics involved in speech preparation and standard skills in speech delivery. Elementary introduction to group communication.

Sph 110 **Speech Organization** **5 credits**
Theory and organization of material.

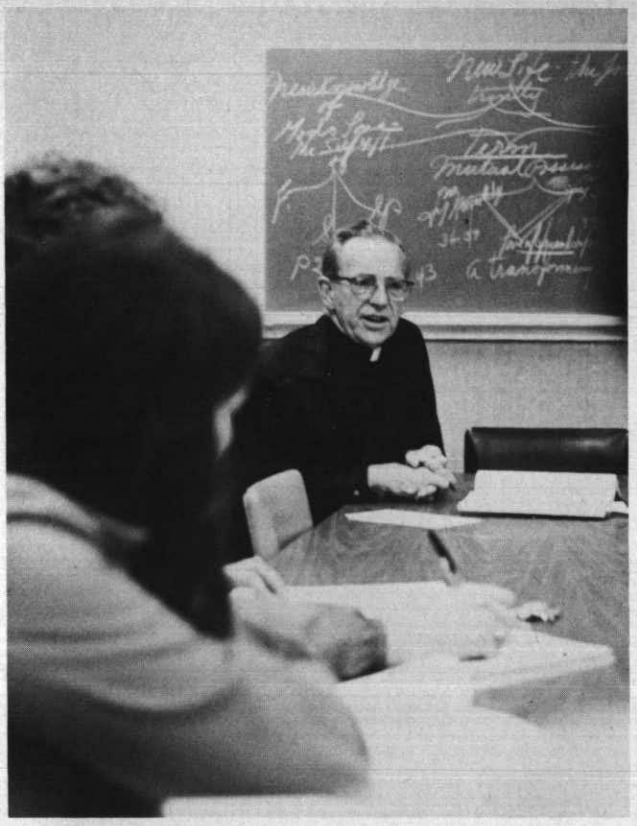
Sph 202 **Introduction to Oral Interpretation** **5 credits**
Historical and basic notions of interpreting the written word; practice in interpreting prose, poetry and drama.

Sph 204 **Methods of Debate** **5 credits**
Introduction to debate; principles involved in rational and effective argumentation; practice in important forms.

Sph 310 **The American Speaker** **5 credits**
Theory and practice in the composition and delivery of standard types of contemporary American speech; exercises in visual, auricular and articulatory rapport with the American audience. Prerequisite: Sph 100 or permission.

Sph 320 **Speech for the Classroom Teacher** **4 credits**
Emphasis on the prospective teacher's own competence as a speaker and the understanding and practice of speech activities useful in teaching; methods of utilizing public speaking. discussion, story telling, oral reading, dramatics and speech correction procedures in the teaching situation.

Sph 491 **Special Topics** **2-5 credits**
Prerequisite: Permission of instructor.



Theology

William F. LeRoux, S.J., S.T.D., Chairman

Objectives

Theology 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 sequence of the core curriculum and it offers a program of courses leading to a Bachelor of Arts degree in theology.

Degree Offered

Bachelor of Arts
Master of Religious Education

General Program Requirements

Students in theology must satisfy core curriculum requirements of the University as given on page 24 of this bulletin. In addition to the core curriculum students in theology must take an added five credits in social science and five credits in philosophy.

Departmental Requirements

Bachelor of Arts — 50 credits in theology beyond the 10 credits required in the core. The student majoring in theology is required to take the following courses. Th 200 and any two other Scripture courses; Th 320 and any two courses from among the following: Th 330, 335, 340, 344, 350, 420; Th 355, 357, 358 sequence; any three 400 numbered courses. The student who is majoring in theology 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 which must include Th 200 and one other Scripture course; Th 320 and any other three 300 or 400 courses.

Bachelor of Arts

Freshman year

English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Philosophy 110, 220	10 credits
Social Science core options	10 credits
Theology 200	5 credits

Sophomore year

Philosophy core option	5 credits
Social Science core option	5 credits
Theology core option and major	15 credits
Electives	20 credits

Junior year

Mathematics/Science core options	10 credits
Philosophy elective	5 credits
Theology 355, 357, 358	15 credits
Electives	15 credits

Senior year

Theology electives	25 credits
Electives	20 credits
Total	180 credits

Master of Religious Education

For Admission — a Bachelor of Arts degree or equivalent; 20 quarter credits or 16 semester credits of theology; grade point average of 3.00 for regular standing; no transfer credits accepted; no language requirements; preference given to those now active in religious education between the ages of 25 and 45 (exceptions only with further information).

For Degree Conferral — 40 credits of course work completed over three eight-week summer sessions with adequate graduate achievement; all core subjects required; final written comprehensive examination; 3 credit practicum research thesis. At the discretion of the director of the program, the Chairman of the Theology Department and the Dean of the Graduate School, six quarter hours of graduate credit in areas related to religious education may be substituted for the practicum research theses. A student permitted to make this substitution would complete 43 credit hours for the degree. These substituted credits may be earned only after attendance at the first two summer sessions. The substitution of these credits may be made from any college or university offering a graduate program in the areas related to religious education. Courses such as the communication workshops and communication seminars are non-credit, but are required core courses for all. Students must live on campus; all degree work must be completed within six years of the initial summer.

Theology Courses

Th 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 minimal previous background in biblical studies.

Th 210 **Synoptic Gospels** **5 credits**
Investigation of the Gospels of Matthew, Mark and Luke.

Th 215 **Johannine Theology** **5 credits**
Study of John's theological reflections on the Christ-event, given witness in his gospel, epistles and the Apocalypse.

Th 220 **Pauline Theology** **5 credits**
Study of Paul's theological development analyzed in his epistles.

Th 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.

Th 289 **Comparative Religion** **5 credits**
Investigation and contrast of the major world religions: Pantheism, Buddhism, Hinduism, Judaism, Christianity and Islamism.

Th 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.

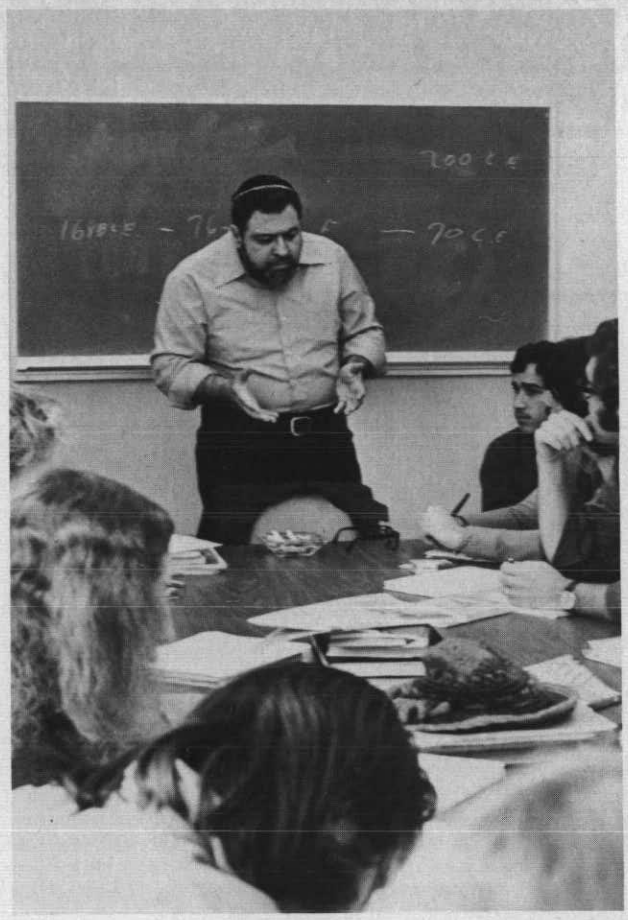
Th 291 **Special Topics** **3-5 credits**
Th 292 **Special Topics** **3-5 credits**
Th 293 **Special Topics** **3-5 credits**

Th 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.

Th 330 **The Problem of God** **5 credits**
The reality of God for contemporary man; what of reason's affirmation of God's existence and atheism; man's sense of God's presence and the growing feeling of God's absence, man's personal experience of God in the Bible and the theological reflection on who the God-who-is-with-us is?

Th 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 — first as it related to the person of Jesus himself, then in its consequences for man and all human values.

Th 340 **Theology of Man** **5 credits**
Study of the pre-biblical and biblical notions of man; the development of early Christian and scholastic theology of man as redeemed and graced; contemporary man as related to this background.



Th 344 **The Church as Community** **5 credits**
Central biblical themes bearing on the nature and structure of the Christian Community; study of the further insights into, and expressions of, the self-understanding of that Community in its dynamic, historical process of growth; the theological ferment concerning current issues such as authority and freedom, institutionalism and personalism, tradition and change.

Th 350 **Perspective of Christian Hope** **5 credits**
Christian perspective with respect to the future of man and the cosmos based upon the Christian's faith in the Resurrection and Glorification of Jesus Christ; a view of history that arises out of a Christian eschatology and a theology of hope that confronts modern secularism.

Th 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: Th 200.

Th 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: Th 355.

Th 358 **Reformation Theology** **5 credits**
The theological dispute of the Reformation on justification by faith alone; total depravity, irresistible grace, controversies among Catholics, Lutherans, Calvinists and Jansenists; the Enlightenment and Vatican Council I. Vatican Council II and some modern theologians in relationship to these theological disputes. Prerequisite: Th 357.

Th 391 (Hs 324) **Church History I** **5 credits**

Th 392 (Hs 325) **Church History II** **5 credits**
I. Topics in early Church history from the birth of Christ through the High Middle Ages. II. Topics in Church history from William of Occam through Vatican II.

Th 420 **Christian Sacraments** **5 credits**
Dynamism of the sacraments in Christian life; the doctrinal, moral and liturgical aspects of the sacraments in the perspective of public worship and the Christian community.

Th 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.

Th 443 **Vatican II and the Future** **5 credits**
Spirit and relevance of the Second Vatican Council as seen in the Council itself and the formation of its documents and its relationship to the present and the future in terms of the changing life of the Church.

Th 475 **Contemporary Christian Morality** **5 credits**
Dynamics of Christian living and the moral implications of the Christian commitments; formulation of the principles of a Christian ethic; contemporary approaches to decision-making in matters of morality; problems encountered by the Christian conscience in today's world.

Th 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 of contemporary Protestant social statements.

Th 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.

Th 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.

Th 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.

Th 480 **Seminar on Contemporary Judaeo-Christian Thought** **5 credits**
Discussion and research on major contemporary issues which reflect the basic agreements and disagreements of the Judaeo and Christian religions and cultures in present day life.

Th 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.

Th 482 **Ancient Near Eastern Religions** **5 credits**
Seminar: Study of selected religious texts from ancient Egypt, Mesopotamia and Canaan; their bearing upon the ideas and institutions of ancient Israel.

Th 483 **Dynamics of Christian Living** **5 credits**
Lived truth of Christianity; becoming a total Christian person through interpersonal relations with God and neighbor; the relationship of man's cognitive, affirmative and affectional development through theological faith, hope and love; concrete application of this relationship from the writings of outstanding Christians.

Th 485 **Theological Horizons of Modern Literature** **5 credits**
Study of selected literary works in terms of their theological implications and religious insights.

Th 486 **Catechesis: Vision and Tactics** **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.

Th 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.

Th 488 **Methodology** **5 credits**
Introduction to the history, methodology and sources of research in theology; the conditions for theological development; evaluating this development in terms of doctrinal evidence; and the continuing Christian response in its magisterial and credal functions.

Th 490 **Special Topics** **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 Th 200 or the approval of the department chairman.

Th 491 **Special Topics — Scripture** **3-5 credits**
Th 492 **Special Topics — Scripture** **3-5 credits**
Th 493 **Special Topics — Moral** **3-5 credits**
Th 494 **Special Topics — Theology** **3-5 credits**

Th 495 **Special Topics** **5 credits**
Under this number there will be provided various courses not otherwise available which may fulfill the core curriculum requirement. Ordinarily the prerequisite will be Th 200 or the approval of the department chairman.

Th 497 **Readings and Research** **3-5 credits**

Graduate Courses

Th 500 **Communication Workshop and Seminar** **0 credits**
Communication groups aim at helping the individual enter more deeply into himself to uncover the obstacles and defenses that keep him from expressing his ideas and himself more deeply and honestly with others. Required SUMORE core course.

Th 502 **Religious Perspectives in Psychology** **5 credits**
Transition and growth in faith from the religion of youth to the religion of maturity; understanding of faith in this process of growth; catechetical implications of religious instruction; natural liturgical response of men in their faith realized; problems associated with the learning, living and transmission of the Christian message.

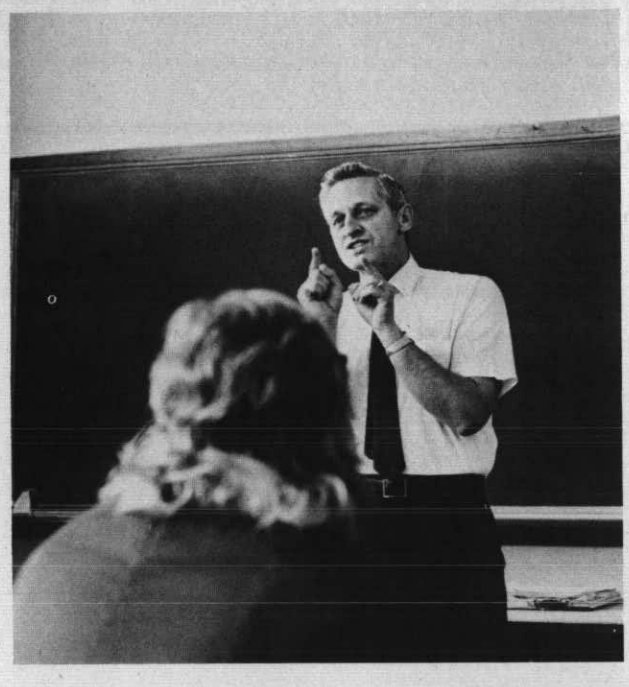
Th 505 **Sacramental Theology** **3 credits**
Explanation of membership in the worshipping community; use of the conceptual model of religious belonging and its application by Christianity past and present; deeper understanding of sacrament from historical perspective as well as the experience of living in a faith community entering into dialogue with God through the sacraments.

Th 510 **Theologies of the New Testament** **3 credits**
The nature of revelation, inspiration as human and divine process. The historical backgrounds of the community and its writers, the sacramental and catechetical situations which produced the literary genres of the early gospel tradition. Redaction criticism of the various gospels, Pauline Theology, formation of the New Testament canon.

Th 511 **Modern Trends in Catechetics** **0 credits**
Catechetics will deal with the problem of faith communication and education, integrate the summer's courses in the context of catechetics and develop modern trends in the difficult field of religious education. Required SUMORE core course.

Th 520 **Philosophy of Religion** **3 credits**
Religion in essence and manifestation in the religious subject and object and their reciprocal operation. The unique contribution of Chardinian concepts in the contemporary world.

Th 525 **Religious Perspectives in Sociology** **3 credits**
Systematic inquiry into the complex structure and dynamic function of modern society with emphasis on the religious dimension of culture and its reciprocal relationships.



Th 530 **Christ in the Gospel and Tradition** **5 credits**
The development of Christology in the primitive Church, culminating in the theologies of the Synoptics, John and Paul. The Church's growing understanding of these doctrines through controversy and concilar definition. The development of dogma. Contemporary theologies of Jesus the Christ.

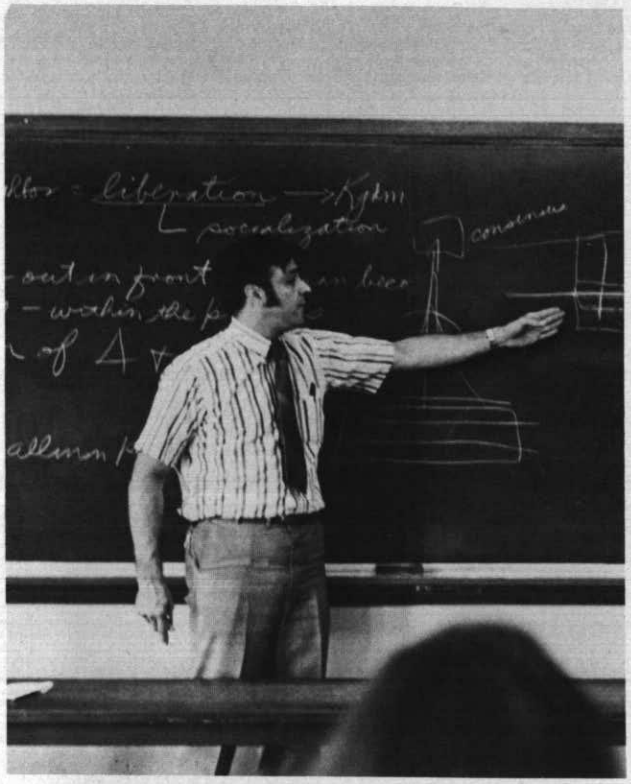
Th 535 **The Church's Mission to the World** **3 credits**
The Gospel as leaven within and for the world. The Church's developing understanding of her role in the christianization of world process. Contemporary socio-economic problems of America and the world; poverty, underdevelopment, prejudice, alienation, revolution and counter-culture.

Th 540 **Christian Self-Image** **5 credits**
Analysis of contemporary philosophical systems as the intellectual environment in which the Christian message is translated. Influence of philosophers from Kierkegaard through Marcel with consideration of linguistic analysts such as Van Buren.

Th 545 **The Church as Historically Developing Community** **3 credits**
How the Church arose in the first century by divine-human processes. What the New Testament says is central to the Church and what is conditioned by the times. The development of the Church throughout history, especially as this is affected by diverse political systems, thought processes and economic conditions of the ambient world.

Th 550 **Religious Perspectives in Anthropology** **3 credits**
Man as the creator of culture and the object of the culture created. Religion as a human phenomenon in different times and cultures and the implications of this for Catholicism. Anthropological analysis of of the different cultures to which the religious educator directs the gospel message.

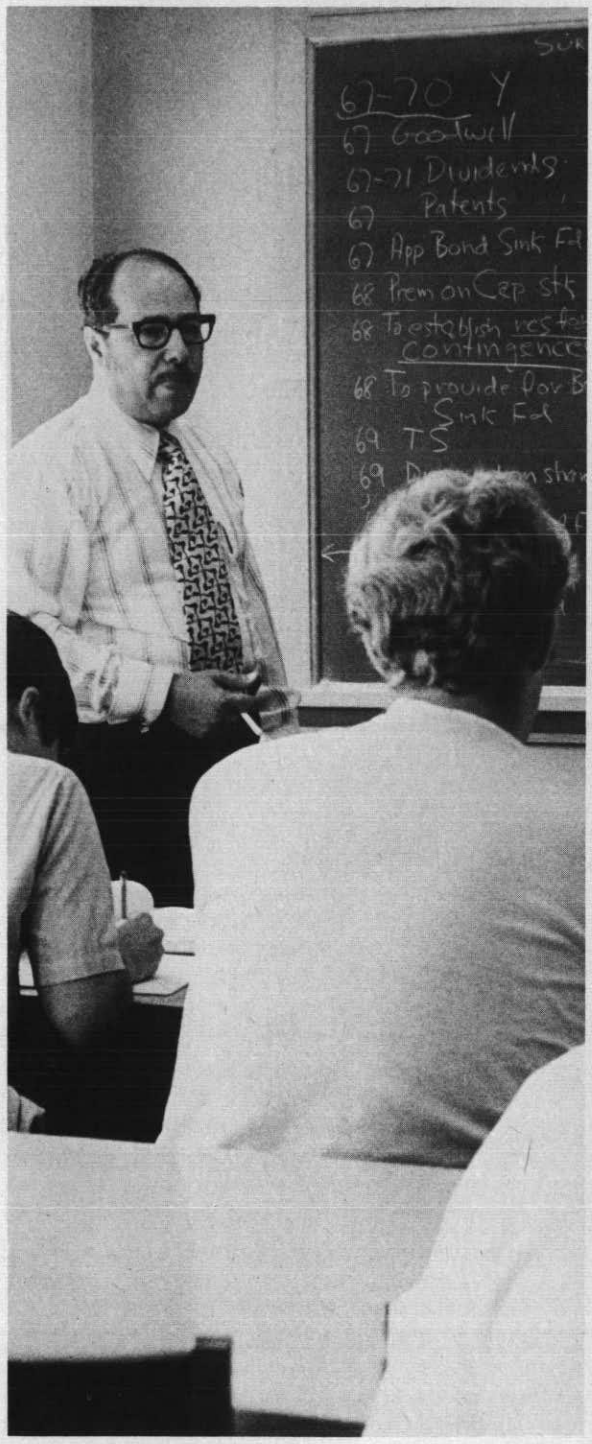
Th 555 **Modern Moral Problems** **3 credits**
Exploration of the basic premises of law and authority in the moral dimensions of the Church; situation ethics and other moral concerns of man in the 20th Century; understanding the theological posture needed for personal and social morality.

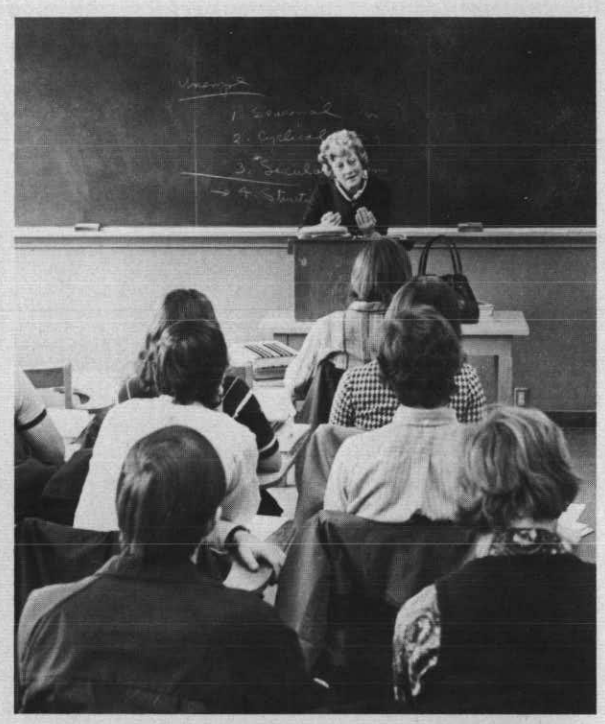


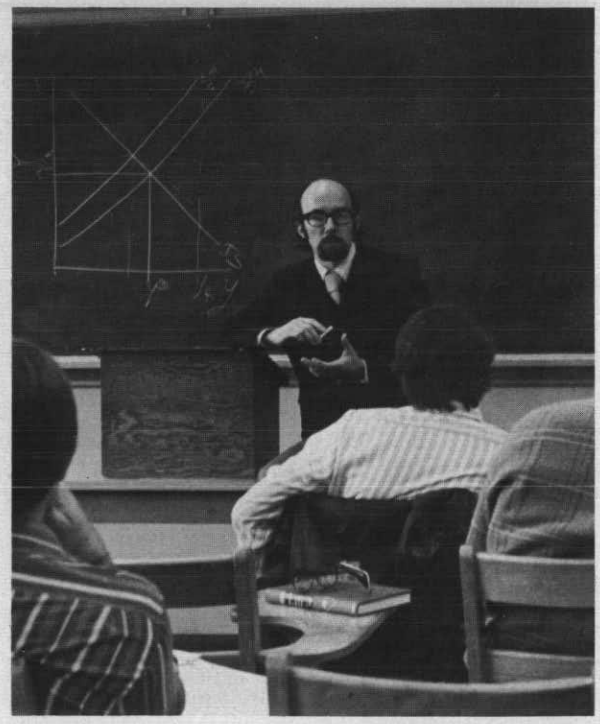
Th 560	Sacraments: Their Existential Character	2 credits
Th 561	Adolescent Psychology	2 credits
Th 562	Theology of Hope	2 credits
Th 563	Mass Media	2 credits
Th 564	Theology of Change	2 credits
Th 565	Man Without God: Belief and Unbelief in the Contemporary World	2 credits
Th 566	Study of the Person in Society	2 credits
Th 567	Parables Emphasized in Luke	2 credits
Th 568	Theory of Transactional Analysis	2 credits
Th 569	Processive Character of Revelation	2 credits
Th 570	Seminar	2 credits
Th 571	Seminar	2 credits
Th 572	Seminar	2 credits
Th 580	Practicum Research Thesis	3 credits
Th 590	Special Topics	3-5 credits
Th 591	Special Topics	3-5 credits
Th 592	Special Topics	3-5 credits

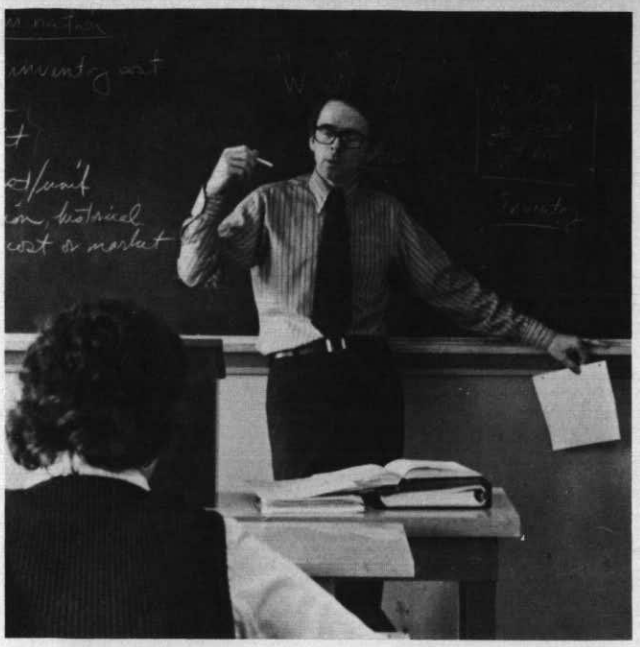
School of Business

Gerald L. Cleveland, Ph.D., Dean
J. W. McLelland, M.A., Associate Dean









Objectives

Collegiate education for business should prepare students for business careers, not simply for job-finding. 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 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 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)

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. 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 below 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 other than business and economics. . . . . 75 credits
   English 100 and one of the following English courses: 132, 133, 134, 220, 230 or 240; five credits in history; Mathematics 118 and 130; Philosophy 110, 220 and a five-credit philosophy elective; Psychology 100; Sociology 101; ten credits in theology 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 170, 210, 211, 230, 231, 270, 340, 350, 380, 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. . . . . 25 credits

Total . . . . 180 credits

Graduate Program

Master of Business Administration — The degree requires 45 graduate credits beyond the basic core in business and economics courses. A research paper must be completed in an area of concentration. The program is designed to accommodate those with baccalaureate degrees in business and other fields, including engineering, arts and sciences and education. Graduate school information appears in another section of this bulletin.

Bachelor of Arts in Business Administration

Freshman year

Business 170 or Economics 100	5 credits
English 100 and 132 or 133 or 134 or 220 or 230 or 240	10 credits
Mathematics 118, 130	10 credits
Natural Science	5 credits
Philosophy 110	5 credits
Social Sciences (Psychology 100 and Sociology 100 Recommended)	10 credits

Sophomore year

Business 211, 230, 231, 270	20 credits
Economics 271, 272	10 credits
Mathematics 214	5 credits
Philosophy 220	5 credits
Theology	5 credits

Junior year

Business 310, 340, 350, 380	20 credits
Business major (300-499)	10 credits
Theology	5 credits
Electives other than business and economics	10 credits

Senior year

Business 482	5 credits
Business major (300-499)	10 credits
Philosophy	5 credits
Electives	25 credits
Total	180 credits

Accounting

Fawzi G. Dimian, Ph.D., Adviser

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, 432, 433, 435 and 436.

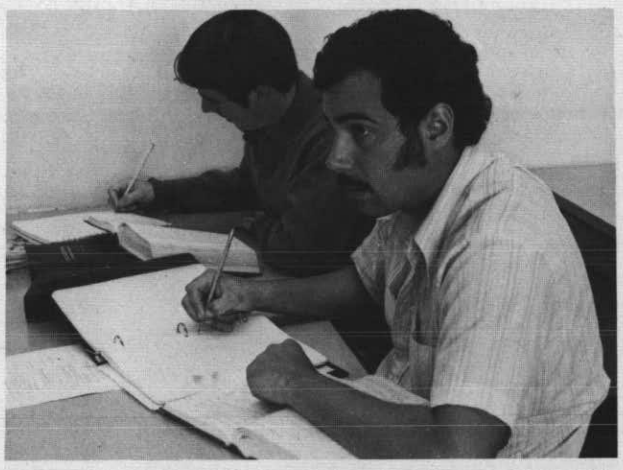
Finance

Khalil Dibee, Ph.D., Adviser

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 or 473. Ec 472 is strongly recommended.



General Business

Hildegard R. Hendrickson, Ph.D., Adviser

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, 471, 472, 476.

Management

Harriet B. Stephenson, Ph.D., Adviser

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 and in government.

Requirements for the management major are: Bus 381, 383 and at least 10 credits from Bus 370, 375; Ec 372, 472, 476.

