

1971

1971-72 Seattle University Bulletin of Information

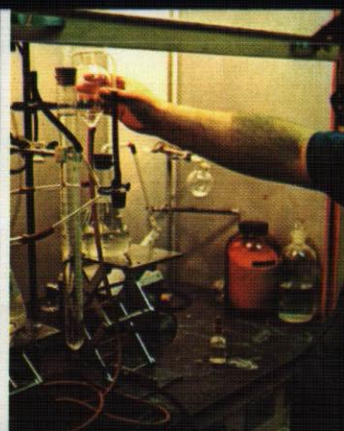
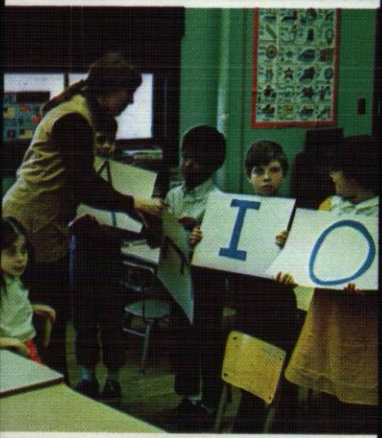
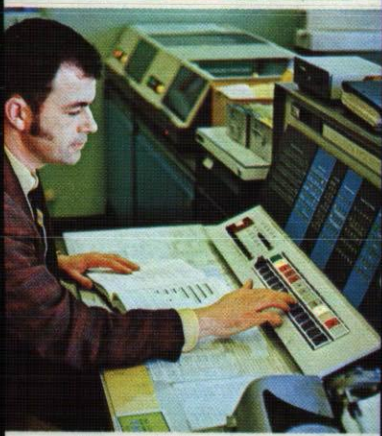
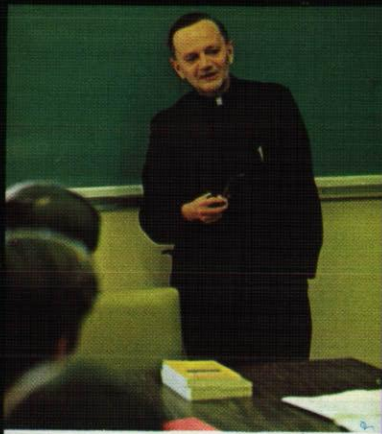
Seattle University

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Bulletin of Information

1971-72

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Seattle University



Seattle University

**Bulletin
of
Information
1971-72**

University Policy

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. 2

NO. 4

Editor - John R. Talevich

Published quarterly by Seattle University, Seattle, Washington 98122.
Second class postage paid at Seattle, Washington.

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Academic Calendar

1971

Spring Quarter 1971

March 29—Monday	Registration
March 30—Tuesday	Classes Begin
April 1—Thursday	Last Day to Late Register
April 5—Monday	Last Day to Change or Add Classes
April 9—Friday	Good Friday — No Classes
May 12—Wednesday	Last Day to Withdraw with 'W'
May 12—Wednesday	Last Day to Remove Incompletes
May 31—Monday	Memorial Day — No Classes
June 5—Saturday	Baccalaureate Mass
June 6—Sunday	Commencement
June 8-11—Tuesday-Friday	Final Examinations

Summer Quarter 1971

June 21—Monday	Registration
June 22—Tuesday	Classes Begin
June 25—Friday	Last Day to Late Register
June 25—Friday	Last Day to Change or Add Classes
July 5—Monday	Independence Day — No Classes
July 6—Tuesday	Last Day to Withdraw —
	First Term
July 16—Friday	First Term Ends
July 19—Monday	Registration/Classes Begin —
	Second Term
July 20—Tuesday	Close Registration — Second Term
July 26—Monday	Last Day to Withdraw —
	Full Term
July 30—Friday	Last Day to Withdraw —
	Second Term
Aug. 12-13—Thursday-Friday	Final Examinations

Fall Quarter 1971

Sept. 20—Monday	Orientation
Sept. 21—Tuesday	Registration — Returning Students
Sept. 22—Wednesday	Registration — New Students
Sept. 23—Thursday	Classes Begin
Sept. 24—Friday	Last Day to Late Register
Sept. 29—Wednesday	Last Day to Change or
	Add Classes
Oct. 11—Monday	Columbus Day — No Classes
Oct. 13—Wednesday	Mass of the Holy Spirit
Oct. 25—Monday	Veterans Day — No Classes
Nov. 6—Friday	Last Day to Withdraw with 'W'
Nov. 6—Friday	Last Day to Remove Incompletes
Nov. 25-26—Thursday-Friday	Thanksgiving Holiday —
	No Classes
Dec. 8-10—Wednesday-Friday	Final Examinations

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1972

Winter Quarter 1972

Jan. 3—Monday Registration
Jan. 4—Tuesday Classes Begin
Jan. 6—Thursday Last Day to Late Register
Jan. 10—Monday Last Day to Change or Add Classes
Feb. 11—Friday Last Day to Withdraw with 'W'
Feb. 11—Friday Last Day to Remove Incompletes
Feb. 21—Monday Washington's Birthday —
No Classes
March 15-17—Wednesday-Friday Final Examinations

Spring Quarter 1972

March 27—Monday Registration
March 28—Tuesday Classes Begin
March 30—Thursday Last Day to Late Register
March 31—Friday Good Friday — No Classes
April 4—Tuesday Last Day to Change or Add Classes
May 5—Friday Last Day to Withdraw with 'W'
May 5—Friday Last Day to Remove Incompletes
May 29—Monday Memorial Day — No Classes
June 3—Saturday Baccalaureate Mass
June 4—Sunday Commencement
June 7-9—Wednesday-Friday Final Examinations

Summer Quarter 1972

June 19—Monday Registration
June 20—Tuesday Classes Begin
June 23—Friday Last Day to Late Register
June 23—Friday Last Day to Change or Add Classes
July 4—Tuesday Independence Day—No Classes
July 5—Wednesday Last Day to Withdraw —
First Term
July 14—Friday First Term Ends
July 17—Monday Registration Classes Begin —
Second Term
July 18—Tuesday Close Registration — Second Term
July 24—Monday Last Day to Withdraw —
Full Term
July 28—Friday Last Day to Withdraw —
Second Term
Aug. 10-11—Thursday-Friday Final Examinations

Fall Quarter 1972

Sept. 25—Monday Orientation
Sept. 26—Tuesday Registration — Returning Students
Sept. 27—Wednesday Registration — New Students
Sept. 28—Thursday Classes Begin
Sept. 29—Friday Last Day to Late Register
Oct. 4—Wednesday Last Day to Change or Add Classes
Oct. 11—Wednesday Mass of the Holy Spirit
Oct. 23—Monday Veterans Day — No Classes
Nov. 8—Wednesday Last Day to Withdraw with 'W'
Nov. 8—Wednesday Last Day to Remove Incompletes
Nov. 23-24—Thursday-Friday Thanksgiving Holiday —
No Classes
Dec. 8—Friday Feast of Immaculate Conception —
No Classes
Dec. 13-15—Wednesday-Friday Final Examinations

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Purpose and Scope



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

- the conservation, interpretation and transmission of knowledge, ideas and values;

- the extension of the frontiers of knowledge by critical and exhaustive investigation or experimentation;

- the preparation for some of the professions by thorough and intelligent training in the theory and principles underlying those professions.

As a University, it attains its end not only through the sciences and humanities, including philosophy and theology, but also through its professional schools.

As a Catholic University operated under the sponsorship and direction of the members of the Society of Jesus:

- 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 Yunger, 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: general science, medical records, medical technology, pre dental and premedical 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, engineering, English, history 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 Association of Collegiate Schools of Business

National Council for Accreditation of Teacher Education

is approved by:

Washington State Board of Education

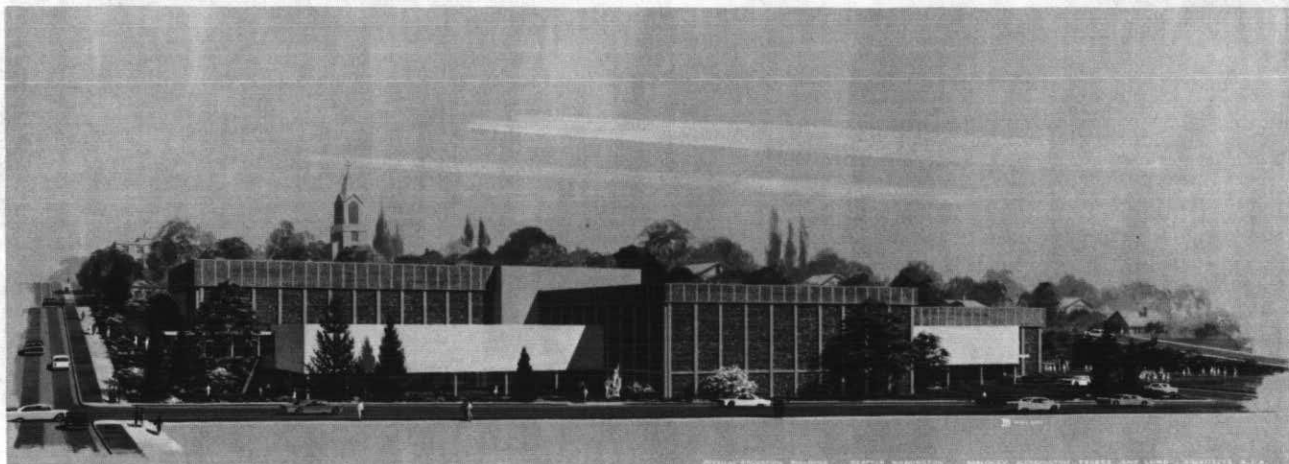
American Medical Association

American Society of Clinical Pathologists

American Association of Medical Records Librarians

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, Jesuit Educational Association, National Catholic Educational Association, National Commission on Accrediting, Northwest Association of Colleges, Western Interstate Commission for Higher Education.

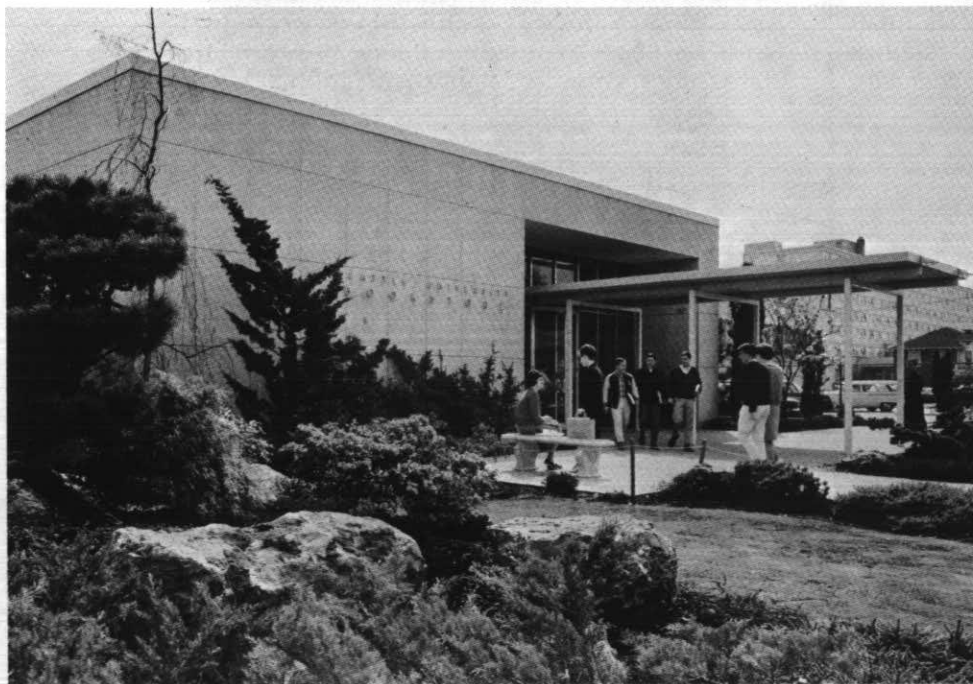


Campus

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, women's residence (1962); Bookstore Building (1964); Campion Tower, student residence (1965); 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 September 21, 22.

Winter Term — Preregistered students in person or by mail at Treasurer's Office not later than December 31. Others — at registration January 3.

Spring Term — Preregistered Student — in person or by mail at Treasurer's Office not later than March 24. Others — At registration March 27.

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) \$510.00

(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) \$ 51.00

Auditor's tuition (per credit hour) \$ 30.00

Residence Charges

Room and Board per academic year \$975.00

Payment Schedule

Reservation Fee \$ 70.00

Fall Quarter \$271.00

Winter Quarter \$317.00

Spring Quarter \$317.00

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) \$ 10.00

Tuition deposit (applied to first quarter's tuition if student completes registration) \$ 50.00

Change of registration (per change) \$ 5.00

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

Removal of incomplete \$ 5.00

Withdrawal fee (per course) \$ 1.00

Washington Pre-College tests (if not taken in high school) \$ 5.00

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

Duplicate official transcript (per copy) \$ 1.00

Duplicate unofficial transcript (per copy) ... \$.50

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

CE 221, 323, 333; EE — all even-numbered, laboratory courses; ME 425, 426, 428, 477, 481, 484, 485 \$ 10.00

CE 481 \$ 20.00

Cooperative Engineering: \$ 75.00

Mathematics: MT 114, 214 \$ 30.00

Music:

Mu 110, 111 \$ 40.00

(One hour lesson by special arrangement with instructor \$ 60.00)

Piano or organ practice room, one hour daily, per quarter \$ 5.00

Instrument rental for Mu 158, 159, 160 . \$ 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 of 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 Social 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. The advising system is not meant to supplant personal initiative and responsibility. The student is held responsible for making out programs and schedules and choosing courses and degrees.

Counseling and Testing Center

In addition to the academic and personal advising described above, 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.

Spiritual Guidance

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. The regular training of the Jesuit averages 15 years beyond high school and includes, besides their academic degrees, training in pastoral counseling and guidance. These faculty members are available by appointment or through the informal contact of campus life, since all live on campus.

These guidance facilities constitute an important contribution to mental health and adjustment, though usually not designated as such.

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.

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

All students enrolled at the University for 10 or more credit hours participate in the Student Health Center program. The program entitles students to the use of the Student Health Center located on the 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.

Blood Bank

The Seattle University Blood Bank may be drawn upon by registered students for themselves and for their families. All requests for blood must be submitted to the Vice President for Students. Blood contributions to the bank are solicited from students during the year.

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 Physical Education department 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 Vice President for students.

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 Vice President for Students.

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.

Gamma Sigma Phi—Women's service honorary.

Mu Sigma—Music service honorary.





Housing

All full-time freshmen and sophomores under 21 years of age are required to live in University housing unless they are married or living with their parents, or unless they have been granted an advance waiver by the Director for Resident Student Services or the Dean of Women.

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housing

Residence Halls for Women

Bellarmino Hall, opened in 1962, has accommodations for 458 freshmen and sophomore women. It provides study and recreational facilities, a snack bar and a dining hall. Experienced directors are in residence. Jesuit spiritual counselors schedule informal conferences and are readily available for personal help and guidance. Marian Hall, apartment-type residence for upperclasswomen students, accommodates 91. It has studio, one-bedroom and two-bedroom apartments.

Residence Hall for Men

Campion Tower, opened in 1965, has accommodations for 714 men. This 12-story residence is equipped with study and recreational facilities. All meals are taken in Bellarmino Hall. Jesuit Fathers reside in Campion Tower and serve as prefects and counselors.

Application for Housing

Requests for student housing are made through the Director for Resident Student Services (men) or through the Dean of Women (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 of 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 financial loss.



Financial Aid

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scholarships

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). This document reflects 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 a revised Parents' Confidential Statement 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. Secure a copy of the Parents' Confidential Statement from your high school counselor. Have this completed by your parents or guardian and sent to the College Scholarship Service, Box 1501, Berkeley, California 94701, before 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 PCS HAS BEEN ANALYZED AND THE STUDENT ADMITTED.**
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 \$10 application fee) by February 15.

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 winter.

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 scholarships award each succeeding year may be adjusted to the financial need of the student as evidenced by a supplemental PCS or SCS. 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 Academic Scholarships

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

A one-year partial tuition scholarship.

The Boeing Company

An annual grant given to students majoring in engineering, physics, mathematics, or business. The award is renewable for three additional years if the students maintain a high scholastic standing.

Louella Cook Foundation

A number of partial tuition scholarships are awarded annually on the basis of need and scholastic ability.

Dean and Marie Efner Scholarship

A partial tuition grant from funds left the University by the estate of Dean and Marie Efner.

Farmers Insurance Group

Scholarship funds are granted to the University on the basis of the number of Seattle University graduates who have worked for the company at least four years.

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

A fund sponsored by the Italian Club of Seattle for students whose parents are members of the Italian Club. Awards are generally for partial tuition assistance.

Laventhol, Krekstein, Horwath & Horwath

An award to a student majoring in accounting.

Rosemary McCone Memorial

A tuition scholarship established in memory of the late Rosemary McCone by a friend.

James B. McGoldrick, S.J. Scholarship Fund

Established by friends of Father McGoldrick on his Golden Jubilee, the interest accruing from this fund is used to provide partial tuition scholarships for worthy students.

Northwest Computing Association

A scholarship fund established for students interested in the field of computer programming.

Anne O'Donnell Memorial

A one-year scholarship for a woman political science major established by the Business and Professional Women's Club, Totem Chapter.

Paul Pigott Memorial

A one-year scholarship to be awarded to an entering freshman.

Albert A. Schafer Memorial

A permanent fund established by the late Mrs. Albert Schafer, first woman regent of the University, in memory of her husband who was a pioneer Northwest lumberman.

John F. and Elizabeth J. Sullivan Foundation

An annual partial tuition scholarship.

Western Gear Foundation

Several engineering scholarships are awarded annually in honor of the late Philip L. Bannan, Sr. These scholarships are renewable for three additional years if the student maintains a high scholastic standing.

Wyman Youth Trust

A partial tuition scholarship awarded to an entering freshman or to an upperclassman.

Army ROTC Scholarships

Four-year scholarships which provide tuition, fees, textbooks, and retainer pay of \$50 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.

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**

Both programs provide for two years of education on an enlisted reserve status during the junior and senior years. Upon completion of the baccalaureate degree and licensure as registered nurses, participants are required to accept commissions as first lieutenants/ensigns in the Army Nurse Corps/Nurse Corps of the Naval Reserve. Active duty time will be determined on the basis of time spent in the student program.

Federal Traineeship Programs

The Public Health Service Act (Sections 306 and 307) provides 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. Section 306 covers students who plan to accept full-time public health nursing positions upon graduation. Section 307 is for those who plan to accept full-time supervisory, teaching or head nurse positions upon graduation.

Mental Health Training Program

Traineeship grants are available 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.

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 Defense Student Loan

Qualified students are eligible to borrow up to a maximum of \$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. Borrowers who become full-time teachers in public or private schools or colleges may have 10 per cent of their loan and interest cancelled for each year of teaching up to a maximum of 50 per cent.

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.

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 a \$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

Ninety-day loans are available at the start of each school quarter for students who want to pay tuition costs out of current income. The standard interest rate, plus a set-up fee is charged for this service. The National Bank of Commerce, First Hill Branch, Seattle, serves as the collection agency for the loans. Repayment is required by the last day of the quarter in which the loan is granted. Delinquent borrowers are charged at the current interest rate on the unpaid amount and are not eligible for additional loans until the account is cleared.

Miscellaneous Loan Funds

Limited amounts of loan funds are available annually through the Ravetti Educational Fund, the Alda Medack Loan Fund and the Bing Crosby Loan Fund. Loans are restricted to students with demonstrated deep financial need and bear a low interest rate with a long period for repayment.

Commercial Tuition Payment Plans

Parents interested in deferred payment plans may contract for loans with Education Funds, Inc., and Insured Tuition Plan. Both offer programs ranging from one to four years with repayment in equal monthly installments. Life insurance on the subscribing parent is an important feature of the program.

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.

Educational Opportunity Grant

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. These grants must be matched with equal amounts from other aid sources such as National Defense Loans, College Work-Study or a University scholarship or grant.

Nursing Scholarship Program

Non-repayable grants of up to \$1,500 per year are available to nursing students with exceptional financial need under the Health Manpower Act of 1968. Grade point is not a primary consideration in this program. These grants are usually combined with other aid forms, with the amount dependent upon the financial resources available to the student.

Washington State Grant

High school seniors with deep financial need are eligible for grants which allow them to attend any institution of higher education in the state under a program sponsored

by the State of Washington. Grants are approximately one-third the total demonstrated need. To be eligible a student must be: 1) a first-time entering freshman; 2) unmarried; 3) a resident of the state; 4) dependent upon parental assistance and; 5) planning to attend an institution in the state.

Students are eligible to reapply each year. Closing date for applications is March 15. A copy of the Parents' Confidential Statement should be sent to Washington State Council on Higher Education, Olympia, Washington. Information is available from high school counselors.

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.

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. Contact the Veterans Administration for information.

Educational Assistance for Veterans

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 as demonstrated through the Parents' Confidential Statement, students are given jobs either on or off campus for periods not to exceed 15 hours per week while school is in session. Work-Study jobs are included as part of the financial aid package.

Part-Time Jobs

Lists of part-time employment opportunities are maintained in the Placement office. Jobs with business firms in the Seattle area are listed as well as those on campus. These include typing, stenography, bookkeeping, sales and clerical work, child care, housework, gardening, driving, food service, and more specialized types of work such as laboratory assistant, reader or research assistant. Most are on an hourly wage basis. 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 Placement office. A library of career information is maintained and assistance on career opportunities and preparation of resumes is available.

Alumni Assistance Program

Employers contact qualified and experienced alumni by listing open positions with the Placement office. Capable alumni in all disciplines who are unemployed or seeking job betterment can utilize the services of the Placement office to investigate position referrals, discuss job search techniques or possible career redirection in the light of changing employment opportunities.



Admission



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. This policy and consequent requirements and procedures apply to all applicants. 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.

Have scores on the College Entrance Examination Board Scholastic Aptitude Test that demonstrate a potential for successful college level academic achievement.

Have satisfactory recommendations from the high school as to character, personality and ability.

*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. 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. This evidence is sought:

in the quality of his academic record, which must include all credits and grades and a statement that the high school course will be or has been completed with a diploma of graduation;

in the recommendations of his principal or counselors and in test scores and results of the Scholastic Aptitude Test.

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. No application for a degree will be accepted until all entrance deficiencies have been removed.

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. High school students seeking admission for the fall quarter may have credentials forwarded by the high school after the appropriate semester.

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

1. Complete page one and two of the Washington uniform application for admission and leave the entire form with high school counselor to have pages three and four 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. Students in Washington state should take the Washington Pre-College Test when it is given in candidate's vicinity.
4. Take the CEEB Scholastic Aptitude Test, preferably in December or January. Acceptable test dates are March, May or July.
5. 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.

