1983

1983-84 Bulletin of Information - Undergraduate

Seattle University

Bulletin of Information 1983/1984

Seattle University

Seattle University
Bulletin of Information
Editor / Jean Merlino

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John Sutherland

Information concerning graduate and summer school programs may be obtained in supplementary bulletins.

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.

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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 intelligant training in the theory and principles underlying those professions.

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

As a University conducted under the auspices of the Jesuits:

- 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 centers of higher education is closely interwoven with the history of Seattle and the Puget Sound area. It is the story of a continuing effort on the part of the University to serve the educational needs of a growing metropolitan community.

Like most universities whose roots go back a century or so, Seattle University had a humble and unpretentious beginning. It all started in 1890 when Bishop Aegidius Junger of the then Nesqually Diocese, concerned over the lack of educational opportunity for Catholic youth in the Seattle area, urged the Jesuits of the Rocky Mountain Mission territory to establish both a parish and a school in the young city. In response to repeated appeals, the mission superior sent Fathers Victor Garrand and Adrian Sweere from the Yakima station to make the establishment.

The two Jesuits arrived in Seattle in the spring of 1891 and immediately set about their task. They initially leased St. Francis Hall for their needs. This building, located at Sixth and Spring in downtown Seattle, had been constructed in the previous year by Fr. Francis X. Prefontaine, the area's first resident priest. In these quarters, rededicated as the parish and school of the Immaculate Conception, the Jesuit co-founders began their modest educational effort. They were aided in this effort by two Holy Names sisters who served as full-time teachers.

In 1893, the cornerstone of the first building on the Broadway campus was laid. Property for this building and a playground area had been purchased in 1890 by the mission procurator with the advice and assistance of Father Prefontaine. The new building, which again housed both parish church and school, was opened for classes for the "older boys" in September, 1894, and was formally dedicated in the following December.

Further progress was made in 1895 with the introduction of the first "Academic" or high school level class. In 1898, articles of incorporation were filed and duly approved by the state of Washington changing the parish school for boys into Seattle College.

The years that followed the founding of the College were mostly a time of struggle and disappointment. The frontier mentality that in many respects still prevailed in Seattle was unreceptive to either the need or the value of higher education other than in the professions. For this reason, as well as for others, it was not until 1900 that the college department was actually instituted with the class of "Humanities." In 1909, the first small but very proud class of three graduates were awarded the bachelor of arts degree.

A combination of adverse circumstances during World War I led to the suspension of college classes from 1918 to 1922. In 1919, the successful high school department moved from Broadway to a new seven acre campus on Interlaken Boulevard. This site, including two buildings suitable for school purposes, was the gift of Mr. Thomas C. McHugh. When the college department was reinstated in 1922, it, too, was housed at the new campus.

In 1931, the college and high school departments were physically separated and the College returned to the Broadway campus to a partially renovated building. Although the fall enrollment was less than fifty students, the separation of the two academic levels was to prove beneficial for both units. Within two years the first women were enrolled in credit courses at the College. The first women graduates received their degrees in 1936. In the year previous, the first professional degree program was established with the introduction of the School of Education. In 1937, the College was fully accredited by the Northwest Association of Secondary and Higher Schools. The School of Nursing was officially opened in 1940 and the School of Engineering was added in 1941.

In anticipation of the academic needs of the returning veterans of World War II, the School of Commerce and Finance was established in 1945 as the fifth major academic unit of the college. By 1948, the enrollment in all programs was nearing 3,000 students. To give expression to the growth and academic development of the previous fifteen years, the board of trustees in that year approved a further amendment to the articles of incorporation changing the institutional name to Seattle University.

The decades of the 1950's and 1960's were marked by rapid expansion of both the physical boundaries and the educational facilities of the University. In 1950, the campus comprised three premanent buildings and three World War II surplus structures. Over the next twenty years a total of twelve major buildings were added either by construction or conversion. This development took place for the most part under the direction of Fr. A.A. Lemieux, S.J., who served as University president from 1948 to 1965.

The decade of the 1970's was primarily a period of curriculum expansion achieved through the introduction of innovative new schools and programs. Chief among these additions were the School of Science and Engineering (1972), the Institute of Public Service (1974), and Matteo Ricci College (1977). In 1976, the University instituted its first doctoral degree program, the Doctorate in Educational Leadership. The list of recent academic innovations also includes master level programs in software and transportation engineering, and in therapeutic psychology.

Recent facility development of major significance includes the addition of the Gene E. Lynn Building, home of the School of Nursing, and the outdoor intramural and recreational center.