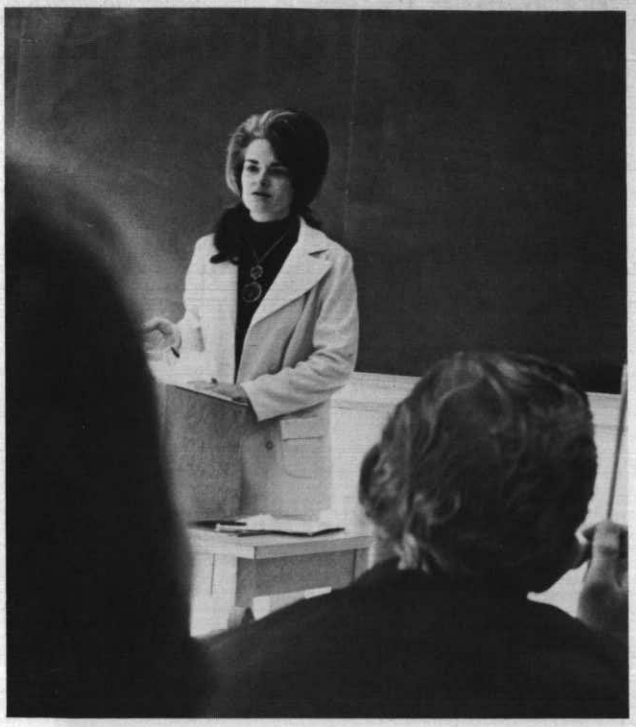
Marketing

Woodrow R. Clevinger, Ph.D., Adviser

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 472 is 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. (fall, spring)

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 5 credits
Bus 231 Principles of Accounting II 5 credits
I. Introduction to the accounting cycle; accounts and financial statements of a single proprietorship with emphasis on the merchandising business; sales, purchases, notes and interest, receivables, inventories, plant assets, payroll accounting and elements of manufacturing costs. II. Accounting concepts and principles with emphasis on partnerships and corporations; long-term debt, investments, financial statement analysis, funds flow; introduction to managerial uses of accounting data and tax considerations in business decisions. Prerequisite: Bus 230 for 231. (fall, winter, spring)

Bus 270 Law and Business 5 credits
Nature and development of law, structure and functions of the courts; civil and criminal procedure; the jury system; role of attorneys and other legal personnel. (fall, winter, spring)

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
Bus 333 Intermediate Accounting II 5 credits
I. Study of generally accepted accounting principles and concepts with special attention to cash, receivables, inventories, current liabilities, plant equipment and depreciation. II. Theory and problems related to intangible assets, long-term investments, long-term liabilities, allocation of income taxes, stockholders' equity. Statements from incomplete records, analysis of financial statements and funds flow. Prerequisites: Bus 231 for 332; 332 for 333. (I-fall, II-winter)

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 5 credits
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 Management Practices **5 credits**
Survey of quantitative and behavioral concepts of management; case studies relating the concepts of management to management practices. Prerequisite: Bus 231. (fall, winter, spring)

Bus 381 Organization Theory **5 credits**
Administrative setting and roles of supervisory personnel as determinates of the scope and techniques of management functions involving interpersonal relations, communication, leadership, organization structure, individual behavior and motivation. Prerequisite: Bus 380.

Bus 383 Personnel Management **5 credits**
Management of human resources to achieve the goals of the personnel of the firm and of the firm in times of change in technology and personal preferences. Prerequisite: Bus 380.

Bus 431 Advanced Accounting I **5 credits**
Bus 432 Advanced Accounting II **5 credits**
I. Partnerships; formation, dissolution and liquidation; joint ventures; installment sales; consignment sales; home office and branch accounting; acturarial science. II. Accounting for business combinations; consolidated balance sheets and income statements; survey of accounting for governmental and non-profit organizations, Prerequisite: Bus 333. (I-fall II-winter)

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.

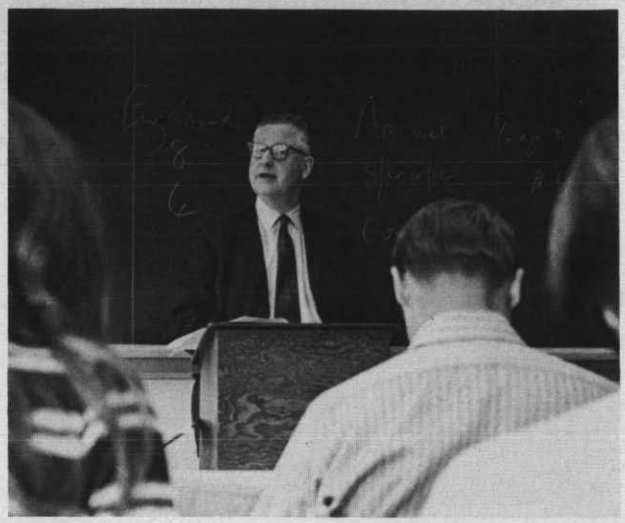
Bus 435 Auditing **5 credits**
Purpose and scope of audits and examinations; auditing standards; audit procedures for cash, receivables, inventories and other areas. Practical application through an illustrative audit case. Prerequisite: Bus 333.

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.

Bus 451 Marketing Research **5 credits**
Purpose, methods and techniques of marketing research. Prerequisites: Bus 211, 352, 353.

Bus 452 Marketing Management **5 credits**
Case studies of corporate problems and decision-making 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 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 491 Special Topics **2-5 credits**

Bus 499 Independent Study **1-5 credits**
Supervised individual research. Open to senior business majors with the approval of the student's adviser.

Graduate Courses

Bus 501 Descriptive and Analytical Statistics **3 credits**
Basic statistics, probability concepts, probability distributions, expectation, sampling, estimation, hypothesis testing, index numbers, introduction to simple linear models.

Bus 502 Financial Accounting **3 credits**
Concepts and principles underlying accounting with special attention to income determination and measurement of assets and equities. Analysis of business performance from accounting viewpoints.

Bus 503 Corporate Financial Theory **3 credits**
Theory and practice of business finance with emphasis on asset management, capital structure, cost of capital and capital budgeting. Prerequisite: Bus 502.

Bus 504 Marketing Principles **3 credits**
An introduction to marketing and its functions.

Bus 505 Legal Environment **3 credits**
Nature and development of law; legal institutions; some aspects of commercial law; the role of legal processes in resolving conflicts between business and the environment in which it operates.

Bus 506 Macroeconomics **3 credits**
Determinants of the aggregate level of income, employment, and prices. Stabilization problems and policies.

Bus 507 Administrative Practices **3 credits**
Processes of management are explored: planning, organizing, directing, coordinating and controlling. Various managerial practices are examined. Potentially effective ways of managing human resources are stressed.

Bus 509 Introduction to Information Systems **3 credits**
Planning, designing and implementing commercial systems. Use of programming concepts for problem solving. Development of computer-based management information systems and associated problems.

Bus 510 Survey of Quantitative Methods **3 credits**
Survey of statistical techinques used in business decision making. Sampling, time series analysis, analysis of variance, linear programming, inventory models, quality control and other selected topics. For students not intending to pursue the quantitative area. Prerequisite: Bus 501.

Bus 511 Advanced Statistical Analysis **3 credits**
Probability distributions, sampling, analysis of variance, multiple correlation and regression, time series analysis, non-parametric statistics and introduction to linear programming. Prerequisite: Bus 501

Bus 512 Operations Research **3 credits**
Philosophy and methodology of operations research, linear programming, inventory models, simulation, queuing theory, game theory and introduction to dynamic programming. Prerequisite: Bus 511.

Bus 513 Operations Analysis **3 credits**
Applications of operations research and statistical techniques to solutions of business problems in finance, marketing, logistics, production, computer systems and management decision making; opportunity for field research problems. Prerequisite: Bus 511.

Bus 519 Research in Quantitative Methods **3 credits**
Prerequisite: Permission of adviser.

Bus 530 Managerial Accounting **3 credits**
Concepts of managerial accounting; attention-directing and problem-solving functions of accounting in current planning and control; evaluation of performance; special decisions and long-range planning. Emphasis on cost analysis rather than on cost record keeping. Prerequisite: Bus 502.

Bus 531 Management Control Systems **3 credits**
Study of the nature, structure and processes of management control systems considering such problems as organization structure, performance measurement and budgeting and performance analysis in both profit and non-profit organizations. Prerequisite: Bus 530.

Bus 533 Contemporary Accounting and its Environment **3 credits**
Case studies in the role of accounting in society; essentials of accounting measurement; formulation of accounting concepts, interaction of accounting with other disciplines with which it has the greatest interplay—economics, law, mathematics, information systems, communication theory and behavioral sciences. Prerequisite: Bus 502.

Bus 534 Seminar in Accounting **3 credits**
Analysis of the development of accounting principles, postulates and general accounting theory. Current research activities of the accounting profession. Study of the changes which affect the future practice of accounting and accounting education. International accounting; behavioral accounting; accounting for social costs. Prerequisite: Permission of adviser.

Bus 539 Research in Accounting **3 credits**
Prerequisite: Permission of adviser.

Bus 540 Managerial Finance **3 credits**
Cases in business finance that develop students skill for identifying problems, acquiring relevant factual material and using appropriate financial theory for making decisions in simulated business settings. Prerequisite: Bus 503.

Bus 555 Management of Marketing Communication **3 credits**
Role of promotion in marketing: functions of personal selling, advertising, sales promotion and publicity and their coordination into an effective promotional mix evaluation and control of promotion. Prerequisite: Bus 550.

Bus 559 Research in Marketing **3 credits**
Prerequisite: Permission of adviser.

Bus 570 Economic Analysis of the Firm **3 credits**
Theory of the consumer, the firm, and the industry, with emphasis on applications to business decision making. Prerequisite: Bus 506.

Bus 574 Managerial Economics **3 credits**
Application of economic theory and methodology to business administration practice, using tools and techniques of economic analysis to solve business problems. Prerequisite: Bus 570.

Bus 575 International Trade and Development **3 credits**
Economic fundamentals of international trade including the working of the foreign exchange market. National policies and international institutions. Foreign branches and subsidiaries. Multinational corporations. Centrally planned economies. Developing nations. Prerequisite: Bus 506.

Bus 576 International Finance and Investment **3 credits**
Balance of payments. International investment. Exchange controls. Liquidity and adjustment problems. I.M.F. and possible developments. American payment problems. Special drawing rights. Proposals for international payments systems. Eurodollar market. Prerequisite: Bus 506; 575 recommended.

Bus 578 Legal Influences on Business **3 credits**
Commercial law, anti-trust regulation, legal aspects of consumer relations, basic tax considerations of alternative business structures, governmental economic controls, credit and environmental legislation.

Bus 579 Research in the Environmental Area **3 credits**
Prerequisite: Permission of asviser.

Bus 580 Organizational Structure and Behavior **3 credits**
Conceptual understanding of organization structure and functioning. Provides examination of various forces operating in an organization. Examines research studies from various disciplines to understand the organizational functional and dysfunctional aspects. Explores introduction of change. Prerequisite: Bus 507.

Bus 581 Administrative Social Communication **3 credits**
Analysis of socio-psychological theory and research, decision making, group structure, dynamics and leadership and how these influence social communication in small groups and the formal organization. Emphasis is on the understanding of theory and the practice of communication skills in class. Prerequisite: Bus 580.

Bus 582 Decision Theory **3 credits**
Study, analysis and discussion of the total decision-making process. Particular emphasis is accorded the interdisciplinary aspect of decision making and the concept of rational decisions. Prerequisite: Bus 510, 580.

Bus 583 Management Philosophy **3 credits**
Review, analysis and discussion of managerial values, ideology, motivation and objectives. The power of managers and their social responsibilities are examined through the evolution of management thought and the theories of technological "determinism". Prerequisite: Bus 580.

Bus 584 Comparative Administration **3 credits**
Examining differences which exist in managing different kinds of organizations and institutions such as business, education, health services and government. Prerequisite: Bus 580.

Bus 585 Management of Change **3 credits**
Analysis of the process of social change in American society and its impact on formal and informal social organizations. Prerequisite: Bus 581.

Bus 586 Small Business Management **3 credits**
Procedures and problems in starting and operating a successful small business enterprise. Prerequisite: Bus 530, 540, 550, 580.

Bus 589 Research in the Behavioral Area **3 credits**
Prerequisite: Permission of adviser.

Bus 590 Special Topics **1-3 credits**
Prerequisite: Permission of adviser.

Bus 599 Research **1-3 credits**
Prerequisite: Permission of adviser.

Economics

John D. Eshelman, Ph.D., Adviser

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 an economist 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 24 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 substitute Hs 231 for 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 six additional economics courses (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	10 credits
Philosophy 110	5 credits
Political Science 160	5 credits
Elective	5 credits

Sophomore year

Business 211, 230	10 credits
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 274 **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 neo-Keynesian analysis.

Ec 372 **Aggregate Economic Analysis** **5 credits**
Economic basis for political policy under classical, Keynesian and revisionist systems; methods of analysis; equilibrium theories and pragmatic tests; attempts at stablization under monetary fiscal policies; the roles of competition and oligopoly; American commercial banking. Prerequisite: Ec 271.

Ec 374 **Intermediate Price Theory** **5 credits**
Demand, supply, costs, 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 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 Economics** **5 credits**
Foreign trade theory and practice; foreign exchange; tariffs and quotas; G.A.T.T.; common markets and free trade areas; balance of payments; international payments systems; gold standard; foreign investment and adjustment; reserve currencies; special drawing rights; developing nations. Prerequisite: Ec 271.

Ec 473 **Business Cycles** **5 credits**
Basic variations affecting general business conditions as a background for business and investment decisions; appraisal of proposals for controlling the business cycle and of forecasting techniques. Prerequisite: Ec 271; 372 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 economics; 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.

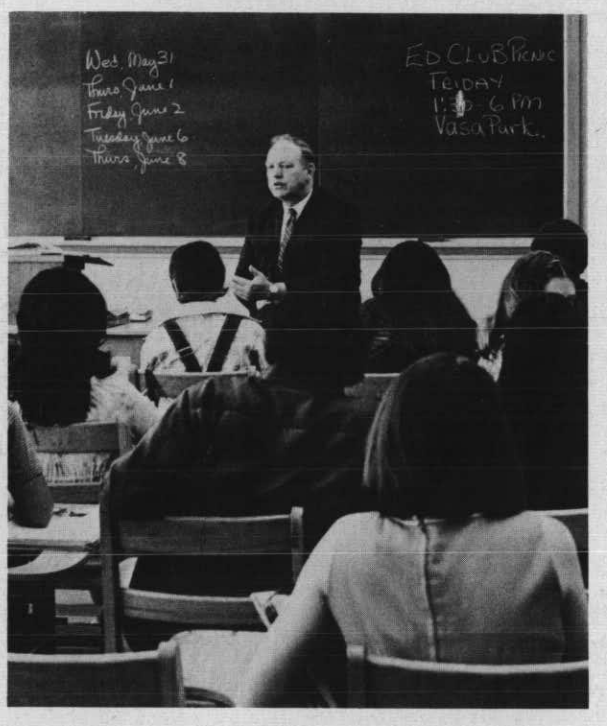
Ec 479 **Senior Seminar** **5 credits**
An advanced course providing the opportunity for students to pursue topics in breadth and depth and apply the tools of economic analysis to current issues in national and international economic policy. Prerequisite: Permission of instructor.

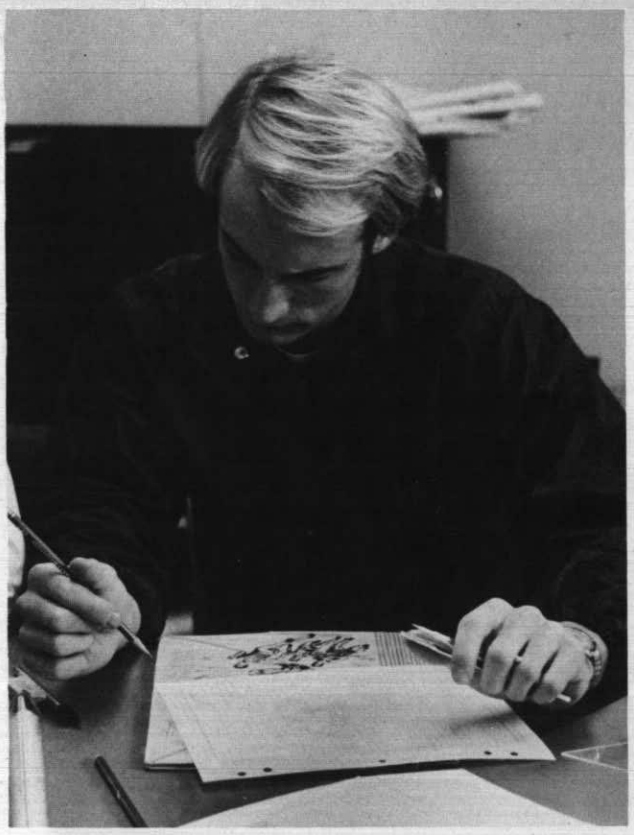
Ec 491 **Special Topics** **2-5 credits**

Ec 499 **Independent Study** **2-5 credits**
Supervised individual research. Open to senior economics majors with the approval of the departmental advisers.

School of Education

John A. Morford, Ed.D., Dean
Ralph K. O'Brien, Ed.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.

The teacher education program at Seattle University develops a breadth and depth of culture and a mastery of the chosen areas of teaching. The educational philosophy of Seattle University is dualistic — the development and harmonious unity of both mind and matter — and Christian — the illumination and elevation of man through revelation.

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. The Advisory Committee on Teacher Education, which consists of faculty members from both the College of Arts and Sciences and the School of Education, makes recommendations regarding program changes and reviews new programs prior to consideration by the Academic Council. Close cooperation exists among all departments, schools and colleges of the University in working out a program of preparation for the individual student.

Admission Requirements

All entering freshmen and undergraduate transfer students from accredited institutions of higher learning who aspire to become teachers may be admitted to to the School of Education if they meet the University's regular admission standards.

A student in the School of Education will be approved for the certification program of studies upon achieving a 2.5 or higher cumulative grade point average and after acceptance by a faculty selection committee which has been convened to consider the applicant's potential as a teacher. Normally, this committee is convened after the applicant has completed approximately 80 quarter hour credits, or, in the event the applicant had taken this amount of study at another institution, after a full quarter of study at Seattle University.

Applicants with a bachelor's degree earned in other disciplines at Seattle University or at other accredited institutions of higher learning will meet with the faculty committee prior to being approved for the certification program of studies.

Periodic faculty reviews of the prospective teacher's progress are made at the completion of his foundations of education course, his committee interview, the completion of his principles and technology course, wherein he teaches before his fellow students, and upon completion of his preferred level student teaching.

In addition to the maintenance of a minimum grade point average of 2.5, which demonstrates adequate mastery of the intended teaching subjects and the ability to use the essential communication skills, the prospective teacher is expected to exemplify sound character, personality and a positive commitment to teaching.

Degrees Offered

Bachelor of Arts in Education
Bachelor of Education
Master of Education
Master of Arts in Education

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 and minor 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.

The School offers work leading to the provisional teaching certificate, the standard teaching certificate, the provisional principal's credential and the standard principal's credential.

Each undergraduate and graduate student in education is assigned an adviser with whom he confers at least quarterly. Secondary school majors must also confer periodically with an adviser in their departments. Certification of the mastery of a teaching major taken by a prospective teacher is a joint responsibility of the School of Education and the department in which the student has elected to specialize. Selection of candidates for teacher certification, their advisement, supervision, assistance in placement and follow-up of initial teaching is the responsibility of the School of Education which both observes in the schools and receives reports from them.

General Program Requirements

Students in the School of Education must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin and those of the School outlined below.

Bachelor of Education (elementary teaching) — 25 credits in one of the following teaching subjects: art, English, history, modern language, music; 20 credits in one of these supporting areas: social studies, language arts, science-mathematics, fine and applied arts; at least one course in American literature and United States history are required.

Bachelor of Education (junior high teaching) — 30 credits in English and 30 credits in history.

Both programs require professional courses in addition to the core and the above subject area requirements. The provisional (initial) certification program based on the Bachelor of Education requires a minimum of 190 credits, of which 10 credits will be credited toward the mandatory Standard Teaching Certificate requirements.

Bachelor of Arts in Education (high or junior high or middle school or elementary school teaching) — 45 credits teaching major beyond the core requirements, in any subject that is normally taught as a regular offering in the schools. Since there is a varying demand on the part of schools for each of the several teaching majors, students should discuss their choices with their advisers and consult the current Teacher Supply and Demand report available in the School of Education. A course in organization and teaching of the major subject must be included in this major. The provisional (initial) certification program based on the Bachelor of Arts in Education requires a minimum of 190 credits of which 10 credits will be credited toward the mandatory Standard Teaching Certificate requirements.

Graduate Programs

Master of Education — 45 credits with a major in school administration, curriculum development, guidance or adult education administration; the completion of a graduate project or thesis is encouraged (but may be omitted by completing a total of 48 credits of approved course study); satisfactory completion of a written comprehensive examination in the major field is required.

This degree is designed to broaden and deepen the knowledge of experienced teachers. Combined with the Washington State Provisional Principal's Credential, it requires a total of 54 credits beyond the bachelor's degree. The candidate should consult with an adviser as to the level of work for the additional 9 credits.

Master of Arts in Education — 45 credits with a major in school administration, curriculum development, guidance or adult education administration; a thesis must be completed and a written examination in a modern language may be required; satisfactory completion of a written examination covering the major field is required.

This degree is designed as an intensive preparation which may lead to doctoral graduate study. The Master of Arts in Education, combined with the Washington State Provisional Principal's Credential, requires a total of 54 credits beyond the bachelor's degree. The candidate should consult with an adviser as to the level of work for the additional 9 credits.

For either the Master of Education or the Master of Arts in Education, a maximum of 15 credits of supporting studies in 300-499 level courses may be taken from departments outside the School of Education, provided the major for the master's degree has been programmed fully, prior approval has been received from the Graduate Committee and Graduate Council, and the credits are earned at Seattle University or at another accredited institution in agreement with the initial program of studies.

Applicants for graduate degree programs in the School of Education are granted full candidate status after the Committee on Graduate Studies has given approval based on:

1. the cumulative undergraduate grade point average;
2. the recommendation of the authorities where the applicant is assigned;
3. the score received on the Graduate Record Examination;
4. the arrangement with an adviser of a proposed program of studies;
5. the quality of the first 12 credits of graduate work completed at Seattle University (which must include Ed 500; a choice of Ed 501, 502, 503 or 504; 505 or 506; and at least one course in the graduate major).

When full candidate status is accorded, the 12 credits of provisional work will become a part of the total 45 credit graduate degree program.

Senior and junior high school teachers applying for graduate degree programs are expected to have completed previously the equivalent of a major (approximately 45 credits) in a commonly taught undergraduate subject.

Elementary school teachers are expected to have

completed previously the equivalent of a major in a teaching field such as social studies, language arts, arithmetic and science, fine and applied arts, or any commonly taught subject area.

Candidates for a master's degree in the School of Education must be in residency for at least one full quarter. The remaining work may be taken on less than a full time basis during other academic quarters.

Graduate students and candidates for the Standard Teaching Certificate who are teaching full time should register for only one three-credit course per quarter during the regular academic year and will not be allowed to register for more than one five-credit course or two three-credit courses and then only upon the recommendation of the major adviser.

Special Programs for Certification

Programs may be designed for those already possessing bachelor's degrees who lack certain courses to meet the requirements for teacher certification. Confer with adviser in School of Education.

Fifth-Year Non-Degree Programs — Programs of this type are designed for those planning to meet the requirements for standard teacher certification but who do not desire to work for a master's degree.

Teaching Certificates — The School of Education offers various programs which meet the requirements for teaching certificates issued by the Washington State Office of Public Instruction. Consult the School of Education for State regulations regarding the requirements for specific certificates.

A candidate for teacher certification who has completed the requirements for a bachelor's degree in the School of Education must receive recommendations from both the faculty and the chairman of the department in which his teaching major was completed before his name is submitted to the State Office of Public Instruction for a teaching certificate. The provisional certificate is valid for three years and may be renewed once upon the completion of 12 credits of the fifth college year and one year of successful teaching.

Candidates who have completed their bachelor degrees at other accredited institutions and who plan to earn their provisional teaching certificates through Seattle University must complete a minimum of 30 credits of approved course work at Seattle University.

The standard certificate will be issued upon successful completion of the fifth college year and two years of teaching experience. The fifth year shall include a minimum of 45 credits of which at least 50 per cent are in studies of the third, fourth and postgraduate years.

Candidates who plan to earn their standard teaching certificate through Seattle University must complete at Seattle University a minimum of 23 of the required 45 credits. All work to be applied toward this certificate must conform to the fifth year plan.

Principals' Credentials

Candidates for the provisional principal's credential must receive State of Washington Board of Education approval to enter administrative preparation leading to the credential. (An application form may be obtained from the faculty adviser.) Requirements for the principal's credential include: completion of requirements for a standard teaching certificate; 54 credits of course work beyond the bachelor's degree, of which at least 24 credits are to be in an approved program, including administrative internship; and at least three years of successful teaching at the time the credential is requested. At least one year of successful teaching must have been completed at the time the candidate begins the credential program. Acceptance in Graduate School as a credential candidate is a prerequisite.

Candidates for the standard principal's credential must have the provisional principal's credential, have completed 12 credits of applicable study since receiving the provisional credential, have a master's degree and have completed three successful years as a school principal. For detailed programs and instructions consult the School of Education.

Bachelor of Arts in Education

Secondary

Freshman year

English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Philosophy 110, 220	10 credits
Social Science core option	5 credits
Major or electives	10 credits

Sophomore year

Education 200	5 credits
Mathematics/Science core options	10 credits
Philosophy core option	5 credits
Theology core options	10 credits
Major or electives	15 credits

Junior year

Education 322, 325, 330, 337	20 credits
Physical Education 353 and activities	5 credits
Major or electives (including course in teaching of major)	25 credits

Senior year

Education 440 or 445	15 credits
Major and electives	35 credits
Total	190 credits

Bachelor of Education

Elementary

Freshman year

English 100, 132	10 credits
History 101, 102 or 103 and 231	10 credits
Philosophy 110, 220	10 credits
Social Science core option	5 credits
Teaching subject or supporting area	10 credits

Sophomore year

Art 370, Music 114	10 credits
Biology 303, 304; Mathematics 200	10 credits
Education 200	5 credits
Philosophy core option	5 credits
Teaching subject and supporting area	5 credits
Theology core options	10 credits

Junior year

Education 330, 336, 340	15 credits
Physical Education	5 credits
Psychology 322 or Education 322, 325	10 credits
Teaching subject and electives	20 credits

Senior year

Education 440 or 445	15 credits
History 341 or Speech 320 or Education 372, 374 or 420 (any three)	15 credits
Teaching subject and supporting area and electives	20 credits
Total	190 credits

Education Courses

Ed 101 **College Study Skill Development I** **5 credits**
Ed 102 **College Study Skill Development II** **5 credits**
Ed 103 **College Study Skill Development III** **5 credits**
A sequential development of essential college skills emphasizing reading comprehension, retention and vocabulary building, effective study plans and correlation with the basic university curriculum. Prerequisite: Permission of the instructor. (I. fall, II. winter, III. spring)

Ed 200 **Foundations of American Education** **5 credits**
Introductory, orientation course to professional teacher education based upon 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. (fall, winter, spring, summer)

Ed 304 **Multi-Culture—Rural and Urban Education** **5 credits**
The nature, problems and status of education in the minority culture.

Ed 305 **Philosophy of Education** **5 credits**
Philosophies of education in the American Schools.

Ed 322 **Psychology of Development** **5 credits**
Study of the developmental changes in the normal human being with emphasis on application to the school age years. Two to four weeks field experience. Prerequisite: Ed 200; corequisite: Ed 325. (fall, winter, spring, summer)

Ed 323 **Psychology of the Child** **3 credits**
Principles, factors, stages and problems in child development from conception to puberty. (summer)

Ed 324 **Psychology of Adolescence** **3 credits**
Principles, factors, stages and problems in the development of the adolescent from puberty to adulthood. (summer)

Ed 325 **Psychology of Learning** **5 credits**
Study of human learning in the classroom; theories of learning; organizing knowledge and memorizing; statistical measuring and evaluation of mental processes; factors in the economy of learning. Two to four weeks field experience. Prerequisite: Ed 200; corequisite: Ed/Psy 322. (fall, winter, spring, summer)

Ed 326 **Child Development Laboratory** **2 credits**
Ed 327 **Child Development Laboratory** **2 credits**
Ed 328 **Child Development Laboratory** **2 credits**
Case study of children. Participants gather information about an individual, present the accumulating data to the study group for criticism and group analysis and write an interpretation of the dynamics underlying the child's learning behavior and development. Prerequisite: Ed 322 or 323 or 324.

Ed 329 **Workshop in Child Study Leadership** **2-3 credits**
Training for group leaders in the program of child study. Prerequisite: Ed 326.

Ed 330 **General Methods, Media and Materials** **5 credits**
Application of psychological principles of learning and development to the practical requirements of preparing, organizing and presenting learning units and materials to the students. Two to four weeks field experience. Prerequisites: Ed 322-325; corequisites: Ed 336 and 340 or 337. (fall, winter, spring)

Ed 335 **Early Childhood — Kindergarten** **3 credits**
Principles, organization and methods of teaching. (spring, summer)

Ed 336 **Fundamentals of Reading Instruction Elementary** **3-5 credits**
Nature of the reading process, sequence of skills K-6, recommended practices, materials, methods of diagnosis and evaluation. Two to four weeks field experience. Prerequisites: Ed 322, 325; corequisite: Ed 330. (3 credits without field experience component) (fall, winter, spring, summer)

Ed 337 **Fundamentals of Reading Instruction Secondary** **3-5 credits**
Development of reading and study skills; reading in content areas; methods of diagnosis and evaluation and study and special reading programs. Two to four weeks field experience. Prerequisites: Ed 322, 325; corequisite: Ed 330. (3 credits without field experience component) (fall, winter, spring, summer)

Ed 338 **Reading Skill Analysis** **3 credits**
Analysis of and remedial techniques for reading problems. Prerequisite: Ed 325.