6. Submit the medical form provided by Seattle University after acceptance, properly completed per instructions, to the Student Health Center.
7. 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, candidates for admission to the Freshman class must take the Scholastic Aptitude Test of the College Entrance Examination Board and have the scores submitted to the Admissions Office of the University. Any student who has earned less than 45 quarter credits or 30 semester credits in another college or university and wishes to be considered for transfer admission to the University will also be required to submit scores from the Scholastic Aptitude Test of the College Entrance Examination Board.

Test application forms and information concerning testing centers and test dates is contained in the CEEB's Bulletin of Information which may be obtained from high school counselors and principals, or by writing 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.

The fee for the Scholastic Aptitude Test is to be paid to the Educational Testing Service. Scores will

be regarded as official only if received from the Educational Testing Service.

Guidance Tests

All entering freshmen students will be required to take the tests of the Washington Pre-College Testing Program. These test results will be used for placement and counseling but not for admission. The tests may be taken when offered during high school by residents of the state of Washington. During fall quarter and at the beginning of winter and spring quarters, there will be a special administration of these tests at Seattle University for students who are residents of other states and for Washington students who did not take them while in high school. The dates of these tests will be announced by the Counseling and Testing Center.

Medical Examination

When notified of their acceptance for entrance to Seattle University, all candidates will receive a medical examination form which must be completed and signed by a physician and returned to the University Student Health Center before the student will be permitted to register.

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.

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 all cases the student must be directed to the Counseling and Testing Center at Seattle University for guidance and testing.

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 and must submit results of the Scholastic Aptitude Test of the College Entrance Examination Board.
4. Submit a non-refundable application fee of \$10 to the Office of Admissions. Make remittances payable to Seattle University.

Students who wish to transfer to Seattle University after one or two years in attendance at a two-year college are encouraged to apply for admission at the close of a complete academic year.

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 Academic Council.

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 three years of academic credit 135 credits 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 the departmental sections on philosophy and theology for listing of required courses.
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 are not acceptable for transfer.

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 be eligible for admission to the university of their province. The Immigration Form (I-20) necessary to enter the United States is issued to the student upon receipt of the required deposit after he is admitted.

Special Students

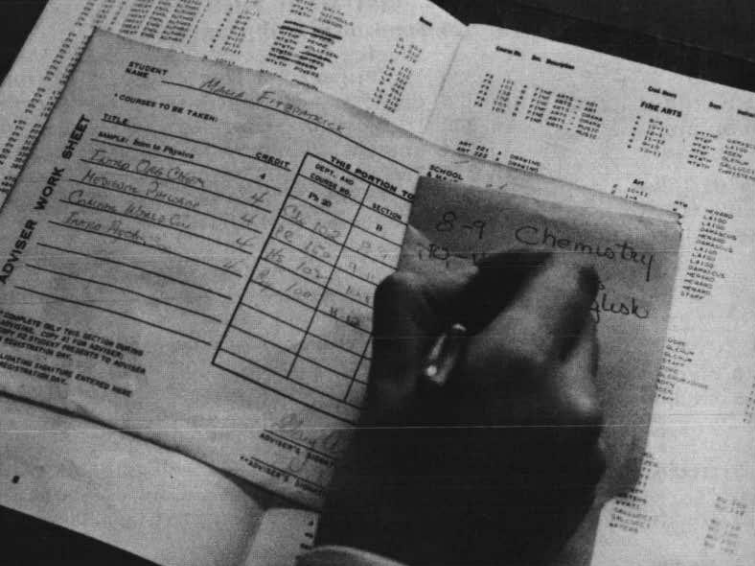
Mature individuals may apply to the Board of Admissions for special standing. A special student may take such regular courses as the dean of his school may determine. A special student may not represent the University, nor is he eligible for a degree. By fulfilling the requirements for admission to the 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.

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.



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

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

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

PHILOSOPHY SEQUENCE 15 credits

PI 110 Philosophical Problems — The World 5 credits

PI 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.

THEOLOGY SEQUENCE 10 credits

Students may 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

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

Additional Requirements for Bachelor of Arts Programs

HISTORY SEQUENCE 10 credits

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

Hs 101 Western Culture I	5 credits
Hs 102 Western Culture II	5 credits
Hs 103 Western Culture III	5 credits

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:

Ec 271 Principles of Economics I	5 credits
Ec 272 Principles of Economics II	5 credits
Ec 273 American Economic History	5 credits
Ec 371 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

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

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

Core Exceptions for Science, Engineering and Business

Bachelor of Science degree majors in biology, chemistry, mathematics and physics may substitute for the 10-credit history and 10-credit social science requirements 15 credits chosen from any history and social science core courses.

Engineering students may substitute for the history and social science requirements 10 credits of electives chosen from core courses in English, history, economics, philosophy, political science, psychology, sociology or theology.

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.

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.

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.

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. Fee for an official transcript is \$1 per copy unless the student has a financial obligation outstanding in which case the fee is the full amount outstanding plus \$1.

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

Any student absent from 15 per cent or more of classes or laboratory sessions may be dropped from the class with a failing grade. Absences are recorded from the first scheduled class meeting regardless of the first day of attendance.

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.

Grade Reports

Student quarterly grade reports are mailed at the end of each quarter. Students may obtain copies of their transcripts for a fee of 50 cents per copy. 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	Percentage Value	Descriptive Value
A	93-100	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	85-92	An above average student; knowledge is very good, scholarship meets all requirements, information is complete but not detailed.
C	77-84	Average student; knowledge is good; scholarship meets assignments, but information is incomplete.
D	70-76	Below average student; knowledge is fair, scholarship does not meet assignments; essential information is lacking or false information given.
E	Below 70	A failing student.
W	Withdrawal	Official withdrawal during the first six weeks of the quarter.
CR	Credit	Grade assigned under PASS/NO-PASS option if work meets or is above minimum passing level.

NC No Credit Grade assigned under PASS/NO-PASS option if work is below minimum passing level.

I Incomplete Effective with courses taken Fall 1970 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 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 several 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.

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

Students 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 auditing 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.

Pass/no-Pass Option

Effective Fall quarter 1970 a pass/no-pass grading option was introduced for a two-year trial period. Under this program undergraduate students may elect a pass/no-pass option in elective courses

under the following conditions:

1. Student must declare his desire for pass/no-pass during registration; student may change to or from pass/no-pass only during the five-day drop/add period.
2. Eight courses, (except those mentioned in 7 below), regardless of credit hours per course, is the maximum number of pass/pass classes acceptable toward a bachelor's degree. Transfer students will be allowed the following number of pass/no-pass courses at Seattle University:

Transfer Credits	0-447 courses
	45-896 courses
	90-1344 courses
	135-& above0 courses

3. The pass/no-pass option may not apply to courses required by the University (core) or a departmental degree program. Exceptions to this will be P.E. activity courses, music practice courses, three required reading courses in languages, and the two courses indicated under 4.
4. Pass/no-pass may apply to a maximum of two courses in the major or departmental requirements outside the University core.
5. Students who elect a pass/no-pass option are eligible for quarter honor roll only if credit for graded courses totals 12 or more.
6. Only one pass/no-pass course may be taken in a given quarter, except those in 7.
7. All P.E. activity courses and music practice courses shall be pass/no-pass.
8. All courses elected as pass/no-pass 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. 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 Treasurer'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 and the required fee must be returned to the Treasurer 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. The first official transcript will be sent free of charge but each additional copy will cost \$1. However, no official transcript copies will be sent for students with financial obligations, 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 and required fee are presented to the Treasurer within the specified time limit. A grade of W will be allowed during the first six weeks 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 sections on philosophy and theology 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.

A candidate for an undergraduate degree with a cumulative grade point average of 3.25 graduates Cum Laude; one with a cumulative grade point average of 3.50 graduates Magna Cum Laude; one with a cumulative grade point average of 3.75 graduates Summa Cum Laude.

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

Robert I. Bradley, S.J., Ph.D., Dean
James E. Royce, S.J., Ph.D., Associate 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 11 are departments in a specific academic subject. The departments are: English, Fine Arts, Foreign Languages, History, Journalism, Military Science, Philosophy, Political Science, Psychology, 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 (Non-Classical)

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

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.

Area Majors

Rather than in a specific subject, three major programs concentrate in an area: fine arts, humanities or social science (for the Bachelor of Arts degree). For all such area majors, the normal requirement is 50 hours beyond the core curriculum 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

Naomi Goodard, M.S.W., 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 of social work. 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 378, 379, 478 and 479; 25 credits in sociology; 15 credits in psychology; 10 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 400.

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 Social Science core option	10 credits

Sophomore year

Economics or Political Science elective ...	5 credits
Mathematics/Science core option	5 credits
Philosophy 220 and core option	10 credits
Sociology 102, 260 and 201-202 or Psychology 201	15 credits
Theology core options	10 credits

Junior year

Community Services 375, 376	10 credits
Economics 272	5 credits
Fine Arts 400	5 credits
Political Science 214 or 370 and 372 or 373	10 credits
Psychology 210	5 credits
Sociology 280	5 credits
Elective	5 credits

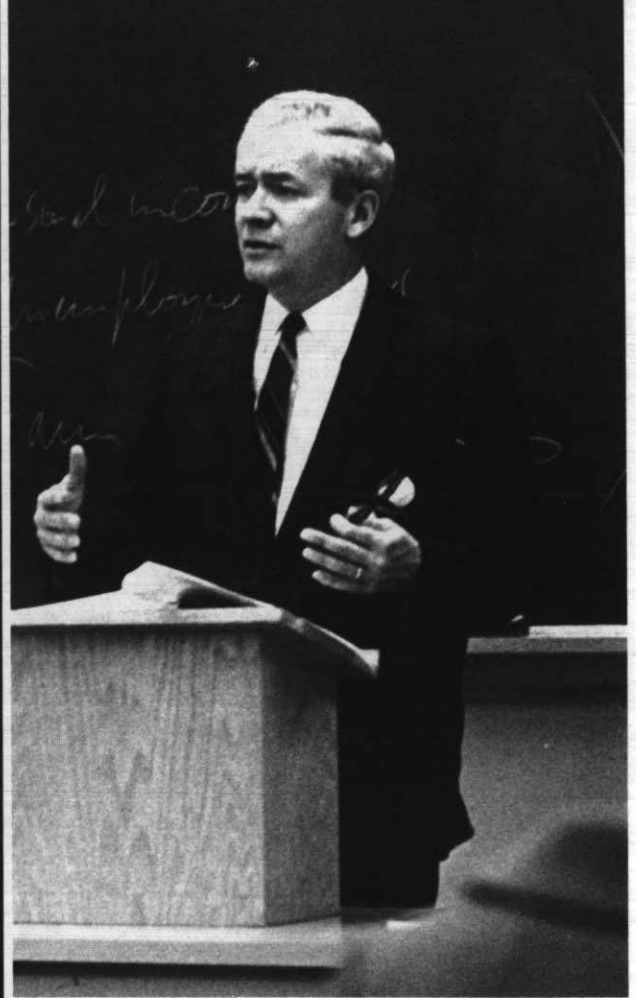
Senior year

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

Total 180 credits

Community Services Courses

- CS 375 Introduction to Social Work** 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. Prerequisites: CS 376 or permission for 378; 378 for 379; 379 for 380.
- 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. Co-requisites: 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 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.	

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|---------------|--|------------------|---------------|---|------------------|
| En 306 | Writing Poetry | 5 credits | En 390 | Eighteenth Century Novel | 5 credits |
| | Study of and practice in the modes and techniques of poetic composition. | | | Defoe, Richardson, Fielding, Sterne, Smollett and contemporaries. | |
| En 310 | Introduction to Chaucer | 5 credits | En 392 | Nineteenth Century Novel | 5 credits |
| | Study of Chaucer's "Canterbury Tales." | | | Austen, Bronte, Dickens, Thackeray, Eliot, Hardy and contemporaries. | |
| En 311 | Introduction to Medieval Literature | 5 credits | En 394 | Twentieth Century Novel | 5 credits |
| | Literary selections, in modern English, representative of the life and thought of the Middle Ages. | | | Conrad, Joyce, Lawrence, Gide, Mann, Hesse, Kafka, Camus and others. | |
| En 313 | Mythology | 5 credits | En 395 | Modern Poetry | 5 credits |
| | Study of the mythological backgrounds of English and American literature. | | | Yeats, Rilke, French Symbolists, Eliot, Pound, Stevens and others. | |
| En 314 | World Literature I | 5 credits | En 398 | Modern Drama | 5 credits |
| En 315 | World Literature II | 5 credits | | Ibsen, Strindberg, Pirandello, O'Neill, Brecht, Genet and others. | |
| | 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 406 | Structure of the English Language | 5 credits |
| En 320 | Sixteenth Century Poetry and Prose | 5 credits | | Introduction to linguistic theory and the comparison of traditional, structural and transformational descriptions of English. | |
| | Wyatt, Surrey, Sidney, Spenser, the Humanists, Elizabethan prose. | | En 407 | History of the English Language | 5 credits |
| En 323 | Elizabethan Drama | 5 credits | | Study of the historical development of modern English. | |
| | Early Shakespeare, Kyd, Marlowe, Dekker, Jonson and contemporaries. | | En 410 | Chaucer | 5 credits |
| En 324 | Jacobean Drama | 5 credits | En 411 | Medieval Literature | 5 credits |
| | Later Shakespeare, Webster, Tourneur, Beaumont and Fletcher, Ford and contemporaries. | | En 420 | Renaissance Literature | 5 credits |
| En 330 | Introduction to Shakespeare | 5 credits | En 430 | Shakespeare I | 5 credits |
| | Readings in the comedies, tragedies and histories. | | En 431 | Shakespeare II | 5 credits |
| En 345 | Seventeenth Century Poetry and Prose | 5 credits | | I. Tragedies. II. Comedies/histories. | |
| | Donne and the metaphysical poets; shorter poetry of Milton, Jonson, Bacon, Burton and contemporaries. | | En 440 | Milton | 5 credits |
| En 350 | Eighteenth Century Poetry and Prose | 5 credits | En 445 | Seventeenth Century Literature | 5 credits |
| | Dryden, Pope, Swift, Johnson, Gray and contemporaries. | | En 450 | Neo-Classic Literature | 5 credits |
| En 358 | Restoration and Eighteenth Century Drama | 5 credits | En 451 | Late Eighteenth Century Literature | 5 credits |
| | Wycherly, Dryden, Congreve, Gay, Sheridan and contemporaries. | | En 460 | Romantic Literature I | 5 credits |
| En 360 | Romantic Poetry and Prose | 5 credits | En 461 | Romantic Literature II | 5 credits |
| | Blake, Wordsworth, Coleridge, Byron, Shelley, Keats and contemporaries. | | En 470 | Mid-Victorian Literature | 5 credits |
| En 370 | Victorian Poetry and Prose | 5 credits | En 471 | Late Victorian Literature | 5 credits |
| | Tennyson, Arnold, Browning, Hopkins, Carlyle, Ruskin and contemporaries. | | En 480 | Seventeenth and Eighteenth Century American Literature | 5 credits |
| En 380 | Major American Poets | 5 credits | En 482 | Nineteenth Century American Literature | 5 credits |
| | From the Puritans to modern times: Taylor, Bryant, Poe, Whitman, Dickinson, Frost, Stevens and others. | | En 484 | Twentieth Century American Literature | 5 credits |
| En 382 | Major American Novelists | 5 credits | En 485 | Modern Literature | 5 credits |
| | American fiction from its beginning to modern times: Cooper, Melville, Twain, James, Hemingway, Faulkner and others. | | En 487 | Contemporary 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 509	Old English Poetry	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	Contemporary American Literature	5 credits
En 584	The English Novel	5 credits
En 586	Modern Poets	5 credits
En 588	Contemporary 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

Louis K. Christensen, Ph. D., 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.

Degrees Offered

Bachelor of Arts

Bachelor of Arts—Area major in Fine 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 — 74 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, 215; 3 credits of ensembles, 3 credits of vocal or instrumental lessons; 9 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, 216, 217; 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, 117, 215; 2 credits 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	0 credits
Music 130 or 131 or 135	3 credits
Philosophy 110, 220	10 credits
Social Science core options	10 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 core option	5 credits
Theology 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	8 credits

Senior year

Art 221, 231 and elective	6 credits
Music 110 or 111; 418; 12 credits from 370-415 or 371-416 or 374-417 ...	18 credits
Electives	18 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 110 or 111 and 115, 116, 117 and electives	8 credits
Theology core option	5 credits
Electives	6 credits

Senior year

Art electives	2 credits
Music 215 and electives	9 credits
Electives	34 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 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.)	

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 from cafeteria 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.

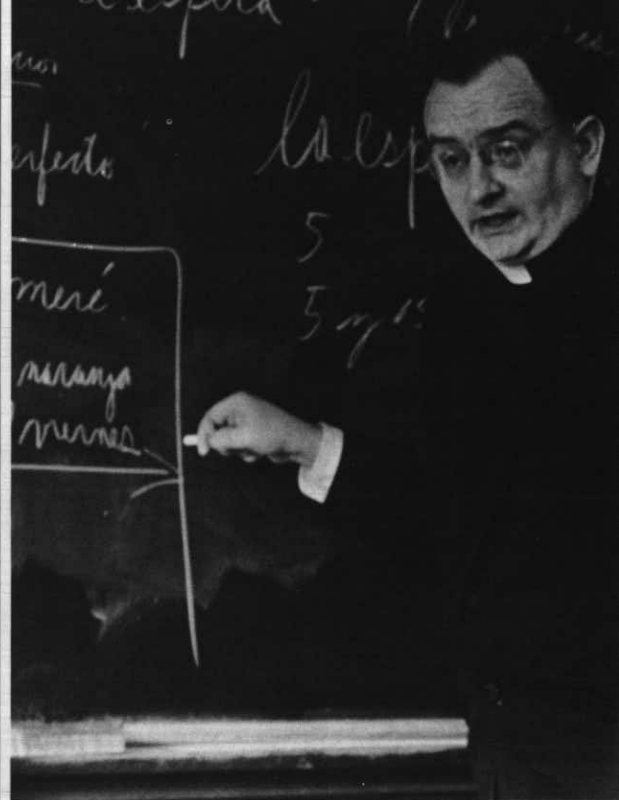
Music Courses

- 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** 0 credits
Mu 116 Theory II 0 credits
Mu 117 Theory III 0 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 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
Study of the life cycle of an art form. Exploration of origins, major styles and performers.
- 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 of 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

Robert B. Saenz, S.J., Ph.L., S.T.L., Acting Chairman

Objectives

The specific purpose of the foreign language program in French, German, Italian, Spanish, Latin and Greek is both linguistic and cultural.

Major/Minor Program — At the first level it seeks to equip the student with an adequate reading, writing and speaking facility at the level of ordinary discourse so that he may use these skills for communication with native speakers. At the same time it seeks to equip the student for academic research or instruction in his chosen field. Since it is a program of a certain depth, it may also serve as a supporting minor in many fields.

At the second level its purpose is to unlock the culture of the linguistic community by means of the foreign language used as the key. It embraces not only the works and movements of each literary epoch but also their relationship to the other arts, to political and social history, and to physical, economic and human geography. This is the goal of the major.

Reading Program — For students whose program demands the use of a foreign language only as a tool for reading, a sequence of three reading courses (101, 102, 103) is offered each year. Its primary purpose is to prepare the student to handle with understanding the written text of a foreign language for scholarly purposes. It concentrates on the morphological and syntactical patterns of the language, together with its lexicon, to instill the reading skill. Its secondary goal is to produce the facility needed to meet the foreign language requirements of graduate schools.

Degree Offered

Bachelor of Arts

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) — 55 credits which must include 115, 125, 135, 215, 225, 235, 315, 325 and three courses from Sequence I (415, 425, 430) or Sequence II (435, 440, 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).

Undergraduate Minor (modern languages) — 35 credits which must include 415, 125, 135, 215, 225, 235 and 315.

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

The Foreign Languages department reserves the right to waive all or part of these requirements for students who have demonstrated equivalent achievement at the college level. Such achievement will be determined by a series of written and oral examinations. No credit is given for courses waived, but the student passing these examinations may substitute electives for the courses waived. Credit by examination in language courses may be provided if the student meets the University's requirements as specified on page 27 of this bulletin.

Through the cooperation of the School of Education a program has been arranged to equip the student for a career as a foreign language teacher. All applicants for secondary certification are expected to complete one course in foreign language teaching methodology as part of their major language program.

In collaboration with other departments having bilingual instructors, courses in the related humanities are occasionally offered with a foreign language as the medium of instruction. It thus becomes possible for the student to complete a larger portion of his general course work in the language of his choice.

No student may satisfy reading language requirements by examinations in his native language, since the goal of this program is mastery of a language foreign to the student.