Ed 340 **Fundamentals of Mathematics Instruction — Elementary I** **5 credits**

Ed 341 **Fundamentals of Mathematics Instruction — Elementary II** **5 credits**
I. Study of number systems including basic operations and properties of numbers; principles of teaching these concepts in kindergarten through grade 6; application in a two to four week field experience. II. Emphasis on geometry and measurement; principles of teaching these in kindergarten through grade 6. Prerequisite: Ed 340 for 341. (fall, winter, spring)

Ed 372 **Teaching Geography and Social Studies** **5 credits**
Survey of major geographic concepts focused on the development of map skills, areal relationships and spatial interactions. Aspects of geographical instruction in the social sciences will be stressed. (fall, winter)

Ed 373 **Story Telling — Primary** **3 credits**
Selection and interpretation of kindergarten-primary grade literature. For Kindergarten-primary grade teachers and elementary school librarians. (summer)

Ed 374 **Elementary School Literature** **5 credits**
Selection, introduction and student use of literature for preschool, kindergarten, primary and intermediate grades. (winter)

Ed 375 **Literature for Children** **3 credits**
Survey of the present field of literature for early childhood and primary education. (spring, 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 **Children's Drama** **3 credits**
Use of drama in the classroom; creative drama techniques. (summer)

Ed 401 **Workshop in Elementary School Methods (summer)** **3 credits**

Ed 402 **Workshop in Secondary School Methods (summer)** **3 credits**

Ed 403 **Workshop in Improvement of Instruction (summer)** **3 credits**

Ed 404 **Workshop in Elementary School Curriculum (summer)** **3 credits**

Ed 405 **Workshop in Secondary School Curriculum (summer)** **3 credits**

Ed 406 **Workshop in Audio-Visual Methods (summer)** **3 credits**

Ed 407 **Workshop in Television Teaching** **3 credits**

Ed 408 **Workshop in Business Education (winter)** **3 credits**

Ed 409 **Workshop in Secretarial Studies (winter)** **3 credits**

Ed 410 **Workshop in Elementary School Creative Writing** **3 credits**
Individualized study, research and development of specific curricular programs under the direction of a subject field specialist.

Ed 411 **Organization of Library Materials** **3 credits**
Principles and techniques of cataloging, organization, classification and subject heading assignment; study of Dewey decimal system. (summer)

Ed 412 **Library Reference Materials** **3 credits**
The school librarian's services related to information for classroom teachers; examination of the major reference sources such as encyclopedias, dictionaries, indexes, atlases and instructional aid files. (summer)

Ed 415 **Library Administration** **3 credits**
Organization of the school library; study of standards, utilization, plans selection of materials, equipment and personnel. (summer)

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. Prerequisite: Ed 330. (fall, winter, spring)

Ed 421 **Teaching Elementary School Language Arts** **3 credits**
Adaptation of general methods of teaching to the area of language arts in the elementary school. Prerequisite: Ed 330; corequisite: Ed 440. (summer)

Ed 422 **Teaching Elementary School Social Studies** **3 credits**
Adaptation of general methods of teaching to the area of social studies in the elementary school. Prerequisite: Ed 330; corequisite: Ed 440. (summer)

Ed 423 **Teaching Elementary School Art** **3 credits**
Adaptation of general methods to the teaching of art in the elementary school. Prerequisite: Ed 330; corequisite: Ed 440. (summer)

Ed 424 **Teaching Elementary School Music** **3 credits**
Adaptation of general methods of teaching to the area of elementary school music. Prerequisite: Ed 330; corequisite: Ed 440. (summer)

Ed 425 **Teaching Elementary School Religion** **3 credits**
Adaptation of general methods of teaching to the area of elementary school religion. Prerequisite: Ed 330; corequisite: Ed 440.

Ed 426 **Special Education — Teaching Trainables** **3 credits**
Materials and techniques for educating the severely retarded child. (summer)

Ed 427 **Special Education — Teaching Educables** **3 credits**
Materials and techniques for educating the moderately retarded child. (summer)

Ed 428 **Montessori Method of Teaching** **3 credits**
History, philosophy, basic principles and teaching methods of Dr. Maria Montessori.

Ed 429 **Workshop in Montessori Education** **3 credits**
Demonstration and application of Montessori methods and materials in teaching preschool and primary levels. Prerequisite: Ed 428.

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 431 **Teaching Secondary School English and Speech** **3 credits**
Adaptation of general methods of teaching to the secondary school areas of English and speech. Prerequisite: Ed 330; corequisite: Ed 445.

Ed 432 **Teaching Secondary School Social Sciences** **3 credits**
Adaptation of general methods of teaching to the secondary school area of Social Sciences. Prerequisite: Ed 330; corequisite: Ed 445.

Ed 433 **Teaching Secondary School Languages** **3 credits**
Adaptation of general methods of teaching to the secondary school area of foreign languages. Prerequisite: Ed 330; corequisite: Ed 445.

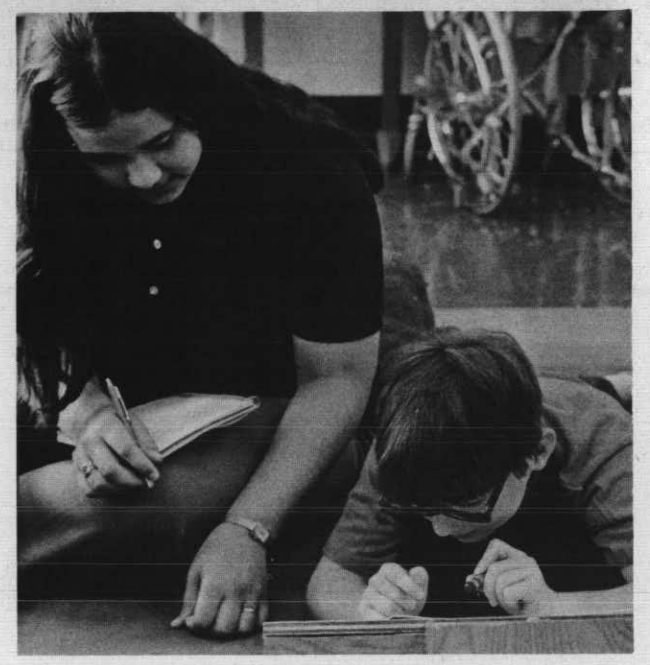
Ed 434 **Teaching Secondary School Science** **3 credits**
Adaptation of general methods of teaching to the secondary school area of science. Prerequisite: Ed 330; corequisite: Ed 445. (winter)

Ed 435 **Teaching Secondary School Mathematics** **3 credits**
Adaptation of general methods of teaching to the secondary school area of mathematics. Prerequisite: Ed 330; corequisite: Ed 445.

Ed 438 **Laboratory Experience — Elementary** **1-6 credits (fall, winter, spring, summer)**

Ed 439 **Laboratory Experience — Secondary** **1-6 credits (fall, winter, spring, summer)**

Ed 440 **Student Teaching — Elementary** **12-15 credits**
One quarter of full-day supervised teaching experience on the elementary school level. Prerequisite: Ed 330 and related teaching experience. (fall, winter, spring)



Ed 445 **Student Teaching — Secondary** **12-15 credits**
One quarter of full-day supervised teaching experience on the secondary school level. Prerequisite: Ed 330 and related teaching experience. (fall, winter, spring)

Ed 451 **Art Education — Beginning Media** **3 credits**
Ed 452 **Art Education — Intermediate Media** **3 credits**
Ed 453 **Art Education — Advanced Media** **3 credits**
Teaching of art media which can be utilized by the general classroom teacher in the elementary school and junior high school general art programs. For experienced teachers with majors other than art. (summer)

Ed 460 **Speech Correction** **3 credits**
Analysis of common speech problems of the classroom and demonstration of remedial techniques.

Ed 461 **Speech Training for the Retarded** **3 credits**
Teacher's course in special techniques of speech development for the mentally retarded.

Ed 467 **Educational Sociology** **3 credits**
Social nature of education, interrelationship of society and education, cultural and social media and agencies.

Ed 471 **Geography of the Pacific Northwest** **3 credits**
Regional survey emphasizing natural resources, their use and role in urban and rural developments. (summer)

Ed 472 **Geography of the Western Hemisphere** **3 credits**
Natural resources of the Western hemisphere and their effect upon world trade and international relations. (summer)

Ed 473 **Geography of Asia** **3 credits**
Survey of countries and regions; their resources, economic activities, settlement patterns and international relations. (biennially)

Ed 474 **Geography of the Pacific Rim** **3 credits**
Physical geography of the areas bordering the Pacific, trade and international relations. (biennially)

Ed 475 **Geography of North America** **3 credits**
Physical geography of North America with emphasis on the cultural and economic results of resources. (biennially)

Ed 476 **Geography of South America** **3 credits**
Physical geography of South America with emphasis on the cultural and economic results of resources. (biennially)

Ed 480 **Seminar in Great Teachers and Ideas of Western Civilization I** **3 credits**
Ed 481 **Seminar in Great Teachers and Ideas of Western Civilization II** **3 credits**
Ed 482 **Seminar in Great Teachers and Ideas of Western Civilization III** **3 credits**
I. Themes of thought; philosophy, theology, social sciences and behavioral science; development of independent study; dialogue method; discussion based on the Great Books, the Gateway Series to the Great Books and other writings of Great Teachers. II. Imaginative and historical literature; fine prose and poetry, plastic arts, architecture and music. III. Science and mathematics; Newton, Kepler, Boyle, Dalton, Joule, Coulomb, Planck and Einstein.

Ed 485 **Institute on Teaching the Great Teachers** **3 credits**
Based on the Great Books of the Western World, the Gateway Series and writings of other Great Teachers. Use of the dialogue and discussion methods and independent study for secondary school use.

Ed 491 **Special Topics** **1-5 credits**
Ed 492 **Special Topics** **1-5 credits**
Ed 493 **Special Topics** **1-5 credits**
Supervised research work. Open to seniors in education with the approval of their adviser and the dean. (fall, winter, spring, summer)

Ed 497 **Independent Study** **1-5 credits**
Ed 498 **Independent Study** **1-5 credits**
Ed 499 **Independent Study** **1-5 credits**
(fall, winter, spring, summer)

Graduate Courses

Ed 500 **Introduction to Graduate Study** **3 credits**
Purpose of graduate study; American characteristics, procedures and standards. Each student will complete orientation to and planning of individual program of studies, meet sufficiently with mentor to become acquainted with status and trends in his major area and will identify four to six possible areas of individual study that are pertinent to his interests and needs. (fall, winter, spring, summer)

Ed 501 **Philosophy of Education** **3 credits**
Philosophical foundations of education. (winter, summer)

Ed 502 **History of Education** **3 credits**
Great educators, theories and systems from the Hebrews, Greeks and Romans to the present. (fall, summer)

Ed 503 **Comparative Education** **3 credits**
Investigation and comparison of the leading national and cultural systems of education of the world. (spring, summer)

Ed 504 **Jesuit Education** **3 credits**
History, principles and methods of the Jesuit system of education; analysis of the Ratio Studiorum. (biennially)

Ed 505 **Fundamentals of Research Design** **3 credits**
Familiarization with developments in research design, evaluation and methods utilized; impact of computer technology, program and system analysis on education; anticipated opportunities and problems. Student requirements will emphasize practical application. (fall, spring, summer)

Ed 506 **Educational Statistics** **3 credits**
Specialized utilization of statistical data analysis and application to research. (winter, summer)

Ed 510 **Introduction to Guidance** **3 credits**
Overview of the philosophy, principles and services of school guidance for classroom teachers and other guidance specialists. (fall, summer)

Ed 511 **Organization and Administration of Guidance Services** **3 credits**
Consideration of the various guidance services offered in schools with particular reference to their organization and administration as well as the ethics and legality involved. Prerequisite: Ed 510. (fall, summer)

Ed 512 **Informational Services in Guidance** **3 credits**
Study of the occupational, educational and social information necessary for the effective guidance of students; supplemented with appropriate field visitations. Prerequisite: Ed 510. (spring, summer)

Ed 513 **Principles and Practices in Counseling** **3 credits**
Study of the various theories of counseling with opportunities for in-class practice in simulated counseling interview situations of the type encountered in schools. Prerequisite: Ed 510. (fall, summer)

Ed 514 **Contemporary Issues in Counseling** **3 credits**
Critical exploration of current controversial concerns in the field of school counseling conducted in seminar style. Prerequisite: Ed 513. (winter, summer)

Ed 515 **Guidance and Multicultures** **3 credits**
An examination of Chicano, Indian, Black and Asian cultures and their relationship with the impact on helping professions. (winter, summer)

Ed 519 **Group Counseling — Theory and Procedures** **3 credits**
Emphasis on the theory and practice of group counseling. Opportunities for in-class practice will be provided to integrate theory with procedures. Prerequisite: Permission of instructor. (winter, spring)

Ed 520 **Advanced Study of Children I** **3 credits**
Ed 521 **Advanced Study of Children II** **3 credits**
Opportunity to observe and record scientifically the behavior of an individual child in a nearby school.

Ed 522 Child Psychology Seminar **3 credits**
Investigation of and experimentation with various theories of child development. Prerequisites: Ed 322 or 323 and 506. (fall, summer)

Ed 523 Adolescent Psychology Seminar **3 credits**
Investigation and reporting on original studies in adolescent psychology, including a personal report on an investigation of some specific phase or problem. Prerequisites: Ed 322 or 324 and 506. (spring, summer)

Ed 524 Psychology of the Exceptional Child **3 credits**
Study of the atypical child who deviates from the normal to well below or above the average; tests for evaluation; consideration of remedial techniques. (summer)

Ed 525 Psychology of Learning Seminar **3 credits**
Investigation, analysis and reporting on original studies in the field of learning; includes a report on an investigation of some specific phase or problem. Prerequisites: Ed 325, 506. (winter, summer)

Ed 526 Measurement and Evaluation for Classroom Teachers **3 credits**
Nature, uses and limitations of various measurement instruments used in school testing programs; exposure to representative standardized test materials. Not interchangeable with Ed 527 or 528.

Ed 527 Measurement in Psychology and Education **3 credits**
Theoretical foundations of modern measurement practices in education and related fields; taught with the cooperation of the Psychology department for prospective guidance specialists. Prerequisite: Ed 506. (winter, summer)

Ed 528 Psychological Tests **3 credits**
Application of principles of psychological measurement in the critical examination of representative standardized tests used in schools with opportunities for scoring and interpretive practice. Prerequisite: Ed 527. (spring, summer)

Ed 529 Character Education **3 credits**
Psychological foundations of character development, will-training, values, nature of morality, the relation of character to education and studies in character education. Prerequisite: Ed 325. (summer)

Ed 530 Workshop in Elementary Education **3 credits**
Provides an opportunity for experienced workers in elementary education to pursue individual studies in curriculum, teaching methods and related fields. (spring, summer)

Ed 531 Workshop in Secondary Education **3 credits**
Provides an opportunity for experienced workers in secondary education to pursue individual studies in curriculum, teaching methods and related fields. (spring, summer)

Ed 532 Seminar in Contemporary World Problems **3 credits**
Location, use and organization of resources and materials in building background information for social studies courses. (summer)

Ed 533 Reading Diagnosis and Evaluation **3 credits**
Diagnosis of reading difficulties; tests, reading inventories, classroom techniques and materials; clinical programs and approaches. Prerequisite: Ed 336 or 337 or equivalent or permission of instructor. (summer)

Ed 534 Seminar in Teaching of Reading **3 credits**
Development of reading skills at all levels; examination and evaluation of current reading practices and programs. (spring, summer)

Ed 535 Reading in Content Fields **3 credits**
Decoding and vocabulary analysis, comprehension reading rote, study skills and reading interests as related to specific content fields. Prerequisite: Ed 336 or 337 or equivalent or permission of instructor. (summer)

Ed 536 Supervision of Instruction **3 credits**
Improvement of instruction through supervisory leadership. (spring, summer)

Ed 537 Curriculum Independent Study **3 credits**
Intensive library research in curriculum. Approximately 30 hours of reading and allied assignments for each credit. Completion reports will include analysis and critical appraisal of materials read. Prerequisite: Permission of adviser. (fall, winter, spring, summer)

Ed 538 Curriculum Field Study **3 credits**
Scholarly study and reporting of a curriculum field problem. Emphasis on application of completed research and design to an actual situation. Prerequisite: Approval of major mentor. (fall, winter, spring, summer)

Ed 539 Curriculum Graduate Project **3 credits**
Scholarly graduate project designed to improve some aspect of education. For non-thesis degrees. Prerequisites: Graduate core requirements and approval of project coordinator and major mentor. (fall, winter, spring, summer)

Ed 540 Fundamentals of Curriculum Development **3 credits**
Historical, philosophical foundations, principles, types and methods of curriculum development and organization. (fall, summer)

Ed 541 Elementary Curriculum Seminar **3 credits**
Investigation and analysis of changes and trends, including a personal intensive report on some phase of curriculum on the elementary school level. Prerequisite: Ed 540. (winter, summer)

Ed 542 Junior High School Curriculum Seminar **3 credits**
Investigation and analysis of changes and trends, including a personal intensive report on some phase of curriculum on the junior high school and middle school levels. Prerequisite: Ed 540. (winter summer)

Ed 543 Senior High School Curriculum Seminar **3 credits**
Investigation and analysis of changes and trends, including a personal intensive report on some phase of curriculum on the senior high school level. Prerequisite: Ed 540. (spring, summer)

Ed 544 **Seminar: The Gifted Child — Elementary** **3 credits**
Principles, curricula and methods appropriate to teaching the gifted child in the elementary school. Prerequisite: Ed 540. (summer)

Ed 545 **Seminar: The Gifted Child — Secondary** **3 credits**
Principles, curricula and methods appropriate to teaching the gifted youth in the secondary school. Prerequisite: Ed 540. (summer)

Ed 550 **Counseling Practicum** **3-6 credits**
Supervised counseling experience wherein the counselor candidate is responsible for on campus counseling cases. With supervision. Prerequisite: Ed 513 (fall, winter, summer)

Ed 551 **Practicum in Group Processes** **3 credits**
Supervised off-campus experience with youth in a group dynamics situation oriented toward the school guidance function. Offered spring quarter with limited enrollment approved by practicum supervisor. Prerequisite: Ed 512, 513, 528, 550. (spring)

Ed 553 **Adult Education Practicum** **3 credits**
Practical experience in instructing adults in the area of the candidate's competence. (fall, winter, spring, summer)

Ed 557 **Guidance Independent Study** **3 credits**
Intensive library research in guidance. Approximately 30 hours of reading and allied assignments for each credit. Completion reports will include analysis and critical appraisal of materials read. Prerequisite: Permission of adviser. (fall, winter, spring, summer)

Ed 558 **Field Practicum in Guidance** **3 credits**
Supervised on the job participation in counseling and guidance activities in a regular school setting or in relevant community agencies. Ten clock hours per week. Permission in advance. Prerequisites: Ed 512, 513, 528, 550 (fall, winter, spring)

Ed 559 **Guidance Graduate Project** **3 credits**
Scholarly graduate project designed to improve some aspect of education. For non-thesis degrees. Prerequisites: graduate core requirements and approval of project coordinator and major mentor. (fall, winter, spring, summer)

Ed 570 **Seminar on the American Community College** **3 credits**
Consideration of the college parallel, vocational, technical and community service roles; history, status and projected development of community colleges; staffing needs and qualifications. (summer)

Ed 571 **Seminar on Community College Instructional Problems** **3 credits**
Identification of instructional programs pertinent to the community college; contrasts with and similarities to problems associated with senior institutions; trends in curricula, personnel and selection. (summer)

Ed 572 **Foundations in Adult Education** **3 credits**
Place of adult or continuing education in the total spectrum of American education. Required of the candidate for the M.Ed. in Adult Education Administration. (fall, summer)

Ed 573 **Special Problems of the Adult Learner** **3 credits**
Characteristics of various adult groups and related instructional problems with suggested approaches. (winter, summer)

Ed 574 **Administration of Adult Education Programs** **3 credits**
Problems relating to the development, financing, staffing, supervision and evaluation of instructional programs for adults. (spring, summer)

Ed 575 **Course Development and Instructional Resources** **3 credits**
Organizing a course of instruction for adults in the candidate's area of competence; collecting and editing supplementary materials; compiling a bibliography. (fall, winter, spring, summer)

Ed 576 **Job and Task Analysis** **3 credits**
Study of jobs, tasks and systems to meet the work function. Studying the questions who does what to whom procedures for developing task inventories and work sampling procedures.

Ed 577 **Adult Education Independent Study** **3 credits**
Intensive library research in adult or vocational education. Approximately 30 hours of reading and allied assignments for each credit. Completion reports will include analysis and critical appraisal of materials read. Prerequisite: Permission of adviser. (fall, winter, spring, summer)

Ed 578 **Adult Education Field Study or Internship** **3 credits**

Scholarly study and reporting of an educational field problem. Emphasis on application of completed research and design to an actual situation. May include a supervised internship in a community college or adult training center. Prerequisite: Approval of major mentor. (fall, winter, spring, summer)

Ed 579 **Adult Education Graduate Project** **3 credits**

Scholarly graduate project designed to improve some aspect of education. For non-thesis degrees. Prerequisites: graduate core requirements and approval of project coordinator and major mentor. (fall, winter, spring, summer)

Ed 580 **Seminar in School Administration** **3 credits**
Contemporary problems and trends; analysis and evaluation. (summer)

Ed 581 **Seminar in Elementary School Administration** **3 credits**
Duties of administrators; criteria; administrative process; case studies. Prerequisite: Ed 541 or permission. (winter, summer)

Ed 582 **Seminar in Secondary School Administration** **3 credits**
Duties of administrators; criteria; administrative process; case studies. Prerequisite: Ed 542 or 543 or permission. (winter, summer)

Ed 583 **School Finance** **3 credits**
Historical development; balanced taxation; school support program; problems and controversies. (spring, summer)

Ed 584 School Law **3 credits**
Federal and state laws regarding education; liability and protection of schools; legal status of personnel; case precedents. (spring, summer)

Ed 585 School Plant Planning **3 credits**
Plant requirement projections; site selections; staff and patron planning; leadership of principal. (biennially)

Ed 586 School Personnel **3 credits**
Recruitment, selection, orientation, induction and retention of certificated and non-certificated personnel. (summer)

Ed 587 School Public Relations **3 credits**
Purposes and media for informing the general public and school patrons about school programs and needs; public relations roles of teacher and administrative officers. (fall, summer)

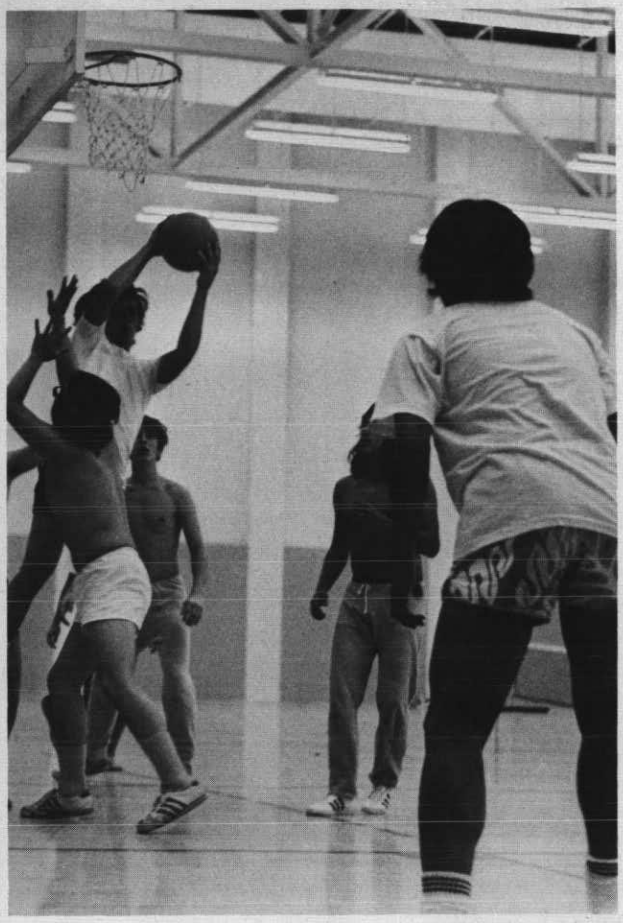
Ed 590 Administrative Internship I **3 credits**
Ed 591 Administrative Internship II **3 credits**
Supervised experiences in the administration of a school. Prerequisites: Course work in school administration and permission the spring prior to year of internship. Required for credentials. (fall, winter, spring)

Ed 592 Administrative Internship III **3 credits**
Ed 597 Administrative Independent Study **3 credits**
Intensive library research. Approximately 30 hours of reading and allied assignments for each credit. Completion reports will include analysis and critical appraisal of materials read. Prerequisite: Permission of adviser. (fall, winter, spring, summer)

Ed 598 Administrative Field Study **3 credits**
Scholarly study and reporting of an educational field problem. Emphasis on application of completed research and design to an actual situation. Prerequisite: Approval of major mentor. (fall, winter, spring, summer)

Ed 599 Administrative Graduate Project **3 credits**
Scholarly graduate project designed to improve some aspect of education. For non-thesis degrees. Prerequisites: Graduate core requirements and approval of project coordinator and major mentor. (fall, winter, spring, summer)

Ed 600 Thesis **10 credits**
Contribution to the body of essential knowledge in the fields of teaching and specialized education. Required of Master of Arts in Education candidates; optional for others. Prerequisites: Graduate core requirements and approval of preliminary application by the graduate adviser and the Dean of the Graduate School. (fall, winter, spring, summer)



Health and Physical Education

Joseph T. Page, Ph.D., Associate Dean

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.

Degree Offered

Bachelor of Arts in Education

General Degree Requirements

Students in the fields of health and physical education must satisfy University core curriculum requirements as given on page 24 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 and, 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, 330, 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.

Bachelor of Arts in Education

Freshman year

English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Major, minor or electives	21 credits
Mathematics/Science core option	5 credits
Social Science core option	5 credits

Sophomore year

Education 200, 322, 325	15 credits
Major, minor or electives	19 credits
Mathematics/Science core option	5 credits
Philosophy 110, 220	10 credits

Junior year

Education 330, 337	10 credits
Major, minor or electives	30 credits
Philosophy core option	5 credits

Senior year

Education 440	15 credits
Major, minor or electives	20 credits
Theology core options	10 credits
Total	190 credits

Health and Physical Education Courses

PE 120 **Badminton** — **1 credit**
(winter, spring)

PE 122 **Bowling** — **1 credit**
(fall, winter)

PE 122 **Golf** — **1 credit**
(spring, summer)

PE 123 **Gymnastics** — **1 credit**
(fall)

PE 124 **Swimming** — **1 credit**
(fall, winter, spring, summer)

PE 125 **Tennis** — **1 credit**
(spring, summer)

PE 126 **Volleyball** — **1 credit**
(fall)

PE 129 **Skiing** — **1 credit**
(winter)

PE 130 **Paddle Sports** — **1 credit**
(winter, spring, summer)

PE 131 **Archery** — **1 credit**
(spring)

PE 132 **Handball — Squash** — **1 credit**
(fall, winter; spring, summer)

PE 134 **Social Dance** — **1 credit**
(winter)

PE 135 **Fencing** — **1 credit**
(winter)

PE 138 **Conditioning — Women** — **1 credit**
(winter)

PE 139 **Basketball — Men** — **1 credit**
(winter)

PE 140 **Soccer — Men** — **1 credit**
(spring)

PE 142 **Developmental Physical Education — Men** (spring, summer) — **1 credit**

PE 143 **Modern Dance** — **1 credit**
(fall)

PE 145 **Sailing** — **1 credit**
(fall)

PE 146 **Scuba Diving** — **1 credit**

PE 147 **Folk-Square Dance** — **1 credit**
Basic instructional courses in activities indicated designed to meet the physical and recreational needs of college men and women.

PE 148 **Self-Defense—Men and Women** — **1 credit**

PE 195 **Movement Exploration** — **2 credits**
(winter)

PE 196 **Gymnastics** — **2 credits**
(fall)

PE 197 **Track — Soccer — Men** — **2 credits**
(spring)

PE 198 **Track — Softball — Women** — **2 credits**
(spring)
Activity courses for physical education majors only.

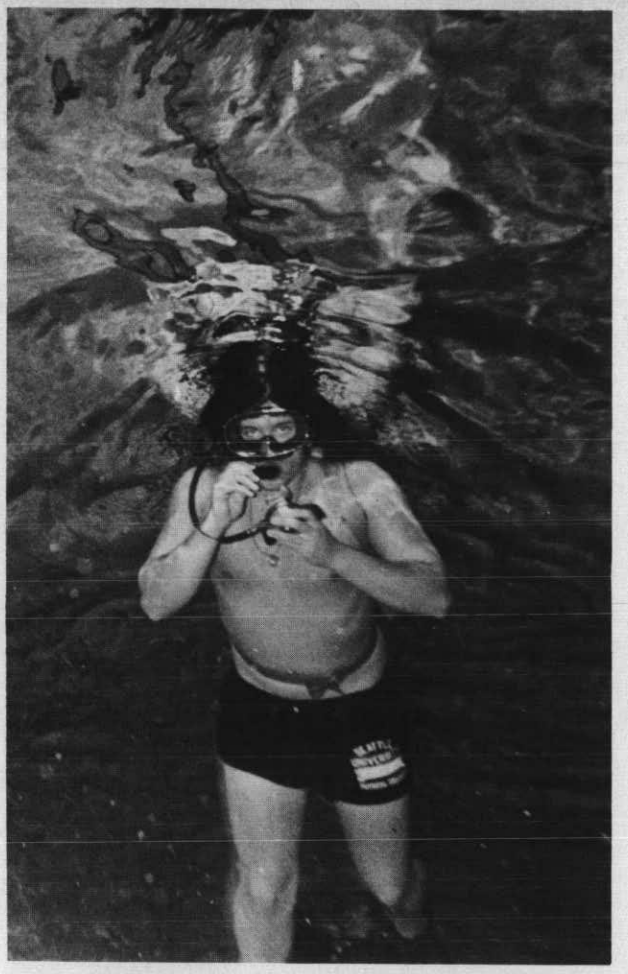
PE 200 **Personal and Community Health** — **5 credits**
Comprehensive course covering all basic aspects of health education; personal health problems; school health programs; community health agencies and problems. (spring)

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 cardio-respiratory systems. Prerequisite: Bl 200. (winter)

PE 230 **First Aid-Standard-Advance Instructor** — **3 credits**
Skills, knowledge, teaching methods. American Red Cross standards and certification. (winter)

PE 295 **Badminton — Volleyball** — **2 credits**
(spring)



PE 297 **Golf — Tennis** **2 credits**
(fall)
Activity courses for physical education majors only.

PE 308 **Coaching and Officiating of Womens Sports — Women** **4 credits**
Philosophy and techniques applicable to girls' and womens' sports in schools and colleges. (fall)

PE 309 **Psychology of Coaching — Men** **4 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)

PE 310 **Lifesaving and Water Safety — WSI** **3 credits**
Skills, knowledge and teaching methods. American Red Cross standards and certification. Prerequisite: Intermediate swimmer (ARC) or equivalent. (winter, summer)

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 achievment in terms of objectives. Prerequisite: Ed 201. (winter)

PE 340 **Teaching Health Methods** **2 credits**
Techniques and methodology in health instruction; available community resources; audio-visual aids; voluntary agencies. Prerequisite: PE 200. (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, summer)

PE 393 **Basketball — Women** **2 credits**
(winter)

PE 394 **Basketball 8 baseball — Men** **2 credits**
(fall)

PE 395 **Football — Speedball — Men** **2 credits**
(spring)

PE 396 **Field Sports — Women** **2 credits**
(fall)

PE 397 **Wrestling and Weight Training** **2 credits**
(winter)

PE 398 **Modern Dance** **2 credits**
(winter)
Activity courses for physical education majors only.

PE 410 **Perceptual Motor Development** **4 credits**
Principles of perceptual motor development and their application in the education of the exceptional child. (spring)

PE 420 **Elementary Physical Education Workshop** **4 credits**
Improving the classroom teacher's background in physical education through basic movement skills and rhythmic activities. (summer)

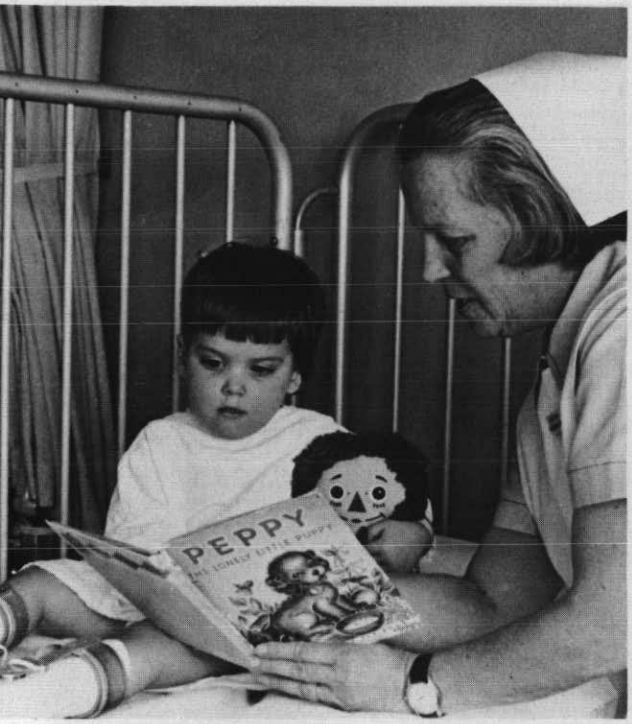
PE 460 **Organization and Administration of Physical Education** **5 credits**
Summary professional course in physical education; includes service, intramural and interscholastic programs; stresses curriculum, scheduling, facilities. Prerequisites: Upper division standing and departmental approval. (fall)

PE 495 **Folk and Square Dancing** **2 credits**
Activities courses for physical education majors only. (spring, summer)

PE 497 **Special Topics** **1-5 credits**
(fall, winter, spring, summer)

School of Nursing

Eileen M. Ridgway, Ph.D., Dean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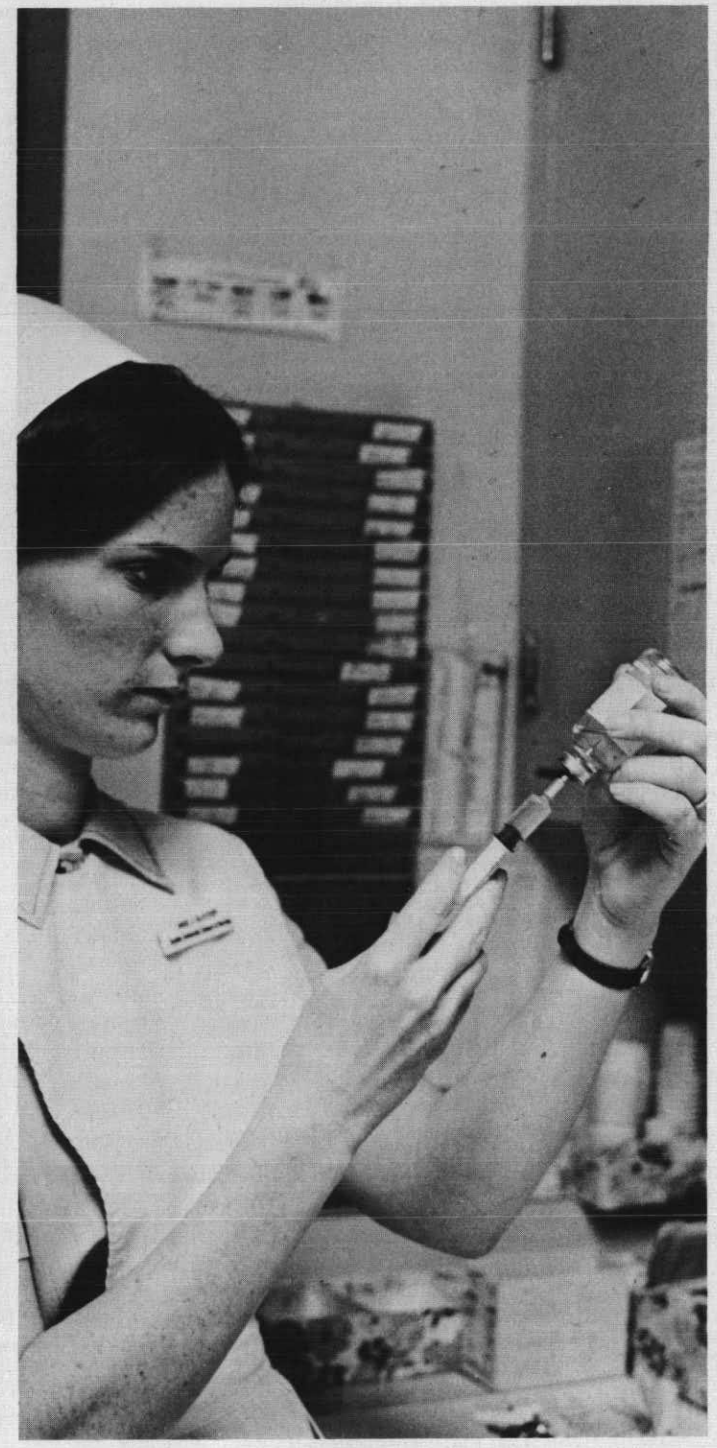


Objectives

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 facts and principles of the humanities, the natural and social sciences; upholds the ethical principles of Christianity; and is able to assume nursing responsibility for the promotion, maintenance and restoration of health.

Accreditation

National League for Nursing

Organization

The School of Nursing is formally organized within the University structure and is under the direction of its own dean and has a separate faculty. The School is a distinct and independent degree recommending unit responsible directly to the Academic Vice President of the University.

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. Additional requirements for registered nurses are:

- Graduation from an approved school of professional nursing
- Current nursing licensure in at least one State or Canadian Province
- Report of complete physical examination within six months before entrance
- Recommendation from the Director of the Associate Degree Nursing Program

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 her to assume responsibility for self-directed education and professional development, and as a basis for graduate education and research.

Clinical experience is provided through cooperating teaching units which include Children's Orthopedic Hospital Medical Center and Clinics, Group Health Cooperative: Northgate Clinics, the Mason Clinic, Northwest Hospital, Overlake Memorial Hospital, Providence Hospital, United States Public Health Service Hospital and Veterans Administration Hospital. Community Nursing practice is provided through the Seattle King County Health Department and selected health agencies. The professional portion of the curriculum includes study in the four major areas of clinical nursing, which are: medical-surgical, maternal-child, psychiatric and community health nursing.

General Program Requirements

Students in the School of Nursing must satisfy core curriculum requirements of the University given on page 24 of this bulletin. For additional required sequences see the program of study which follows.

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 2.0 in the Basic 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.

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.

Bachelor of Science in Nursing

Freshman year

Chemistry 101, 102	10 credits
English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Philosophy 110	5 credits
Psychology 100	5 credits
Sociology 101	5 credits

Sophomore year

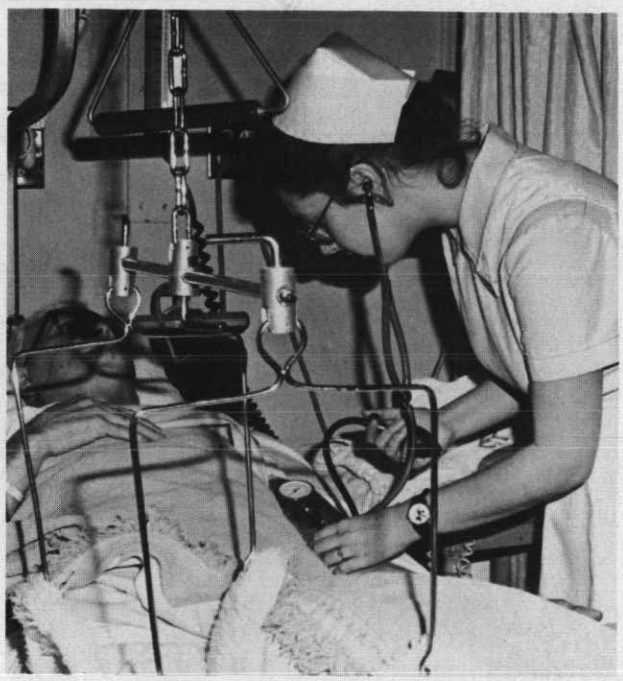
Biology 200, 210, 220	15 credits
Theology core option	5 credits
Philosophy 220	5 credits
Nursing 205, 206, 207, 300	15 credits
Psychology 322	5 credits

Junior year

Nursing 318, 319, 320, 330, 332, 335, 337 340, 341	45 credits

Senior year

Nursing 406, 407, 426, 427, 428	25 credits
Philosophy core option	5 credits
Theology core option	5 credits
Electives	10 credits
Total	180 credits



Nursing Courses

N 205 **Basic Nursing I** **5 credits**
N 206 **Basic Nursing II** **3 credits**
Sequential courses in the beginning study of the role of the nurse in a variety of settings; concepts of nursing, interpersonal relationships, wellness-illness, comfort-discomfort and mobility-immobility. Supervised experience provides an opportunity to begin application of concepts and performance of skills. (I. winter, II. spring)

N 207 **Elementary Pharmacology** **2 credits**
Study of basic concepts and principles related to pharmacology and drug therapy in nursing. Prototypes of drugs basic to a wide variety of circumstances are discussed. (spring)

N 300 **Pathophysiology** **5 credits**
Study of the functional changes of the body which accompany illness and form the basis for nursing intervention. (spring)

N 318 **Behavioral Concepts in Nursing Practice . . . The Individual** **3 credits**
Study of selected behavioral concepts and their application to nursing care of adults and children. The major ideas are drawn from the social sciences. These concepts include self-understanding in relation to the therapeutic roles, crisis as it relates to demands upon individuals currently receiving health care. Weekly conferences are correlated with students' clinical experiences.

N 319 **Behavioral Concepts in Nursing Practice . . . Families and Small Groups** **3 credits**
The study and analysis of selected behavioral concepts related to man's responses to health and illness, and the nursing requirements of individuals and their families. An examination of interaction in small groups is included. Weekly conferences are correlated with students' clinical experiences.

N 320 **Trends and Issues in Nursing Practice** **3 credits**
A study of the major trends and issues confronting the nurse practitioner and the profession. Questions concerning new roles and responsibilities and ethical and legal decisions are examined in light of community health needs. The major themes and related questions set the focus for weekly seminars. Students have an opportunity to participate as discussion leaders as well as participants.

N 330 **Medical—Surgical Nursing I** **4 credits**
N 332 **Medical—Surgical Nursing II** **4 credits**
Study of Nursing problems commonly experienced by adults and children requiring medical or surgical therapy.

N 335 **Nursing of Children** **8 credits**
Directed clinical experience in the study of nursing problems commonly experienced by children.

N 337 **Nursing of Adults** **8 credits**
Directed clinical experience in the study of nursing problems commonly experienced by adults.

N 340 **Maternal-Child Nursing I** **4 credits**
N 341 **Practicum in Maternal-Child Nursing I** **8 credits**
Study of the family in all phases of the reproductive cycle incorporating the growth and development continuum to include mothers, infants and well-children. Health supervision is emphasized. Selected experience in observing and caring for mothers, infants and well-children in a variety of settings, including hospital maternity services, clinics and community agencies serving families.

N 406 **Psychiatric Nursing** **4 credits**
N 407 **Practicum in Psychiatric Nursing** **6 credits**
Study of psychological and psychiatric nursing principles which can be applied to the nursing care of emotionally disturbed individuals in a variety of settings. The emphasis is on the promotion of mental health as well as the provision for nursing care of the mentally ill, both acute and chronic. Clinical practice is planned to promote the application of these concepts in a manner which facilitates growth and constructive problem solving in both patient and student.

N 426 **Community Nursing** **5 credits**
N 427 **Practicum in Community Nursing** **8 credits**
Study of the dynamics of individuals, families and the larger social system. Includes directed experience, with an emphasis on the helping process, with people experiencing problems in living. A variety of community health agencies and related service systems are utilized.

N 428 **Leadership and Management in Nursing** **2 credits**
The study of theories and functions of management and of leadership roles in providing nursing care for groups of patients in a variety of settings.

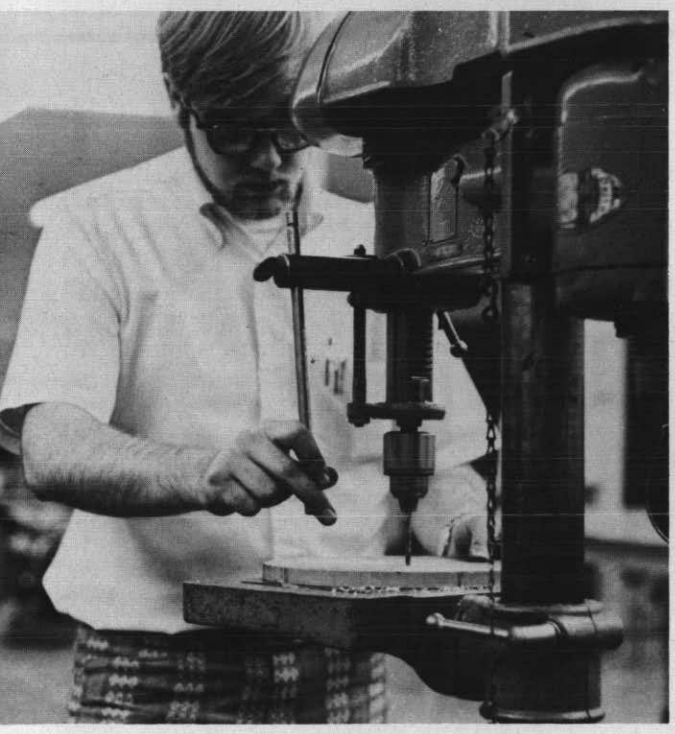
N 440 **Interdisciplinary Seminar** **1-3 credits**
Interdisciplinary approach to enduring ideas and expressions of man, including communication, love and trust, presented by faculty from fine arts, theology, philosophy and sociology.

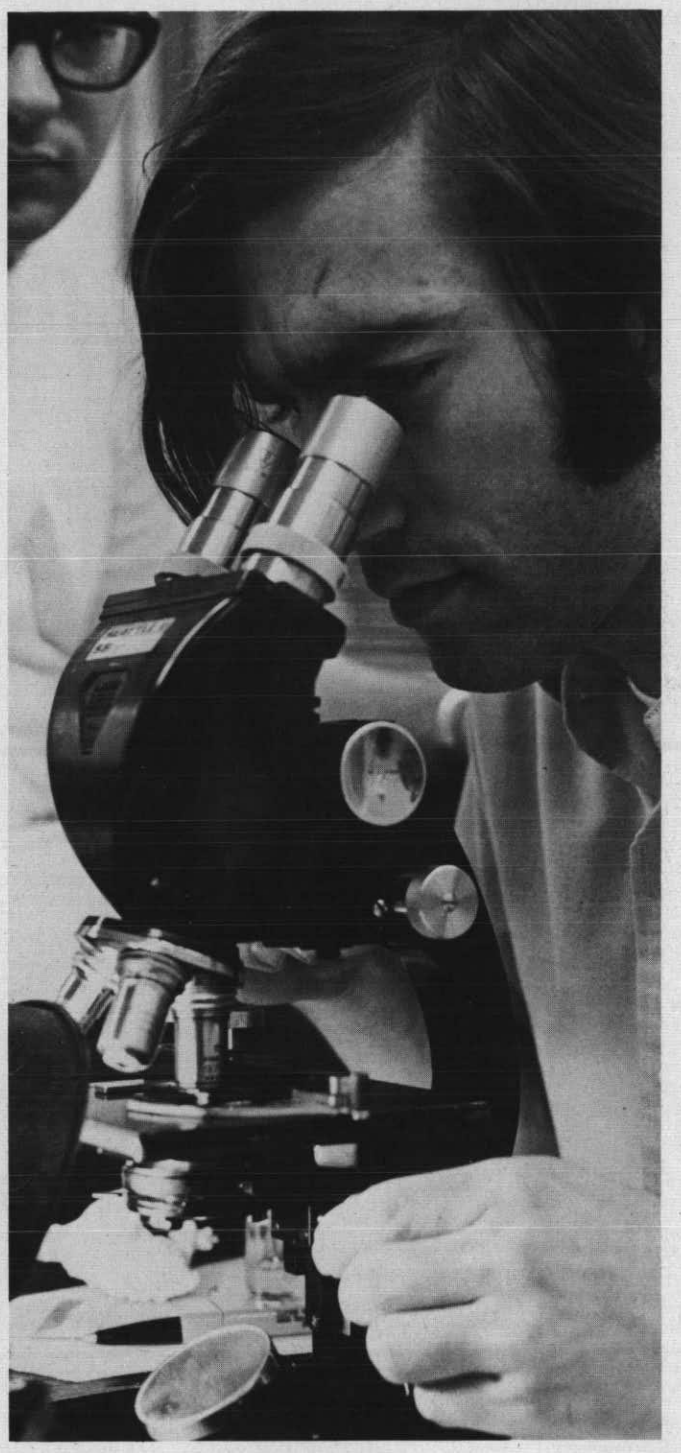
N 490 **Independent Study** **2-5 credits**
Prerequisite: Senior status and permission required.

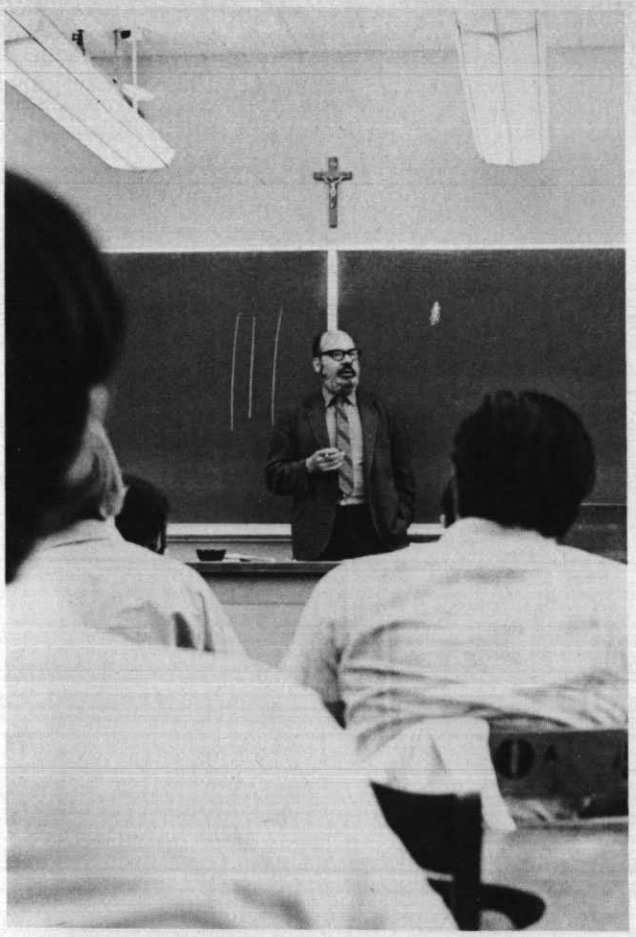
N 499 **Independent Study** **2-5 credits**

School of Science and Engineering

David W. Schroeder, 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. Several more generalized programs are offered for those students who wish a strong scientific or engineering background as part of a liberal education perhaps a premedical, predental or prelaw program, or who aspire to a career in government or industry where such a background would be helpful.

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 Association

Organization

The School of Science and Engineering offers programs in Biology, Chemistry, Clinical Chemistry, Environmental Studies, General Science, Health Information Services, Mathematics, Medical Technology, Physics, and in Civil, Electrical and Mechanical Engineering. Premedical and predental students may also enroll in the school and will be guided through suitable programs.

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. Concerning these the respective departmental sections in this bulletin should be consulted.

Degrees Offered

Bachelor of Arts with a major in Biology, Chemistry, Mathematics or Physics

Bachelor of Science in Biology, Chemistry, Clinical Chemistry, General Science, Mathematics, Medical Technology, Natural Science or Physics

Bachelor of Health Information Services

Bachelor of Engineering

Bachelor of Civil Engineering

Bachelor of Electrical Engineering

Bachelor of Mechanical Engineering

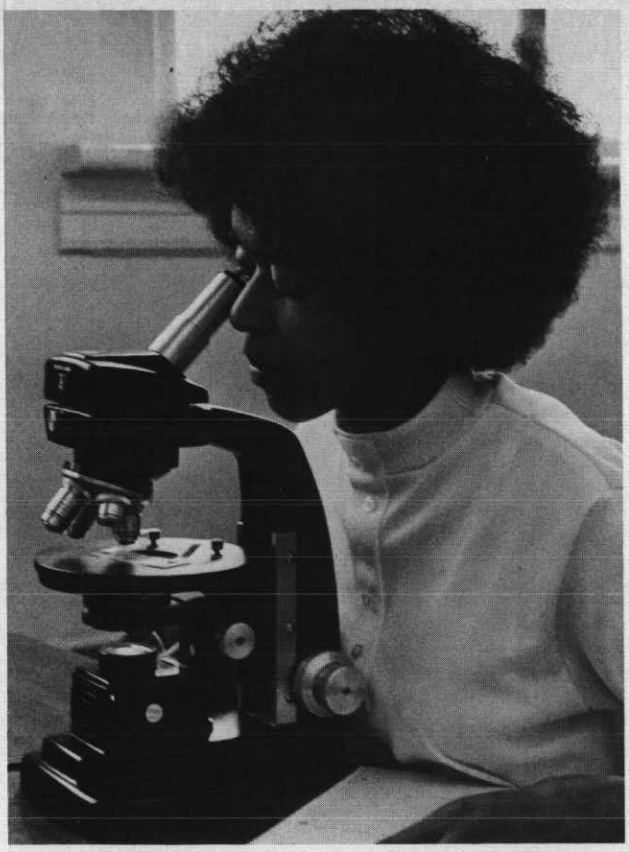
Master of Science in Natural Science (summer only - restricted to high school science teachers)

Cooperative Program — Engineering students entering Fall Quarter 1968 or later may apply for the cooperative engineering education program. The program requires five or six regular academic quarters and thereafter will alternate an academic quarter with a quarter at work in a related industrial occupation. The University will assist students in obtaining suitable industrial employment.

Engineering Executive Program — A combined five-year program leading to the Bachelor's Degree in Engineering and a Master's Degree in Business Administration is available.

General Program Requirements

Students seeking the Bachelor's degrees in the School of Science and Engineering must complete 180 credits, including the University core requirements shown on pages 24-25 of this bulletin. They must also complete the programs shown in this bulletin for their particular degree.



Biology

Lewis E. Aldrich, Jr., Ph.D., Program Director

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 24 of this bulletin.

Departmental Requirements

Bachelor of Arts — 50 credits of biology which must include Bl 150, 160 and 170 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 Bl 150, 160, and 170 and at least one seminar credit; 30 credits of mathematics or science electives.

Bachelor of Science in Biology — 60 credits of biology which must include Bl 150, 160 and 170; at least 10 credits of biology courses at the 400-499 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 103, as determined by examination); Psy 100 and Mt 112. Additional courses in biology, calculus, biochemistry and statistics are recommended.

Teaching Major (School of Education) — Secondary: 50 credits in biology which must include Bl 150, 160, 170 and 35 credits of approved electives. Elementary: 25 credits in biology which must include Bl 150, 160, 170, 370 and 371.

Undergraduate Minor — 30 credits of biology selected at direction of a biology adviser.

Bachelor of Arts

Freshman year

Biology 150, 160, 170	15 credits
English 100 and core option	10 credits
Mathematics 112	5 credits
Philosophy 110, 220	10 credits
Psychology 100	5 credits

Sophomore year

Biology electives	15 credits
Chemistry 114, 115, 116	15 credits
History or Social Science core options	10 credits
Philosophy core option	5 credits

Junior year

Biology electives	10 credits
Chemistry 225-226 or 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
Total	180 credits

Bachelor of Science

Freshman year

Biology 150, 160, 170	15 credits
English 100 and core option	10 credits
Philosophy 110, 220	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 150, 160, 170	15 credits
English 100 and core option	10 credits
Mathematics 112	5 credits
Modern Language 101, 102, 103	15 credits

Sophomore year

Biology electives	15 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
Total	180 credits

Biology Courses

BI 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. Four lecture and two laboratory hours per week. Not open for credit to students who have taken BI 150. Prerequisite: Ch 100. (winter)

BI 150 Biological Principles **5 credits**
Principles of biology common to both botany and zoology, such as cell anatomy and physiology, metabolism, mitosis, meiosis, genetics, ecology and evolution. Four lecture and two laboratory hours per week. (fall, summer 1974)

BI 160 General Botany **5 credits**
Structure, function, taxonomy and ecology of plants. Three lecture and four laboratory hours per week. Prerequisite: BI 150. (spring)

BI 170 General Zoology **5 credits**
Structure, function, taxonomy and ecology of animals. Three lecture and four laboratory hours per week. Prerequisite: BI 150. (winter)

BI 180 Human Genetics **5 credits**
The pattern of biological inheritance in man. Credits not applicable for biology major. (summer)

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 210 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)

BI 231 Anatomy, Morphology and Taxonomy of the Invertebrates **5 credits**
Three lecture and four laboratory hours per week. Prerequisite: BI 170. (fall)

BI 232 Natural History and Ecology of the Invertebrates **5 credits**
Three lecture and four laboratory hours per week. Prerequisite: BI 160; recommended: BI 231. (winter)

BI 241 Vertebrate Zoology **5 credits**
Structure, physiology, ecology and behavior of Hemichordata and Chordata. Three lecture and four laboratory hours per week. Prerequisite: BI 170. (fall)

BI 251 Plant Morphology **5 credits**
Study of plant form, structure and development. Three lecture and four laboratory hours per week. Prerequisite: BI 160.