Bachelor of Arts — Modern Languages

Freshman year

English 100 5 credits
History 101-102 or 102-103 10 credits
Major Language 130, 220, 239 30 credits

Sophomore year

English core option 5 credits
Major Language 315, 325, 415 or 435 15 credits
Philosophy 110, 220 and core option 15 credits
Social Science core option 5 credits
Theology core option 5 credits

Junior year

Major Language 425 or 440, 430 or 445 ... 10 credits
Mathematics/Science core option 5 credits
Minor Language 130, 220, 239 or electives 30 credits

Senior year

Mathematics/Science core option 5 credits
Minor Language 315 or elective 5 credits
Social Science core option 5 credits
Theology core option 5 credits
Electives 25 credits

Bachelor of Arts — Classical Languages

Freshman year

Classical Languages Major 101, 102, 103 .. 15 credits
English 100 and core option 10 credits
History 101-102 or 102-103 10 credits
Philosophy 110, 220 10 credits

Sophomore year

Classical Languages Major 204, 205, 206 .. 15 credits
Classical Languages Minor 101, 102, 103
or electives 15 credits
Philosophy core option 5 credits
Social Science core options 10 credits

Junior year

Classical Languages Major 307, 308, 309 .. 15 credits
Classical Languages Minor 204, 205
or electives 10 credits
Mathematics/Science core option 5 credits
Theology core options 10 credits
Elective 5 credits

Senior year

Mathematics/Science core option 5 credits
Second Classical Languages Major 307,
308, 309 or electives 15 credits
Electives 25 credits

Total 180 credits

Modern Language Courses

French Courses

Fr 101 Reading French I 5 credits
Fr 102 Reading French II 5 credits
Fr 103 Reading French III 5 credits
Intensive study of the morphological and syntactical patterns of written French, with its lexicon, to equip the student with the skills necessary to read and translate the standard written text. For non-majors and non-minors only. (I-fall, II-winter, III-spring)

Fr 115 Langue française I 5 credits

Fr 125	Langue française II	5 credits
Fr 130	Langue française I, II en bloc	10 credits
Fr 135	Langue française III	5 credits
Fr 140	Langue française I, II, III en bloc	15 credits
Fr 215	Langue française IV	5 credits
Fr 220	Langue française III, IV en bloc	10 credits
Fr 225	Langue française V	5 credits
Fr 235	Langue française VI	5 credits
Fr 239	Langue française V, VI en bloc	10 credits
Fr 240	Langue française IV, V, VI en bloc	15 credits
Fr 315	Geographie et histoire de la France	5 credits
Fr 325	Initiation à la littérature française Théorie et technique de l'analyse littéraire, explication de textes choisis, versification, figures de style, bibliographie.	5 credits
Fr 390	French Literature in Translation Specified topics for non-majors and non-minors only.	2-5 credits
Fr 415	XIX Siècle Panorama littéraire-poesie.	5 credits
Fr 425	XVII Siècle Panorama littéraire-theatre classique.	5 credits
Fr 430	XX Siècle Aspects de la littérature contemporaine.	5 credits
Fr 435	XVIII Siècle L'esprit philosophique: Montesquieu, Voltaire, Diderot, Rousseau.	5 credits
Fr 440	XVI Siècle Aspects de la littérature de la Renaissance.	5 credits
Fr 445	XX Siècle Aspects de la littérature contemporaine.	5 credits
Fr 450	Methodologie de l'enseignement du français	5 credits
Fr 451	La civilisation française	5 credits
Fr 452	Perfectionnement de la langue Ces trois cours constituent un "Cours d'Ete" reserve au professeurs de lycees americains qui leur permet de perfectionner leur connaissance de la langue et de la civilisation, et d'en apprendre les principes pedagogiques.	5 credits
Fr 455	Methodologie de l'enseignement des langues vivants	2-5 credits
Fr 490	Etudes litteraires Analyse intensive d'auteurs, d'oeuvres ou de problemes specifiques.	2-10 credits

German Courses

Gr 101	Reading German I	5 credits
Gr 102	Reading German II	5 credits
Gr 103	Reading German III Intensive study of the morphological and syn- tactical patterns of written German, with its lexicon, to equip the student with the skills necessary to read and translate the standard text. For non-majors and non-minors only. (I-fall, II-winter, III-spring)	5 credits

Gr 115	Deutsche Sprache I	5 credits
Gr 125	Deutsche Sprache II	5 credits
Gr 130	Deutsche Sprache I, II zusammen	10 credits
Gr 135	Deutsche Sprache III	5 credits
Gr 140	Deutsche Sprache I, II, III zusammen	15 credits
Gr 215	Deutsche Sprache IV	5 credits
Gr 220	Deutsche Sprache III, IV zusammen	10 credits
Gr 225	Deutsche Sprache V	5 credits
Gr 235	Deutsche Sprache VI	5 credits
Gr 239	Deutsche Sprache V, VI zusammen	10 credits
Gr 240	Deutsche Sprache IV, V, VI zusammen	15 credits
Gr 315	Einführung in die deutsche Literatur	5 credits
Gr 325	Deutsche Geschichte und Landeskunde	5 credits
Gr 390	German Literature in Translation Specified topics for non-majors and non-minors only.	2-5 credits
Gr 415	Moderne deutsche Literatur Kurzgeschichten und Hörspiele.	5 credits
Gr 425	Historischer Überblick und Proben aus der deutschen Literatur bis 1900	5 credits
Gr 430	Ausgewählte Kapitel aus der deutschen Literatur	5 credits
Gr 435	Moderne deutsche Literatur Drama und Lyrik.	5 credits
Gr 440	Deutsche Klassik und Romantik	5 credits
Gr 445	Moderne Prosa	5 credits
Gr 455	Methodologie des Sprachunterrichts	2-5 credits
Gr 490	Werkinterpretation	2-10 credits

Italian Courses

It 101	Reading Italian I	5 credits
It 102	Reading Italian II	5 credits
It 103	Reading Italian III Intensive study of the morphological and syn- tactical patterns of written Italian, with its lexicon, to equip the student with the skills necessary to read and translate the standard text. For non-majors and non-minors only. (I-fall, II-winter, III-spring)	5 credits

Spanish Courses

Sp 101	Reading Spanish I	5 credits
Sp 102	Reading Spanish II	5 credits
Sp 103	Reading Spanish III Intensive study of the morphological and syn- tactical patterns of written Spanish, with its lexicon, to equip the student with the skills necessary to read and translate the standard written text. For non-majors and non-minors only. (I-fall, II-winter, III-spring)	5 credits

Sp 115	Idioma castellano I	5 credits
Sp 125	Idioma castellano II	5 credits
Sp 130	Idioma castellano I, II en conjunto	10 credits
Sp 135	Idioma castellano III	5 credits
Sp 140	Idioma castellano I, II, III en conjunto	15 credits
Sp 215	Idioma castellano IV	5 credits
Sp 220	Idioma castellano III, IV en conjunto	10 credits
Sp 225	Idioma castellano V	5 credits
Sp 235	Idioma castellano VI	5 credits
Sp 239	Idioma castellano V, VI en conjunto	10 credits
Sp 240	Idioma castellano IV, V, VI en conjunto	15 credits
Sp 315	Geografia e historia del mundo hispanico	5 credits
Sp 325	Iniciacion a la literatura en lengua castellana Los generos literarios, la explicacion de texto, la versificacion y la bibliografia.	5 credits
Sp 390	Hispanic Literature in Translation Specified topics for non-majors and non-minors only.	2-5 credits
Sp 415	El ensayismo del 98	5 credits
Sp 425	El romanticismo espanol	5 credits
Sp 430	El teatro del Siglo XVI	5 credits
Sp 435	La poesia del 98	5 credits
Sp 440	El modernismo	5 credits
Sp 445	Introduccion a "Don Quixote"	5 credits
Sp 450	Metodologia de la ensenanza del castellano	5 credits
Sp 451	La civilizacion espanola	5 credits
Sp 452	Perfeccionamiento del idioma Integran estas tres asignaturas un "Cursillo de Verano" destinado a los profesores de colegio para perfeccionar sus conocimientos del idioma y de la civilizacion y para demostrar los principios de su pedagogia.	5 credits
Sp 455	Metodologia de la ensenanza de los idiomas modernos	2-5 credits
Sp 490	Estudios literarios Analisis intensivo de autores, de obras o de problemas determinados.	2-10 credits

Classical Language Courses

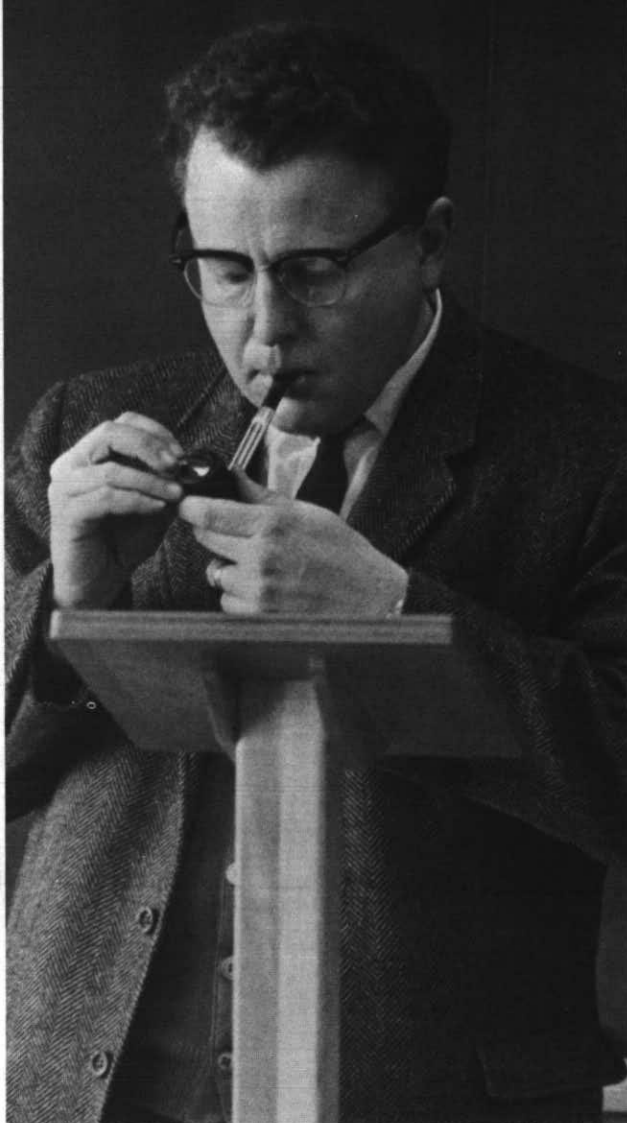
Greek Courses

Gk 101	Greek Language I	5 credits
Gk 102	Greek Language II	5 credits
Gk 103	Greek Language III Functional treatment of the phonology, morphology, syntax and lexicon of Koine Greek with readings from the New Testament. (I-fall, II-winter, III-spring)	5 credits

Gk 204	Attic Greek A transitional course to the Attic dialect with selections from Xenophon and Herodotus.	5 credits
Gk 205	Greek Oratory Selections from the Attic orators.	5 credits
Gk 206	Greek Lyric Poetry	5 credits
Gk 307	Plato Selections from the dialogues.	5 credits
Gk 308	Greek Drama	5 credits
Gk 309	Greek Epic Poetry Introduction to the Homeric dialect with readings from the Iliad and Odyssey.	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 490	Special Topics Supervised study of specific aspects of Greek language and literature.	2-5 credits

Latin Courses

Lt 101	Latin Language I	5 credits
Lt 102	Latin Language II	5 credits
Lt 103	Latin Language III Phonology, morphology, syntax and lexicon of Classical Latin. (I-fall, II-winter, III-spring)	5 credits
Lt 204	Cicero's Essays	5 credits
Lt 205	Roman Oratory	5 credits
Lt 206	Roman Poetry Selections from Catullus, Horace, Ovid and Tibullus.	5 credits
Lt 307	Roman Philosophers	5 credits
Lt 308	Roman Comedy	5 credits
Lt 309	Vergil's Aeneid	5 credits
Lt 410	Roman Satire	5 credits
Lt 420	Roman-Alexandrian Poets	5 credits
Lt 430	Roman Tradition and Religion	5 credits
Lt 450	Methodology of Teaching	5 credits
Lt 451	Roman Civilization	5 credits
Lt 452	Linguistic Improvement Summer institute for Latin teachers in the secondary schools designed to upgrade their linguistic and professional proficiency.	5 credits
Lt 490	Special Topics Supervised study of specific aspects of Latin language and literature.	2-10 credits



History

Martin F. Larrey, Ph.D., Acting 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 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.

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
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 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 Napoleonic 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, Ecuador 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 precluding 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 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 or 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 Problems 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

Glenn W. Olsen, 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 and history, 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 223. They must complete the mathematics/science or social science core sequences in regular University classes, as given on page 24 of this bulletin.

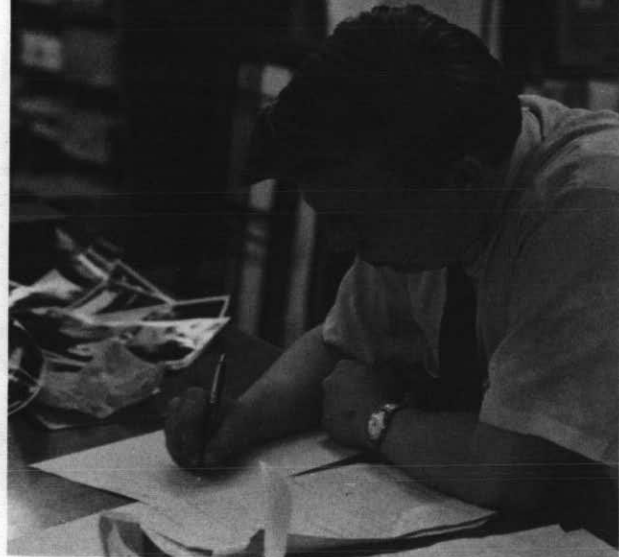
Honors students, on completion of their two-year program, transfer into one of the departments of the University to fulfill the requirements for their major. It is possible to fulfill these requirements in some departments, chiefly in the humanities, in one year by completing some work in summer session.

Completion of the Honors Program satisfies core requirements in philosophy, 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.

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	6 credits
Hu 102	Humanities Seminar - Thought	6 credits
Hu 103	Humanities Seminar - Thought	6 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, Seneca, Epictetus, New Testament, St. Augustine, Boethius, 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, Lucretius, Virgil, St. Paul, St. Augustine, The Cid, Song of Roland, Beowulf, 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 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 Galileo, Descartes, Bacon, Hobbes, Luther, Calvin, the Council of Trent, Locke, Spinoza, Leibnitz, Rousseau, Hume, Kant, Hegel, J. S. Mill, Newman, Freud, Marx, Whitehead, 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 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, which is 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 sophomore standing to enroll in any journalism course and 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 — 45 credits in journalism which must include Jr 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; 15 credits of upper division United States history courses (or ap-

proved substitutes); 15 credits of language or fine arts and/or speech and drama courses.

Undergraduate Minor — 25 credits which must include Jr 200, 210, 250 and 10 credits of additional courses numbered 300 and above.

Undergraduate Minor (teaching) — 20 credits which must include Jr 200, 210, 250 and 465 or approved substitute.

Bachelor of Arts

Freshman year

English 100 and core option 10 credits
History 101, 102 10 credits
Philosophy 110, 220 10 credits
Social Science core options 15 credits

Sophomore year

Journalism 200, 210, 250 15 credits
Modern Language, Fine Arts or
Speech/Drama options 15 credits
Philosophy core option 5 credits
Theology core options 10 credits

Junior year

English 200/300 options 10 credits
Journalism 330 and 300/400 options 15 credits
Mathematics/Science core options 10 credits
Electives 10 credits

Senior year

History 331 or 333 or 335 or 337 or 339
or 347 or 348 15 credits
Journalism 300/400 options 15 credits
Electives 15 credits

Total 180 credits

Journalism Courses

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. (winter)	
Jr 250	Newsediting	5 credits
	Copy and proof editing procedures; headlining writing, layout and makeup of the newspaper; photographic editing techniques. Four classroom and one publication's laboratory session per week. (spring)	
Jr 310	Reporting Public Affairs	4 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 4 credits**
Elements of non-fiction articles for newspapers and magazines; actual writing for sale. (Biennially, fall)
- Jr 355 Communications Graphics 4 credits**
Basic typographic, layout and design concepts. Editing techniques for organizational publications. Planning and purchasing printing. Prerequisite: Jr 250. (Biennially, winter)
- Jr 370 Editorial Writing 4 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 4 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. (Biennially, 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. John L. Robinson, B.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 \$50 per month retainer pay 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 \$50 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
Social Science core options	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
Social Science core options	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
History 101-102 or 102-103	10 credits
Mathematics 134, 135, 136	15 credits
Mechanical Engineering 100, 110	5 credits
Military Science 101, 102, 103	6 credits

Sophomore year

Electrical Engineering 251, 253	8 credits
Mathematics 114, 233	8 credits
Mechanical Engineering 112	3 credits
Military Science 201, 202, 203	6 credits
Physics 200, 201, 202	15 credits
Social Science core option	5 credits

Junior year

Chemistry 114, 115	10 credits
Engineering elective	2 credits
Mechanical Engineering 271	4 credits
Military Science 301, 302, 303, 304	16 credits
Philosophy 110, 220 and core option	15 credits

Senior year

Engineering electives	12 credits
Mechanical Engineering 281	4 credits
Military Science 401, 402, 403	12 credits
Social Science core option	5 credits
Theology core options	10 credits

Total 180 credits

Military Science Courses

- MS 100 Military Drill and Command** 0 credits
Techniques of manual of arms and marching formations. Progression from student to instructor positions. Stress on progressive training with the objective of developing initiative and self-confidence. MS 100-200 level students must register for this course at registration each quarter; MS 300-400 level students are assigned positions each quarter.
- MS 101 History of ROTC** 2 credits
History and organization of the ROTC and reasons for continued growth. Basic marksmanship, first aid and other selected military subjects. Corequisite: MS 100. (fall)
- MS 102 Organization of the United States Army** 2 credits
Organization of the United States Army from squad to division. Study of the basic principles of ground navigation and other selected military subjects. Corequisite: MS 100. (winter)
- MS 103 United States Army and National Security** 2 credits
Discussion of United States national defense policy and world wide commitments that require support of the Armed Forces. Other selected selected military subjects. Corequisite: MS 100. (spring)

- MS 201 Advanced Map Reading and Introduction to Small Unit Tactics** 2 credits
Application of the principles of map reading, emphasizing terrain appreciation and evaluation, methods of orientation, aerial photography. Organization and mission of the rifle squad. Corequisite: MS 100. (fall)
- MS 202 Small Unit Tactics and American Military History** 2 credits
Small unit tactics and tactical training of the individual soldier; American military history from origin of the United States Army to 1848; principles of war and their application in military campaigns. Corequisite: MS 100. (winter)
- MS 203 American Military History** 2 credits
United States military history from 1848 to the present. Corequisite: MS 100. (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 80-minute 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 80-minute 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 80-minute leadership laboratory per week. (spring)

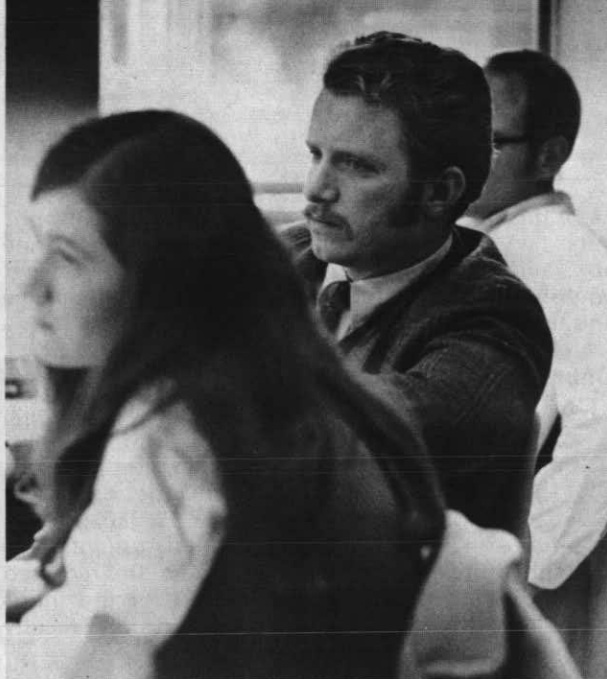
MS 304 Advanced Summer Camp 4 credits
Arms qualification; practical application of tactics; leadership training and practice. Six weeks during the summer at a military reservation designated by the Department of the Army. Prerequisite: MS 303. (summer)

MS 401 Military Logistics 4 credits
Staff operations at battalion and division levels. Review of small unit tactics. Tactics used at infantry battalion level. Map reading review. 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 80-minute 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 80-minute 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

55

philosophy

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 260 and seminars	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	10 credits
Social Science elective	5 credits
Theology elective	5 credits
Electives	15 credits

Total 180 credits

University Philosophy Requirements

The Philosophy department contributes to the core curriculum at Seattle University. The philosophy core consists of three courses of five credits each. It is desirable that the first two courses (PI 110 and 220) be taken in the freshman year and the remaining optional course in the sophomore year. No first-quarter freshman will be permitted to take a philosophy course in fall quarter.

Transfer Students

Students transferring to Seattle University must complete the following philosophy requirements after transferring into the University:

Transfer students with senior standing (135 or more credits) 2 courses

Transfer students with junior standing (90 to 134 credits) 2 courses

Transfer students with sophomore standing (45 to 89 credits) 3 courses

Transfer students with freshman standing (less than 45 credits) 3 courses

The specific courses required in each case shall be determined by consultation with the chairman of the philosophy department. The basic philosophy course offered at community colleges will be accepted toward the requirements noted above.

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, predication, cause, movement, unity, potency and actuality. 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 225 Cognitive 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 295 Contemporary Philosophical Problems 5 credits
In-depth 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 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.

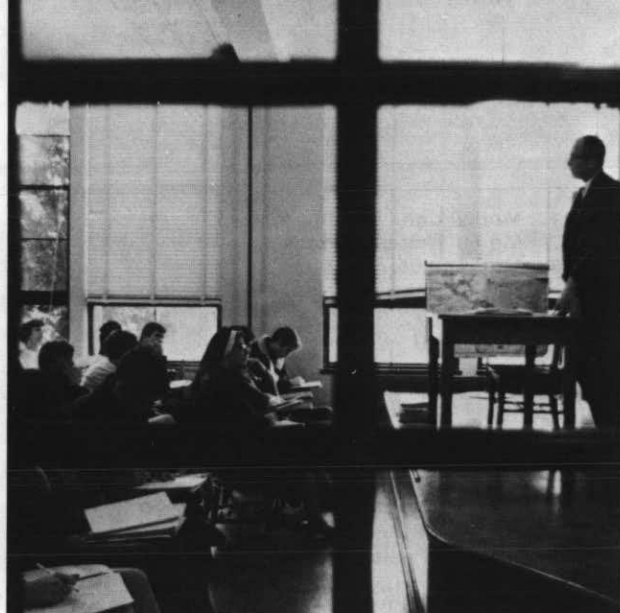
PI 410 Early Medieval Philosophy 5 credits

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 493 Contemporary Ethical Theory 5 credits**
Selected readings from contemporary moral philosophers such as Hare, Stevenson and Fletcher. Prerequisite: PI 220.
- PI 494 Contemporary Social Ethics 5 credits**
Moral problems facing urbanized man in his contemporary setting. Prerequisite: PI 220.
- PI 495 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 496 Thesis 5 credits**
Original philosophical investigation under the direction of a faculty member appointed by the chairman of the department. Substitute for one of the regularly required courses for philosophy majors. Must be at least 40 pages in length and manifest competence in original investigation and effective reporting. Prerequisite: PI 220.
- PI 497 Special Topics in Philosophy 5 credits**
PI 498 Special Topics in Philosophy 5 credits
PI 499 Special Topics in Philosophy 5 credits
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. Appropriate areas for assignment would be in personnel offices, budget offices, intelligence organizations, foreign policy desk positions, administrative offices and election offices. While this program is not an apprenticeship system to train personnel for specific government jobs, a required internship during the senior year will expose the student to the functioning of the bureaucracy and help him make a career choice.

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 491-492-493) 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	15 credits

Senior year

Political Science 325 or 371 or 372 or 374 or 418 or 419 (any four)	20 credits
Political Science 492, 492, 493	15 credits
Electives	10 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 (342)	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 (349)	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 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 (224)	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 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.	

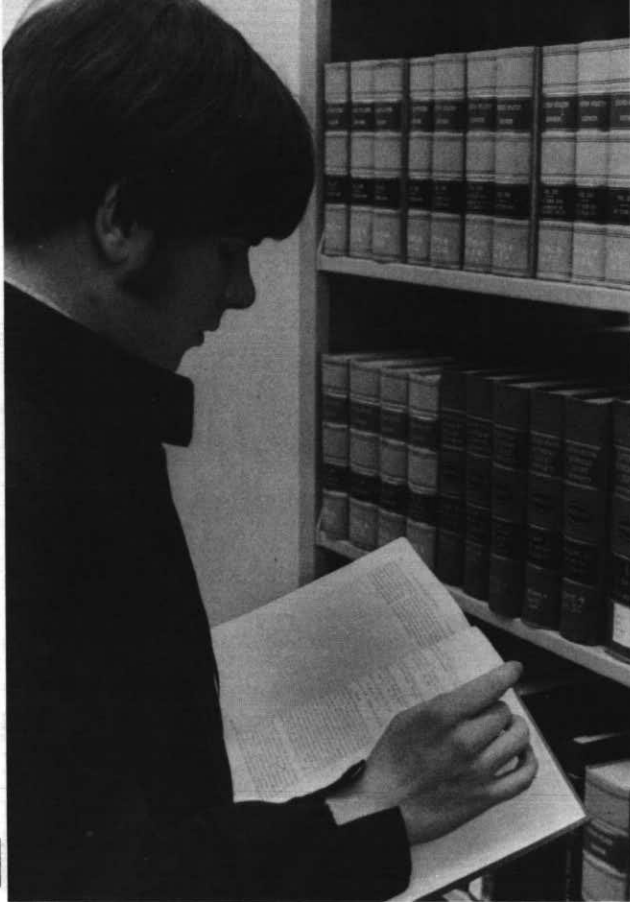
Pls 353	Modern Political Thought	5 credits
	Political ideas from Machiavelli through Hobbes,	

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 (250)**
Role and function of the bureaucracy in modern American government.
- Pls 371 State Government and Politics 5 credits (251)**
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 (252)**
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 (253)**
Study of the presidential office and its powers; special treatment of the President's relations with the Congress and with bureaucratic structure.
- 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 (290)**
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 (291)**
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 (218)**
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 436 International Regionalism 5 credits**
Analysis of the theory and practice of Regionalism early administrative international unions; the League Experience; regionalism and the United Nations; various forms of regionalism; NATO; Organization of American States; Organization of African Unity, Arab League, SEATO and others; Regional Economic Commissions; and the politics and prospects for regionalism.
- Pls 437 World Government 5 credits**
Proposals of revision of United Nations Charter, World Federalism, World Community, World State. Present trends and prospects for world government.
- 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

James McGuire, J.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	30 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	5 credits
I. Basic descriptive methods; measures of central tendency, variability, correlation and regression; inferential statistics, hypothesis testing, binomial probability t-tests, Chi-square, simple analysis of variance. II. More complex analyses; factorial designs and non-parametric statistics. Prerequisite: Psy 201 for 202. (I-fall, winter, spring, II-winter, spring)		

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		

Psy 301	History and School 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 mental processes. Three lecture and three laboratory hours per week. 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
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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)		

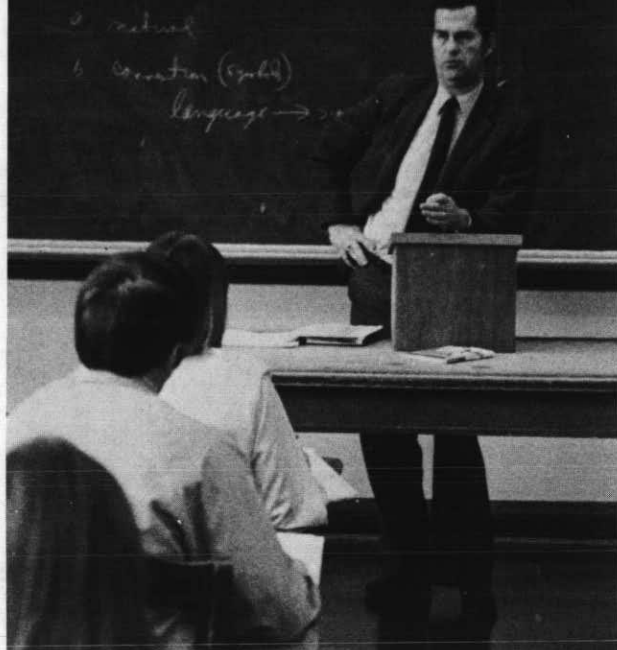
Psy 460	Group Dynamics	5 credits
Survey of theories and empirical studies of the dynamics of group behavior; emphasis on means of more effective and productive group performance. Prerequisite: Psy 310 or equivalent. (fall, winter)		

Psy 490	Symposium on Alcoholism	2 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

Anita Yourglich, Ph.D., 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 258 Correctional Theory and Practice 5 credits
Theoretical discussion of correction as it is relevant to criminal behaviors and review of correctional treatments, institutions, and programs. 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 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 467 Educational Sociology 5 credits**
Sociological analysis of education as a social process expedited through specific educative agencies and media which vary across cultures. 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

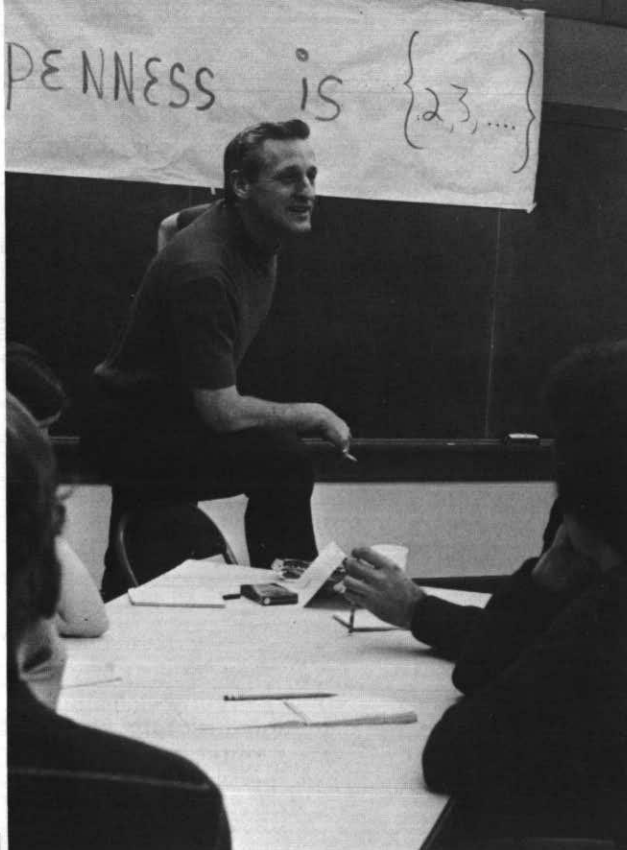
The Speech program offers background and practice in the skills of oral delivery. It aims at uniting both speakers and auditors into a speech community which shares the highest contemporary standards of both written and oral expression. To accomplish this purpose effectively, the program provides in 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 competency 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. (Substitution of other courses for the major requirements in

theology will be allowed only with the written authorization of the chairman of the theology department.) 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; practicum thesis or the substitution of two graduate theology courses (minimum of 6 credits) taken after the second summer (these may be completed during the year or summers after third summer: substitution courses may be transferred from another university); no final comprehensive; students must live on campus.

University Theology Requirements

The theology core requirement for all students consists of 10 credits. Students may fulfill this requirement by choosing any two 5-credit courses from the three areas indicated on page 24 of this bulletin. No two courses may be taken as core courses from the same area with authorization of the Theology department chairman. Courses should be taken in proper sequence, as 300-level courses presume some knowledge of 200-level courses and 400-level courses relate to 300-level courses. Students should not begin their theology sequence before the sophomore year and should have had some philosophy courses before taking theology.

Transfer Student Requirements

Students transferring to Seattle University must complete the following theology requirements after transferring into the University:

Transfer students with junior or senior standing (90 or more credits) . . . 1 course

Transfer students with freshman or sophomore standing (89 or less credits)
..... 2 courses

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 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, Origen, 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 391 Church History I 5 credits**
(Hs 324)
- Th 392 Church History II 5 credits**
(Hs 325) 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 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 Modern Protestant Theology** 5 credits
Theological position, history and trends of the major Protestant denominations; principal leaders of modern Protestant thought and their tenets; Bultman, Tillich, Neibuhr. Prerequisite: Approval of 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 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 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** 5 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 Formation of Gospel Tradition** 3 credits
Analysis and classification of the Gospel materials; influence of form criticism; life situation of the literary forms, their application and use in modern catechetics.



- 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 Historical Role of the Christian Community** 3 credits
Christian community as a theological source; the mission of the Church in the modern world; the ecclesiastical implications of liturgy in theory and in the development of the catechist; the meaning of teacher as apostle.
- Th 550 Religious Perspectives in Anthropology** 3 credits
Analysis of the development of religious and secular attitudes; influence of the latent and overt, verbal and non-verbal milieu.
- 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 560-579 Seminars** 2 credits
- Th 580-589 Practicum Research Thesis** 3 credits
- Th 590-599 Special Courses** 3-5 credits



School of Business



Gerald L. Cleveland, D.B.A., 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 Association 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	5 credits
English 100 and 132 or 133 or 134 or 220 or 230 or 240	10 credits
History	5 credits
Mathematics 118, 130	10 credits
Philosophy 110	5 credits
Psychology 100	5 credits
Sociology 101	5 credits

Sophomore year

Business 210, 211, 230, 231, 270	25 credits
Economics 271, 272	10 credits
Natural Science	5 credits
Philosophy 220	5 credits

Junior year

Business 340, 350, 380	15 credits
Business major (300-499)	10 credits
Philosophy	5 credits
Theology	10 credits
Elective	5 credits

Senior year

Business 482	5 credits
Business major (300-499)	10 credits
Electives other than business and economics	10 credits
Electives	20 credits

Total . . . 180 credits

Accounting

Theodore J. Ross, M.B.A., C.P.A., 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.

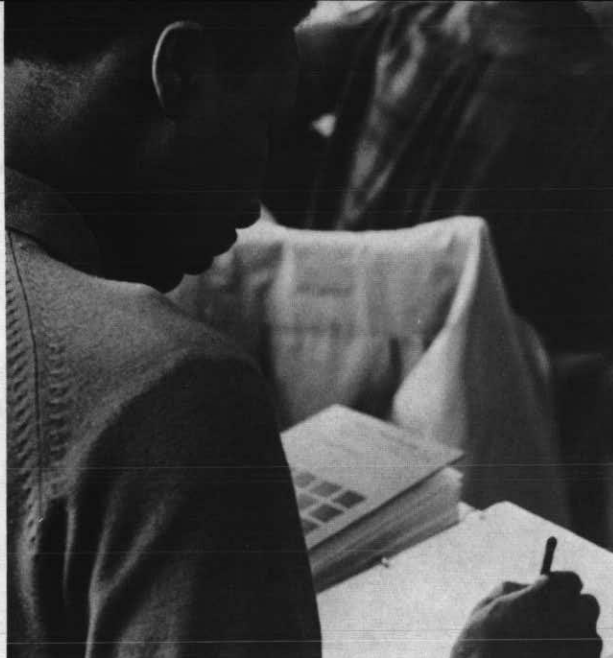
Finance

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

Donald W. Ireland, M.B.A., J.D., Adviser

Objectives

The general business major provides a broad survey of the entire area of business. It is designed for students who intend to operate their own business enterprise, those who expect to attain greater specialization through on-the-job programs, or those who plan graduate studies.

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, D.B.A., 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. It provides students with the opportunity of pursuing 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.

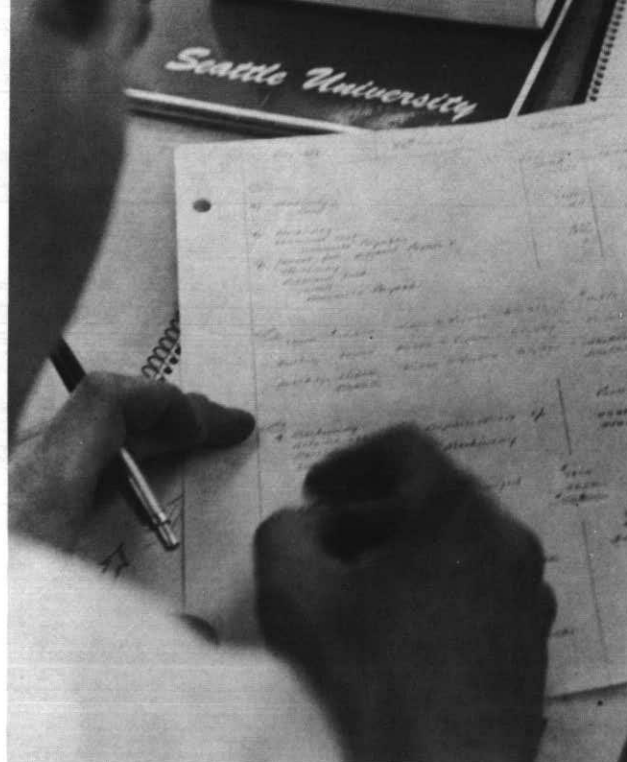
Marketing

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, winter, spring)
- Bus 210 Introduction to Computer-Based Management Information Systems 5 credits**
Management uses of the computer; familiarization with computer hardware and software systems; instruction in programming in the time-sharing environment; use of "library" programs; general problems of planning, designing and implementing computer-based information systems. (fall, winter, spring)
- Bus 211 Business Statistics 5 credits**
Basic descriptive and inferential statistics; calculation of various averages and measures of dispersion; introduction to probability concepts essential to statistical inference; basic statistical decision theory; development of Bayes' theorem. Prerequisites: Mt 118 and 130; Bus 210 or permission. (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 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. Prerequisites: 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 administrative regulations with emphasis on labor relations. 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; actuarial 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 3 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 department adviser.

Graduate Courses

Bus 509 Computer-Based Management Systems 3 credits
Introduction to computer hardware and software systems; use of "library" programs, time-sharing concepts, simulation applications and study of the design and implementation of computer-based, management information systems.

Bus 510 Descriptive and Analytical Statistics 3 credits
Basic descriptive and inferential statistics. Introduction to probability concepts, statistical estimation and simple correlation and regression. Prerequisite: Permission of adviser.

Bus 511 Advanced Statistical Analysis 3 credits
Survey of techniques useful in business decision processes; tests of hypotheses, Chi-square tests and analysis of variance; linear programming and game theory. Prerequisite: Bus 510.

Bus 512 Operations Research 3 credits
Operations research techniques useful in business analysis. Queing theory, dynamic and network programming, simulation, inventory and reliability control and advanced Bayesian decision models. Prerequisite: Bus 511.



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

Bus 520 Social Psychology 3 credits
Analysis of socio-psychological theory and research, decision-making, group structure and dynamics and leadership, relevant to institutionalized social systems.

Bus 521 Social Communication 3 credits
Analysis of the structure, function and development of communication in small groups and formal organizations which comprise the social complex. Prerequisite: Bus 520.

Bus 522 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 521.

Bus 523 Industrial Psychology 3 credits
Extension of psychological principles and empirical findings to human relations and functions in business and industry.

Bus 529 Research in Behavioral Area 3 credits
Prerequisite: Permission of adviser.

Bus 530 Analytical 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 532 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 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 532.

Bus 534 Seminar in Accounting 3 credits
Analysis of the development of accounting principles, postulates and general accounting theory. Present research activities of the accounting profession. Study of the changes which affect the future practice of accounting and accounting education. Prerequisite: Bus 532.

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

Bus 541 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 532.

Bus 542 Investments 3 credits
Principles and practice of investments; security analysis and evaluation, portfolio management and elements of the investment process. Prerequisite: Bus 541.

Bus 543 Financial Policy 3 credits
Introduces finance students to a higher level of reading materials and presents practical situations where students apply theories in policy making. Prerequisite: Bus 541.

Bus 549 Research in Finance 3 credits
Prerequisite: Permission of adviser.

Bus 551 Survey of Marketing Principles 3 credits
Questions concerning the interrelations of marketing functions, including merchandising, channels, pricing and marketing research as applied to various industries and related products.

Bus 552 Marketing Research 3 credits
Purpose, methods and techniques of marketing research; description of marketing information systems. Prerequisite: Bus 551.

Bus 554 International Marketing 3 credits
Growing importance of international marketing; differences in economic, cultural and political factors between countries; feasibility of using American techniques in performing marketing functions abroad. Prerequisite: Bus 551.

Bus 555 Promotion in Marketing 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 551.

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

Bus 570 Economic and Social Environment of Business 3 credits
Interdisciplinary ideas course designed to broaden perspectives on the significant factors that affect business and to study the effect of business on environmental factors.

- Bus 571 Survey of Economic Principles** 3 credits
Operation of the American economy; public policy and problems of unemployment, inflation, taxation and public debt; the market system as an allocational mechanism; prices, output and income distribution under different market structures.
- Bus 572 Economic Analysis of the Firm** 3 credits
Systematic development of the theory of the consumer, the firm, the industry and their interaction. Prerequisite: Bus 571.
- Bus 573 Macroeconomic Analysis** 3 credits
Economic basis for political policy under classical, Keynesian and revisionist systems; methods of analysis; equilibrium theories and pragmatic tests; attempts at stabilization under monetary fiscal policies; the role of competition, oligopoly and American commercial banking. Prerequisite: Bus 571.
- Bus 574 Legal Environment of Business** 3 credits
Nature and development of law; legal institutions and processes; the role of legal personnel and processes in resolving conflicts between business and the environment in which it operates.
- Bus 575 Economic Theory** 3 credits
Application of economic theory and analysis to current domestic and/or foreign economic problems. Prerequisite: Bus 572, 573.
- Bus 578 Labor Law** 3 credits
Review of the National Labor Relations Act and other pertinent labor legislation; seminar-type discussion of labor law and its application to labor relations; research involving interviews; reference to published materials of a labor organization.
- Bus 579 Research in the Environmental Area** 3 credits
Prerequisite: Permission of adviser.
- Bus 580 Principles of Administration** 3 credits
Concepts of business management as influenced by behavioral science and decision-making theories.
- Bus 581 Organization Theory** 3 credits
Influence of the theory and practice of the structure of business organization upon the exercise of management functions. Prerequisite: Bus 580.
- Bus 582 Decision Theory** 3 credits
Role and effect of different disciplines upon the methodology and rationale of decision-making. Prerequisite: Bus 581.
- Bus 583 Management Philosophy** 3 credits
Study of the social and political environment as determinants of the policies and practices used by management for the utilization of its economic resources.
- Bus 589 Research in the General 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

Margaret Mary Davies, 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 in 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 as given on page 24 of this bulletin. In fulfilling the core, Hs 231, Pls 160, Mt 118 and 130 are required.

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, 373, 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 271	Principles of Economics I	5 credits
Ec 272	Principles of Economics II	5 credits
	I. 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. II. Operation of the American economy with emphasis on prices, wages, production and distribution of income and wealth; problems of the world economy. Prerequisites: Sophomore standing or permission. (fall, winter, spring)	
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. Prerequisite: Sophomore standing or permission.	
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. Prerequisite: Sophomore standing or permission.	
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 stabilization 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. Prerequisite: Ec 271; 372 recommended.	
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

Winfield S. Fountain, 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 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 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	Master of Education
Bachelor 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 20 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. He must also confer periodically with an adviser in his major department. 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 examination covering 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 15 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 15 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 102-231	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 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 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 beginning 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)
- 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. (winter, 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. (summer)
- Ed 515 Guidance Services for Students with Special Needs 3 credits**
Specialized procedures and essential socio-economic and culturally disadvantaged students. (winter, summer)
- Ed 519 Group Counseling — Theory and Procedures 3 credits**
Emphasis on the theory and practice of group counseling, especially in an educational or vocational setting. Opportunities for in-class practice will be provided to integrate theory with procedures. (spring, summer)

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 and reporting on original studies in child psychology; includes a personal report on an investigation of some specific phrase or problem. 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.

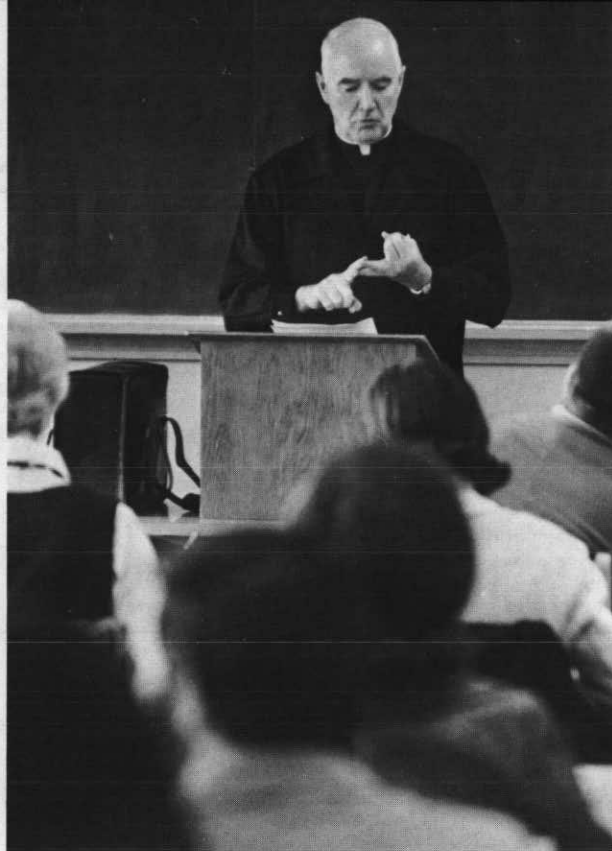
Ed 527 Measurement in Psychology and Education 3 credits
Theoretical foundations of modern measurement practices in education and related fields; taught with the cooperation of the Psychology department for prospective guidance specialists. Prerequisite: Ed 506. (fall, summer)

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. (winter, 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 Seminar in Elementary Methods — Subject Area 3 credits

Ed 531 Seminar in Secondary Methods — Subject Area 3 credits
Investigation, analysis and reporting on original studies in teaching methods; includes a personal report of an intensive nature on some phase. (winter, summer)



Ed 535 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 536 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 537 Reading in Content Fields 3 credits
Decoding and vocabulary analysis, comprehension reading rate, study skills and reading interests as related to specific content fields. Prerequisite: Ed 336 or 337 or equivalent or permission of instructor. (summer)

Ed 538 Supervision of Instruction 3 credits
Improvement of instruction through supervisory leadership. (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 level. Prerequisite: Ed 540. (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.
- 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.
- Ed 546 Special Education Seminar 3 credits**
Investigation, analysis and reporting on original studies and trends in education of the mentally retarded. Prerequisite: Ed 524. (summer)
- Ed 547 Seminar in Curriculum Analysis 3 credits**
Determination of instructional program needs for a particular school or system; analysis of existing curricula structuring and implementation of essential change. Prerequisite: Ed 540 or permission. (summer)
- Ed 548 Seminar in Educational Technology 3 credits**
Analysis and evaluation of existing educational technological media and programs. An in depth application of selected media to the graduate student's field of specialization. Prerequisite: Ed 330 or permission. (summer)
- Ed 549 Organization of Learning Resource Centers 3 credits**
Theory, objectives, design and administration of learning resource centers. Individualized application to specific school settings. Prerequisites: Ed 330 and 415 or permission. (summer)
- Ed 550 Practicum in Group Processes 3 credits**
Supervised off-campus experience with youth in a group dynamics situation oriented toward the school guidance function. Offered summer quarter with limited enrollment approved by practicum supervisor. Prerequisite: Ed 513. (fall, summer)
- Ed 551 Counseling Practicum 3-6 credits**
Supervised counseling experience wherein the counselor candidate is responsible for actual counseling cases and small group guidance situations. Prerequisite: Ed 513. (fall, winter, spring, summer)
- Ed 552 Field Experience in Guidance 3 credits**
Supervised on the job participation in guidance activities in a regular school setting or in relevant community agencies. Three clock hours during one full semester. Permission in advance. Prerequisites: Ed 512, 513, 528. (fall, winter, 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 565 Seminar in Educational Classics I 3 credits**
Ed 566 Seminar in Educational Classics II 3 credits
Ed 567 Seminar in Educational Classics III 3 credits
I. Ancient writers: Plato, Aristotle, Plutarch, Cicero, Quintilian. II. Middle writers: New Testament, Augustine, Aquinas, Tertullian, Clement, Maurus, Erasmus, Comenius. III. Modern writers: Rousseau, Locke, Pestalozzi, Nerbart, Froebel. Prerequisites: Ed 560, 561.
- 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 577 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 579 Writing for Publication 3 credits**
Advanced work in the preparation and composition of articles for learned and professional journals in education. Prerequisite: Permission of adviser.
- 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 588 Administrative Internship I** **3 credits**
Ed 589 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 590 Graduate Research Readings** **1-6 credits**
Ed 591 Graduate Research Readings **1-6 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 592 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 593 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 599 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 three major functions at Seattle University. These are:

The professional preparation of young men and women as teachers of health and physical education.