BI 252 Taxonomy of Flowering Plants **5 credits**
Native flora as an introduction to taxonomy, involving the principal orders and families of flower-plants. Three lecture and four laboratory hours per week. Prerequisite: BI 160 or 251.

BI 270 Human Structure and Function I **5 credits**
BI 271 Human Structure and Function II **5 credits**
I. Integrated study of the microscopic and gross structure and of the functions of the human organism; basic tissues, skeletal, muscular, nervous, circulatory and respiratory systems. (fall)
II. Digestion and metabolism, the excretory, endocrine and reproductive systems. Introduction to regional anatomy. Prerequisites: BI 101 or 150, Ch 101, 102 for 270; 270 for 271. Students with credit in BI 200 and 210 may not receive credit for 270 and 271. (winter)

BI 275 General Physiology **5 credits**
Chemical and physical processes inherent in living organisms. Three lecture and four laboratory hours per week. Prerequisite: BI 170 and/or 160. (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 270 and 275. (fall)

Bl 291 **Special Topics in Biology** **1-5 credits**
Bl 292 **Special Topics in Biology** **1-5 credits**
Bl 293 **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)

Bl 300 **Microbiology** **5 credits**
Morphology, physiology and distribution of micro-organisms. Three lecture and four laboratory hours per week. Prerequisite: Permission of instructor. (winter)

Bl 301 **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)

Bl 303 **Biophysical Principles** **3 credits**
Interdependence of selected biosystems such as nervous, muscular, respiratory and physical; principles of matter and energy including sound, heat, light, and electricity. For elementary level science teachers. Credits not applicable for biology major. Three lectures per week. (fall, winter, spring, summer)

Bl 304 **Biophysical Laboratory** **2 credits**
Simplified series of experiments and demonstrations designed to implement the principles in Bl 303. Credits not applicable for biology major. Four laboratory hours per week. (fall, winter, spring, summer)

Bl 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. Prerequisites: Bl 241 or permission of instructor. (fall)

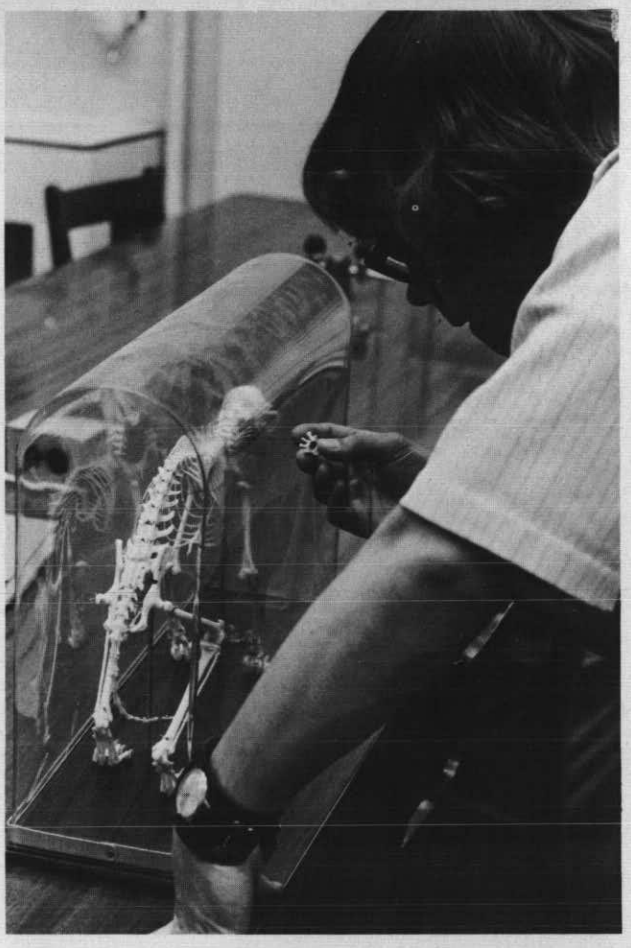
Bl 315 **Bioethics** **5 credits**
Indepth look at the problems created by a vast and highly complex technological society. Directed toward questions for which solutions are currently being sought. Lectures, discussions and directed readings. (summer)

Bl 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: Bl 241.

Bl 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.

Bl 326 **Comparative Anatomy of the Vertebrates I** **5 credits**

Bl 327 **Comparative Anatomy of the Vertebrates II** **5 credits**
I. Comparative study of the skin, skeletal system and muscular systems of selected veretbrates. II. Comparative study of the digestive system, respiratory system, excretory and reproductive systems, circulatory system, nervous system and sense organs of selected vertebrates. Three lecture and four laboratory hours per week. Prerequisite: Bl 170; Bl 241 recommended. (I-winter, II-spring)



Bl 330 **Comparative Vertebrate Histology** **5 credits**
Study of fundamental body tissues. Three lecture and four laboratory hours per week. Prerequisite: Bl 150 and permission of instructor. (spring)

Bl 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: Bl 330 or concurrently.

Bl 350 **Genetics** **5 credits**
Classical and molecular principles of heredity. Four lecture and two laboratory hours per week. Prerequisite: Bl 150. (winter)

Bl 360 **Parasitology** **5 credits**
Study of parasitic protozoa, helminths and arthropods. Three lecture and four laboratory hours per week. Prerequisite: Bl 231; Recommended: Bl 232. (spring)

Bl 370 **Population Biology: Ecology** **3 credits**
Study of ecology and evolution with emphasis on population ecology. Three lecture hours per week. Prerequisites: Bl 150 and permission of instructor. (winter)

Bl 371 **Field Ecology** **2 credits**
Techniques used in ecological research and analysis. Four laboratory hours per week (field trips). Prerequisite: Permission of instructor. Corequisite: Bl 370. (spring)

Bl 375 **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: Bl 231, 232. (spring)

BI 430 Endocrinology **4 credits**
Structure and function of the glands of internal secretion of vertebrates. Prerequisites: Advanced standing in biology and Ch 226 or 236. (fall)

BI 435 Comparative Neurology **4 credits**
Study of the phylogenetic history of the central nervous systems. Prerequisite: BI 310 or 325.

BI 440 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 325. (fall)

BI 450 Advanced Invertebrate Zoology **5 credits**
Advanced studies of the invertebrate phyla. Three lecture and four laboratory hours per week. Prerequisites: BI 231, 232.

BI 455 Biological Chemistry **5 credits**
Composition and metabolism of carbohydrates, lipids, proteins, enzymes and body fluids. Prerequisite: Ch 236. (spring)

BI 460 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 170; recommended: BI 470 and/or 231 and/or 232. (spring)

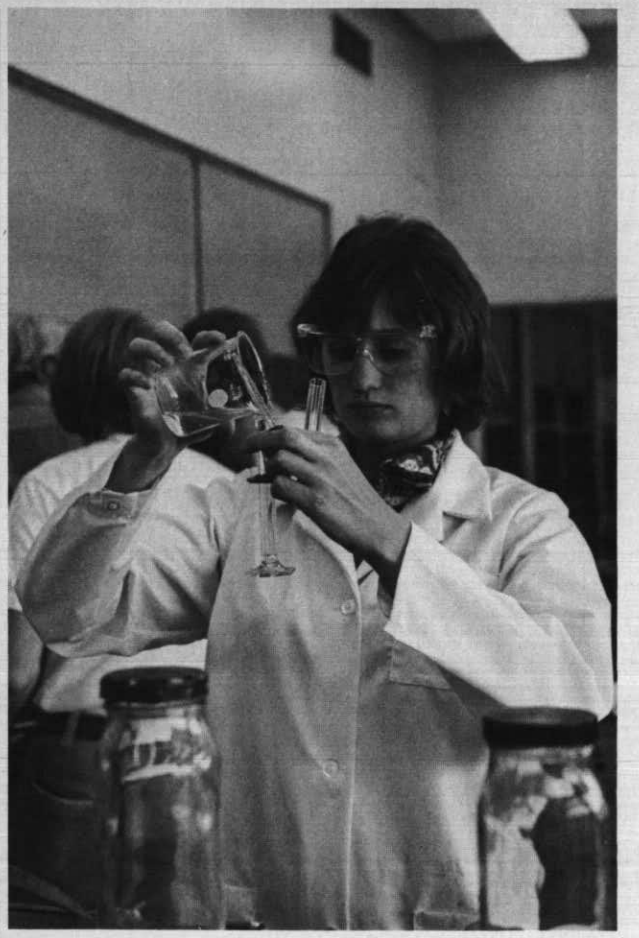
BI 465 Population Biology: Evolution **4 credits**
Study of ecology, population genetics and evolution, with emphasis on evolution. Four lecture hours per week. Prerequisite: BI 150; recommended: BI 350. (spring)

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 150; recommended: BI 170. (fall)

BI 491 Special Topics in Biology **1-5 credits**
BI 492 Special Topics in Biology **1-5 credits**
BI 493 Special Topics in Biology **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 Seminar **1 credit**
BI 495 Seminar **1 credit**
BI 496 Seminar **1 credit**
Problems in modern biology. Prerequisite: Permission of instructor. (fall, winter, spring)

BI 497 Research **1-5 credits**
BI 498 Research **1-5 credits**
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)



Chemistry

Vincent S. Podbielancik, Ph.D., Program Director

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 degree program, which is approved by the Committee on Professional Training of the American Chemical Society, is especially suited to those preparing for graduate studies in chemistry.

The Clinical Chemistry program is especially suited to those students interested in a career in the rapidly developing field of clinical chemistry. This degree will also provide adequate preparation for graduate studies in clinical chemistry, biochemistry or (with additional biology) medicine.

The Bachelor of Arts degree program is recommended for those desiring a solid foundation in chemistry but with greater freedom of choice of elective courses such as education, business, premedical studies or other fields within the University.

Degrees Offered

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Chemistry
Bachelor of Science in Clinical Chemistry
Master of Science in Natural Science (summer only - restricted to high school science teachers)

General Program Requirements

Students in chemistry must satisfy the core requirements of the University given on page 24 of this bulletin. The programs for the Bachelor of Science in Chemistry and Clinical Chemistry degrees require a mathematics sequence and 15 credits of German. The history and social science requirements of the core for these two degrees may be satisfied by any combination of 15 credits of these two disciplines. The program for the Bachelor of Arts degree requires the full core, 15 credits of a modern language and a mathematics sequence. A mathematics placement test will indicate the beginning mathematics course for which the student should register.

Departmental Requirements

Bachelor of Arts — 45 credits of chemistry which must include Ch 114, 115, 116, 235, 236, 237, 324, 325, 351 plus electives from the following: 356, 357, 415, 436, 455, 461, 495, 497, 498, 499. For those interested in bio-chemistry, the following courses are recommended: Bl 150, 170, 275 and 300.

Bachelor of Science — 60 credits of chemistry which must include Ch 114, 115 and 116; 30 credits of mathematics or science electives.

Bachelor of Science in Chemistry — 74 credits of chemistry which must include Ch 114, 115, 116, 235, 236, 237, 238, 324, 325, 326, 355, 356, 357, 415, 436, 461, 497, 498, 499.

Bachelor of Science in Clinical Chemistry — 65 credits in chemistry which must include Ch 114, 115, 116, 225, 226, 325, 355, 356, 455, 461, 470, 471, 481, 482, 483. Recommended electives: Ch 238, 357; Bl 280, 330, 350; Mt 114; humanities courses.

Master of Science in Natural Science — 45 credits of courses numbered 400 or higher which may include the following: Ch 411, 419, 425, 435, 495, 511, 519, 555, 560, 590 or selections from the corresponding programs in physics or mathematics.

Bachelor of Arts

Freshman year

Chemistry 114, 115, 116	15 credits
English 100 and core option	10 credits
Philosophy 110	5 credits
Electives	15 credits

Sophomore year

Chemistry 235, 236 and elective	15 credits
Mathematics 112, 134, 135	15 credits
Philosophy 220 and core option	10 credits
Theology core option	5 credits

Junior year

Chemistry 325, 351	10 credits
History core options	10 credits
Physics 105, 106, 107	15 credits
Theology core option	5 credits
Social Science core option	5 credits

Senior year

Chemistry elective	5 credits
Modern Language	15 credits
Social Science core option	5 credits
Electives	20 credits
Total	180 credits

Bachelor of Science

Freshman year

Chemistry 114, 115, 116	15 credits
English 100 and core option	10 credits
Philosophy 110 and 220	10 credits
Mathematics or science electives	10 credits

Sophomore year

Chemistry electives	15 credits
History or Social Science core option	15 credits
Science or mathematics electives	10 credits
Philosophy elective	5 credits

Junior year

Chemistry electives	15 credits
Science or mathematics electives	10 credits
Theology electives	10 credits
Electives	15 credits

Senior year

Chemistry electives	15 credits
Electives	30 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	15 credits
Philosophy 110	5 credits

Sophomore year

Chemistry 235, 236, 237, 238	16 credits
Mathematics 114	3 credits
Philosophy 220 and core option	10 credits
Physics 200, 201, 202	15 credits
Elective	1 credit

Junior year

Chemistry 324, 325, 326, 355, 356, 357	28 credits
German 101, 102, 103	15 credits
Electives	2 credits

Senior year

Chemistry 415, 436, 461, 497, 498, 499	15 credits
History/Social Science core options	15 credits
Theology core options	10 credits
Electives	5 credits
Total	180 credits

Bachelor of Science in Clinical Chemistry

Freshman year

Biology 150	5 credits
Chemistry 114, 115, 116	15 credits
English 110 and core option	10 credits
Mathematics 134, 135, 136	15 credits

Sophomore year

Chemistry 235, 236, 455	15 credits
Philosophy 110, 220 and core option	15 credits
Physics 105, 106, 107	15 credits

Junior year

Biology 270, 271	10 credits
Chemistry 325, 355, 356	15 credits
Theology core options	10 credits
Physics 290	5 credits
History/Social Science core option	5 credits

Senior year

Chemistry 456, 461,470, 471, 481, 482, 483	20 credits
German 101, 102, 103	15 credits
History/Social Science core options	10 credits
Total	180 credits

Chemistry Courses

Ch 100 Principles of Physical Sciences 5 credits
Principles of chemistry and physics as a foundation for the life sciences; matter and energy, molecular and atomic structure, chemical bonding, equilibrium, reaction rates, covalent carbon compounds. Five lecture hours per week.

Ch 101 Introductory General Chemistry 5 credits
Survey of inorganic chemistry treating the basic principles and descriptive material requisite for nursing. Four lecture and three laboratory hours per week.

Ch 102 Introductory Organic Chemistry 5 credits
Survey of organic and biological chemistry treating the basic principles and descriptive material requisite for nursing. Four lecture and three laboratory hours per week. Prerequisite: Ch 101.

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 mater, 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 for 116 will be elementary qualitative analysis. Three lecture, one quiz and one three-hour laboratory sessions per week for 114 and 115. Four lecture and four laboratory hours per week for 116. Prerequisites: High school chemistry or permission for 114; 114 for 115; 115 for 116.

Ch 125 Seminar 1 credit
Ch 126 Seminar 1 credit
Ch 127 Seminar 1 credit
Discussions dealing with current problems of interest to any science student.

Ch 225 Organic Chemistry for the Biosciences I 5 credits
Ch 226 Organic Chemistry for the Biosciences II 5 credits
I. Functional groups, thermodynamic and kinetic aspects of reactions of selected groups. Ultraviolet and visible spectra and correlation with theory. Theory and practice of laboratory operations. Introduction to the literature. II. Conjugated systems and heterocycles, oxidation-reduction mechanisms and electrochemistry. Natural products, biopolymers. Enzymes: structure and mechanism of catalysis. Four lecture and three laboratory hours per week. Prerequisites: Ch 115 for 225; 225 for 226.

Ch 231 Organic Chemistry I 4 credits
Structure, properties and elementary reactions of organic compounds, including biopolymers; stereochemistry. Ten lecture hours per week for the first session of summer school.

Ch 232 Organic Chemistry I Laboratory 1 credit
Laboratory for above course. Six laboratory hours per week for the first session of summer school only.

Ch 233 Organic Chemistry II 4 credits
Elementary thermodynamics, aromatic substitution, reactions involving formation and breaking carbon-to-carbon bonds. Mechanisms of reactions of biological interest. Applications of organic chemistry in enzyme catalysis. Ten lecture hours per week for the second session of summer school.

Ch 234 Organic Chemistry II Laboratory 1 credit
Laboratory for above course. Six laboratory hours per week for the second session of summer school only.

Ch 235 Organic Chemistry I 5 credits
Ch 236 Organic Chemistry II 5 credits

Ch 237 Organic Chemistry III 3 credits
I. Structure, functional groups, properties, synthesis and uses of organic compounds; emphasis on structural theory and reaction mechanisms; theory of laboratory operations. II. Stereo-chemistry, reactions of carbonyl derivatives, carbonyl compounds and organic acids and bases. Four lecture and three laboratory hours per week. III. Carbohydrates, amino acids and proteins. Two lecture and three laboratory hours per week. Prerequisites: Ch 115 for 235; 235 for 236; 236 for 237.

Ch 238 Qualitative Organic Analysis 3 credits
Methods of identification of 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.

Ch 324 **Analytical Chemistry I** **3 credits**
Ch 325 **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 practices 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: Ch 325.

Ch 351 **Survey of Physical Chemistry** **5 credits**
Survey course of the derivation, interpretation and application of the fundamental laws and theories of chemistry. Four lecture and three laboratory hours per week. Prerequisite: Ch 325.

Ch 355 **Physical Chemistry I** **5 credits**
Ch 356 **Physical Chemistry II** **5 credits**
Ch 357 **Physical Chemistry III** **5 credits**
I. Application of physical principles to chemistry with theoretical mathematical treatment; gases, laws of thermodynamics, thermochemistry, one-component systems, solutions. II. Chemical equilibria, phase equilibria, kinetic theory, chemical kinetics, electrochemistry, ionic equilibria. III. Quantum theory, molecular structure, spectroscopy, statistical mechanics, surface chemistry, crystals, photochemistry and nuclear chemistry. Four lecture and three laboratory hours per week. Prerequisites: Mt 134 and one year of college physics for 355; 355 for 336; 356 for 357.

Ch 411 **Principles of Inorganic Chemistry** **6 credits**
Review of basic principles of reactions in ion-systems, electrochemistry, thermochemistry and elementary thermodynamics. Descriptive chemistry of the periodic table in terms of electronic configuration, bonding orbitals, ionization potentials, kinetics, equilibrium, complex ion, and thermodynamics. Prerequisites: One year of college inorganic chemistry or permission. Corequisite: Mt 400.

Ch 415 **Advanced Inorganic Chemistry** **3 credits**
Advanced topics in inorganic chemistry, with particular reference to contributions of atomic and molecular structural studies, thermodynamics and kinetics. Directed reading and/or lectures. Prerequisite: Ch 351 or 357.

Ch 425* **The Structure and Relevancy of Science** **3 credits**
Analysis of the nature, limitations, values and impact of scientific thought: significant historical and philosophical scientific developments selected from the natural sciences; the impact of scientific knowledge on man's condition; potential of the scientific and technological revolution. Three lecture-dialogue sessions per week. Prerequisite: Ch 411 or permission.

Ch 435* **Organic Chemistry** **6 credits**
Brief survey of functional groups and of type reactions involved in biopolymer formation and in catabolism, natural products, reactions of carbonyl and carboxyl derivatives, oxidation and its relation to biochemical energetics, enzymes. Five lectures, one problem session, three laboratory hours per week. Prerequisite: Ch 411 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. Prerequisites: Ch 237, 351 or 356.

Ch 455 **Biochemistry I** **5 credits**
Ch 456 **Biochemistry II** **3 credits**
I. Composition and metabolism of carbohydrates, lipids, proteins, enzymes and body fluids. Four lecture and three laboratory hours per week. II. Detailed consideration of selected biochemical topics of contemporary research significance. Prerequisites: Ch 226 or 236 for 455; 455 or permission of instructor for 456.

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: Ch 357.

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: Ch 351 or 357.

Ch 470 **Clinical Chemistry I** **3 credits**
Ch 471 **Clinical Chemistry II** **3 credits**
Ch 472 **Clinical Chemistry III** **3 credits**
I. Statistics and normal values in the clinical laboratory; theory and techniques of spectrophotometry, atomic absorption spectroscopy, flame photometry, fluorimetry and infrared analyses; electrophoretic techniques and densitometry; protein diffusion and immunological techniques. II. Automated analyses in clinical laboratory use; critical comparison of analytical methodologies for carbohydrates, lipids, electrolytes, enzymes, hemoglobins and porphyrins, with emphasis on the biosynthesis, metabolism, analytical methods of importance, normal ranges and pathological conditions leading to abnormalities. III. Toxicology, steroids, catecholamines, radiommunoassay techniques, renal function testing, hepatic function testing, cerebrospinal fluid. Three lecture hours per week. Prerequisite: Ch 356 or permission of instructor. (Offered in sequence: fall, winter, spring)

Ch 475 **Clinical Chemistry Laboratory I** **1 credit**
Ch 476 **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)

Ch 481 Clinical Practice **2 credits**
Ch 482 Clinical Practice **2 credits**
Ch 483 Clinical Practice **2 credits**
Practical experience in approved hospital clinical laboratory. Six laboratory hours per week. Prerequisite: Permission of instructor.

Ch 491 Special Topics **2-5 credits**
Ch 492 Special Topics **2-5 credits**
Ch 493 Special Topics **2-5 credits**
Directed reading and/or lectures at the advanced level. Prerequisite: Permission of the instructor.

Ch 497 Undergraduate Research **2 credits**
Ch 498 Undergraduate Research **2 credits**
Ch 499 Undergraduate Research **2 credits**
Literature and laboratory investigation of a basic research problem. Six laboratory hours per week. Prerequisite: Permission of department chairman.

Graduate Courses

Ch 511* The Chemical Bond **6 credits**
Historical development of quantum theory; introduction to wave mechanics; atomic structure; valence bond and molecular orbital approaches; group theory and symmetry; bonding in diatomic molecules, polyatomic molecules, transition metal complexes and rare gas compounds. Five lecture hours and one seminar period per week. Prerequisite: Ch 411 or permission.

Ch 519* Advanced Analytical Chemistry **6 credits**
Principles of reactions in ionized systems applied to analysis; advanced cation and anion analysis; volumetric and gravimetric methods; colorimetry, chromatography, ion exchange; the descriptive chemistry of the more common ions. Four lectures and six laboratory hours per week. Prerequisite: Ch 411 or permission.

Ch 555* Chemical Thermodynamics **6 credits**
Foundation of theory of thermodynamics, enthalpy, internal energy, free energy, entrophy, work function. Application to states of matter, equilibrium and electrochemistry. five lectures and one seminar per week. Prerequisite: Ch 411 or permission.

Ch 560* Radiochemistry **3 credits**
Theory of radioactivity; nuclear radiations, detection of radiation, radiological safety, rates of radioactive processes, radiochemical separations. Two lectures and two three-hour laboratory sessions per week. Prerequisite: Ch 411.

Ch 590* Research **6-12 credits**
Literature and laboratory investigation of a basic research problem. Preparation of a written report. Three hours per credit per week. Prerequisite: Permission of instructor.

*Offered summer only for high school teachers in the master's degree program in natural science.

Environmental Studies

The solution of problems relating to man's environment will depend, among other things, upon the enlightened application of science and technology. This task will require people from a wide spectrum of educational backgrounds and professional interests, from attorneys to nuclear physicists. One thing will be common to all who are really effective in the environmental field: they will have an education broad enough to understand the problem and deep enough in some area to have an impact. Students interested in the environmental field may:

1. Choose a Bachelor of Science in Biology, Chemistry or Physics degree program, or a Bachelor of Civil Engineering program and choose electives and seminar courses to broaden their knowledge of environmental problems.

2. Choose the Bachelor of Science in General Science degree and include in it a variety of course in biology, chemistry and engineering which are relevant to environmental problems.

3. Choose the more general Bachelor of Science or Bachelor of Engineering programs to gain expertise in one field and use the greater number of electives permitted in these programs to get breadth in other fields of environmental interest.

4. Choose a Bachelor of Arts degree program which will provide a strong background in one field and leave ample room for such fields as economics, political science, psychology and sociology.

Courses especially recommended for persons interested in environmental problems are: Biology 101, 150, 370, 371; Chemistry 100; Mathematics 114, 116; Physics 101, 110, 475; Civil Engineering 210, 351; Sociology 101; Psychology 100; Economics 271 and Political Science 150.

The student will be advised by the department in which he plans to take the most courses. See sample programs of study below for specific course requirements. See also General Science section of this bulletin.

Environmental Studies
Bachelor of Science

Freshman year

Biology 150	5 credits
Chemistry 114, 115, 116	15 credits
English 100 and core option	10 credits
Mathematics 112, 134	10 credits
Philosophy 110	5 credits

Sophomore year

Biology 170, 370, 371	10 credits
Chemistry 235, 236	10 credits
Philosophy 220 and core option	10 credits
Physics 105, 106, 107 or 200, 201, 202	15 credits

Junior year

Chemistry 324, 325, 355, 356, 357 and electives	30 credits
Civil Engineering 210, 351	10 credits
Theology core options	5 credits

Senior year

Chemistry elective	5 credits
History/Social Science core option	15 credits
Theology core option	5 credits
Electives	20 credits
Total	180 credits

Environmental Studies
Bachelor of Engineering

Freshman year

English 100 and core option	10 credits
Mathematics 112, 114, 134	13 credits
Mechanical Engineering 102, 111, 112, 113	12 credits
Philosophy 110, 220	10 credits

Sophomore year

Biology 150	5 credits
Chemistry 114, 115	10 credits
Civil Engineering 210	5 credits
Mathematics 135, 136	10 credits
Physics 200, 201, 202	15 credits

Junior year

Biology 170, 370, 371	10 credits
Civil Engineering 351	5 credits
Chemistry 355 or Mechanical Engineering 321	5 credits
Engineering electives	15 credits
Philosophy core option	5 credits

Senior year

Civil Engineering 485, 486	10 credits
Economics 271	5 credits
Engineering electives	15 credits
Political Science 160	5 credits
Theology core electives	10 credits
Total	180 credits

General Science

Jerry A. Riehl, Ph.D., Coordinator

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. A concentration in engineering and one in environmental studies is shown below, but other choices are possible according to the need of the student. These choices are governed by the General Program Requirements.

Degree Offered

Bachelor of Science in General Science

General Program Requirements

Students in general science must satisfy the core curriculum for science majors shown on pages 24-25 of this bulletin. Also required are 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 and 20 credits in a second field. Four of the fields must be represented by at least one course. See sample programs below for specific course requirements.

Bachelor of Science in General Science
Environmental Studies

Freshman year

Biology 150	5 credits
Chemistry 114, 115, 116	15 credits
English 100 and core option	10 credits
Mathematics 112, 134	10 credits
Philosophy 110	5 credits

Sophomore year

Biology 170, 370, 371	10 credits
Chemistry 235, 236	10 credits
Philosophy 220 and core option	10 credits
Physics 105, 106, 107 or 200, 201, 202	15 credits

Junior year

Chemistry elective	5 credits
Civil Engineering 210, 351	10 credits
Biology or Physics elective	5 credits
Theology core options	10 credits
Electives	15 credits

Senior year

Science, Mathematics or Engineering electives	10 credits
Humanities/Social Science electives	15 credits
Electives	20 credits
Total	180 credits

Bachelor of Science in General Science Engineering Concentration

Freshman year

English 100 and core option	10 credits
Mathematics 112, 114, 134	13 credits
Mechanical Engineering 102, 111, 112, 113	12 credits
Philosophy 110, 220	10 credits

Sophomore year

Chemistry 114, 115	10 credits
Civil Engineering 210	5 credits
Electrical Engineering 290	5 credits
Mathematics 135, 136	10 credits
Physics 200, 201, 202	15 credits

Junior year

Chemistry electives	10 credits
Engineering electives	10 credits
Philosophy core option	5 credits
Theology core option	10 credits
Electives	10 credits

Senior year

Humanities/Social Science electives	15 credits
Electives	30 credits
Total	180 credits

Health Information Services

Kathleen A. Waters, R.R.A., Director

Objectives

The Health Information Services 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. Students who complete the program are eligible for registration with the American Medical Record Association.

Degree Offered

Bachelor of Health Information Services

General Program Requirements

Candidates must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin.

Departmental Requirements

Bachelor or Health Information Service s– 20 credits of science and mathematics beyond the core requirement; 10 credits of social science and 20 credits of business courses.

Bachelor of Health Information Services

Freshman year

Chemistry 100	5 credits
English 100 and core option	10 credits
History 102-103	10 credits
Mathematics 101 or elective	5 credits
Philosophy 110	5 credits
Psychology 100	5 credits
Elective	5 credits

Sophomore year

Biology 150	5 credits
Business 210, 230	10 credits
Economics 271	5 credits
Philosophy 220	5 credits
Theology core options	10 credits
Elective	10 credits

Junior year

Biology 270, 271 and 220 or 300	15 credits
Business 270, 380	10 credits
Philosophy core option	5 credits
Psychology or Sociology 201	5 credits
Electives	10 credits

Senior year

Health Information Service 401, 402, 403 422, 425, 426, 430, 440, 450, 455, 470, 494 and 495 and electives	45 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. (fall)

HI 402 Analysis, Design and Implementation of Health Record Systems **5 credits**
Application of health record science and management skills in the coordination of record systems and information centers in health facilities. Prerequisites: HI 401 and 450. (winter)

HI 403 Professional and Governmental Influences on Health Record Administration **5 credits**
Study of the standards designed by JCAH, AMA, HEW and other agencies to raise the level of health care with analysis of the effects on health record administration. Prerequisites: HI 401 and 402. (spring)

HI 422 Medical Terminology **3 credits**
(fall)

HI 425 Medical Science I **3 credits**
HI 426 Medical Science II **3 credits**
I. 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. (I. winter II. spring)

HI 430 Health Care Delivery System **3 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. (fall, spring)

HI 440 Practicum **1-5 credits**
HI 441 Practicum **1-5 credits**
Supervised learning experience in which the student develops skill in learning to interact with personnel, to preserve the confidential nature of medical records and to work with other personnel. (fall, winter, spring)

HI 450 Development of Management Resources **3 credits**
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. (fall)

HI 455 Comprehensive Communication Skills **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. (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.

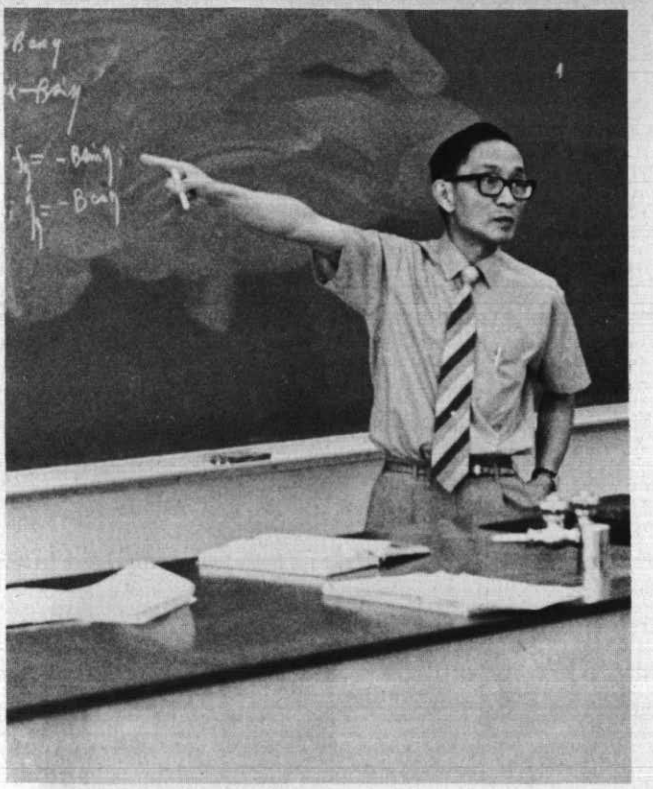
HI 475 Data Processing **3 credits**
Data processing systems and the application of newer techniques in handling information in medical institutions.

HI 491 Special Topics **2-5 credits**
HI 492 Special Topics **2-5 credits**

HI 494 Current Topics—Seminar **2 credits**
Organizational patterns in health facilities and their role in the community, career opportunities. (winter)

HI 495 Problem Solving and Decision Making — Seminar **2 credits**
(spring)

HI 497 Independent Study **1-6 credits**
Prerequisites: Senior standing; permission. (fall, winter, spring)



Mathematics

Andre L. Yandl, Ph.D., Chairman

Objectives

The Mathematics department offers three structured undergraduate programs. The first, leading to the Bachelor of Science in Mathematics degree, is designed to prepare the student for advanced study and professional work in mathematics. The other two, for students wishing more flexible programs which provide for a concentration of work in a secondary field, lead to the Bachelor of Arts degree or the Bachelor of Science degree.

Degrees Offered

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Mathematics
Master of Science in Natural Science

General Program Requirements

Students in mathematics must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin. 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 below for additional requirements.

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 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).

Master of Science in Natural Science — 45 credits of courses numbered 400 or higher which may include the following: Mt 405, 410, 415, 420, 425, 435, 450, 460, 470, 480, 491, 499; 20 credits selected from corresponding programs in chemistry or physics.

Bachelor of Arts

Freshman year

English 100 and core option	10 credits
History 101-102 or 102-103	10 credits
Mathematics 134, 135, 136	15 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 101, 102, 103 ..... 15 credits
Mathematics 315 or 381 and electives ..... 15 credits
Theology core options ..... 10 credits
Elective ..... 5 credits

Senior year
Mathematics 411 or 431 ..... 5 credits
Electives ..... 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 year
Mathematics ..... 15 credits
History or Social Science core option ..... 15 credits
Physical Science, Psychology or Economics ..... 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 ..... 15 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, 201, 202 ..... 15 credits
Elective ..... 5 credits

Junior year
French or German 101, 102, 103 ..... 15 credits
Mathematics 411, 412, 413 or 431, 432, 433 ..... 15 credits
Theology core options ..... 10 credits
Elective ..... 5 credits

Senior year
Mathematics 431-432-433 or 411-412-413 and electives ..... 25 credits
Electives ..... 20 credits

Total .... 180 credits

Mathematics Courses

Mt 101 Intermediate Algebra 5 credits
Introduction to elementary logic and sets. Review of the fundamental operations of algebra; laws of exponents; linear and quadratic equations; inequalities; systems of equations. Prerequisite: one unit each of high school algebra and geometry.

Mt 112 College Algebra and Trigonometry 5 credits
Sets; functions and relations; complex numbers; the algebra of functions; exponential functions; trigonometric and inverse trigonometric functions; identities; trigonometric equations; graphs of trigonometric functions. Prerequisite: Mt 101 or one-and-one-half units of high school algebra.

Mt 114 Elementary Electronic Computer Programming 3 credits
Fundamentals of digital computing. FORTRAN language basic instruction; flow charts, loops, sub-routines. Operation of the computer and supporting equipment of the University Computer Center. One two-hour laboratory period per week. Prerequisite: Mt 101.

Mt 116 Computer Applications 2 credits
Techniques for problem solving; implementation of various formulas of mathematics, statistics, and the sciences; documentation techniques. Assignments will require use of Computer Center equipment. Corequisite: Mt 114.

Mt 118 College Algebra for Business 5 credits
Sets, subsets; real numbers; permutations and combinations; systems of linear algebraic equations; matrices; inequalities and linear programming. Prerequisite: Mt 101 or qualifying examination.

Mt 130 Elements of Calculus for Business 5 credits
Relations and functions; polynomial and other functions; rate of change; derivative, basic differentiation formulas, applications of the theory of extrema; area under a curve; limits of sequences; the definite integral and applications. Prerequisite: Mt 118.

Mt 134 Calculus and Analytic Geometry I 5 credits
Mt 135 Calculus and Analytic Geometry II 5 credits
Mt 136 Calculus and Analytic Geometry III 5 credits
I. Introduction to analytic geometry. Limits and derivatives and some applications of limits and

derivatives; the definite integral and the fundamental theorem of calculus. II. Differentiation and integration of trigonometric, exponential and logarithm functions. Techniques of integration; applications of integration; polar coordinates and parametric representations. III. Indeterminate forms and improper integrals; infinite series and Taylor's theorem; solid analytical geometry and partial differentiation. Prerequisites: Mt 112 or qualifying examination for 134; 134 for 135; 135 for 136.

Mt 175 Mathematics for the Liberal Arts Student **5 credits**
Flow charts and elementary operations; rational numbers; linear polynomials and equations; the computer; non-linear relationships; approximations; introduction to geometry, statistics and probability.

Mt 200 Theory of Arithmetic **5 credits**
Systems of numeration; sets; relations, equivalence relations, equivalence classes; number systems and the integration of these concepts. Prerequisite: Mt 101 or 175.

Mt 214 Principles of Digital Computers and Coding **3 credits**
Fundamentals of commercial and scientific computer programming including flowcharting, problem solving and file management. Laboratory assignments will require the use of Computer Center equipment. Prerequisite: Mt 101 or equivalent.

Mt 233 Multivariable Calculus and Linear Algebra **5 credits**
Line integrals; multiple integrals and applications; linear algebra, vectors and eigen value problems. Prerequisite: Mt 136.

Mt 234 Vector Calculus and Differential Equations **5 credits**
Vector functions; line and surface integrals; linear differential equations, systems and power series solutions of differential equations. Prerequisite: Mt 233.

Mt 300 Methods for Secondary School Mathematics **5 credits**
Special topics in mathematics relevant to the high school curriculum; emphasis on basic concepts and procedures for teaching them. Prerequisite: Mt 136 or permission of instructor.

Mt 315 Number Theory **5 credits**
Divisibility and the Euclidean algorithm; the Euler Phi-function; congruences; quadratic reciprocity law; numerical functions; the Mobius inversion formula. Prerequisite: Mt 135.

Mt 321 Foundations of Euclidean Geometry **5 credits**
Introduction to the axiomatic foundations of Euclidean geometry; ruler and compass constructions and the famous problems of antiquity; the 5th postulate and non-Euclidean geometries. Prerequisite: Mt 135.

Mt 322 Topics in Geometry **5 credits**
Selected topics from among convexity, applications of geometry, geometry in other subjects and transformation groups from the geometric viewpoint. May be repeated for credit with permission. Prerequisite: Mt 233 or permission.

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.

Mt 371 Introduction to Numerical Methods **5 credits**
Approximation and errors; Newton's and Lagrange's formulas; finite differences and operators; numerical integration; numerical solution of differential equations. Three lecture and two laboratory hours per week. Assignments will require use of the Computer Center equipment. 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.

Mt 400* Topics in Applied Calculus **4 credits**
Selected topics from calculus involving elementary applications to the physical and biological sciences. Five lecture and two problem sessions per week. Prerequisite: One year of calculus.

Mt 405* Fundamental Concepts of Analysis **5 credits**
The Peano axioms and the construction of the real number system; the complex number system; the limit concept in analysis. Prerequisite: One year of calculus.

Mt 410* Survey of Modern Algebra **5 credits**
Number systems, congruences, equivalence relations, groups, rings, integral domains and fields; stress on the logic of postulational mathematics and its pertinence to the teaching of algebra. Prerequisite: One year of calculus.

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: Mt 315 or 381 for 411; 411 for 412; 412 for 413.

Mt 415* Linear Algebra and Matrix Theory **5 credits**
Introduction to the theory of matrices and determinants, vector spaces, linear transformations. Prerequisite: One year of calculus.

Mt 420* Survey of Geometric Theories **5 credits**
Selected topics in finite geometry, projective geometry and non-Euclidean geometry. Prerequisite: One year of calculus.

Mt 425* Foundations of Geometry **5 credits**
Study of the axiomatic nature of geometry with particular attention to the meaning and role of undefined terms, definitions, axioms, and proofs. Prerequisite: One year of calculus.

Mt 430* Introduction to Higher Analysis **5 credits**
Concepts of function, limits and continuity, derivative and anti-derivative the Riemann integral. Prerequisites: Calculus and one upper division course in modern mathematics.

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: Mt 315 or 381 for 431; 431 for 432; 432 for 433.

Mt 435* **Introduction to Complex Variables** **5 credits**
Covers the same topics as Mt 437. For high school teachers. Prerequisite: Mt 234 or 430 or 460 or equivalents.

Mt 437 **Introduction to Complex Variables** **5 credits**
The complex number system, analytic functions, integrations, series, residues, conformal mapping. Prerequisite: Mt 234.

Mt 450* **Probability and Statistics** **5 credits**
Truth tables, sets, combinatorial algebra; compound and conditional probability, random variables and distribution functions; elements of statistical inference. Prerequisite: One year of calculus.

Mt 460* **Topics in Applied Mathematics** **5 credits**
Introduction to differential equations and vector analysis; application to simple problems of rates, trajectories, harmonic motion, electrical circuits and related topics. Prerequisite: One year of calculus.

Mt 470* **Computer Programming and Numerical Analysis** **5 credits**
Introduction to numerical methods and algorithms; approximations and errors; introduction to computer programming and FORTRAN and its use to implement numerical techniques under study. Prerequisite: One year of calculus.

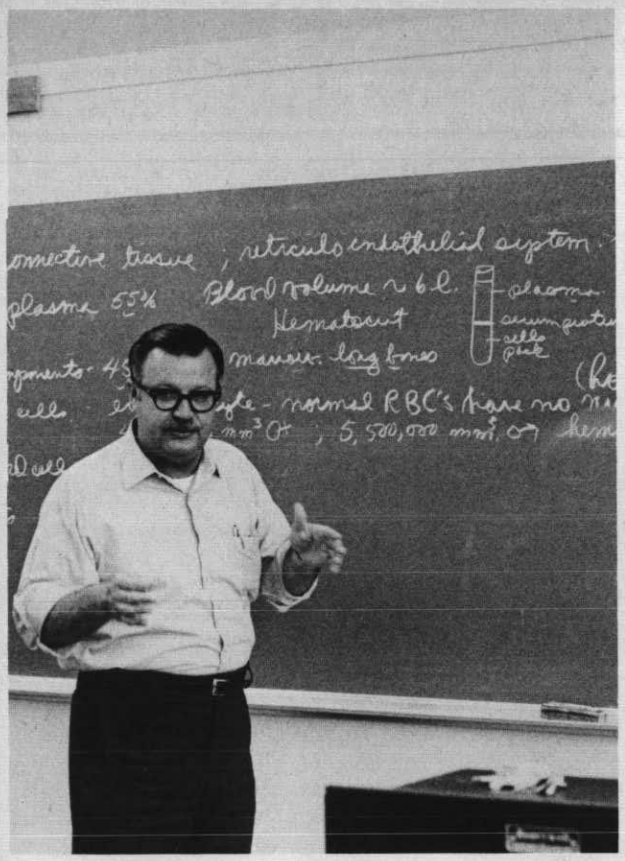
Mt 471 **Numerical Analysis** **5 credits**
Matrix inversion; systems of linear equations; a fixed point theorem and its applications; initial and boundary value problems; methods of Runge-Kutta and Hermite; finite differences.

Mt 480* **Elementary Topology** **5 credits**
Set theory; topology of the real line; topological spaces; metric spaces; compactness, connectedness; product topology; the fixed point property and applications. Prerequisite: One upper division course in algebra and analysis.

Mt 491 **Special Topics in Mathematics** **2-5 credits**
Mt 492 **Special Topics in Mathematics** **2-5 credits**
Mt 493 **Special Topics in Mathematics** **2-5 credits**
May be repeated for a maximum of 12 credits. Prerequisite: Permission.

Mt 497 **Independent Study** **1-5 credits**
Mt 498 **Independent Study** **1-5 credits**
Mt 499 **Independent Study** **1-5 credits**
May be repeated for a maximum of 10 credits. Prerequisite: Permission.

*Offered summer only for high school teachers in the master's degree program in natural science.



Medical Technology

George D. Davis, M.S., Director

Objectives

The Medical Technology program is designed to prepare the student for a professional career as a medical technologist or as a laboratory assistant in a biological research laboratory. Although there is a heavy concentration in basic sciences, the program is also designed to provide a liberal arts education.

Degree Offered

Bachelor of Science in Medical Technology

General Program Requirements

Students in this program must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin.

Degree Requirements

Three years must be spent in academic work on campus and a fourth year of internship in an approved hospital. Those who successfully complete the year of internship will be granted 45 credits toward a degree from Seattle University and are eligible for certification by the Registry of Medical Technologists. The 45 credits for internship will be granted only to those who have spent at least one full year on campus prior to interning. Such credits are not granted to students who have interned from some other school and come to Seattle University to complete their degree.

Current requirements stipulated by the regional hospitals in the area of medical technology strongly recommend the completion of the bachelor's degree before beginning the internship program. It is strongly recommended that the student in medical technology complete the Bachelor of Arts in Biology or Bachelor of Science in Biology in order to meet the expectations of the local clinical schools. This would mean that the clinical internship would be taken as a fifth year prior to the examination for certification.

Bachelor of Science in Medical Technology

Freshman year

Biology 150, 170 and elective	15 credits
English 100	5 credits
History/Social Science core options	10 credits
Mathematics 112, 134	10 credits
Philosophy 110	5 credits

Sophomore year

Biology 275, 280 and 330 or 270, 271 and option	15 credits
Chemistry 114, 115, 116	15 credits
Philosophy 220 and core option	10 credits
Theology core option	5 credits

Junior year

Biology 300 and electives	15 credits
Chemistry 235, 236, 325	15 credits
English core option	5 credits
History/Social Science core option	5 credits
Theology core option	5 credits

Senior year

Internship	45 credits
Total	180 credits

Bachelor of Science in Medical Technology Nuclear Option

Freshman year

Biology 150	5 credits
English 100 and core option	10 credits
Mathematics 112, 134, 135	15 credits
Physics 105, 106, 107	15 credits

Sophomore year

Biology electives	15 credits
Chemistry 114, 115, 116	15 credits
Philosophy 110, 220 and core option	15 credits

Junior year

Biology electives	10 credits
Chemistry 235, 236	10 credits
Physics 375 or Chemistry 461 and Physics elective	10 credits
Theology core option	10 credits
Electives	5 credits

Senior year

Internship	45 credits
Total	180 credits

Bachelor of Science in Medical Technology Cytotechnology Option

Freshman year

Biology 150, 170 and elective	15 credits
English 100	5 credits
History/Social Science core options	10 credits
Mathematics 112, 134	10 credits
Philosophy 110	5 credits

Sophomore year

Biology 275, 280, 330 or 270, 271 and elective	15 credits
Chemistry 114, 115, 116	15 credits
Philosophy 220 and core option	10 credits
Theology core option	5 credits

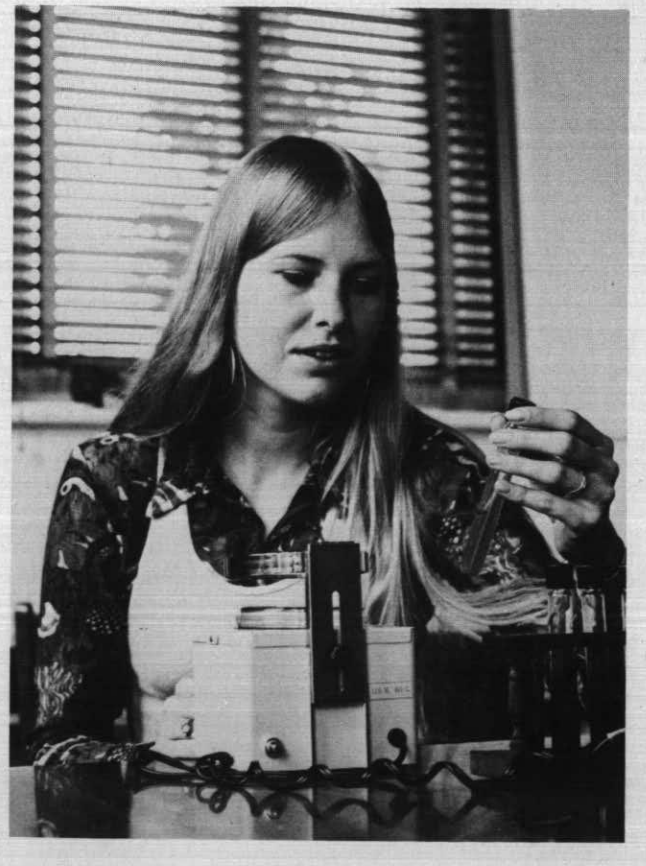
Junior year

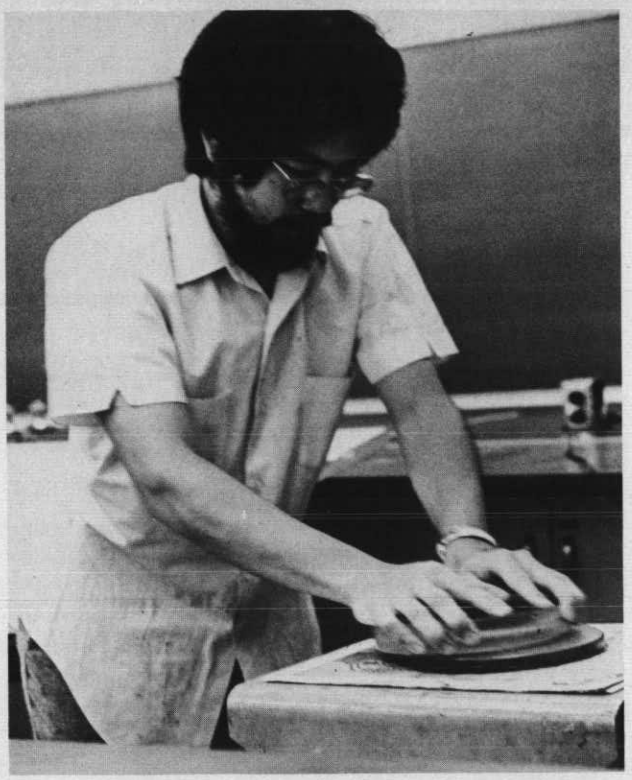
Internship	45 credits

The certification examination for C.T. (A.S.C.P.) may be taken at the end of a full year of internship. Further training will be required for a Medical Technology certificate.

Senior year

Biology 300 and electives	15 credits
Chemistry 235, 236, 325	15 credits
English core option	5 credits
History/Social Science core option	5 credits
Theology core option	5 credits
Total	180 credits





Physics

Jerry A. Riehl, Ph.D., Program Director

Objectives

The Physics department offers four 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, with the inclusion of advanced laboratory courses emphasizing nuclear and nuclear reactor physics. This curriculum is designed to prepare students for advanced work in the field or for graduate school. 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. The Master of Science in Natural Science program is offered only during the summer for high school teachers attending the National Science Foundation Summer Institute.

Degrees Offered

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Physics
Master of Science in Natural Science (summer only—restricted to high school science teachers)

General Program Requirements

Students in physics must satisfy the core curriculum requirements for science students as given on pages 24-25 of this bulletin. The departmental requirements are given below.

Bachelor of Arts — 45 credits in physics which must include Ph 200, 201, 202, 290, 310, 330, 360, 361 and 375. A minimum of 15 additional credits in a cognate discipline is required.

Bachelor of Science — 60 credits in physics which must include Ph 200, 201, 202; 30 credits in mathematics or science electives.

Bachelor of Science in Physics — 70 credits in physics which must include Ph 200, 201, 202, 290, 310, 311, 330, 331, 360, 361, 375, 470, 481 and 475 or 485. Mathematics 134, 135, 136, 233 and 234 are required.

Master of Science in Natural Science — 45 credits of courses numbered 400 or higher which may include Ph 412, 432, 533, 552, 562, 563 and 572 or selections from corresponding programs in chemistry or mathematics.

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).

Bachelor of Arts

Freshman year

English 100 and core option	10 credits
History 102, 103	10 credits
Mathematics 112, 134, 135	15 credits
Physics 200	5 credits
Elective	5 credits

Sophomore year

Mathematics 136, elective	10 credits
Physics 201, 202, 290	15 credits
Philosophy 110, 220	10 credits
Theology core option	5 credits
Elective	5 credits

Junior year

Philosophy core option	5 credits
Physics 310, 375	10 credits
Social Science core option	10 credits
Theology core option	5 credits
Electives	15 credits

Senior year

Physics 330, 360, 361	15 credits
Science electives	15 credits
Electives	15 credits
Total	180 credits

Bachelor of Science

Freshman year

English 100 and core option	10 credits
Mathematics or Science electives	15 credits
Philosophy 110, 220	10 credits
Physics 200	5 credits
Elective	5 credits

Sophomore year

History or Social Science core options ....15 credits
Mathematics or Science electives .....10 credits
Physics 201, 202 and electives .....20 credits

Junior year

Mathematics or Science electives ..... 5 credits
Philosophy core option ..... 5 credits
Physics electives .....20 credits
Theology core options .....10 credits
Elective ..... 5 credits

Senior year

Physics electives .....15 credits
Electives .....30 credits

Total....180 credits

Bachelor of Science in Physics

Freshman year

English 100 and core option .....10 credits
History/Social Science core option .....15 credits
Mathematics 134, 135, 136 .....15 credits
Physics 200 ..... 5 credits

Sophomore year

Mathematics 233, 234 .....10 credits
Physics 201, 202, 310, 311 .....20 credits
Theology core option ..... 5 credits
Philosophy 110, 220 .....10 credits

Junior year

Philosophy core option ..... 5 credits
Physics 290, 330, 331, 360, 361 .....25 credits
Theology core option ..... 5 credits
Electives .....10 credits

Senior year

Physics 375, 470, 481, 475 or 485 .....20 credits
Electives .....25 credits

Total....180 credits

Physics Courses

Ph 100 Modern Physical Science 5 credits
Twentieth Century principles of physics. Emphasis on the microscopic world of atomic and nuclear phenomena: the Bohr theory of the atom, the discovery of the nucleus by Rutherford, modern models for the nucleus and the discovery of elementary sub-nuclear particles. Core science option.

Ph 105 Mechanics and Sound 5 credits
Uniform motion, accelerated motion, rotational motion, energy, statics, harmonic motion, wave motion and sound. Four lectures and one three-hour laboratory per week. Prerequisite: Mt 112 or equivalent.

Ph 106 Electricity and Magnetism 5 credits
Electric charge, magnetism, current and resistance, electric cells, electromagnetism, inductance and capacitance, alternating currents, thermoelectricity and elementary theory of electronics. Four lectures and one three-hour laboratory per week. Prerequisite: Ph 105.

Ph 107 Survey of Modern Physics 5 credits
Introduction to thermodynamics, light interference, diffraction, optical instruments, radiation, atomic and nuclear physics and biophysics. The relation of physics to the other sciences. Four lectures and one three-hour laboratory per week.

Ph 110 Fundamentals of Astronomy 5 credits
Introductory course in the tools and methods of modern astronomy and its historical development from the invention of the telescope to the use of satellites. Celestial bodies, constellation and nebulae are studied in detail with the help of slide presentations from the world's greatest observatories and with occasional sightings through a reflection telescope. Core science option.

Ph 200 Mechanics 5 credits
Kinematics, relative motion, dynamics of a particle, of a system of particles and of a rigid body, work and energy, momentum and collisions. Four lectures and one three-hour laboratory per week. Prerequisites: Mt 134 or permission.

Ph 201 Waves, Electricity and Magnetism 5 credits
Electric and magnetic field currents, Ohm's law, Kirkoff's law, electric potential and Gauss' law; oscillatory motion and waves. Four lectures and one three-hour laboratory per week. Prerequisites: Ph 200, Mt 135 or permission.

Ph 202 Light and Modern Physics 5 credits
Introduction to light, reflection, refraction, dispersion, interference and polarization. Heat, blackbody radiation, thermodynamics, photoelectric and compton effects, Rutherford scattering, atomic physics, nuclear physics. Four lectures and one three-hour laboratory per week. Prerequisite: Ph 201.

Ph 290 Measurement and Instrumentation Fundamentals 5 credits
Principles of 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. Recognition and interpretation of physical data. Four lectures and one three hour problem/laboratory session per week. Prerequisite: Mt 134 and Ph 106 or 201. (With permission of instructor, Ph 106 or 201 may be co-requisite.)

Ph 310 Mechanics (Intermediate Physics) I 5 credits
Ph 311 Mechanics (Intermediate Physics) II 5 credits
I. Statics, equilibrium of systems under the influence of plane forces; kinematics, dynamics, motion of particles and frames of reference in a plane; motion of rigid bodies parallel to a plane; impulse and collision. II. Scalar and Vector product and moment of vectors; kinematics and dynamics of particles and rigid bodies in space; Lagrange and Hamilton equations, theory of vibrations; special theory of relativity. Prerequisites: Ph 200 for 310; 310 for 311. Corequisites: Mt 233 for 310; 234 for 311.

Ph 330 **Electricity and Magnetism I** **5 credits**
Ph 331 **Electricity and Magnetism II** **5 credits**
I. Conductors and dielectrics; d.c. currents; induced emf and magnetic flux properties of capacitors and inductors; a.c. circuit problems; conduction in gases. II. Electrostatics; electric potential properties of dielectrics and capacitors; electromagnetic effects; Ampere's and Faraday's laws; magnetic properties of matter; ferromagnetism; transformers; electromagnetic waves. Prerequisites: Ph 201, 311 and Mt 241 for 330; 330 for 331.

Ph 360 **Modern Physics I** **5 credits**
Ph 361 **Modern Physics II** **5 credits**
Basic areas of physics from elementary solid state phenomena to a description of the physics of solid state devices of particular interest to students of electrical engineering. Prerequisite: Ph 202, Mt 136 for 360; 360 for 361.

Ph 375 **Nuclear Instrumentation** **5 credits**
Laboratory course dealing with radioactivity, alpha, beta and gamma decay, interaction of radiations and matter, nuclear models, reactions and forces. Prerequisites: Ph 107 or 202.

Ph 391 **Special Topics** **1-5 credits**
Ph 392 **Special Topics** **1-5 credits**
Ph 393 **Special Topics** **1-5 credits**

Ph 412* **Principles of Mechanics** **6 credits**
Introduction to vector analysis, statics, Newton's Laws of Motion, work energy, impulse and momentum, circular motion, moment of inertia, elasticity, harmonic motion. Five lectures, one laboratory period, one problem session per week. Prerequisite: College physics. Corequisite: Mt 400.

Ph 432* **Principles of Electricity and Magnetism** **6 credits**
The electric field, direct current circuits, chemical thermal electromotive force, properties of dielectrics, the magnetic field, the magnetic field of a moving charge, induced electromotive force, inductance, magnetic properties of matter, alternating currents and electromagnetic waves. Five lectures, one laboratory period, one problem session per week. Prerequisite: Ph 412.