The conduct of a wide variety of intramural sports activities for recreational and social benefit of all students.

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

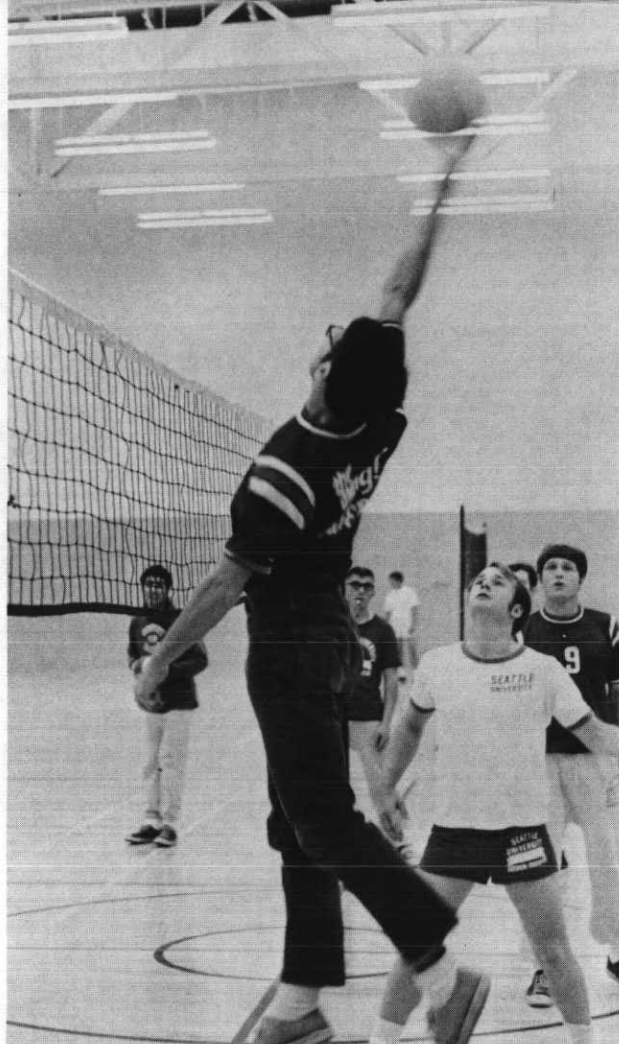
Education 440	15 credits
Major, minor or electives	20 credits
Theology core options	10 credits

Total . . . 190 credits

Health and Physical Education Courses

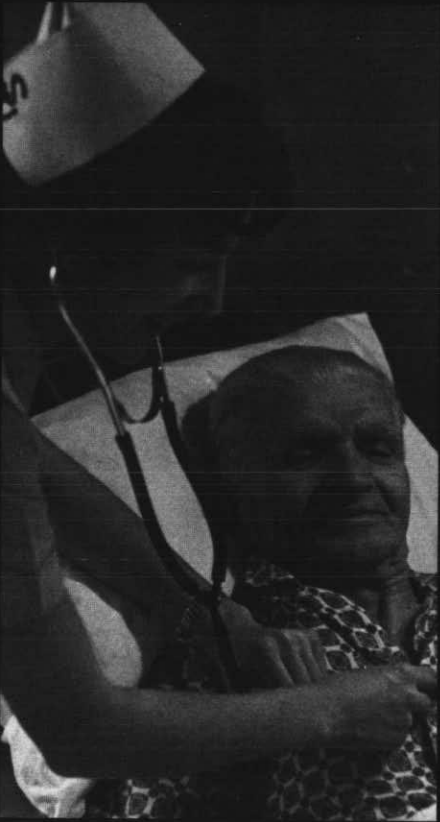
PE 120	Badminton (winter, spring)	1 credit
PE 122	Golf (spring, summer)	1 credit
PE 123	Gymnastics (fall)	1 credit

PE 124	Swimming (fall, winter, spring, summer)	1 credit
PE 125	Tennis (spring, summer)	1 credit
PE 126	Volleyball (fall)	1 credit
PE 129	Skiing (winter)	1 credit
PE 130	Paddle Sports (winter, spring, summer)	1 credit
PE 131	Archery (spring)	1 credit
PE 132	Handball — Squash (fall, winter; spring, summer)	1 credit
PE 134	Social Dance (winter)	1 credit
PE 135	Fencing (winter)	1 credit
PE 138	Conditioning — Women (winter)	1 credit
PE 139	Basketball — Men (winter)	1 credit
PE 140	Soccer — Men (spring)	1 credit
PE 142	Developmental Physical Education — Men (spring, summer)	1 credit
PE 143	Modern Dance (fall)	1 credit
PE 145	Sailing (fall)	1 credit
PE 147	Folk-Square Dance (spring)	1 credit
Basic instructional courses in activities indicated designed to meet the physical and recreational needs of college men and women.		
PE 195	Movement Exploration (winter)	2 credits
PE 196	Gymnastics (fall)	2 credits
PE 197	Track — Soccer — Men (spring)	2 credits
PE 198	Track — Softball — Women (spring)	2 credits
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: BI 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 (spring)	2 credits
PE 297	Golf — Tennis (fall)	2 credits
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 achievement 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



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 Providence Hospital, Veterans Administration Hospital, Public Health Service Hospital, Children's Orthopedic Hospital, Northwest Hospital and Overlake Memorial Hospital. Community nursing practice is provided through selected health agencies. The professional portion of the curriculum includes study in the four major areas of 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.

Living expenses and cost of laboratory tests, X-rays, medications, surgery and hospitalization are the responsibility of the student throughout the program. Uniform and transportation costs to, from and while in cooperating teaching units are the responsibility of the student. A current driver's license and car (covered by insurance as prescribed by the state law) are required for community health nursing.

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

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, 331, 336, 337
340, 341 45 credits

Senior year

Nursing 415, 416, 450, 451 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 Core Concepts for Nursing Practice I 3 credits

N 319 Core Concepts for Nursing Practice II 3 credits

Study of common concepts related to maternal-child, medical-surgical, and psychiatric nursing, including stress, anxiety, defense mechanisms, homeostasis, nurse-patient relationships and health supervision. (I. fall, II. winter)

N 320 Seminar in Nursing 3 credits
(spring)

N 330 Medical-Surgical Nursing I 4 credits

N 331 Practicum in Medical-Surgical Nursing I 8 credits

N 336 Medical-Surgical Nursing II 4 credits

N 337 Practicum in Medical-Surgical Nursing II 8 credits

Study of nursing problems commonly experienced by patients requiring medical or surgical therapy. Includes nursing care of adults and children. (I. fall, II. winter, spring)

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. (winter, spring)

N 406 Psychiatric Nursing 3 credits

N 407 Practicum in Psychiatric Nursing 4 credits

Study of psychodynamics, psychopathology and group interaction in relation to the nursing care of psychiatric patients. Includes clinical experience in care of psychiatric patients.

N 415 Community-Psychiatric Nursing 5 credits

N 416 Practicum in Community-Psychiatric Nursing 5 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. (fall, winter, spring)

N 440 Interdisciplinary Seminar 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 450 Advanced Nursing 5 credits

N 451 Practicum in Advanced Nursing 10 credits

Study of the theories of organization and management. The professional nurse's leadership role in the management of nursing care for groups of patients is emphasized. Includes directed experience as a leader of the nursing team. (fall, winter, spring)

N 490 Independent Study 3-5 credits

Prerequisite: Senior status and permission required.





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nursing





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 Association of Medical Record Librarians

Organization

The School of Science and Engineering offers programs in Biology, Chemistry, General Science, Mathematics, Medical Records, Medical Technology, Physics, and in Civil, Electrical and Mechanical Engineering.

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

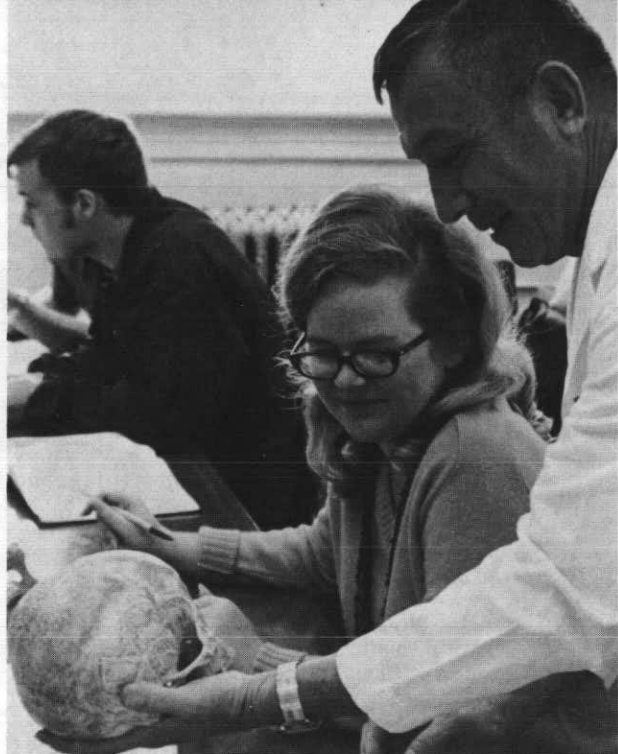
Bachelor of Arts with a major in Mathematics
 Bachelor of Science with a major in: Biology, Chemistry, General Science, Mathematics, Medical Technology, Natural Science, Physics
 Bachelor of Medical Record Science
 Bachelor of Civil Engineering
 Bachelor of Electrical Engineering
 Bachelor of Mechanical Engineering
 Master of Science in Natural Science (summer only)

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.

Five-Year 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 of Arts or Bachelor of Science degrees must complete 180 credits, including the University core requirements shown on page 24 of this bulletin. They must also complete the programs shown in this bulletin for their particular degree. Students seeking a Bachelor of Engineering degree must complete a minimum of 190 credits and the program shown in this bulletin for their particular degree. These students follow a slight modification of University core requirements.



Biology

Lewis E. Aldrich, Ph.D., Chairman

Objectives

The programs in the department are designed to provide a liberal education and to prepare a student for graduate studies or for professional work in basic and applied biology.

Degrees Offered

Bachelor of Science

Bachelor of Science in Natural Science

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 Science — 60 credits of biology which must include BI 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 1 credit of Seminar (3 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.

Bachelor of Science in Natural Science — 50 credits of biology which must include BI 150, 160 and

170 with additional credits, which must include at least 1 credit of Seminar (3 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.

Undergraduate Minor — 30 credits of biology selected at direction of a biology adviser.

Bachelor of Science

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 and/or Social Science core options	10 credits
Psychology 100	5 credits

Junior year

Biology electives	15 credits
Chemistry 225-226 or 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

Bachelor of Science in Natural Science

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 and/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
Theology core options	10 credits
Electives	15 credits

Senior year

Biology electives	10 credits
Electives	35 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 1971)
- 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 1971)
- 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 flowering-plants. Three lecture and four laboratory hours per week. Prerequisite: BI 160 or 251.
- BI 270 Human Biology I** 5 credits
BI 271 Human Biology 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 150. (fall)
- BI 300 Microbiology** 5 credits
Morphology, physiology and distribution of micro-organisms. Three lecture and four laboratory hours per week. Prerequisite: Permission of instructor. (winter)
- BI 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 1971)
- BI 304 Biophysical Laboratory** 2 credits
Simplified series of experiments and demonstrations designed to implement the principles in BI 303. Credits not applicable for biology major. Four laboratory hours per week. (fall, winter, spring, summer 1971)
- BI 310 Comparative Vertebrate Embryology** 5 credits
Early development of the frog and chick with consideration of the early development of the human. Three lecture and four laboratory hours per week. Prerequisites: BI 241. (fall)
- BI 321 Vertebrate Natural History** 5 credits
Ecology, behavior, life history and taxonomy of vertebrate animals, with emphasis on those in the Pacific Northwest. Three lecture and four laboratory hours per week. Prerequisite: BI 241.
- BI 326 Comparative Anatomy of the Vertebrates I** 5 credits
BI 327 Comparative Anatomy of the Vertebrates II 5 credits
I. Comparative study of the skin, skeletal system and muscular systems of selected vertebrates.
II. Comparative study of the digestive 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: BI 170; BI 241 recommended. (I-winter, II-spring)

BI 330 Comparative Vertebrate Histology 5 credits
Study of fundamental body tissues. Three lecture and four laboratory hours per week. Prerequisite: BI 150 and permission of instructor. (spring)

BI 340 Microtechnique 3 credits
Preparation of slides of animal tissue by the paraffin method; techniques of staining procedures. One lecture and four laboratory hours per week. Prerequisite: BI 330 or concurrently.

BI 350 Genetics 5 credits
Classical and molecular principles of heredity. Four lecture and two laboratory hours per week. Prerequisite: BI 150. (winter)

BI 360 Parasitology 5 credits
Study of parasitic protozoa, helminths and arthropods. Three lecture and four laboratory hours per week. Prerequisite: BI 231; Recommended: BI 232. (spring)

BI 370 Population Biology: Ecology 3 credits
Study of ecology and evolution with emphasis on population ecology. Three lecture hours per week. Prerequisites: BI 150 and permission of instructor. (winter)

BI 371 Field Ecology 2 credits
Techniques used in ecological research and analysis. Four laboratory hours per week (field trips). Prerequisite: Permission of instructor. Co-requisite: BI 370. (spring)

BI 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: BI 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. (spring)

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.

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 226 or 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 1-4 credits
BI 492 Special Topics in Biology 1-4 credits
BI 493 Special Topics in Biology 1-4 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 1-4 credits
BI 498 Research 1-4 credits
BI 499 Research 1-4 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., Chairman

Objectives

Programs offered by the Chemistry department are designed to prepare the student for professional work in the various fields of basic and applied chemistry. The Bachelor of Science 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 medicine.

The Natural Science 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, pre-medical studies or other fields within the College of Arts and Sciences.

Degrees Offered

Bachelor of Science
 Bachelor of Science in Clinical Chemistry
 Bachelor of Science in Natural Science
 Master of Science in Natural Science (summer)

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 and Clinical Chemistry 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 Science in Natural Science 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 Science — 76 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. A minimum grade of C is required in all science and mathematics courses.

Bachelor of Science in Clinical Chemistry — 65 credits in chemistry which must include Ch 114, 115, 116, 225, 226, 325, 355, 356, 455, 456, 461, 470, 471, 491, 492, 493. Recommended electives: Ch 238, 357; Bl 280, 330, 350; Mt 114; humanities courses.

Bachelor of Science in Natural Science — 45 credits of chemistry which must include Ch 114, 115, 116, 324, 325 and 225 or 235, 226 or 236, 237, 351, plus electives from the following: 356, 357, 415, 436, 456, 461, 495, 497, 498, 499. For those interested in biochemistry, the following courses are recommended: Bl 150, 170, 275 and 300.

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 Science

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....	30 credits
German 101, 102, 103	15 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 225, 226, 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 332	5 credits
Elective	5 credits

Senior year

Chemistry 456, 461, 470, 471, 491, 492, 493	20 credits
German	15 credits
Electives	10 credits

Total 180 credits

Bachelor of Science in Natural Science

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 225 or 235, 226 or 236 and elective	15 credits
Mathematics 134, 135	10 credits
Philosophy 220 and core option	10 credits
Theology core option	5 credits
Elective	5 credits

Junior year

Chemistry 325, 351	10 credits
History/Social Science core options	15 credits
Physics 105, 106, 107	15 credits
Theology core option	5 credits

Senior year

Chemistry elective	5 credits
Modern Language	15 credits
Electives	25 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. For students with high school chemistry. Atomic structure, weight relations, states of matter, solutions, kinetics and equilibrium. II. Electrical energy, aqueous solutions, alkali metals, alkaline earths, hydrogen, oxygen, the halogens, groups IV, V, and VI. III. Atomic structure, group III elements, transition metals, covalent carbon compounds, nuclear structure and radioactivity. Three lecture, one quiz and three laboratory hours per week. 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. Ultra-violet 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 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. Stereochemistry, reactions of carbonyl derivatives, carbonyl compounds and organic acids and bases. Three lecture and six laboratory hours per week. III. Carbohydrates, amino acids and proteins. Three lecture 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 5 credits**
Ch 325 Analytical Chemistry II 5 credits
I. Theory, prediction and control of reactions in ionized systems; mass action, dynamic equilibrium, oxidation potential, electronegativity. Application of principles to classical qualitative methods. II. Principles and practices of modern methods of quantitative analysis including gravimetric and volumetric procedures. Three lecture and six laboratory hours per week. Prerequisites: Ch 116 for 324; 324 or permission for 325.
- Ch 326 Instrumental Analysis 5 credits**
Theory and techniques of instrumental methods representative of spectrophotometric electro-analytical 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 356; 356 for 357.
- Ch 411* Principles of Inorganic Chemistry 6 credits**
Atomic and molecular structure, energy levels, bonding, equilibrium, thermochemistry, thermodynamics, electrochemistry and kinetics. Five lectures and three laboratory hours per week. 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. Three lecture hours per week. 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 reactivity; mechanistic principles of reaction; evaluation and significance of thermodynamic variables. Three lecture hours per week. 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. Three lecture hours per week. 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. Three lectures per week. Prerequisite: Ch 357.
- Ch 461 Radiochemistry 3 credits**
Theory of radioactivity, use of radioisotopes in studying chemical reactions and structure. One lecture and six laboratory hours per week. Prerequisite: Ch 351 or 357.
- Ch 470 Clinical Chemistry — Instrumentation 4 credits**
Theory and techniques of electro-spectrophotometric methods; infrared, ultraviolet, and visible, colorimetry, fluorimetry, flame photometry, densitometry, atomic absorption, electrophoretic techniques, practical use of automated instrumentation. Two lecture and six laboratory hours per week. Prerequisite: Ch 356 or permission of instructor.
- Ch 471 Clinical Chemistry — Methods 4 credits**
Comparative survey of significant procedures of analysis of carbohydrates, nitrogenous materials, lipids, electrolytes, hormones and enzyme activities. Three lecture and three laboratory hours per week. Prerequisite: Ch 456 or permission of instructor.
- 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 department chairman.

Ch 491 Special Topics in Chemistry 2-4 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, entropy, work function. Application to states of matter, equilibrium and electrochemistry. five lectures and one seminar per week. Prerequisite: Ch 411 or permission.

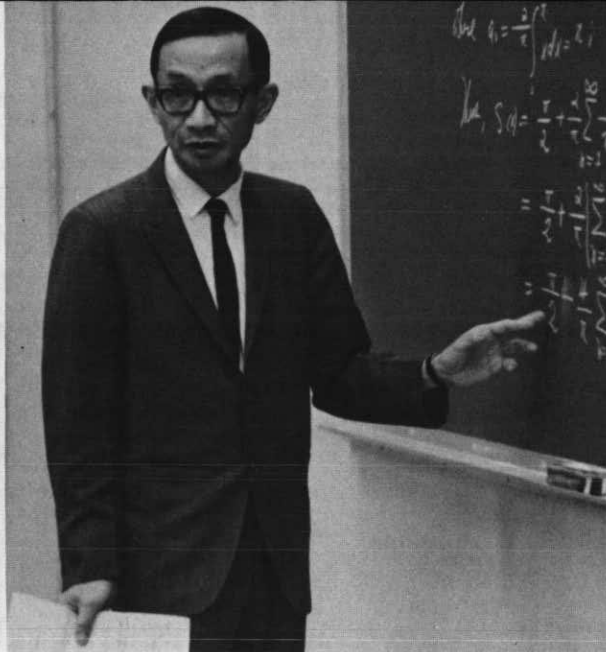
Ch 560* Radiochemistry 3 credits

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.



General Science

Jerry A. Riehl, Ph.D., Science Coordinator

David W. Schroeder, Ph.D., Engineering 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 chemistry or physics is shown below, but other choices are possible according to the need of the student.

Degree Offered

Bachelor of Science in General Science

General Program Requirements

Students in general science must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin. Required are 80 credits of courses in no more than four fields chosen from biology, chemistry, mathematics, physics, psychology and engineering. Courses in engineering are considered as one field in this program. The student must earn at least 24 credits in each of two fields. See sample programs of study below for specific course requirements.

Bachelor of Science in General Science Chemistry and Physics Concentration

Freshman year

Chemistry 114, 115, 116	15 credits
English 100	5 credits
Mathematics 112, 134, 135	15 credits
Philosophy 110	5 credits
Elective	5 credits

Sophomore year

Biology 150, 170	10 credits
Mathematics 114, 136	8 credits
Philosophy 220 and core option	10 credits
Physics 109, 200	8 credits
Theology core option	5 credits
Elective	4 credits

Junior year

Chemistry 235, 236	10 credits
History/Social Science core option	5 credits
Physics 201, 202	10 credits
Theology core option	5 credits
Electives	15 credits

Senior year

English core option	5 credits
History/Social Science core options	10 credits
Physics 360, 375	10 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 100, 110, 112	8 credits
Philosophy 110, 220	10 credits

Sophomore Year

Electrical Engineering 251	4 credits
Mathematics 135, 136 and elective (200 series)	15 credits
Mechanical Engineering 271, 281	8 credits
Philosophy core option	5 credits
Physics 201, 202	10 credits

Junior Year

Chemistry 114, 115 or Physics 361, 362 ...	10 credits
Electrical Engineering 253, 256	6 credits
History core options	10 credits
Social Science electives	10 credits
Theology core options	10 credits

Senior Year

Engineering electives	16 credits
Electives	30 credits

Total 180 credits

**Mathematics**

Andre L. Yandl, Ph.D., Chairman

Objectives

The Mathematics department offers two undergraduate programs. The first, leading to the Bachelor of Science degree, is designed to prepare the student for advanced study and professional work in mathematics. The second, for students wishing a more flexible program which provides for a concentration of work in a secondary field, leads to the Bachelor of Arts degree.

Degrees Offered

Bachelor of Science
Bachelor of Arts
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 Science — 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 department chairman, 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.

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.

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, 233, 300, 321 or 322 and 15 credits of approved electives beyond college algebra.