Ph 470 **Nuclear Physics** **5 credits**
Nuclear structure and models, nuclear processes, properties of nucleons, mesons and other unstable elementary particles. Prerequisite: Ph 360.

Ph 475 **Subcritical Reactor** **4 credits**
Basic physics and engineering problems involving operation of a reactor. One laboratory per week. Prerequisites: Ph 202 and junior standing.

Ph 481 **Theoretical Physics** **5 credits**
Introduction to mathematical physics. Transformation theory, matrix and tensor analysis, orthogonal functions, boundary value problems, field theory and the use of Green's function, and relativity. Prerequisites: Ph 311, Mt 234.

Ph 485 **Quantum Mechanics** **5 credits**
Introduction to quantum mechanics. The state function, the Uncertainty Principle, the Schrodinger equation, the square well and one dimensional solutions, wave packets, semi-classical approximation methods, and motion in three dimensions. Prerequisite: Ph 481.

Ph 491 **Special Topics** **1-5 credits**
Ph 492 **Special Topics** **1-5 credits**
Ph 493 **Special Topics** **1-5 credits**

Ph 497 **Undergraduate Research** **1-5 credits**
Ph 498 **Undergraduate Research** **1-5 credits**
Ph 499 **Undergraduate Research** **1-5 credits**

Graduate Courses

Ph 533* **Electronics — Theory and Practice** **6 credits**
Electronic principles, basic circuits and components, servo systems, operational amplifiers, feedback control, digital circuits. Four lectures, two laboratory periods per week. Prerequisite: Ph 432.

Ph 552* **Principles of Wave Motion and Light** **6 credits**
Wave motion and sound waves; sources and properties of light, including propagation through refractive media, dispersion, line and continuous spectra, interference and diffraction phenomena. Five lectures, one laboratory period and one problem session per week. Prerequisite: Ph 432.

Ph 562* **Principles of Modern Physics** **6 credits**
Introduction to the theories and experiments of physical phenomena involving atomic and molecular structure and spectra. Quantum mechanics and relativity with applications to microscopic physical phenomena. Five lecture and one problem session per week. Prerequisite: Ph 412 or equivalent.

Ph 563* **Principles of Nuclear Physics** **3 credits**
Introduction to modern nuclear physics; basic nuclear properties, binding energy, current nuclear models, interaction of radiation with matter, radioactivity, alpha decay, beta decay, gamma emission, nuclear fission and fusion, nuclear forces and elementary particles will be covered. Three lectures per week. Prerequisite: Ph 412.

Ph 572* **Principles of Nuclear Instrumentation and Reactor Physics** **3 credits**
Lecture-laboratory course dealing with basic nuclear measurements, techniques, and modern instrumentation: principles of health physics, survey meters, geiger tubes, proportional counters, solid and liquid scintillation systems, pulse height analysis, multi-channel analyzers, solid-state detectors, neutron detectors and basic reactor physics will be covered. Two lectures and two three-hour laboratories per week. Prerequisite: Ph 412.

Ph 599* **Research** **2-6 credits**

*Offered summer only for high school teachers in the masters degree program in natural science.

Premedical and Predental

George D. Davis, M.S., Adviser

Preprofessional programs in dentistry and medicine are not fields of concentration, they are career choices. The best preparation for these careers, and the one preferred by professional schools, is a complete four-year undergraduate program leading to a bachelor's degree.

Program

Incoming students who choose a career in medicine or dentistry should consult the premedical/predental adviser before they register for the first time, and as needed thereafter. They may undertake any major field, but their program must allow them to finish in good time the science courses which are required for admission to professional school and which also prepare them for the medical and dental college aptitude tests. In general these are one or two years of biology, two years of chemistry and one year of physics. Most professional schools also recommend calculus. The recommendation of the Association of American Medical Colleges for electives in the humanities and social and behavioral sciences is met by the Seattle University core curriculum.

The normal sequence provides for completion of the science courses in the junior year and for taking the aptitude tests in the spring of that year. (Information and application forms for these tests are available from the premedical/predental adviser.) The student should apply to the professional school during the summer or fall of the senior year. The Committee for Premedical and Predental Studies interviews the student in the fall and prepares a composite recommendation.

Preoptometry

Jerry A. Riehl, 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.

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 student, 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. For a typical example of a two-year preoptometry schedule see the General Science section of this bulletin.

Engineering Programs

Bachelor of Engineering — Students seeking a Bachelor of Engineering degree must complete 180 credits including the core requirements for engineering students shown on pages 24-25 of this bulletin. They must take a minimum of 55 credits of engineering subjects, 23 credits of mathematics and a total of at least 90 credits in engineering, physics, chemistry and biology.

Bachelor of Civil, Electrical or Mechanical Engineering — Students wishing to receive the degree of Bachelor of Civil Engineering, Bachelor of Electrical Engineering or Bachelor of Mechanical Engineering must follow the program outlined in the respective sections of this bulletin.

Bachelor of Engineering

Freshman year

English 100 and core option	10 credits
Mathematics 112, 114, 134	13 credits
Mechanical Engineering 102, 111, 112, 113	12 credits
Philosophy 110, 220	10 credits

Sophomore year

Chemistry 114, 115	10 credits
Electrical Engineering 231, 290	10 credits
Mathematics 135, 136	10 credits
Mechanical Engineering 281	5 credits
Physics 200, 201	10 credits

Junior year

Engineering electives	15 credits
Philosophy core option	5 credits
Science electives	15 credits
Theology core options	10 credits

Senior year

Engineering electives	15 credits
Humanities electives	10 credits
Electives	20 credits
Total	180 credits

Community College Transfer Students

Students who transfer from a community college with 90 credits, including three quarters of calculus, three quarters of engineering physics, engineering problems, engineering drawing, statics and dynamics, and appropriate humanities electives, can enter the junior year at Seattle University and expect to graduate in two additional years. (Civil and Mechanical Engineering candidates should also take two quarters of chemistry). All students are urged to take a course in computer programming at their community college.

Civil Engineering

Richard T. Schwaegler, Ph.D., Program Director

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.

Degree Offered

Bachelor of Civil Engineering

General Program Requirements

Students in Civil Engineering must satisfy core curriculum requirements of the University as modified for the School of Science and Engineering.

Departmental Requirements

Bachelor of Civil Engineering — In this degree program a minimum of 180 credits are required. In special cases qualified students, with the approval of their adviser, may substitute equivalent or more advanced courses for those listed. A set of options in the senior year permits students to begin specialization in their choice of transportation, sanitary engineering or structures.

Bachelor of Civil Engineering

Freshman year

English 100 and core option	10 credits
Mathematics 112, 114, 134	13 credits
Mechanical Engineering 102, 111, 112, 113	12 credits
Philosophy 110, 220	10 credits

Sophomore year

Chemistry 114	5 credits
Civil Engineering 211, 210 (or Electrical Engineering 290), 231 (or Mathematics or Science elective)	15 credits
Mathematics 135, 136	10 credits
Mechanical Engineering 281	5 credits
Physics 200, 201	10 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 electives	24-34 credits
Engineering or Science electives	0-10 credits
Humanities electives	10 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.

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. (spring)

CE 211 Engineering Measurements 5 credits
Engineering measurements as applied to civil engineering projects. Planning for surveys. Introduction to photogrammetry and extend of its use. U.S. Public Land and State Plane Coordinate Systems. Prerequisite: Sophomore standing. Four lecture and three laboratory periods per week. (spring)

CE 231 Engineering Analysis 5 credits
Approximation techniques; error minimization; discrete representations of continuous processes; moment methods; numerical integration and differentiation; computation techniques for linear algebra and eigenvalue problems. Four lectures and one three-hour computational laboratory per week. Prerequisite: Mt. 136.

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.

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, com-

pression, flexure and torsion are studied. Four 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. Four lecture and one laboratory period per week. Prerequisite: CE 321. (winter)

CE 331 **Fluid Mechanics I** **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 **Hydraulic Applications** **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)

CE 337 **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.

CE 351 **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 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.

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)

CE 447 **Structural Design I** **5 credits**
CE 449 **Structural Design II** **5 credits**
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. Prerequisites: CE 445 for 447; 447 for 449. (I. winter, II. spring)

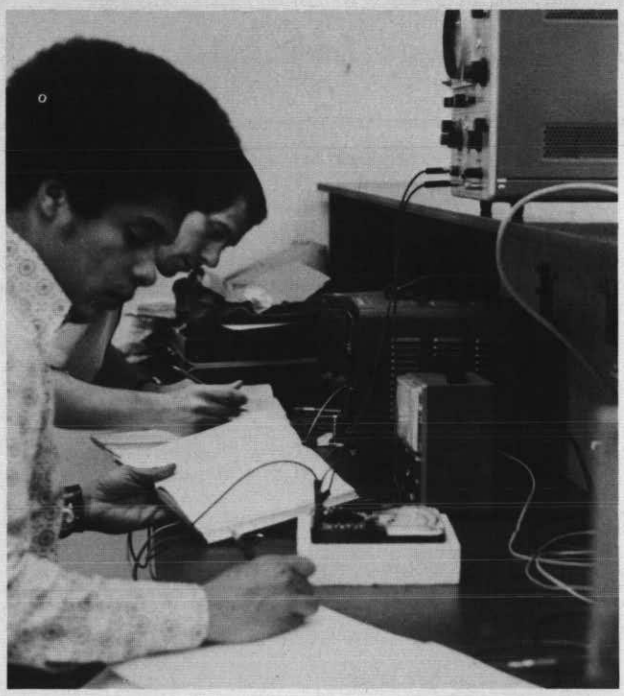
CE 485 **Sanitary Engineering I** **5 credits**
CE 486 **Sanitary Engineering II** **5 credits**
I. Examination of water and waste. Physical treatment processes. Laboaratory experiments in microbial, bacteriological and chemical examination of water and wastes. Chemical and biological treatment, sludge disposal, disinfection, reuse of water, comprehensive planning. Four lectures and one laboratory per week. II. Stream pollution and self-purification. Analysis of indústrial wastes. Four lectures per week plus selected field trips. Prerequisites: Ch 114 for 485; 485 for 486. (I-fall, II-spring)

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 **Advance 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: H — fluid mechanics; ST — structures; S — soils; R — highways; W — sanitary engineering. Prerequisite: Senior standing.

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 under-graduate research. Prerequisite: Senior standing.



Electrical Engineering

Francis P. Wood, S.J., M.S., Program Director

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 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

Bachelor of Electrical Engineering

General Program Requirements

Students in electrical engineering must satisfy the specific core curriculum requirements of the University as modified for the School of Science and Engineering.

Departmental Requirements

Bachelor of Electrical Engineering — 180 credits as listed in the following outline. In special cases, qualified students, with the approval of the department, may substitute advanced courses in nuclear physics for regular electrical engineering courses.

Bachelor of Electrical Engineering

Freshman year

English 100 and core option	10 credits
Mathematics 112, 114, 134	13 credits
Mechanical Engineering 102, 111, 112, 113	12 credits
Philosophy 110, 220	10 credits

Sophomore year

Electrical Engineering 231, 290	10 credits
Mathematics 135, 136	10 credits
Mechanical Engineering 281 or Physics 310	5 credits
Philosophy core option	5 credits
Physics 200, 201, 202	15 credits

Junior year

Electrical Engineering 301, 303, 311, 321	15 credits
Physics 330, 360, 361	15 credits
Theology core options	10 credits
Humanities elective	5 credits

Senior year

Electrical Engineering 411, 435, 441, 443, 445, 446, 451, 461, 485 and electives	40 credits
Humanities elective	5 credits
Total	180 credits

Electrical Engineering Courses

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.

EE 231 Engineering Analysis 5 credits
Approximation techniques; error minimization; discrete representations of continuous processes; moment methods; numerical integration and differentiation; computation techniques for linear algebra and eigenvalue problems. Four lectures and one three-hour computational laboratory per week. Prerequisite: Mt 136. (spring)

EE 290 Measurement and Instrumentation Fundamentals 5 credits
Principles of 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. Recognition and interpretation of physical data. Four lectures and one three-hour problem/laboratory per week. Prerequisites: Mt 134 and Ph 106 or 201. (with permission of instructor, Ph 106 or 201 may be co-requisite.) (fall and spring)

EE 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.

EE 301 **Electrical Circuits I** **5 credits**
EE 303 **Electrical Circuits II** **5 credits**
Fundamental concepts and units; energy and power; Kirchoff's laws, nodal and mesh analysis; steady-state 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. (I-fall, II-winter)

EE 311 **Seminar** **0 credits**
Attendance required for junior year Electrical Engineering students. (winter)

EE 321 **Linear Analysis** **5 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 non-linear analysis and to network synthesis. Prerequisite: EE 303. (spring)

EE 361 **Special Studies in Electrical Engineering** **1-3 credits**
Special studies for qualified students, under the direction of a faculty member. A written report will be required. By arrangement with the department. (fall, winter, spring)

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.

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 435 **Electromechanics** **5 credits**
Electromechanical energy conversion principles; transformers, rotating machines, electromechanical energy conversion devices such as electromagnets, loud speakers. Four lectures and one four-hour laboratory per week. Prerequisite: EE 321. (fall)

EE 441 **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 bypassing circuits. Cascaded amplifier circuits; gain-frequency characteristics and bandwidth control. Prerequisite: EE 321. (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 AB, C and C amplifiers and tuned amplifiers. Oscillators; various basic forms and their frequency and amplitude stability characteristics. Prerequisite: EE 441. (winter)

EE 445 **Digital Systems** **3 credits**
Boolean algebra, logical reduction of combinatorial and sequential circuits, Vetch diagrams, Karnaugh maps; number systems and codes; logical circuits, basic counting, timing and authentic circuits; wave shaping, limiting, clipping, gating and dc-restoring circuits; memory devices. Prerequisite: EE 321. (spring)

EE 446 **Electronics Laboratory** **2 credits**
Laboratory problems based on characteristics of electron devices; amplifier, rectifier, and digital circuits. One lecture and one four-hour laboratory per week. Prerequisite: EE 443. (spring)

EE 451 **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 and EE 303. (winter)

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 462 **Systems Laboratory** **2 credits**
Comprehensive systems laboratory utilizing components from electronics, energy conversion devices, filters and magnetics; emphasis on integration of components into a complete system. One lecture and one four-hour laboratory per week. Prerequisites: EE 461 (arranged).

EE 481 **Solid State Theory** **5 credits**
Review of elementary quantum physics; energy bands and carrier statistics; theory of junction devices; periodic structures and energy bands; transport theory; semiconductor parameters. Prerequisite: EE 441 (arranged).

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)

EE 489 **Special Topics** **1-5 credits**
EE 490 **Special Topics** **1-5 credits**
Current topics in Electrical Engineering not normally covered in the undergraduate curriculum. Prerequisite: Senior standing. (arranged)

Mechanical Engineering

Harry Majors, Jr., M.S., Program Director

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 Mechanical Engineering

General Program Requirements

Students in mechanical engineering must satisfy core curriculum requirements of the University as modified for the School of Science and Engineering.

Departmental Requirements

Bachelor of Mechanical Engineering — 180 credits are required for the degree. In special cases, qualified students with the approval of the major department may substitute equivalent or more advanced courses for those listed in the curriculum.

Bachelor of Mechanical Engineering

Freshman year

English 100 and core option ..... 10 credits
Mathematics 112, 114, 134 ..... 13 credits
Mechanical Engineering 102, 111, 112, 113 ..... 12 credits
Philosophy 110, 220 ..... 10 credits

Sophomore year

Chemistry 114 ..... 5 credits
Electrical Engineering 290 ..... 5 credits
Mathematics 135, 136 ..... 10 credits
Mechanical Engineering 281 and 231 (or Mathematics elective) ..... 10 credits
Physics 200, 201 ..... 10 credits
Physics 202 or Chemistry 115 ..... 5 credits

Junior year

Civil Engineering 321, 323, 331, 337 ..... 17 credits
Mechanical Engineering 371, 321 or Chemistry 355 and 380 ..... 13 credits
Philosophy core option ..... 5 credits
Theology electives ..... 10 credits

Senior year

Civil Engineering 402 ..... 3 credits
Engineering elective ..... 5 credits
Humanities electives ..... 10 credits
Mechanical Engineering 425, 426, 472, 473, 485, 496, 497, 498 ..... 27 credits

Total .... 180 credits

Mechanical Engineering Courses

ME 102 Engineering Computations 2 credits
Review of exponents and logarithms. Separate sections on slide rule and logarithmic computation. Students must attend these sessions until they are able to pass examinations on the subjects concerned. Introduction to desk top computers. Hours arranged. (fall)

ME 111 Engineering Drawing 3 credits
Use of instruments, lettering, orthographics, isometrics, free-hand sketching, dimensioning. Introduction to descriptive geometry. Three two-hour sessions per week. (fall)

ME 112 Engineering Graphics and Design 2 credits
Graphical calculus. AVS diagrams; graphs and diagrams; nomograms. Two two-hour lecture periods per week. (winter)

ME 113 Engineering Problems 5 credits
Presentation of engineering papers. Dimensional analysis. Handling of data. Vector algebra. Free body diagrams; static equilibrium. Engineering reports. Four lectures and a one-hour problem session per week. (spring)

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.

ME 231 Engineering Analysis 5 credits
Approximation techniques; error minimization; discrete representations of continuous processes; moment methods; numerical integration and differentiation; computation techniques for linear algebra and eigenvalue problems. Four lectures and one three-hour computations laboratory per week. Prerequisite: Mt 136. (spring)

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. (I-fall, II-winter)

ME 281 Mechanics II, Dynamics 5 credits
Principles of dynamics; kinematics and kinetics of a particle, system of particles and rigid bodies; relative motion, the equations of motion, impulse-momentum and work-energy; conservative force fields and potential energy; the inertia tensor, principal axes and moments of inertia; Euler's equations of motion of a rigid body, Euler's angles, Lagrange's equations; methods of vector calculus. Applications drawn from mechanical vibrations, planetary and satellite motion, rocket and jet propulsion and the symmetrical gyroscope. Prerequisite: ME 113. (winter)

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.

ME 321 Engineering Thermodynamics I 5 credits
ME 322 Engineering Thermodynamics II 5 credits
I. Heat, work, the laws of thermodynamics; entropy and absolute temperature; properties of liquids, vapors, perfect gases and mixtures of gases and vapors; application to heat cycles. II. Equations of state, thermodynamic relations, study of processes and cycles; flow of fluids, heat transfer, chemical reactions, combustion, equilibrium. Prerequisites: Ph 201 for 321; 321 or Ch 355 for 322. (I-fall, II-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 and Mass Transfer I 5 credits
Introduction to the theory of heat flow by conduction; convection and radiation; dimensional analysis. Four lectures and one four-hour laboratory per week. Prerequisites: ME 321 or Ch 355, CE 331. (spring)

ME 398 Seminar 0 credit
Students will attend. Seminar papers will be presented by the seniors. (winter)

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.

ME 425 Power Plants I 5 credits
ME 426 Power Plants II 5 credits
ME 427 Power Plants III 5 credits
I. Application of thermodynamic theory and heat transfer to the economic design of modern central station power plants and auxiliaries. II. Thermodynamic analysis of internal combustion engines and rotating machinery. III. Propulsion systems. Four lecture and four laboratory periods per week. Prerequisites: ME 322, 380 for 425; 426 for 427. (I-fall, II-winter, III-spring)

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 472 Machine Design II 5 credits
ME 473 Machine Design III 5 credits
ME 474 Machine Design IV 5 credits
II. Philosophy of design, a creative approach, and a comprehensive design project; planning, organizing and leading an engineering project; exercising judgement and considering economic factors. III. Instruction and experience in 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. Prerequisites: 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 velocity, Blasius theorem, flow about cylinders and air foils. Free streamline flow; Schwartz-Christoffel theorem. Vortex motion. Prerequisite: Permission of instructor.

ME 481 Heat and Mass Transfer II 5 credits
Use of analogue and digital computer; numerical methods; mass transfer; diffusion. Four lecture and four laboratory hours per week. Prerequisite: ME 380. (fall)

ME 484 Linear Systems Analysis 5 credits
Application of Laplace transforms to linear systems. Four lecture and four laboratory hours per week. Prerequisites: ME 322, 371, CE 333. (winter)

ME 485 Control Systems I 5 credits
Analysis and design of linear control systems with emphasis on transient and frequency response. Four lecture and four laboratory hours per week. Prerequisite: ME 484. (spring)

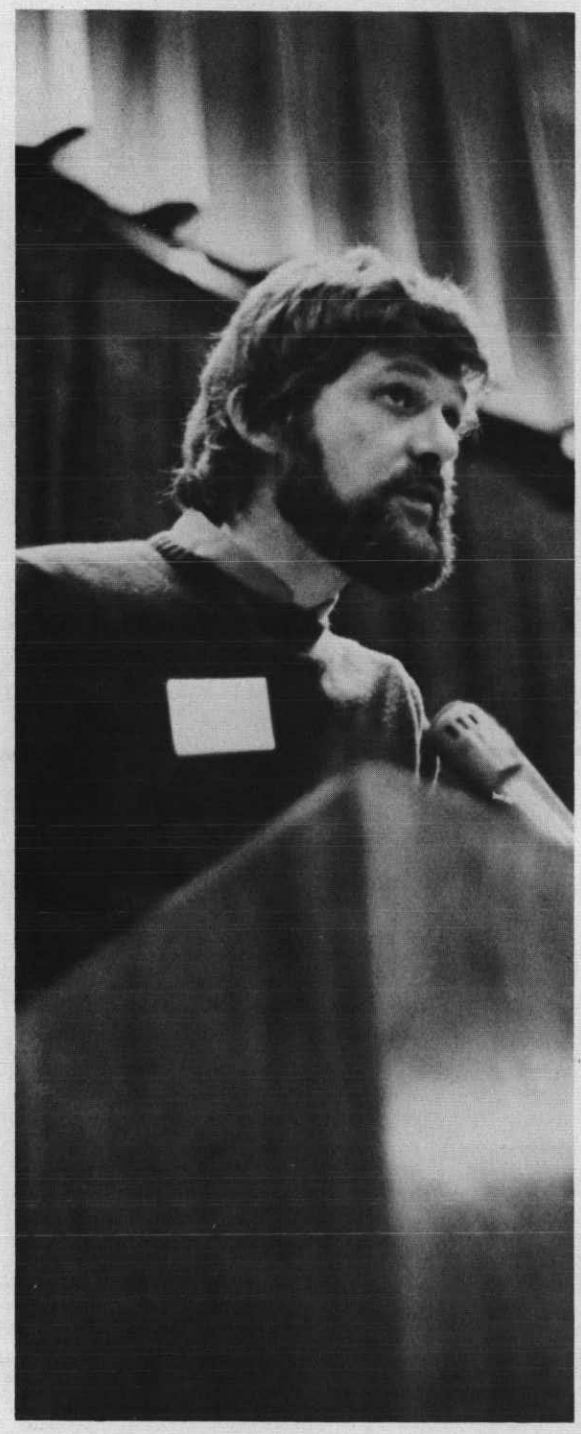
ME 491 Special Studies 2-5 credits
ME 492 Special Studies 2-5 credits
ME 493 Special Studies 2-5 credits
Selected subjects of current interest in mechanical engineering. Assigned reading and/or experiments will be arranged on an individual basis in consultation with the instructor. Written report and oral delivery are required. Prerequisite: Senior standing.

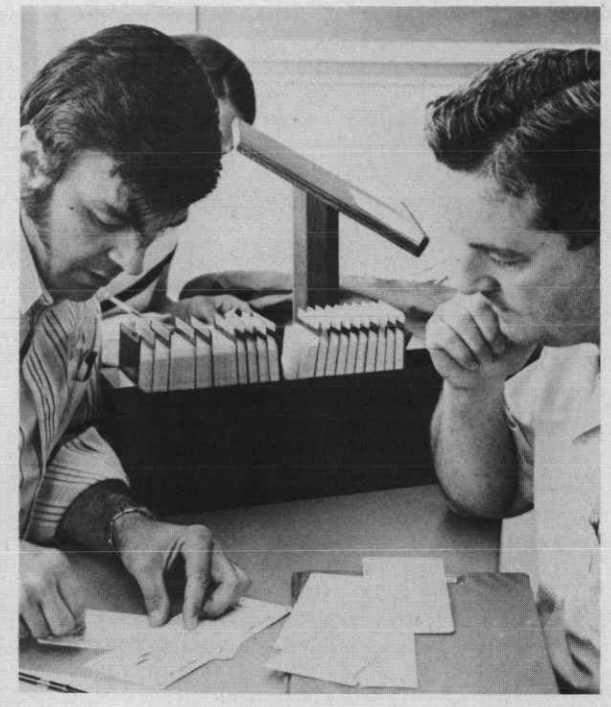
ME 496 Seminar 2 credits
ME 497 Seminar 2 credits
ME 498 Seminar 2 credits
Prerequisite: Senior standing. (fall, winter, spring)

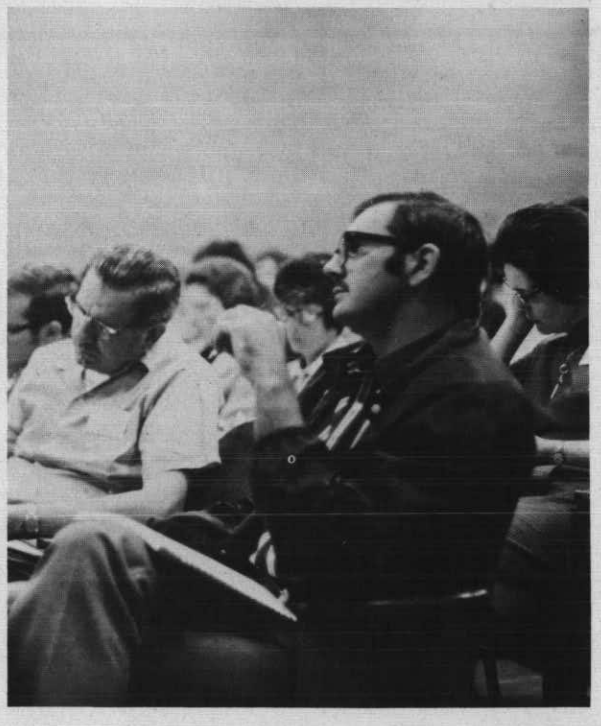
ME 499 Thesis 2 credits
In special cases a thesis may be substituted in place of seminar with the approval of the department chairman. Prerequisite: Senior standing.

Graduate School

James J. Cowgill, S.J., Ph.D., Dean







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 the fall of 1958 Seattle University began a program of graduate study leading to the Master of Science degree in electrical or mechanical engineering for students in evening classes. A Master of Business Administration program was offered for the first time in the fall of 1967 in evening classes. The Graduate School is a separate school of the University with four divisions: arts and sciences, business, education and science and engineering. Courses offered in the College of Arts and sciences include English, history and religious education. Programs in chemistry, mathematics and physics are sponsored by the National Science Foundation.

Objectives

Graduate School programs are not merely more courses in undergraduate study; they involve courses advancing by graduation 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 Council.

Organization

Administration of the Graduate School and supervision of all programs leading to the master's degree lies with the Dean of the Graduate School and the Graduate Council appointed by the President and directly responsible to the Academic Vice President. 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 department chairman 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 degree. Graduate students are classified as regular, on probation or visiting. A student admitted on probation must demonstrate in his 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 attend a graduate course with prior approval of the instructor and the Dean of the Graduate School.

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 has been accepted by the Graduate School in a master's degree program.

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 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 his 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 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.

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 I-20 form is necessary.

Admission to Candidacy

Application for admission to candidacy should be filed after the student has completed from 10 to 20 credits in courses applicable to the graduate program of the department, with no grade of less than B in the major area. At this time he must file the complete Program of Studies and Candidacy form.

Degrees Offered

Graduate degrees offered by the University are:

ARTS AND SCIENCES

Master of Arts — English.
Master of Arts — History.
Master of Arts — Teaching — English.

Master of Religious Education (summer only)

BUSINESS

Master of Business Administration.

EDUCATION

Master of Arts in Education.
Master of Education.

These two degrees may be earned with specialization in the following areas: administration, curriculum development, guidance, and adult education administration.

SCIENCE AND ENGINEERING

Master of Science in Natural Science — A degree with no required research, especially designed for and restricted to high school teachers of science and mathematics (summer only).

General Program Requirements

The candidate for the master's degree must present a minimum of 35 credits beyond the bachelor's degree. He must satisfy any additional requirements imposed by the major department and the Graduate Council.

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. An exception to this rule is in the Master of Science in Natural Science degree which is a terminal degree program where no 300 numbered courses are acceptable, but the program may be made up of courses numbered 400 or above. 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 recommended by the department and 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 major department and the Graduate Council. 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.

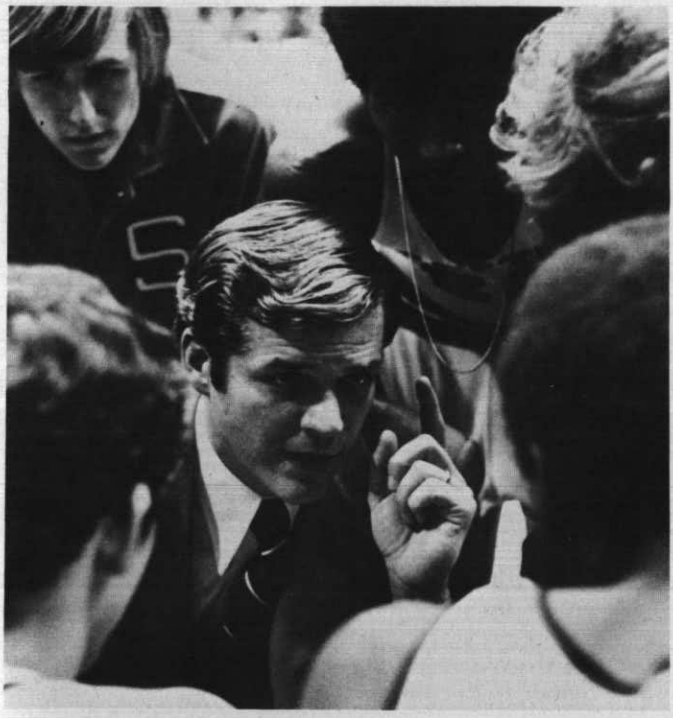
All thesis work must be done under the direct supervision of an assigned adviser.

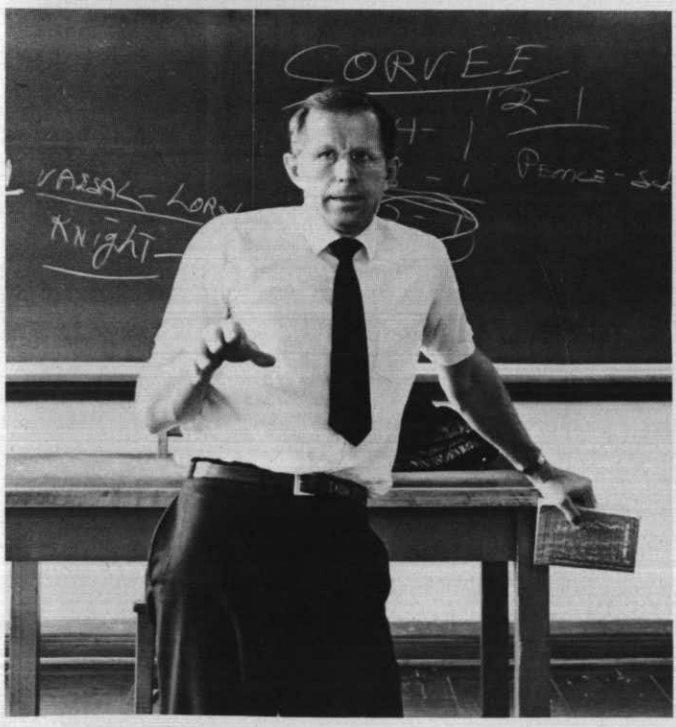
Four unbound copies of the approved thesis are to be filed in the office of the dean four weeks before the date of graduation. Two of these copies will be bound and placed on file in the University's library; one copy will go to the department chairman and one copy to the student.

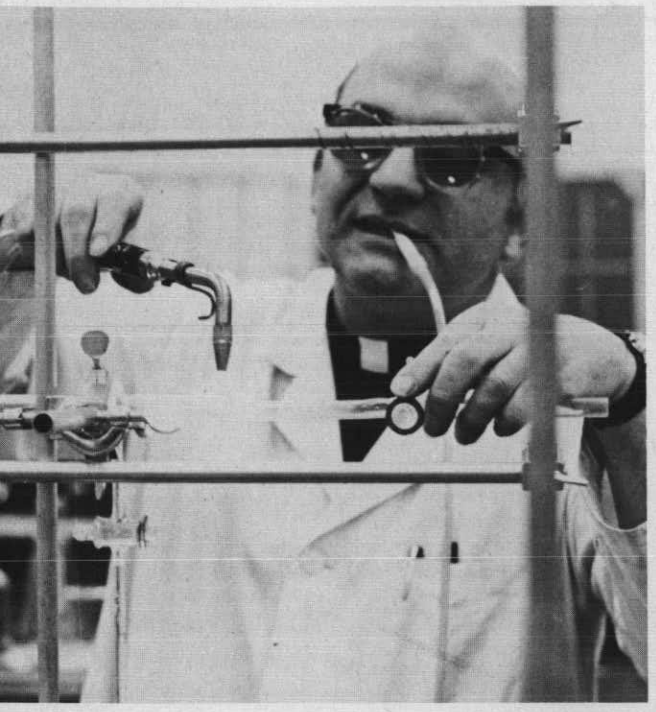
An oral examination on the content of the thesis, cognate literature and available source material may be held before a board appointed by the departmental chairman and approved by the Dean of the Graduate School.

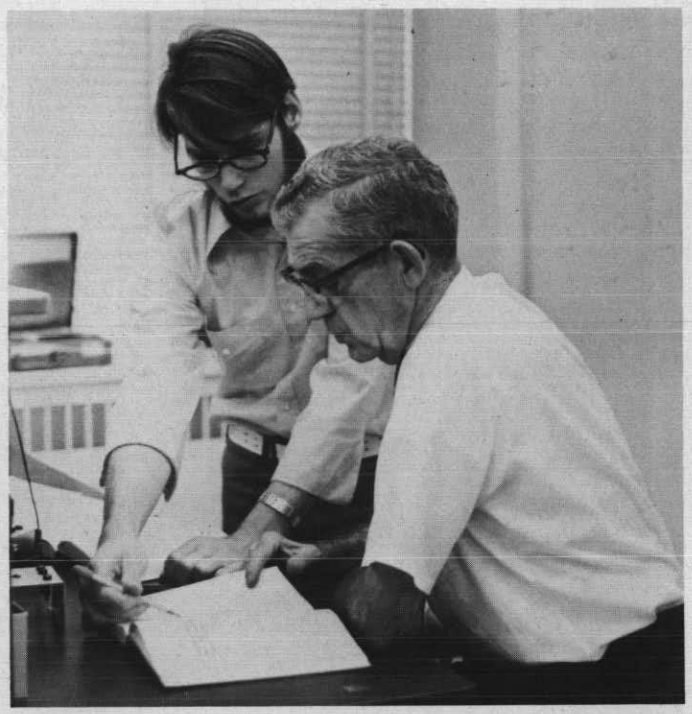
All requirements for the master's degree must be completed within six years after course work is begun, including the time of any courses for which the candidate applies for transfer of credit. The application for the degree must be filed with the University Registrar by February 15. Ordinarily each 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 degree.

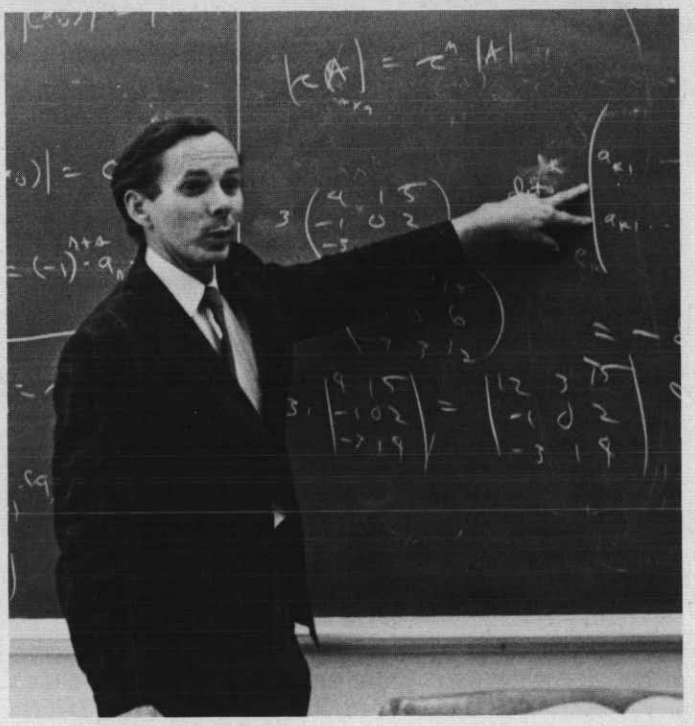
Faculty and Staff











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James J. Cowgill, S.J., Ph.D. *Dean, Graduate School, Director, Academic Research*

Eileen M. Ridgway, Ph.D. *Dean, School of Nursing*

J. W. McLelland, M.A. *Associate Dean, School of Business*

Ralph K. O'Brien, Ed.D. *Associate Dean, School of Education*

J. Thomas Page, Ph.D. *Associate Dean, Physical Education*

Richard Hasenoehrl, B.C.S. *Controller*

Mary Alice Lee, B.A. *Registrar*

Alexander F. McDonald, S.J., M.A. (Oxon.) *Librarian*

Kenneth R. Rose, BA, BA. *Director of Admissions*

A. A. Lemieux, S.J., Ph.D. *Co-Chairman, Stabilization Drive*

Patrick E. Pheasant, B.C.S. *Director for Development*

George C. Towner, M.S., Vice Adm., U.S.N. (Ret.) *Administrative Assistant to the President*

Joseph A. Maguire, S.J., M.A. *Chaplain*

Col. Florian O. Cornay, M.S. *Commanding Officer, R.O.T.C.*

Dona Marie MacDonald, M.Ed. *Dean for Women*

Leonard F. Sitter, S.J., M.Ed. *Director for Student Activities Director for Resident Student Services*

Eugene P. Delmore, S.J., M.A. *Assistant Chaplain*

Louis A. Sauvain, S.J., S.T.B. *Assistant Chaplain*

J. Brian Cullerton, B.A. *Director of Urban Affairs*

Charles H. Mitchell, B.A. *Director, Minority Student Affairs*

Robert Flor *Assistant Director Minority Student Affairs*

Mary M. Ridge, B.A. *Director Premajor Program Foreign Student Adviser*

Michael J. Dolan, M.A., Lt. Col., U.S.A. (Ret.) *Director of Financial Aid and Director of Special Events*

Clair A. Marshall, S.J., MS. *Veterans Coordinator, Assistant Director of Financial Aid*

Edward J. O'Brien, B.C.S. *Director of Athletics*

William O'Connor, B.S. *Head Basketball Coach*

William V. Meyer, B.A. *Director, Connolly Center*

David K. Elder, M.Ed. *Director, Counseling and Testing Center*

Michael M. McHugh, B.C.S. *Alumni Director*

Robert J. Rebhahn, S.J., M.A. *Associate Alumni Director*

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Jean M. Merlino, B.A. *Director of University Publications*

Genevieve Weston, A.B. *Director, University Bookstore*

Michael J. Schreck, B.C.S. *Director, Physical Plant and General Services*

Jeremy W. Reed, B.S. *Director of Computer Systems*

Raymond L. Nichols, S.J., Ph.D. *Superintendent of Grounds*

Gerald Evich, M.Ed. *Associate Director of Admissions*

Paul D. Seely, M.Ed. *Assistant Director of Admissions*

MaryAnn Bastasch, B.A. *Admissions Counselor*

Mary Hermann, B.A. *Admissions Counselor*

Gary A. Zimmerman, Ph.D. *Coordinator for Academic Research and Government Relations*

Patricia Young, B.A. *Grant Coordinator*

Charles P. Moriarty, Jr., LL.B. *Legal Counsel*

James D. Layman, M.D. *Medical Adviser*

The University Faculty

The dates following faculty names indicate initial and subsequent appointments to the University faculty. Asterisks preceding names denote faculty members on leave of absence. Daggers (†) following names indicate Graduate School faculty members.

Clarence L. Abello, B.Econ. (1953)
Associate Professor of Spanish
B.Econ., 1933, University of London; Contador Publico Nacional, 1937, Universidad Nacional de Buenos Aires, Facultad de Ciencias Economicas.

Lois D. Aden, M.F.A. (1966)
Assistant Professor of Drama
A.B., 1953, Queens College; M.F.A., 1960, Yale University.

Lewis E. Aldrich, Jr., Ph.D. (1968)
Program Director, Biology
Associate Professor of Biology
B.A., 1950, Linfield College; M.S., 1954, Ph.D., 1960, Oregon State College.

Irene Allen, M.L., (1970)
Periodicals Librarian
B.A., 1968, M.L., 1969, University of Washington.

Julian B. Andersen, Ph.D. (1970)†
Assistant Professor of Business
A.S., 1958, Weber State College; B.S., 1960, Ph.D., 1966, Utah State University.

***William E. Armstrong, S.J., Ph.D. (1957)**
Associate Professor of Modern Languages
A.B., 1944, M.A., 1945, Gonzaga University; S.T.L., 1952, Alma College; Diplome de l'Institut de Phonetique Francaise de la Sorbonne, Universite de Paris, 1954; Ph.D., 1955, Catholic University of Paris.

Engelbert M. Axer, S.J., Ph.D. (1941; 1955; 1971)
Associate Professor of Philosophy
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)†
Visiting 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)
Assistant Professor of Theology
A.B., 1957, M.A., 1959, Gonzaga University; S.T.B., 1965, Alma College; M.A., 1965, University of Santa Clara.

Ella M. Blumenthal, M.A. (1969)
Assistant Professor of Nursing
B.S., 1955, Adelphi College; M.A., 1957, Teachers College, Columbia University; M.A., 1963, New York University.

Hamida H. Bosmajian, Ph.D. (1966)
B.A., 1961, University of Idaho; M.A., 1962, Ph.D., 1968, University of Connecticut.

Robert I. Bradley, S.J., Ph.D. (1961; 1973)
Associate Professor of History
A.B., 1947, M.A., 1948, Gonzaga University; S.T.L., 1956, Facultes Saint Albert, Louvain University; M.A., 1958, Ph.D., 1963, Columbia University.

John P. Burke, M.A. (1967)
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 of Philosophy
L.Ph., 1933, S.T.L., 1937, Gregorian; M.A., 1952, Seattle University; Ph.D., 1957, University of Washington.

Robert J. Carmody, S.J., Ph.D. (1943)†
Professor of English
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.

Ben Cashman, Ph.D. (1962; 1967)
Chairman, Political Science Department
Associate 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.

Suzanne C. Champoux, M.N. (1972)
Instructor in Nursing
B.S., 1970, Seattle University; M.N., 1972, 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.

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)
Assistant Librarian
B.A., 1962, Reed College; M.L., 1966, University of Washington.

Janet M. Claypool, M.N. (1966)
Assistant Professor of Nursing
B.S.N., 1959, M.N., 1960, University of Washington.

Gerald L. Cleveland, Ph.D. (1967)
Dean, School of Business
Professor of Accounting
B.S., 1953, University of South Dakota; M.B.A., 1957, University of Minnesota; Ph.D., 1965, University of Washington.

Woodrow R. Clevinger, Ph.D. (1959)
Professor of Marketing
B.A., 1938, M.A., 1940, Ph.D., 1955, University of Washington.

Sister Mary Cobelens, O.P., M.L.S. (1971)
Reference Librarian
B.A., 1959, Central Washington State; M.L.S., 1971, University of Washington

William J. Codd, S.J., Ph.D. (1947)
Professor of Education
A.B., 1936, M.A., 1938, Gonzaga University; S.T.B., 1944, Alma College; Ph.D., 1958, University of Washington.

James S. Collins, M.Eng. (1972)
Instructor in Electrical Engineering
B.Sc., 1962, Dalhousie University; B.Eng., 1964, M.Eng., 1965, Nova Scotia Technical College.

James V. Connors, S.J., M.A. (1961; 1972)
Assistant 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.

Edgar A. Cormier, SSGT (1972)
Supply Sergeant

Florian O. Cornay, Col., M.S. (1972)
Professor of Military Science
B.S., 1950, United States Military Academy; M.S., 1960, Georgia Institute of Technology.

Eugene M. Corr, M.P.A. (1972)
Assistant Professor of Community Services
B.A., 1954, M.P.A., 1969, University of Washington.

A. Barrett Corrigan, S.J., Ph.D. (1944; 1965)†
Professor of Education
A.B., 1935, M.A., 1936, Gonzaga University; Ph.D., 1954, Fordham University.

John L. Corrigan, S.J., Ph.D. (1948)
Professor of Economics
A.B., 1933, M.A., 1934, Gonzaga University; S.T.L., 1941, Alma College; Ph.D., 1948, Catholic University.

Marie J. Cowan, M.S. (1972)
Instructor in 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.

Thomas W. Cunningham, Ph.D. (1959, 1965)
Chairman, Psychology Department
Associate 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)
Assistant Professor of Biology
Adviser, Medical Technology
B.S., 1956, M.S., 1960, University of Tulsa.

Verelle M. Davis, M.S. (1972)
Instructor in Nursing
B.S., 1959, University of Washington; M.S., 1970 Catholic University.

Rosario T. DeGracia, M.S. (1963)
Assistant Professor of Nursing
B.S.N., 1954, University of the Philippines; M.S., 1959, Western Reserve University

Eugene P. Delmore, S.J., S.T.M. (1970)
Assistant Chaplain
A.B., M.A., 1963, Gonzaga University; S.T.M., 1970, St. Mary's University.

Hugh A. L. Dempsey, Capt., B.S. (1969)
Assistant Professor of Military Science
B.S., 1963, University of Oklahoma.

Khalil (Charles) Dibee, Ph.D. (1964)†
Professor of Finance
B.S., 1956, University of Detroit; M.B.A., 1958, Ph.D., 1962, University of Texas.

Fawzi G. Dimian, Ph.D. (1969)
Associate Professor of Accounting
B. Com., 1951 University of Cairo; M.A., 1955, University of Alexandria; M.A., 1964, Ph.D., 1968, University of Washington.

Joseph P. Donovan, S.J., Ph.D. (1948; 1966) †
Professor of History
A.B., 1938, Gonzaga University; M.A., 1940, Georgetown University; Ph.D., 1948, University of Pennsylvania.

William J. Dore, Jr., M.A. (1963)
Chairman, Fine Arts Department
Associate Professor of Drama
B.A., 1954, M.A., 1957, University of Washington.

Thomas E. Downey, Ph.D. (1957)†
Professor of History
A.B., 1932, M.A., 1934, Loyola University, Chicago; Ph.D., 1944, University of California.

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., M.A. (1964; 1972)
Instructor in Theology
B.A., 1955, Gonzaga University; S.T.L., 1963, College of the Immaculate Conception; M.A., 1963, St. Mary's University.

David K. Elder, M.Ed. (1964)
Director, Counseling and Testing Center
B.A., 1960, M.Ed., 1961, Western Washington State College.

Kenneth F. Enslow, S.J., M.L. (1972)
Associate 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) †
Assistant Professor of Economics
B.S., 1963, Harding College; M.A., 1967, Ph.D., 1971, University of Washington.

Patricia Ann Ferris, Ph.D., (1967)
Assistant 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.

Alice L. Fisher, M.S.P.H. (1950)
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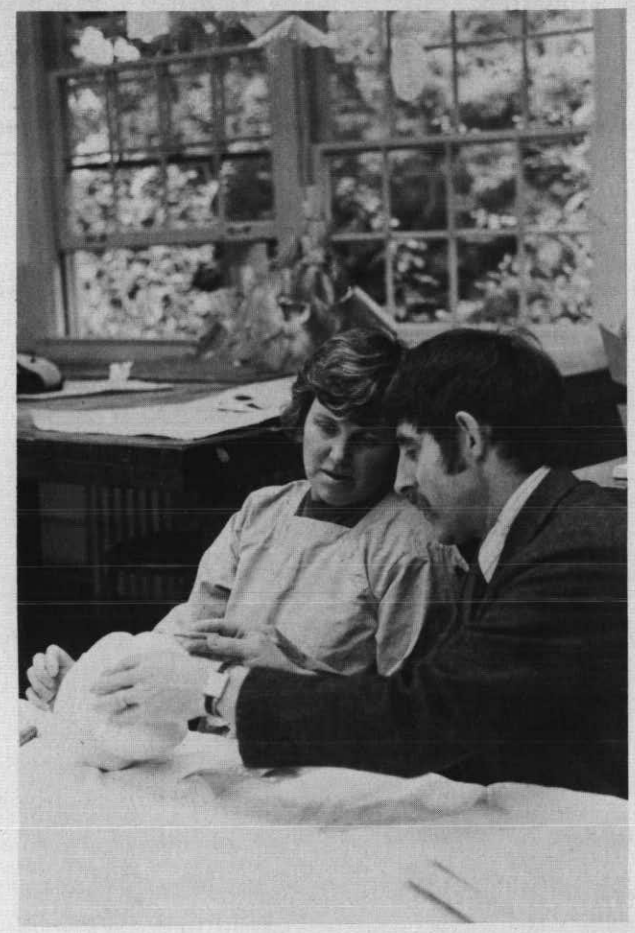

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Litt.B., 1941, M.A., 1948, Litt.D., 1969, University of Sto. Tomas.

William C. Towner, M.S. (1969)
Lecturer-Supervisor
B.S., 1947, M.S., 1950, University of Washington.

John R. W. Wilby, M.Sc. (1967)†
Lecturer in Business
B.Sc., 1928, M.Sc., 1929, University of Leeds.

SEATTLE UNIVERSITY CHAIRS

The following perpetual Chairs will be filled by faculty members chosen each year by the deans and chairmen of the selected schools and departments:

Robert and Miriam Kinsey Chair of Fine Arts
Therese B. Clein Chair of Philosophy
Margaret S. Snyder Chair of Theology
Theiline Pigott McCone Chair of History
John and Zita Maloney Chair of Economics
Harry and Florence Beyma Chair of Economics

Where to Write

There is a central mail room on the campus to which all mail addressed to Seattle University, Seattle, Washington 98122, is delivered. Mail for student residence halls must be addressed to their respective locations. It will expedite delivery on the campus to specify the following as indicated:

Correspondence relating to the general interest of the university:
Very Reverend Father President

Communications regarding cirriculum, scholastic problems, degree programs:
The Dean of the particular school or the Academic Vice President

Admission:
Director of Admissions

Alumni Affairs:
Director, Seattle University Alumni Association

Athletic Program:
Director of Athletics

Bulletins and Catalogs:
Director of Admissions

Counseling and Testing:
Director, Counseling and Testing Center

Diplomas and Graduation:
Registrar

Student Housing:
Men: Director, Student Residence Services
Women: Dean for Women

Financial Aid and Student Employment
Director of Financial Aid

Foreign Students:
Director of Admissions or Foreign Student Adviser

Gifts, Grants and Bequests:
Development Office

Graduate Study:
Dean of the Graduate School

Jesuit Faculty Residence:
Father Minister

Late Afternoon and Evening Classes:
Dean, Graduate School

Personal Welfare and Health of Students:
Vice President for Students

Public Information, Publications:
University Relations

Readmissions:
Registrar

Scholarships, Student Loans:
Director of Financial Aid

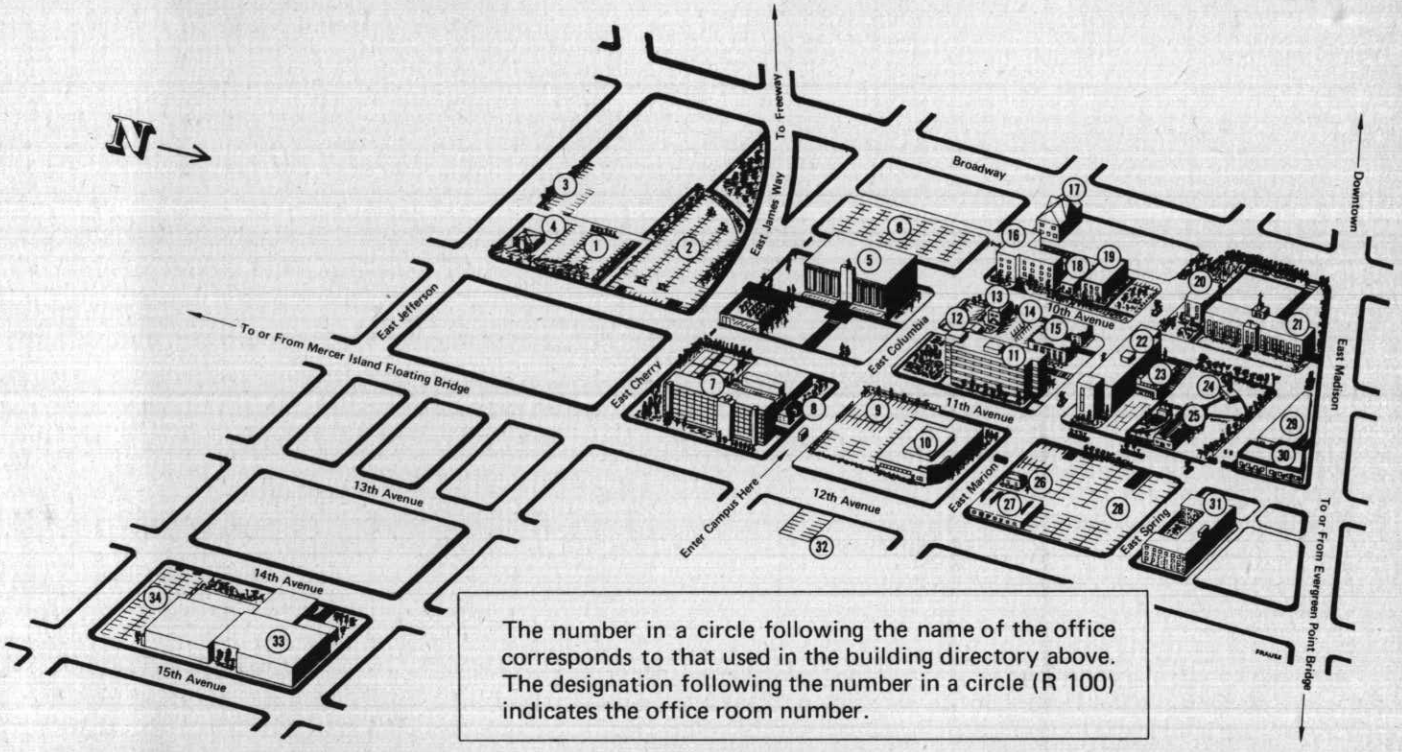
Teachers' Certification and Placement:
Dean of the School of Education

Transcripts, Student Records, Grades:
Registrar

Tuition, Payment of Bills, Refunds:
Treasurer

campus guide

(1)(2)(3) Student Parking
(4) Urban Affairs Institute
(5) Lemieux Library
(6) Student Parking
(7) Bellarmine Hall (coed residence)
(8) Minority Affairs Office
(9) Visitor Parking
(10) University Bookstore
(11) Thomas J. Bannan Building
(12) Alumni House
(13) ROTC Headquarters
(14) Faculty Parking
(15) Marian Hall (faculty offices)
(16) Loyola Hall (Jesuit residence)
(17) Teatro Inigo
(18) Loyola Annex
(19) McCusker Building
(20) Garrand Building
(21) Liberal Arts Building
(22) William Pigott Building
(23) Pigott Auditorium
(24) Sculpture Lab
(25) Buhr Hall
(26) Ethnic Culture Center
(27) Maintenance Shop
(28) Faculty Parking
(29) Engineering Building
(30) Student Union
(31) Xavier Hall (men's residence)
(32) Student Parking
(33) Connolly Center
(34) Connolly Center Parking



The number in a circle following the name of the office corresponds to that used in the building directory above. The designation following the number in a circle (R 100) indicates the office room number.

Academic Programs		Military Science	(13)	Counseling and Testing Center	(22) R502	Placement	(12)
Biology	(20) R115	Philosophy	(15) R105	Dean of Women	(30) 2nd floor	Plant & General Services	(10) R125
Campus Ministry	(22) R301	Physical Education	(33) R103	Development Office	(21) R105	Post Office	(10) Lobby
Chaplain, Student	(30) 2nd floor	Physics	(11) R318	Director, Resident Student Services	(30) 2nd floor	President's Office	(21) R109
Chemistry	(11) R514	Political Science	(15) R3	Director, Student Activities	(30) 2nd floor	Public Information	(21) R118
Civil Engineering	(29) R103	Premajor	(15) R109	Director, Student Publications	(19) R109	Registrar's Office	(22) R251
Clinical Chemistry	(11) R606	Pre Dental / Pre Medical	(11) R612	Education, School of	(22) R552	Science and Engineering, School of	(11) R118
Community Services	(15) R208	Pre Law	(22) R162	Financial Aid Office	(10) R110	Sports Information	(33)
Electrical Engineering	(11) R118	Psychology	(15) R4	Graduate School	(21) R123	Stabilization Fund	(21) R117
English	(15) R203	Sociology	(15) R204	High School & College Relations	(22) R254	Student Activities	(30) 2nd floor
Environmental Studies	(11) R118	Theology	(15) R203	Library	(5)	Student Publications	(19) 2nd floor
Fine Arts	(25) R111	Academic Vice President	(22) R252	Minority Student Affairs Director	(8) R1	Systems	(11) R406
Foreign Languages	(15) R311	Admissions	(22) R253	New Careers	(8) R4	Treasurer's Office	(10) R100
Health Information Service	(11) R120	Alumni	(12)	Nursing Faculty	(15) R309	University Publications	(21) R118
History	(15) R103	Arts and Sciences, College of	(21) R119	Nursing, School of	(21) R121	University Relations, Director of	(21) R118
Honors	(15) R107	Associated Students	(30) 2nd floor	Personnel Director	(10) R125	Urban Affairs Institute	(4) R1
Journalism	(19) R109	Athletic Department	(33) R112			Veterans Coordinator	(10) R110
Mathematics	(11) R320	Business, School of	(22) R156			Vice President, Finance	(21) R114
Mechanical Engineering	(29) R109	Chaplain, Student	(22) R301			Vice President, Students	(21) R111
Medical Technology	(20) R225	Computer Center	(11) R406