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 Science

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, 235 and 315 or 381	15 credits
Philosophy 220 and core option	10 credits
Physics 109, 200, 201	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
Physics 202	5 credits
Theology core options	10 credits

Senior year

Mathematics 431-432-433 or 411-412-413 and 321, or 322 and elective	25 credits
Electives	20 credits

Total 180 credits

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
Social Science core option	5 credits
Electives	15 credits

Junior year

French or German 101, 102, 103	15 credits
Mathematics 321 or 322, 315 or 381 and elective	15 credits
Theology core options	10 credits
Elective	5 credits

Senior year

Mathematics 411 or 431	5 credits
Electives	40 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 1620 system and supporting equipment of the University Computer Center. One two-hour laboratory period per week. Prerequisite: Mt 101.
- Mt 116 Computer Applications for Social Science and Business Students 2 credits**
Techniques for the implementation of various statistical formulas; report generation from data base; documentation techniques; literature survey. 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**
Number systems, machine components, basic machine language, Symbolic Programming System (SPS), operating principles. Assigned problems are processed on the 1620 system of University Computer Center. Prerequisite: Mt 114.
- 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. Prerequisites: Mt 114 and 136.
- 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 Lebesgue 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 461 Advanced Engineering Mathematics I 3 credits
Mt 462 Advanced Engineering Mathematics II 3 credits
Mt 463 Advanced Engineering Mathematics III 3 credits
I. Introduction to the theory of functions of a complex variable; analytic functions, mappings, integration, series, residues. II. Fourier series, Legendre polynomials, Bessel functions and applications to boundary value problems. III. Linear algebra, matrices and determinants, introduction to vector analysis. Prerequisites: Mt 234 for 461; 461 for 462; 462 for 463.

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 2-4 credits
Mt 492 Special Topics in Mathematics 2-4 credits
Mt 493 Special Topics in Mathematics 2-4 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 Record Science

Kathleen A. Waters, R.R.L., Director
Paul P. Cook, Ph.D., Resident Adviser

Objectives

The Medical Record Science 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 Association of Medical Records Librarians.

Degree Offered

Bachelor of Medical Record Science

General Program Requirements

Candidates must satisfy the core curriculum requirements of the University as given on page 24 of this bulletin.

Departmental Requirements

Bachelor of Medical Record Science — 20 credits of science and mathematics beyond the core requirement; 10 credits of social science beyond the core requirement and 20 credits of business courses.

Bachelor of Medical Record Science

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, 272	10 credits
Philosophy 220	5 credits
Theology core options	10 credits
Elective	5 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

Medical Record Science 401, 402, 403, 422, 425, 426, 440, 450, 455, 470, 475, 494 and 495	45 credits
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Total 180 credits

Medical Record Science Courses

MR 401	Medical Record Science I	5 credits
MR 402	Medical Record Science II	5 credits
MR 403	Medical Record Science III	5 credits

I. Introduction to medical record science; orientation to medical institutions, history of medical records, professional ethics; a study of the medical record, its components, development and use. II. Gathering, evaluating and retrieval of health information; health statistics and research techniques; preservation of records, coding and indexing of medical information. III. Study of related medical record systems for departments of the hospital and other health care facilities. Extended care and psychiatric facilities. Impact of Medicare. Organization and function of medical staff and responsibility of the Registered Record Librarian to medical staff.

MR 422	Medical Terminology	3 credits
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MR 425	Medical Science I	3 credits
MR 426	Medical Science II	2 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.

MR 440	Directed Practice	5 credits
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Supervised learning experience in which the student develops skill in learning to deal with personnel, to preserve the confidential nature of medical records and to work with other personnel.

MR 450	Organization and Administration I	3 credits
MR 455	Organization and Administration II	4 credits

I. Management of health information center; hospital organizations and functions; the hospital's role in the community and in education. II. Control and management of information personnel in office setting; budget, layout, work simplification, motivation and job analyses.

MR 470	Legal Concepts for Health Fields	3 credits
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Principles of law as applied to the health field, with particular reference to all phases of medical record practice.

MR 475	Data Processing	3 credits
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Data processing systems and their application of newer techniques in handling information in medical institutions.

MR 494	Seminar in Organization and Administration	2 credits
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Problems in organization and administration of Medical Record department.

MR 495	Seminar in Management of Medical Record Department	2 credits
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Problem solving, human relations, ethics, accreditation problems.



Medical Technology

George D. Davis, M.S., Adviser

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 Science in Biology, Natural Science configuration, 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 270, 271, 330	15 credits
Chemistry 114, 115, 116	15 credits
Philosophy 220 and core option	10 credits
Theology core option	5 credits

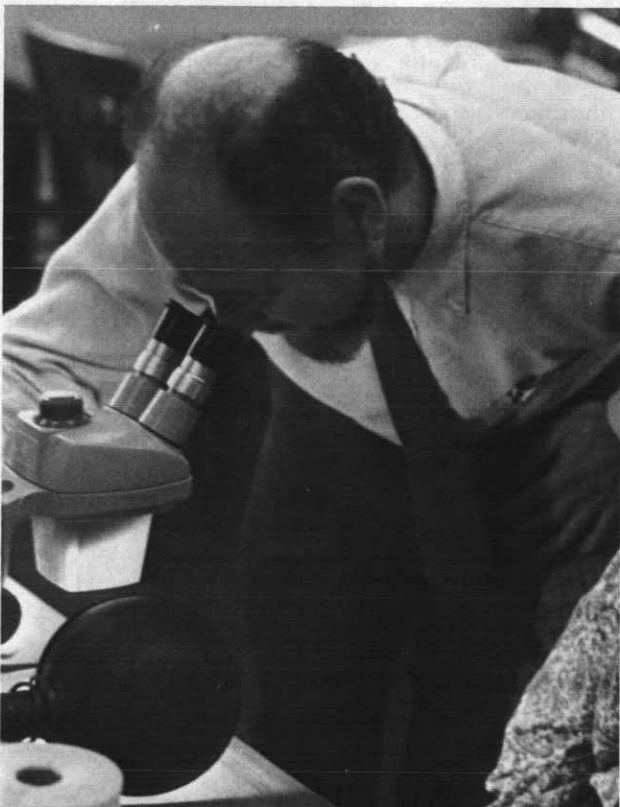
Junior year

Biology 300 and electives	15 credits
Chemistry 225, 226, 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
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Total 180 credits





Physics

John P. Toutonghi, Ph.D., Chairman

Objectives

For those who wish a career in physics, the Physics department offers a curriculum tailored to prepare the student for graduate school. The Bachelor of Science degree requirements take the student from classical mechanics through quantum mechanics, with the inclusion of several advanced laboratory courses emphasizing nuclear physics and nuclear reactor physics.

The department also offers a program leading to the Bachelor of Science in Natural Science degree in Physics. This program is intended for those who wish a broader liberal arts education in addition to a rigorous training in physical science. It prepares the student for several graduate programs in fields other than physics or for a career in the physical sciences upon graduation.

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physics

Degrees Offered

Bachelor of Science
Bachelor of Science in Natural Science
Master of Science in Natural Science

General Program Requirements

Students in physics 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.

Departmental Requirements

Bachelor of Science — 74 credits in physics which must include Ph 200, 201, 202, 310, 311, 330, 331, 332, 360, 361, 362, 375, 470, 475 or 485, 481.

Bachelor of Science in Natural Science — 50 credits in physics which must include Ph 200, 201, 202, 310, 311, 330, 331, 360, 361, 375. Premedical option: BI 150, 230, 240 and 450; Ch 235, 236 and 455. Health physics option: BI 150, 200, 210 and 450; Ch 235, 236 and 455, Ph 376 and 475.

Teaching Major (School of Education) — 45 credits of physics which must include Ph 200, 201, 202, 310, 311, 330, 331, 360, 375.

Bachelor of Science in Physics

Freshman year

English 100 and core option	10 credits
History 102-103	10 credits
Mathematics 111, 134, 135	15 credits
Physics 200	5 credits
Social Science core option	5 credits

Sophomore year

Mathematics 136 and electives	15 credits
Philosophy 110, 220	10 credits
Physics 201, 202, 362	15 credits
Theology core option	5 credits

Junior year

Philosophy core option	5 credits
Physics 310, 311, 360, 361, 481	25 credits
Theology core option	5 credits
Electives	10 credits

Senior year

Physics 330, 331, 332, 375, 470 and 475 or 485	29 credits
Electives	16 credits

Total 180 credits

Bachelor of Science in Natural Science

Freshman year

English 100 and core option	10 credits
History 102-103	10 credits
Mathematics 111, 134, 135	15 credits
Physics 109, 200	10 credits

Sophomore year

Mathematics 136 and electives	15 credits
Philosophy 110, 220	10 credits
Physics 201, 202	10 credits
Theology core option	5 credits
Elective	5 credits

Junior year

Philosophy core option	5 credits
Physics 310, 311, 375	15 credits
Social Science core option	5 credits
Theology core option	5 credits
Electives	15 credits

Senior year

Physics 330, 331, 332, 360, 361	25 credits
Electives	20 credits

Total 180 credits

Physics Courses

- Ph 101 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. (winter)
- Ph 105 Mechanics and Sound 5 credits**
Uniform motion, accelerated motion, rotational motion, energy, statics, harmonic motion, wave motion and sound. One three-hour laboratory per week. Prerequisite: Mt 112 or equivalent. (fall)
- 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. One three-hour laboratory per week. Prerequisite: Ph 105. (winter)
- Ph 107 Heat and Light 5 credits**
Source and velocity of light, reflection and refraction, dispersion and color, lenses, optical instruments, interference and diffraction, polarized light, mechanics of gases, heat and thermodynamics. One three-hour laboratory per week. Prerequisite: Ph 106. (spring)
- Ph 109 Problems in Physics 3 credits**
Training in methods of attacking, analyzing and solving problems in physics. Deals principally with problems in dynamics, elementary mechanics, statics and graphics. Prerequisite: Mt 112 or equivalent. (winter)
- 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. (fall, spring)
- 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. One three-hour laboratory per week. Prerequisites: Ph 109 or CE 102 and Mt 131 or permission. (fall, spring)
- 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. One three-hour laboratory per week. Prerequisites: Ph 200, Mt 132 or permission. (fall, winter)
- Ph 202 Waves and Modern Physics 5 credits**
Kinetic theory of gases, thermodynamics; electromagnetic waves diffraction and interference, blackbody radiation, photoelectric effect, Rutherford scattering and Bohr model of the atom. One three-hour laboratory per week. Prerequisite: Ph 201. (spring)
- 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 237 for 310; 241 for 311. (I. — fall, II. — winter)
- 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. (I — fall, II — winter)
- Ph 332 Experimental Electronics 5 credits**
Laboratory course in electronics. Two laboratories per week. Prerequisite: Ph 331. (spring)
- Ph 360 Modern Physics I 5 credits**
Ph 361 Modern Physics II 5 credits
Fundamental particles, the wave-particle paradox; uncertainty principle; Schrodinger equation, the hydrogen atom, many electron atom, the molecule and solid state. Prerequisites: Ph 202, Mt 133 for 360; 360 for 361. (I — fall, II — winter)
- Ph 362 Thermodynamics and Statistical Physics 5 credits**
Equations of state; first and second laws of thermodynamics; transfer of heat; entropy and thermodynamic functions; kinetic theory of the ideal gas; introduction to statistical mechanics. Prerequisites: Ph 202, Mt 237. (spring)
- 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. (fall)
- 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 Atomic and Nuclear Physics 5 credits**
Atomic spectra, nuclear models and forces, elementary particles. Advanced laboratory. Prerequisite: Ph 360. (Winter)
- Ph 475 Subcritical Reactor 4 credits**
The basic physics and engineering problems involving operation of a reactor. One laboratory per week. Prerequisites: Ph 360, 376 and 470. (spring)
- Ph 481 Theoretical Physics 5 credits**
An 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 241. (spring)
- Ph 485 Quantum Mechanics 4 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. (spring)
- Ph 491 Special Topics 2-4 credits**
Ph 492 Special Topics 2-4 credits
Ph 493 Special Topics 2-4 credits
- Ph 497 Independent Study 2-4 credits**
Ph 498 Independent Study 2-4 credits
Ph 499 Independent Study 2-4 credits

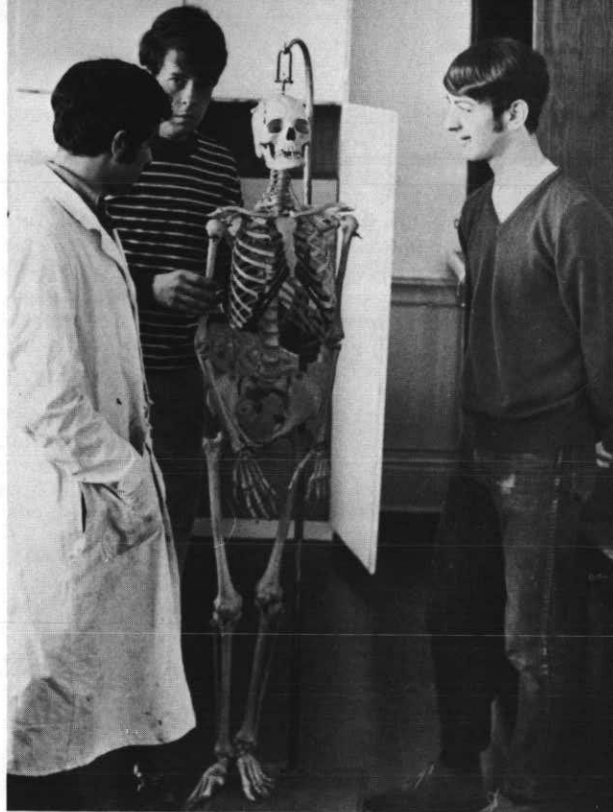
Graduate Courses

- 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.

*Offered summer only for high school teachers in the master's degree program in natural science.



Premedical and Predental

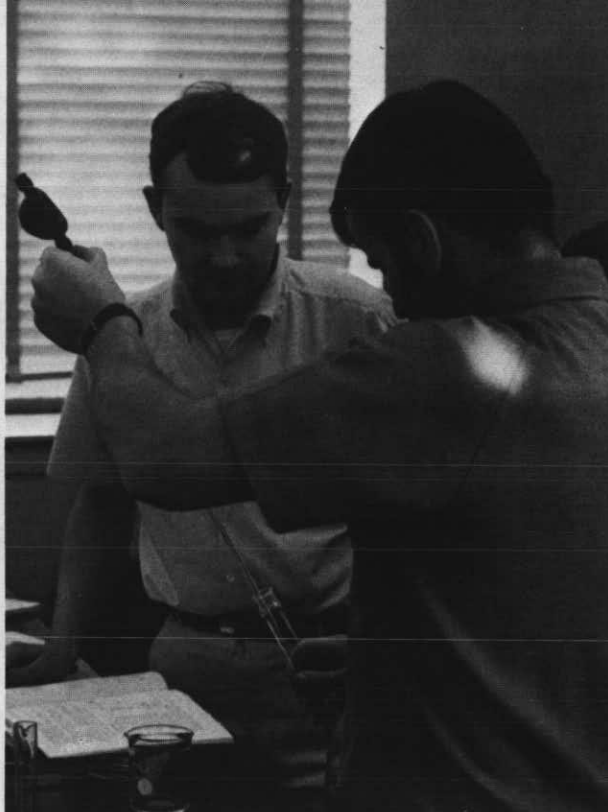
David H. Read, Ph.D., Adviser

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.



Civil Engineering

Richard T. Schwaegler, Ph.D., Chairman

Objectives

The principal objectives of the Civil Engineering department are to provide trained engineers to work in the various areas of the civil engineering profession and to provide a firm foundation for graduate study.

To accomplish these ends, analysis and design courses in the fields of hydraulic, structural, transportation and sanitary engineering are offered in addition to preparatory courses in sciences and basic mechanics. A broad base of theory is provided along with sufficient quantity of current practices of the profession.

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 192 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 134, 135, 136	15 credits
Mechanical Engineering 100, 110, 111, 112	11 credits
Philosophy 110, 220	10 credits
Physics 200	5 credits

Sophomore year

Civil Engineering 211, 221, 351	10 credits
Mathematics 233, 234	10 credits
Mechanical Engineering 271, 281	8 credits
Philosophy core option	5 credits
Physics 201, 202	10 credits
Theology core option	5 credits

Junior year

Chemistry 114, 115	10 credits
Civil Engineering 323, 331, 333, 335, 345, 353, 373, 381	26 credits
Electrical Engineering 251	4 credits
Humanities/Social Science electives	5 credits
Mathematics 114	3 credits
Theology core option	5 credits

Senior year

Civil Engineering 401, 441, 461, 471, 481, 496, 497, 498 and approved 400 courses	28-30 credits
Humanities/Social Science elective	5 credits
Mechanical Engineering 321	4 credits
Technical electives	3-5 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 of the student.
- CE 211 Engineering Measurements 3 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. (fall)
- CE 221 Strength of Materials I 4 credits**
Introduction to the mechanics of solid deformable bodies covering the relationships that exist between the external forces acting on elastic bodies and the stresses and deformations produced. Members subjected to tension, compression, flexure and torsion are studied. Three lecture and one laboratory period per week. Prerequisite: ME 271. (spring)
- 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 323 Strength of Materials II 4 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. Three lecture and one laboratory period per week. Prerequisite: CE 221. (fall)
- CE 331 Fluid Mechanics I 3 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. Three lecture hours per week. Prerequisites: ME 281, Mt 232. (fall)
- CE 333 Fluid Mechanics II 3 credits**
Application of boundary layer theory to fluid flow, including a study of flow development; analysis of potential flow, open channel flow and an introduction to the theory of hydraulic machinery. Theory verified in laboratory study. Two lecture and one four-hour laboratory per week. Prerequisite: CE 331. (winter)
- CE 335 Applied Hydraulics 3 credits**
Weekly student projects in the field of incompressible flow; pump design, hydrographic studies, graphical analysis of overflow or spillway design, model studies, varying flow analysis, economic design of pipeline projects. (spring)
- CE 345 Structural Mechanics I 3 credits**
Analysis of statically determinate girders, trusses, space-frames and cable structures for primary stresses and deflections; use of influence lines for statically determinate structures; graphic, algebraic and matrix methods. Three lectures and one problem session per week. Prerequisite: CE 221. (spring)
- CE 351 Engineering Geology 3 credits**
Elementary study of the material structure and internal condition of the earth and of the physical and chemical processes at work upon and within it as they influence engineering applications. Three lecture hours per week. Prerequisite: Sophomore standing. (winter)
- CE 353 Soil Mechanics 4 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. Three lecture and one problem session per week. Prerequisites: CE 323, 351. (spring)
- CE 373 Transportation I 3 credits**
Development of transportation systems and social and economic effects. Planning present and future systems. Methods of public and private financing. (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 335. (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. Three lecture hours per week. (spring)
- CE 441 Structural Mechanics II 3 credits**
Analysis of statically indeterminate girders, trusses and rigid frames for stresses and deflections; use of influence lines for indeterminate structures; solutions by work energy methods, slope-deflection, moment distribution and the force and displacement methods of matrix structural analysis. Three lecture and one problem session per week. Prerequisite: CE 345. (fall)
- CE 443 Structural Design I 3 credits**
CE 444 Structural Design II 2 credits
Design of a variety of types of structures in steel and wood; structural details. Four lecture hours per week. Prerequisites: CE 441 for 443; CE 443 for 444. (I-winter, II-spring)
- CE 461 Reinforced Concrete I 4 credits**
CE 463 Reinforced Concrete II 3 credits
I. Design of simply reinforced concrete beams, slabs, columns and footings; design of concrete mixes; methods of estimating volumes and cost of reinforced concrete structures. Three lecture and four laboratory hours per week. II. Design of retaining walls, footings, one-way slabs, two-way slabs, flat slabs and rigid frames; elementary concepts of ultimate-strength theory of design and prestressed concrete. Three lecture hours per week. Prerequisites: CE 321, 441, 443 for 461; 461 for 463. (I-winter, II-spring)
- CE 471 Transportation II 3 credits**
CE 472 Transportation III 3 credits
II. Geometric planning for transportation systems. Characteristics of vehicles and their operators. Safety and utility in design of systems. III. Physical design of transportation facilities including terminal facilities, mass movement of people and commodities. Administration and work maintenance. (II-fall, III-winter)
- CE 481 Liquid Waste Disposal I 4 credits**
CE 482 Liquid Waste Disposal II 3 credits
I. Sewerage and drainage systems. Examination of water and waste. Physical treatment processes. Laboratory experiments in microbial, bacteriological and chemical examination of water and wastes. Two lecture and two laboratory periods per week. II. Chemical and biological treatment, sludge disposal, disinfection, reuse of water, comprehensive planning including river basin

development. Prerequisites: Ch 315 for 481; 481 for 482. (I-fall, II-winter)

- CE 483 Industrial Waste Treatment 3 credits**
Stream pollution and self-purification. Analysis of industrial wastes. Selected field trips. Prerequisites: CE 482. (spring)
- 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 1 credit**
CE 497 Seminar II 1 credit
CE 498 Seminar III 1 credit
Each student is required to prepare a technical paper and present it orally to the class. Prerequisite: Senior standing. (I-fall, II-winter, III-spring)
- CE 499 Thesis 2 credits**
Problem in analysis or design at the level of under-graduate research. Prerequisite: Senior standing.

Graduate Courses

- CE 550 Advanced Structural Mechanics I 3 credits**
Fundamental concepts of matrix analysis of structures; review of elementary structural theory and the principle of virtual work; development and application of the basic matrix force and displacement methods of structural analysis. Course project using computer. Prerequisite: Graduate status. (biennially, fall)
- CE 551 Advanced Structural Mechanics II 3 credits**
Analysis of dynamic response of structures using matrix methods; determination of natural modes and frequencies of lumped and distributed parameter systems; application to earthquakes and moving loads; differential equation and energy methods. Course project using computer. Prerequisite: CE 550. (biennially, winter)
- CE 552 Advanced Structural Mechanics III 3 credits**
Variational and energy methods in structural and solid mechanics, application of calculus of variations and minimal principles of mechanics to non-linear structural analysis, elastic stability, theory of elasticity, plates and shells. Prerequisite: CE 551. (biennially, spring)
- CE 580 Special Studies in Civil Engineering 3 credits**
CE 581 Special Studies in Civil Engineering 3 credits
Special studies under the direction of a faculty member, for which academic credit may properly be granted. By arrangement.
- CE 582 Special Studies in Civil Engineering 3 credits**
Special studies under the direction of a faculty member. Master candidates who are not writing a thesis must register for this course and submit Special studies under the direction of a faculty member. Master candidates who are not writing a thesis must register for this course and submit an acceptable paper.



Electrical Engineering

Francis P. Wood, S.J., M.S., Chairman

Objectives

Electrical engineering deals with the applications of electricity to the generation, transmission, distribution and utilization of electric power, to measurement, to control, to computation and to communication by wire and electromagnetic waves.

The specific objective of the department does not provide for undergraduate specialization in various fields but strives to provide a broad foundation based on mathematical and scientific principles that will prepare the graduate to take his 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 — 194 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 114, 134, 135, 136	18 credits
Mechanical Engineering 100, 110, 112	8 credits
Philosophy 110, 220	10 credits
Physics 200	5 credits

Sophomore year

Electrical Engineering 251, 253	8 credits
Mathematics 233, 234	10 credits
Mechanical Engineering 271, 281	8 credits
Philosophy core option	5 credits
Physics 201, 202	10 credits
Theology core option	5 credits

Junior year

Electrical Engineering 255, 256, 311, 321, 323, 351, 353, 355, 375	28 credits
Physics 360, 361, 362	15 credits
Theology core option	5 credits

Senior year

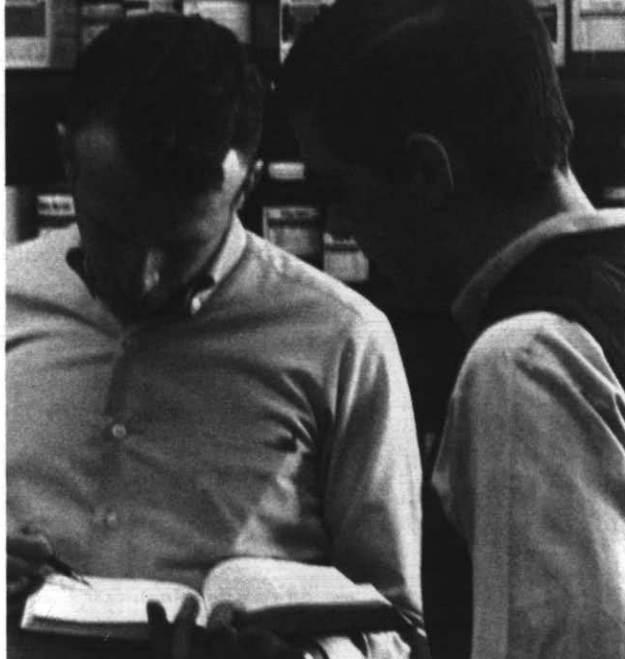
Electrical Engineering 356, 374, 411, 431, 433, 434, 441, 443, 445, 461 and 462 or 424	32 credits
Humanities/Social Science electives	10 credits
Science elective	5 credits

Total . . . 192 credits

Electrical Engineering Courses

EE 100	Introduction to Physical Analysis I	5 credits
EE 101	Introduction to Physical Analysis II	5 credits
I. Methods, philosophy and laws of physical science. Application of geometry, trigonometry and algebra in the analysis of physical problems, particularly space, matter and motion. Emphasis is placed on problem solving. II. Dynamics and energy. Wave motion. Problems selected to develop interest in science or engineering by developing analytical skills. Five lectures per week.		
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 251	Electric Circuits I	4 credits
EE 253	Electric Circuits II	4 credits
EE 255	Electric Circuits III	4 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. Three lecture and one two-hour quiz session per week. Prerequisites: Ph 200 for EE 251; EE 251 for 253; EE 253 for 255. (I-winter, spring, II-fall, spring, III-fall)		
EE 256	Electric Circuits Laboratory	2 credits
Experiments on material of EE 251 and EE 253. One lecture and one four-hour laboratory per week. Prerequisite: EE 253. (fall, winter)		

- 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 311 Seminar 0 credits**
Attendance required for junior year Electrical Engineering students. (winter)
- EE 321 Linear Systems I 3 credits**
Laplace transform techniques; functions in the complex frequency plane; analytic functions; the complex inversion integral; expansion of functions; the complex inversion integral; expansion of functions in series; inversion integral evaluation by residues; conformal field mapping. Three lecture hours per week. Prerequisite: Mt 241. Corequisite: EE 255. (fall)
- EE 323 Linear Systems II 4 credits**
Application of the frequency plane analysis to electronic networks and filter networks; introduction to non-linear analysis; introduction to network synthesis. Three lecture and one two-hour quiz session per week. Prerequisite: EE 321. (winter)
- EE 351 Elementary Electromagnetic Fields 3 credits**
Vector analysis; Gauss' theorem; curl; Stokes' theorem; scalar potential; vector potential; the electrostatic field; electric current; the magnetic field; Maxwell's hypothesis; plane waves. Three lecture and one two-hour quiz session per week. Prerequisites: Ph 201, Mt 232. (fall)
- EE 353 Electromagnetic Fields and Lines 4 credits**
Lumped circuit and field concepts; quasi-static fields and distributed circuits; steady-state waves on lossless transmission lines; transient waves on lossless transmission lines; traveling waves on dissipative transmission lines. Three lecture hours per week. Prerequisites: EE 321, 351. (winter)
- EE 355 Advanced Electromagnetic Fields 4 credits**
Natural oscillations; standing waves; resonance; waves in lossless media; waves in dissipative media; guided waves; elements of radiation. Three lecture and one two-hour quiz session per week. Prerequisite: EE 353. (spring)
- EE 356 Electromagnetic Fields Laboratory 2 credits**
Experiments on material of EE 351, EE 353 and EE 355. One lecture and one four-hour laboratory per week. Prerequisite: EE 355. (fall)
- 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.
- EE 374 Basic Electronics Laboratory 2 credits**
Laboratory problems based on characteristics of fundamental electron devices and simple amplifier and rectifier circuits. One lecture and one four-hour laboratory per week. Prerequisite: EE 256. (fall)
- EE 375 Electrical Engineering Materials 4 credits**
Dielectric and magnetic materials; frequency characteristics, losses, linear, non-linear effects, thermal properties, breakdown characteristics, hysteresis, piezo-electric and magnetostrictive properties. Devices; energy storage elements and converters, saturable memory elements, timing devices. Semi-conductor devices; junction and diffusion capacitances, thermal, radiation, frequency effects, avalanche, Zener, punch-through breakdown. Diode, transistor, multilayer devices, integrated circuit characteristics and construction techniques. Prerequisite: Ph 361. (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 424 Advanced Electronics Laboratory 2 credits**
Laboratory problems demonstrating applications of electron devices in tuned and broadband amplifiers, power amplifiers, oscillators; sweep generators and multivibrators. One lecture and one four-hour laboratory per week. Prerequisites: EE 441, 443. (spring)
- EE 431 Electromechanical Energy Conversion I 4 credits**
- EE 433 Electromechanical Energy Conversion II 4 credits**
Electromechanical energy conversion principles; transformers, rotating machines, electromechanical energy conversion devices such as electromagnets, loud speakers. Three lecture and one two-hour quiz session each week. Prerequisites: EE 323, ME 281; EE 431 for 433. (I-fall, II- winter)
- EE 434 Electromechanical Energy Conversion Laboratory 2 credits**
Experiments based on material of EE 431 and EE 433. One lecture and one four-hour laboratory per week. Corequisite: EE 433. (winter)
- EE 441 Semiconductor Circuits I 4 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 375. (fall)
- EE 443 Semiconductor Circuits II 4 credits**
Linear power amplifiers; push-pull, complementary 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 443. (spring)
- EE 461 Control Systems** 3 credits
Analysis and design of closed-loop control systems with emphasis on stability and transient response using Nyquist, Bode and s-plane analysis. Three lecture hours per week. Prerequisites: EE 323, 433, 434.
- 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 374, 443 and 461 (concurrently). (spring)
- EE 481 Solid State Theory** 4 credits
Review of elementary quantum physics; energy bands and carrier statistics; theory of junction devices; periodic structures and energy bands; transport theory; semiconductor parameters. Three lecture and one two-hour quiz session per week. Prerequisites: EE 355, 443.
- EE 483 Non-Linear Analysis** 4 credits
Introductory course treating numerical, graphical and analytical solutions; analysis of singular points, differential-difference equations. Three lecture and one two-hour quiz session per week. Prerequisites: EE 321, Mt 241.
- EE 485 Modulation and Noise** 4 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. Three lecture and one two-hour quiz session per week. Prerequisites: EE 321, 443.

- EE 487 Pulse and Digital Circuits** 4 credits
Relationships between pulse shape and transmission characteristics of systems; pulse amplifiers and shapers; timing circuits; counters and registers; Boolean Algebra; digital computer circuits; memory devices. Three lecture and one two-hour quiz session per week. Prerequisite: EE 445.
- EE 489 Special Topics** 1-4 credits
EE 490 Special Topics 1-4 credits
Current topics in Electrical Engineering not normally covered in the undergraduate curriculum. Prerequisite: Senior standing.

Graduate Courses

- EE 501 Control Systems I** 3 credits
EE 502 Control Systems II 3 credits
EE 503 Control Systems III 3 credits
I. Analysis and design of linear systems; a review of mathematical tools including Laplace transforms, block diagrams and signal flow graphs; performance criteria; stability criteria including Nyquist, Bode, s-plane and root locus methods; statistical design. II. Statistical design; non-linear system analysis and design including describing functions, phase-plane and state-space methods. III. Sampled-data systems and z-transform theory; an introduction to optimal and adaptive systems. Prerequisites: EE 323 and 461 or equivalent, for 501; 501 for 502; 502 for 503. (biennially; I-fall, II-winter, III-spring)
- EE 507 Introduction to Engineering Analysis** 3 credits
Matrices, determinants, integral solution of boundary value problems, approximate evaluation of integrals, sampling theorem, introduction to probability; set theory, set functions, probability measure, probability distributions, joint and conditional probability, random variables and functions, error analysis in engineering measurements. Prerequisite: Mt 461 or permission. (winter)
- EE 508 Engineering Analysis II** 3 credits
Spectral analysis, correlation, autocorrelation, moments and statistical averaging, characteristic functions, noise generation in electronic components, treatment of noise in electronic systems, fundamental concepts of information transmission, Shannon's theorem and channel capacity. Prerequisite: EE 507. (fall)
- EE 511 Advanced Networks** 3 credits
Basic network analysis concepts: matrix representation of network functions for n-port and n-terminal networks, terminated and combined networks, basic network topology and solution techniques, recognition and synthesis of simple driving-point functions. Prerequisite: Graduate standing.
- EE 512 Network Synthesis I** 3 credits
Fundamentals of network synthesis; mathematical techniques of synthesis, positive real functions and matrices, realizability conditions, realization of driving-point functions for two-element-kind networks. Prerequisite: Graduate status. (fall)

- EE 513 Network Synthesis II** **3 credits**
Synthesis of general driving-point functions; methods of approximation, Butterworth, Bessel, Chebychev polynomials applied to filter design; transfer function synthesis, elements of time-domain synthesis. Prerequisite: EE 512. (winter)
- EE 514 Active Network Synthesis** **3 credits**
Basic theoretical active and non-reciprocal elements, properties of linear active networks. Synthesis of one-port and two-port RC active networks employing controlled sources, negative-impedance converters or negative resistors and gyrators. Prerequisite: EE 513. (spring)
- EE 515 Physical Electronics I** **3 credits**
Atomic structure and introduction to quantum mechanics, electronic conduction in solids, electron emission, semi-conductor devices, conduction in vacuum and gas, plasmas and media breakdown. Prerequisite: Graduate standing. (biennially, winter)
- EE 516 Physical Electronics II** **3 credits**
Dielectric and optical properties of insulators, ferroelectrics, diamagnetism, paramagnetism, ferromagnetism, antiferromagnetism, ferrimagnetism, relaxation and resonance phenomena. Prerequisite: EE 515 or permission. (biennially, spring)
- EE 517 Electromagnetic Fields** **3 credits**
Fundamental concepts: Maxwell's equations, generalized currents, energy and power, circuit concepts and elements, boundary conditions. Wave theory: scalar wave equation, waves in dielectrics and conductors, boundary effects, waveguide and resonator concepts, radiation and antenna concepts. Fundamental source theorems and uniqueness concepts. Construction of solutions by generating function techniques, applications in different geometries. (spring)
- EE 521 Mathematical Techniques of Electromagnetic Theory I** **3 credits**
- EE 522 Mathematical Techniques of Electromagnetic Theory II** **3 credits**
Problems selected from areas of propagation and diffraction of electromagnetic waves of current interest. Wiener-Hopf technique, asymptotic forms, the Sommerfeld problem of the radiation from a short dipole over a conducting earth. Prerequisite: EE 517 for 521; 521 for 522. (biennially; I-fall, II-winter)
- EE 523 Mathematical Techniques of Electromagnetic Theory III** **3 credits**
Seminar on mathematical papers in electromagnetic theory in the recent literature which employ modern techniques. Prerequisite: EE 522. (biennially, spring)
- EE 526 Wave Generation and Shaping** **3 credits**
Analysis of active circuits which contain energy storage and significant non-linearities. Applications selected from various circuit design problems as diode wave shaping, logic gates, timing and sweep circuits, memory elements, and oscillators. Emphasis on techniques that are useful for a variety of active elements, vacuum tubes, transistors, various semi-conductor diodes, controlled rectifiers while also considering device limitations. Prerequisite: Graduate standing.
- EE 532 Theory of Random Signals and Noise** **3 credits**
Treatment of smoothing and prediction in optimum linear systems, least-mean-square error criterion, maximizing of signal-to-noise ratio, matched filters, envelope detectors, square-law detectors and optimum time-variable filters. Prerequisite: EE 508. (biennially, winter)
- EE 535 Statistical Theory of Signal Detection** **3 credits**
Review of basic concepts associated with filters, signals and noise; statistical detection of signals of known phase and arrival time; investigation of detection of signals of random phase and arrival time. Concepts of false alarm rate, multiple observation, maximum likelihood ratio, Bayes criterion, Neyman-Bearson criterion and theory of estimation. Prerequisites: Elementary network theory and Mt 462 or equivalent.
- EE 541 Microwave Circuits and Techniques** **3 credits**
Microwave circuit theory developed from transmission line viewpoint. Waveguide discontinuities and equivalent circuits, ferrites and crystals as circuit elements. Mathematical techniques, Green's function, variational principle, Ritz method and perturbation developed as they arise. Prerequisite: EE 517 (biennially, fall)
- EE 543 Antennas and Radio Wave Propagation** **3 credits**
Basic properties of antennas and linear arrays, radio propagation in plasma and atmosphere. Fresnel integrals, saddle point and stationary phase methods. Prerequisite: EE 541. (biennially, winter)
- EE 545 Microwave Electronics** **3 credits**
Electron devices at microwave frequencies; formation and control of electron beams and interaction with time-varying fields, space charge waves, traveling-wave interactions in one-dimensional systems. Basic concepts of klystron and traveling-wave devices. Prerequisite: Graduate standing.
- EE 547 Measurements Laboratory** **3 credits**
Selected laboratory problems to illustrate quantitative techniques and precision in electrical measurements with particular emphasis on microwave frequencies. One three-hour laboratory and one and one-half lecture hours per week. Prerequisite: Graduate standing. (biennially, spring)
- EE 580 Special Studies** **3 credits**
- EE 581 Special Studies** **3 credits**
Special studies under the direction of a faculty member, for which academic credit may properly be granted. By arrangement.
- EE 582 Special Studies** **3 credits**
Special studies under direction of a faculty member. Master candidates who are not writing a thesis must register for this course and submit an acceptable paper.
- EE 590 Master's Thesis** **3, 4 or 10 credits**
Research in electrical engineering culminating in the writing of a thesis. Prerequisite: Admission to candidacy for degree M.S. in E.E.

Mechanical Engineering

Harry Majors, Jr., M.S., Chairman

Objectives

The mechanical engineer is concerned with the fundamental properties of solids, liquids and gases related to the creative design and manufacture of machines, heat engines, electro-mechanical devices and control systems. He is concerned with the broad area of energy conversion as related to the design of machines. This requires working with the processes of combustion, nuclear and chemical reactions, solar radiations, propulsion systems for sea, land and space and all types of materials under a vast array of conditions.

A mechanical engineer may enter positions in research and development, design engineering, salesmanship, and, with experience, executive positions in industry.

Degrees Offered

Bachelor of 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 — 192 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.

Nuclear Engineering Option — Students who desire to work in the field of nuclear engineering or to pursue graduate study in that area may with the permission of the department chairman substitute appropriate undergraduate courses in physics for some of the required mechanical engineering courses.

Bachelor of Mechanical Engineering

Freshman year

English 100 and core option	10 credits
Mathematics 134, 135, 136	15 credits
Mechanical Engineering 100, 110, 111, 112	11 credits
Philosophy 110, 220	10 credits
Physics 200	5 credits

Sophomore year

Civil Engineering 221	4 credits
Electrical Engineering 251	4 credits
Mathematics 233, 234	10 credits
Mechanical Engineering 269, 270, 271, 281, 291	13 credits
Philosophy core option	5 credits
Physics 201, 202	10 credits

Junior year

Chemistry 114, 115	10 credits
Civil Engineering 323, 331, 333	10 credits
Electrical Engineering 253, 256	6 credits
Mathematics 114	3 credits
Mechanical Engineering 321, 322, 371, 380, 398	15 credits
Theology core option	5 credits

Senior year

Humanities/Social Science electives	10 credits
Mechanical Engineering 426, 430, 472, 481, 484, 496, 497, 498	22 credits
Technical electives	10 credits
Theology core option	5 credits

Total . . . 193 credits

Mechanical Engineering Courses

ME 100	Logarithms and Slide Rule	0 credit
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. Hours arranged. (fall)		
ME 110	Engineering Problems	3 credits
Presentation of engineering papers. Dimensional analysis. Handling of data. Vector algebra. Free body diagrams; static equilibrium. Engineering reports. Three lecture and two one-hour problem sessions per week. (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. (spring)		
ME 112	Engineering Graphics and Design	3 credits
Graphical calculus. AVS diagrams; graphs and diagrams; nomograms. (winter)		
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 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 271	Mechanics I, Statics	4 credits
Principles of statics with application to elementary machine design and structural problems; composition and resolution of force systems; theory of static equilibrium, work-energy methods; principle of virtual work; mass centers, centers of gravity and centroids; area moments and products of inertia; Mohr's circle; applications to fluid statics, friction in machine elements, trusses and beams; introduction to deformable		

bodies; methods of vector algebra. Three lecture and one two-hour problem session per week. Prerequisites: ME 112, Ph 200. Corequisite: Mt 231. (fall, winter)

ME 281 Mechanics II, Dynamics 4 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. Three lecture and one two-hour problem session per week. Prerequisite: ME 271. Corequisite: Mt 232. (winter, spring)

ME 291 Mechanics III, Dynamical Analysis 3 credits

Application of first principles of the kinematic analysis of mechanisms and the dynamic analysis of machines; rolling and sliding bodies in contact, mechanism trains, linkages and principles of dynamic balancing; introduction to kinematic synthesis. Three lectures per week. Prerequisite: ME 281. Corequisite: Mt 341. (spring)

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 4 credits

ME 322 Engineering Thermodynamics II 4 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. Four lecture hours per week. Prerequisites: CE 331, Mt 341, Ph 202 for 321; 321 for 322.

ME 371 Machine Design I 4 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. Four lecture hours per week. Prerequisites: ME 291, CE 323, 333. (spring)

ME 380 Heat and Mass Transfer I 3 credits

Introduction to the theory of heat flow by conduction; convection and radiation; dimensional analysis. Three lecture hours per week. Prerequisites: ME 321, CE 333. (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 4 credits

ME 426 Power Plants II 4 credits

ME 427 Power Plants III 4 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. Three lecture and four laboratory hours per week. Prerequisites: ME 322, 380 for 425; 426 for 427. (I-fall, II-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 430 Principles of the Properties of Materials I 3 credits

ME 431 Principles of the Properties of Materials II 3 credits

Atomic structure of elements. The metallic bond. Structure of metals and non-metals. Equilibrium diagrams. Time-dependent transformations. Elastic and plastic deformations. Relation of structure to properties. (I-fall)

ME 472 Machine Design II 4 credits

ME 473 Machine Design III 4 credits

ME 474 Machine Design IV 4 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 3 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. Two lecture and four laboratory hours per week. Prerequisites: CE 333, ME 371.

ME 478 Compressible Flow I 3 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. Three lecture hours per week. Prerequisites: CE 333, ME 322.

ME 479 Theoretical Hydrodynamics 3 credits

Ideal fluid motions; Euler's equation of motion and continuity equation, boundary conditions. Potential flow; velocity potential, stream function, Laplace equation, hydrodynamic singularities, two and three dimensional flow examples. Conformal transformation; complex potential, complex ve-

locity, Blasius theorem, flow about cylinders and air foils. Free Streamline flow; Schwartz-Christoffel theorem. Vortex motion.

ME 481 Heat and Mass Transfer II 4 credits
Use of analogue and digital computer; numerical methods; mass transfer; diffusion. Three lecture and four laboratory hours per week. Prerequisite: ME 380. (fall)

ME 484 Linear Systems Analysis 4 credits
Application of Laplace transforms to linear systems. Three lecture and four laboratory hours per week. Prerequisites: ME 322, 371, CE 333. (winter)

ME 485 Control Systems I 4 credits
Analysis and design of linear control systems with emphasis on transient and frequency response. Three lecture and four laboratory hours per week. Prerequisite: ME 484. (spring)

ME 491 Special Studies 2-4 credits

ME 492 Special Studies 2-4 credits

ME 493 Special Studies 2-4 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 1 credit

ME 497 Seminar 1 credit

ME 498 Seminar 1 credit
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.

ME 521 Advanced Fluid Mechanics I 3 credits

ME 522 Advanced Fluid Mechanics II 3 credits

ME 523 Advanced Fluid Mechanics III 3 credits
I. Incompressible flow; continuity and equations of motion; irrotationality; velocity potential and stream function; sources, sinks, vortex flow; speed of sound. II. Compressible flow; one-dimension flow; wave propagation; oblique shock waves; flow in ducts and tunnels; two-dimensional flow; small-perturbation theory; airfoils; Prandtl-Glauert rules. III. Two-dimensional compressible flow; methods of characteristics; effects of friction and conductivity; boundary layer; unsteady flow. Prerequisites: Graduate standing and undergraduate course in fluid mechanics (CE 331); ME 521 for 522; 522 for 523. (biennially; I-fall, II-winter, III-spring)

ME 531 Elasticity and Mechanics of Materials I 3 credits

ME 532 Elasticity and Mechanics of Materials II 3 credits

ME 533 Elasticity and Mechanics of Materials III 3 credits

ME 534 Elasticity and Mechanics of Materials IV 3 credits

ME 535 Elasticity and Mechanics of Materials V 3 credits
I. Mathematical theory of elasticity; stress and strain tensor; Hooke's law; experimental tech-

niques; stress concentration; strain energy methods. II. Applications of theory to beams, wedges, disks and curved bars; photo-elasticity; strain energy methods; rotating parts. III. Failure theories; brittle fracture; laws of plasticity; comparison of plasticity and elasticity theories; elastic stability. IV. Elastic theory and stability of beams, columns, plates and shells; dynamic loads on structures. V. Plastic buckling; numerical methods. Prerequisites: ME 531 for 532; 532 for 533; 533 for 534; 534 for 535. (biennially; I-fall, II-winter, III-spring)

ME 541 Heat Transfer I 3 credits

ME 542 Heat Transfer II 3 credits

ME 543 Heat Transfer III 3 credits
I and II. Mathematical theory of heat conduction in one, two and three dimensions; unsteady state; fundamentals of convection; heat transfer by radiation. III. Change in phase; interrelationship between flow of heat and fluids; mass transfer; extreme temperatures and pressures; high-speed air flow. Prerequisites: ME 523 for 541; 541 for 542; 542 for 543. (biennially; I-fall, II-winter, III-spring)

ME 551 Thermodynamics I 3 credits

ME 552 Thermodynamics II 3 credits

ME 553 Thermodynamics III 3 credits
I. Review of thermodynamic relations; kinetic theory of an ideal gas; distribution of molecular velocities; statistical thermodynamics; probability. II. Maxwell-Boltzmann statistics; partition functions and relationship to thermodynamic properties. III. Spectroscopic measurements; specific heat of gases; compressed gases and liquids; solid phase; chemical systems; fluctuations; irreversible processes. Prerequisites: Graduate standing and undergraduate courses in fluid mechanics and thermodynamics for 551; 551 for 552; 552 for 553. (biennially; I-fall, II-winter, III-spring)

ME 561 Dynamics I 3 credits

ME 562 Dynamics II 3 credits

ME 563 Dynamics III 3 credits
I. Foundations of classical mechanics; Hamilton's principle; Lagrange's equation of motion; vibration problems in engineering; numerical procedures. II. Vibration problem in engineering; gyroscopic action; equivalent systems; theory of measurements; numerical procedures. III. Propagation of waves in solids; instrumentation for studies in dynamics; numerical procedures; non-linear systems. Prerequisites: ME 561 for 562; 562 for 563. (biennially; I-fall, II-winter, III-spring)

ME 580 Special Studies 1-3 credits

ME 581 Special Studies 1-3 credits

ME 582 Special Studies 3 credits
Special studies under the direction of a faculty member. By arrangement. Master's degree candidates who are not writing a thesis must register for ME 582 and submit an acceptable paper.

ME 590 Master's Thesis 3, 4 or 10 credits
Research in mechanical engineering or applied mechanics culminating in the writing of a thesis. Prerequisite: Admission to candidacy for the Master of Science in Mechanical Engineering degree.



The 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



The University Administration

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J. Brian Cullerton, B.A.

Director of Urban Affairs

James D. La Cour, B.A.

Youth Coordinator

Charles H. Mitchell, B.A.

*Director,
Minority Student Affairs*

Anthony B. Ogilvie, Jr.

*Assistant Director,
Minority Student Affairs*

Mary M. Ridge, B.A.

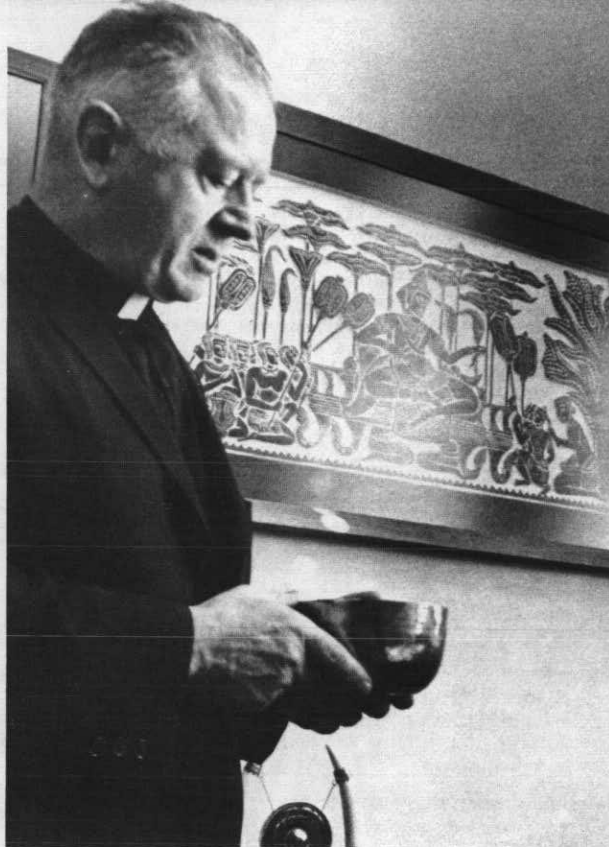
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Director of Financial Aid and Director of Special Events

Clair A. Marshall, S.J., M.S.

*Veterans Coordinator,
Assistant Director of Financial Aid*



John R. Talevich, M.A.

Director of Publications

Edward J. O'Brien, B.C.S.

Director of Athletics

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Head Basketball Coach

David K. Elder, M.Ed.

*Acting Director,
Counseling and Testing Center*

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Director, Computer Center

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Alumni Director

Frederic A. Cordova, B.S.S.

Director of Public Information

Genevieve Weston, A.B.

Director, University Bookstore

Michael J. Schreck, B.C.S.

*Director,
Physical Plant and General Services*

Joseph G. Burgher, M.B.A.

*Assistant Director
for General Services*

Jeremy W. Reed, B.S.

Director of Systems

Raymond L. Nichols, S.J., Ph.D.

Superintendent of Grounds

Edward S. Favilla, S.J.

*Associate Director
of Admissions*

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*Associate Director
of Admissions*

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*Assistant Director
of Admissions*

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Coordinator of Development

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.

James R. Albers, Ph.D. (1962)†

Associate Professor of Physics
B.S., 1956, Washington State University; M.S., 1958, George Washington University; Ph.D., 1962, University of Washington.

Lewis E. Aldrich, Jr., Ph.D. (1968)

Chairman, Biology Department
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 Phonétique Francaise de la Sorbonne, Université de Paris, 1954; Ph.D., 1955, Catholic University of Paris.

Engelbert M. Axer, S.J., Ph.D. (1941; 1955)

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.

Edward J. Baldinger, M.S. (1957)

Professor of Civil Engineering
B.S., 1940, Notre Dame University; M.S., 1951, University of Michigan; Registered Professional Engineer.

Walter E. Barbee, M.Ed. (1970)

Assistant Professor of Education
B.A., 1949, University of Washington; M.Ed., 1969, Seattle 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)†

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)

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)†**

Assistant Professor of English
B.A., 1961, University of Idaho; M.A., 1962, Ph.D., 1968, University of Connecticut.

Robert I. Bradley, S.J., Ph.D. (1961)

Dean, College of Arts and Sciences
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.

Dennis M. Cantwell, M.A. (1963; 1966)

Instructor in Philosophy
B.S., 1962, Seattle University; M.A., 1967, 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.

George J. Cetinich, M.A. (1965)

Assistant Professor of German
B.S., 1953, University of Oregon; Zertifikat, 1958, Diplom, 1959, University of Heidelberg; M.A., 1964, 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)**
Chairman, Fine Arts Department
Associate 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, D.B.A. (1967)†**
Dean, School of Business
Professor of Accounting
B.S., 1953, University of South Dakota; M.B.A., 1957, University of Minnesota; D.B.A., 1965, University of Washington.
- Woodrow R. Clevinger, Ph.D. (1960)**
Professor of Marketing
B.A., 1938, M.A., 1940, Ph.D., 1955, 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.
- Raymond T. Cole, M.B.A. (1969)†**
Assistant Professor of Business
B.A., 1949, M.B.A., 1955, University of Washington.
- *James V. Connors, S.J., M.A. (1961)**
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.
- William W. Cooley, Ph.D. (1964)†**
Associate Professor of Electrical Engineering
B.S., 1954, M.S., 1961, Ph.D., 1966, University of Washington, Registered Professional Engineer.
- John T. Corcoran, Maj., A.B. (1969)**
Assistant Professor of Military Science
A.B., 1959, Loyola College, Baltimore.
- 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.
- 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.
- Rosario T. DeGracia, M.S. (1963)**
Assistant Professor of Nursing
B.S.N., 1954, University of the Philippines; M.S., 1959, Western Reserve University.
- Hugh A. L. Dempsey, Capt., B.S. (1969)**
Assistant Professor of Military Science
B.S., 1963, University of Oklahoma.
- Roger A. Desmarais, S.J., M.A. (1968)**
Instructor in Theology
Director, SUMORE
B.A., 1959, M.A., 1962, Gonzaga University; S.T.L., 1968, St. Mary's, Halifax; M.A.R.E., 1969, Loyola University, Chicago.
- 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, D.B.A. (1969)†**
Associate Professor of Accounting
B. Com., 1951 University of Cairo; M.A., 1955, University of Alexandria; M.A., 1964, D.B.A., 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)**
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.
- Carol Ann Durr, B.S.N. (1969)**
Instructor in Nursing
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A.B., 1913, M.A., 1914, Gonzaga University; Ph.D., 1923, S.T.D., 1923, Valkenburg, Holland; Mag. Ag., 1927, Gregorian.
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A.B., 1923, M.A., 1924, Gonzaga University; S.T.D., 1931, Gregorian; Ph.D., 1935, University of Washington.
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- James D. Miller, SSG (1968)**
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Associate Professor of Sociology
B.A., 1947, University of North Carolina; M.A., 1950, Ph.D., 1954, University of Wisconsin; B.D., 1959, Seabury-Western Theological Seminary.
- Joseph B. Monda, Ph.D. (1955; 1961; 1968)†**
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Director of Athletics
Baseball Coach
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Associate Dean, School of Education
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B.S., 1939, Cortland State Teachers College; M.S.Ed., 1941, Syracuse University; Ed.D., 1954, University of Washington.
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Associate Professor of Theology
A.B., 1943, M.A., 1944, Gonzaga University; S.T.B., 1951, Alma College.
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Assistant Professor of Theology
B.A., 1955, Gonzaga University; S.T.L., 1962, Alma College; M.A., 1962, University of Santa Clara; S.T.D., 1968, Gregorian University.
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Associate Professor of History
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- Joseph T. Page, Ph.D. (1955)**
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- Giuseppe G. Patelli, D.C.S., C.P.A. (1950)**
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Director of Admissions
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B.A., 1947, Western Washington State College; M.A., 1953, Columbia University.
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B.S., 1938, Seattle University; M.S., 1958, Ph.D., 1966, University of Washington.
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Chairman, Mathematics Department
Professor of Mathematics
B.S., 1954, M.A., 1956, Ph.D., 1965, University of Washington.
- Barbara M. Yates, Ph.D. (1970)†**
Assistant Professor of Economics
B.A., 1962, College of Wooster; M.A., 1963, Ph.D., 1969, University of Michigan.
- Anita Yourglic, Ph.D. (1946)†**
Chairman, Sociology Department
Professor of Sociology
B.S., 1945, Seattle University; M.A., 1948, St. Louis University; Ph.D., 1961, University of Oregon.
- Gary A. Zimmerman, Ph.D. (1964)†**
Associate Professor of Chemistry
B.S., 1960, California Institute of Technology; Ph.D., 1965, University of Wisconsin.

University Lectures

- Michael N. Acres, B.S. (1970)**
Graduate Assistant Coach
B.S., 1967, Seattle University.
- Ann M. Birnbaum, Ph.D., (1970)**
Lecturer in German
B.A., 1962, Reed College; M.A., 1963, Ph.D., 1968, University of Washington.
- Dorothy G. Blystad, B.A. (1963)**
Lecturer-Supervisor
B.A., 1947, Colorado University.
- David W. Boisseau, M.D. (1963)**
Lecturer in Biology
B.A., 1939, University of Chicago; M.D., 1943, Boston University.
- Catherine E. Boroughs, B.A. (1964)**
Lecturer-Supervisor
B.A., 1939, Western Washington College.
- Eudora E. Chikwendu, M.A. (1970)**
Lecturer in Political Science
B.A., 1966, Bryn Mawr; M.A., 1969, University of Washington.
- Robert E. Colbert, M.A. (1970)**
Lecturer in History
B.A., 1930, M.A., 1944, Howard University.
- D. Richard Greene, M.S.S.A. (1970)**
Assistant Director, Community Services Program
B.A., 1967, Hiram College; M.S.S.A., 1969, Case-Western Reserve University.
- Ernest F. Harrison, M.B.A. (1969)**
Lecturer in Business
B.A., 1956, M.B.A., 1961, University of Washington.
- Arthur A. Jacobovitz, Rabbi, B.A. (1961)**
Lecturer in Theology
B.A., 1953, Yeshiva University.
- Tempie D. Jones, M.A. (1970)**
Lecturer in Political Science
B.A., 1965, M.A., 1967, University of Washington.

James S. Ketchel, M.B.A. (1969)

Lecturer in Business

B.B.A., 1952, City University of New York; M.B.A., 1954, University of Pennsylvania.

Charles N. Lester, M.D. (1961)

Lecturer in Nursing

B.A., 1928, M.D., 1934, University of Colorado; M.P.H., 1960, University of California.

Katherine E. Maxwell, B.A. (1968)

Lecturer-Supervisor

B.A., 1941, University of Washington

Joanne L. Schuck, M.A. (1967)

Lecturer in Education

B.S., 1954, Seattle University; M.A., 1963, Columbia University.

William G. Simmons, M.A.T. (1970)

Lecturer in English

B.A., 1949, University of Colorado; M.A.T., 1969, Seattle University.

Evalyn J. Taylor, Ph.D. (1963; 1970)

Lecturer in Psychology

B.Sc., 1956, Seattle University; M.S., 1959, Ph.D., 1962, University of Portland.

David E. Tinius, M.B.A. (1970)

Lecturer in Business

B.S.M.E., 1960, M.B.A., 1964, University of Washington.

William C. Towner, M.S. (1969)

Lecturer-Supervisor

B.S., 1947, M.S., 1950, University of Washington.

John R. W. Wilby, M.Sc. (1967)

Lecturer in Business

B.Sc., 1928, M.Sc., 1929, University of Leeds.



SEATTLE UNIVERSITY CHAIRS

The following perpetual Chairs were established in 1968 and 1969 and will be filled by faculty members chosen each year by the deans and chairmen of the selected departments:

1968 Robert and Miriam Kinsey Chair of Fine Arts

1968 Therese B. Clein Chair of Philosophy

1968 Margaret S. Snyder Chair of Theology

1968 Theiline Pigott McCone Chair of History

1969 John and Zita Maloney Chair of Economics

1969 Harry and Florence Beyma Chair of Economics

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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:

Where to Write

Correspondence relating to the general interest of the university:

**Very Reverend Father
 President**

Communications regarding curriculum, 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 Resi-
 dence Services**

Women: Dean of 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, Publicity:

University Relations

Readmissions:

Registrar

Scholarships, Student Loans:

Director of Financial Aid

Teachers' Certification and Placement:

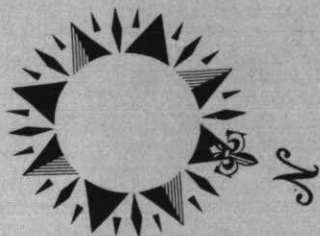
**Dean of the School of
 Education**

Transcripts, Student Records,
 Grades:

Registrar

Tuition, Payment of Bills, Refunds:

Treasurer



TO OR FROM FREEWAY

EAST JAMES WAY

BROADWAY

10TH AVENUE

11TH AVENUE

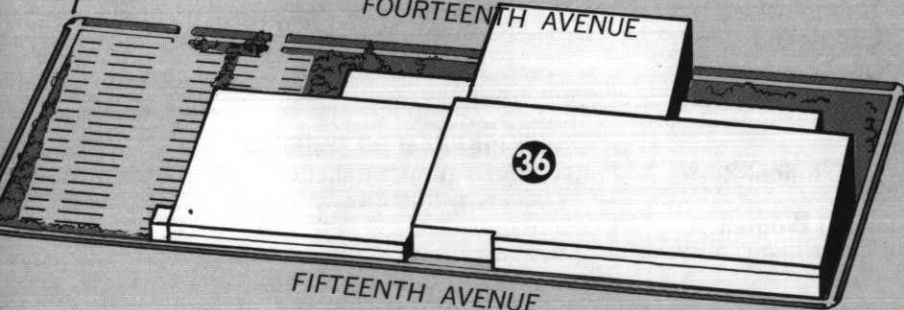
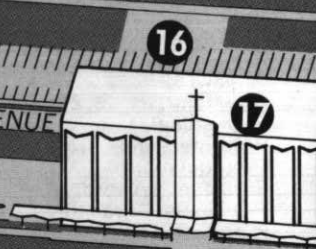
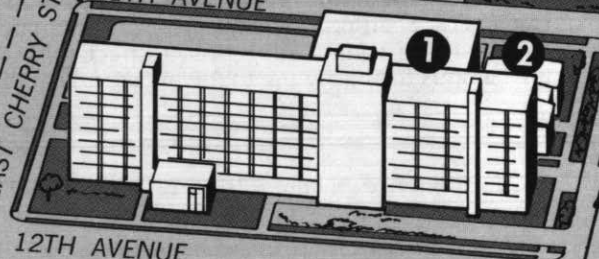
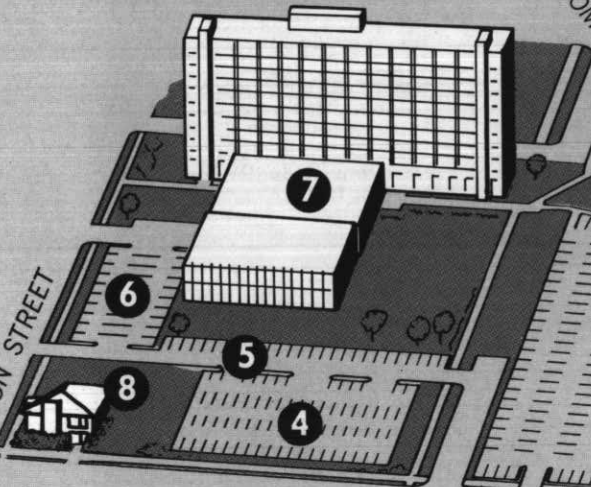
12TH AVENUE

FOURTEENTH AVENUE

FIFTEENTH AVENUE

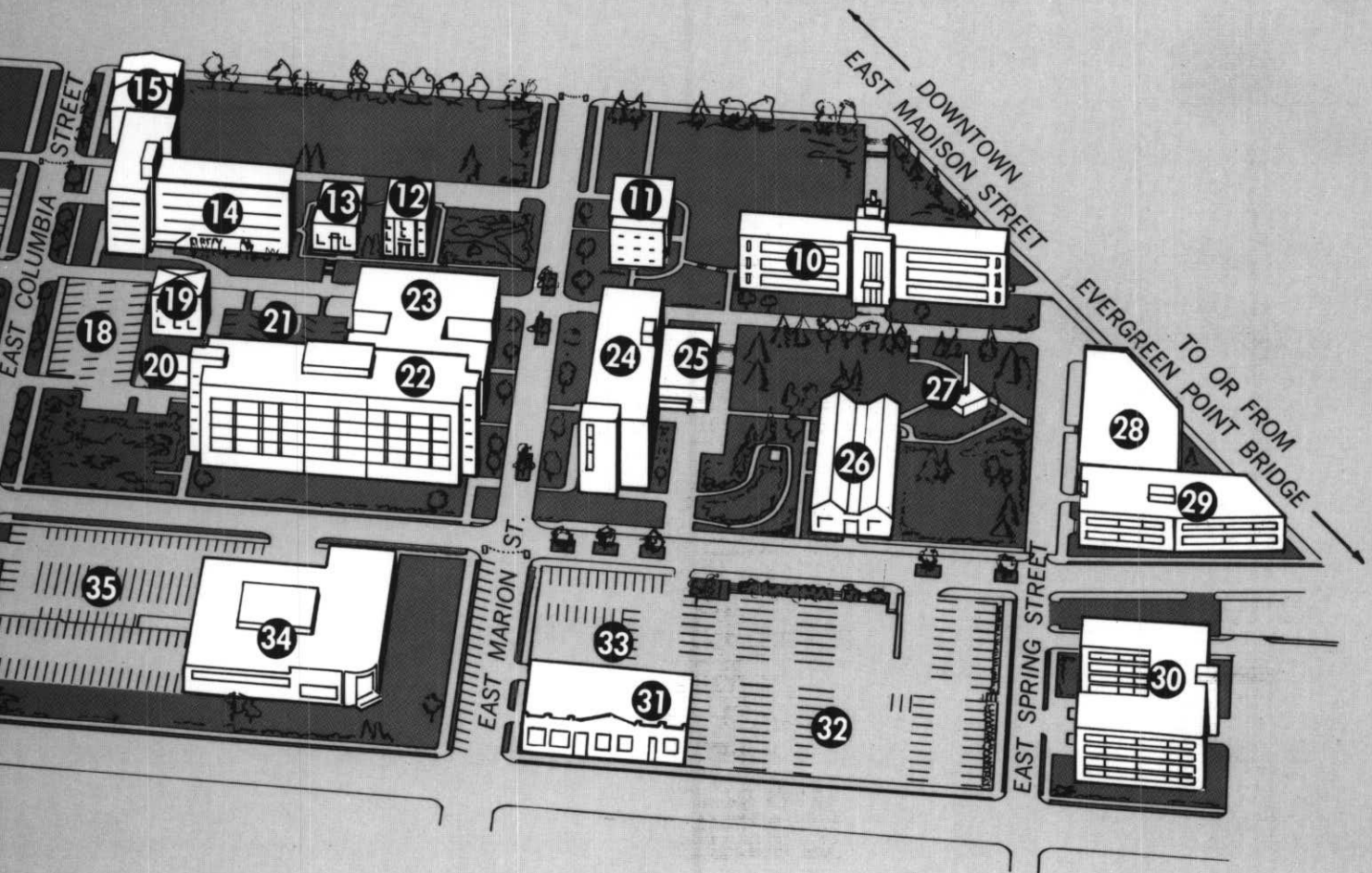
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ISLAND FLOATING BRIDGE

ENTER CAMPUS
HERE



Campus Guide

- | | | |
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| 1. Bellarmine Hall | 14. Loyola Hall | 26. Buhr Hall |
| 2. 1107 East Columbia | 15. Teatro Inigo | 27. Sculpture Lab |
| 3. Student Parking | 16. 400-Parking | 28. Engineering Building |
| 4. Student Parking | 17. A. A. Lemieux Library | 29. Student Union |
| 5. Student Parking | 18. 300-Parking | 30. Xavier Hall |
| 6. Student Parking | 19. ROTC Headquarters | 31. Maintenance Shop |
| 7. Campion Tower | 20. Alumni House | 32. 100-Parking |
| 8. 1020 East Jefferson | 21. 300-Parking | 33. 100-Parking |
| 10. Liberal Arts Building | 22. Thomas J. Bannan Building | 34. University Bookstore |
| 11. Garrand Building | 23. Marian Hall | 35. Visitor 200-Parking |
| 12. McCusker Building | 24. William Pigott Building | 36. Archbishop Connolly Center |
| 13. Loyola Annex | 25. Pigott Auditorium | |





The Seattle University Seal

The letters IHS at the top of the design are from the Greek spelling of Jesus and are especially significant to the Society of Jesus, which conducts the University. The American eagle and shield symbolize the relationship of the University to the nation it serves.

At the upper left of the shield proper, the two wolves over the pot are traditional symbols of the generosity of the house of Loyola, family of the founder of the Jesuits. The seven diagonal stripes at the right are awards for valor made to the family.

In the lower portion of the shield, the crescent is the sign of the Immaculate Conception, patroness of the school; the evergreen tree represents the State of Washington and is a traditional symbol of knowledge; and the Indian tepee commemorates Chief Seattle, whose name the University and the city in which it is located both bear.

Seattle University

BROADWAY and MADISON
SEATTLE, WASHINGTON 98122
626-6200