Organization

Seattle University is an independent, coeducational institution of higher learning incorporated under the laws of the State of Washington. It is operated by its own Board of Trustees and administration under the auspices of the Society of Jesus. Its faculty and students are drawn from all races and denominations. One of 28 Jesuit institutions of higher education in the United States, it derives its tradition and objectives from the academic experience and educational ideals of the Society of Jesus and the Christian tradition.

The University is composed of eight major academic units:

The College of Arts and Sciences comprises 12 departments. These are English/speech, fine arts, foreign languages, history, journalism, military science, philosophy, political science, psychology, rehabilitation, sociology and theology and religious studies. Program divisions are: alcohol studies, community services, criminal justice/police science, general studies, honors and prelaw.

The Albers School of Business offers programs in accounting, economics, finance, general business, management and marketing.

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

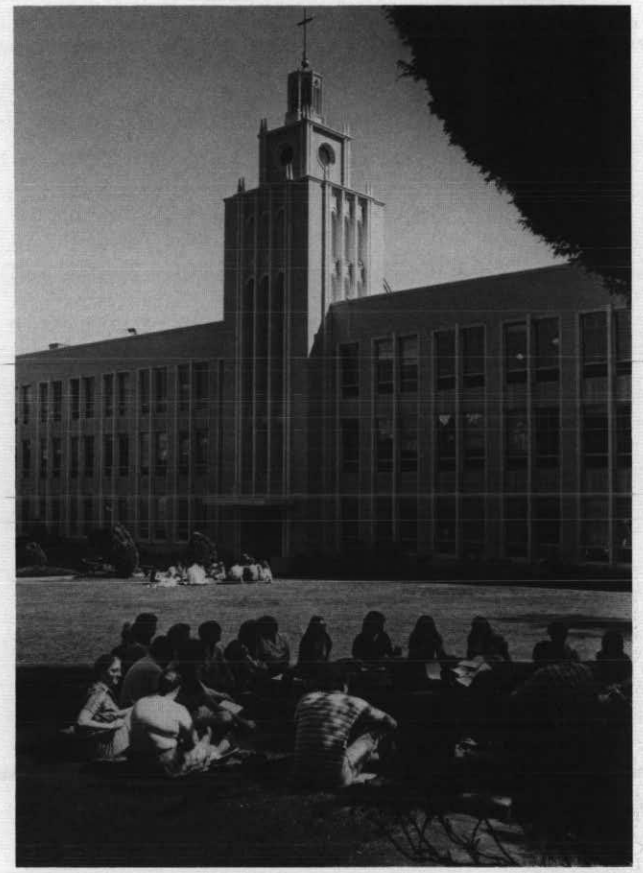
The Institute of Public Service offers a baccalaureate program in Public Administration and a certificate in Human Resources.

Matteo Ricci College is a six year combined high school college program leading to a baccalaureate degree.

The School of Nursing offers a baccalaureate program in professional nursing which qualifies students for registration through state licensure. Registered Nurse students wishing to complete requirements for the Bachelor of Science degree are admitted to the program.

The School of Science and Engineering comprises the departments of allied health technology, biology, chemistry, general science, health information, mathematics, physics and civil, electrical and mechanical engineering.

The Graduate School has programs leading to master's degrees in business, education, ministry, psychology, public administration, rehabilitation, religious education, software engineering and transportation engineering. An Educational Specialist degree can be earned in Administration or Educational Diagnostics/School Psychology. A Doctor of Education degree with a major in Educational Leadership is also offered.



Accreditation

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

The University is accredited by:

Northwest Association of Schools and Colleges
Accreditation Board for Engineering and Technology
(Electrical Engineering and Mechanical Engineering)
American Assembly of Collegiate Schools of Business
American Chemical Society
Council on Allied Health Education and Accreditation
Council on Rehabilitation Education
National Council for Accreditation of Teacher Education
National League for Nursing

is approved by:

American Medical Association
American Medical Record Association
American Society of Clinical Pathologists
Washington State Board of Education
Washington State Board of Nursing

The University is a member of:

American Association of Colleges of Nursing, American Association of Colleges for Teacher Education, American Association of Collegiate Registrars and Admissions Officers, American Council on Education, Association of Higher Education, Association of Jesuit Colleges and Universities, Council of Baccalaureate and Higher Degree Programs, Independent Colleges of Washington, National Commission on Accrediting, National League for Nursing, Northwest Association of Colleges, Western Interstate Commission for Higher Education.

Campus and the City

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

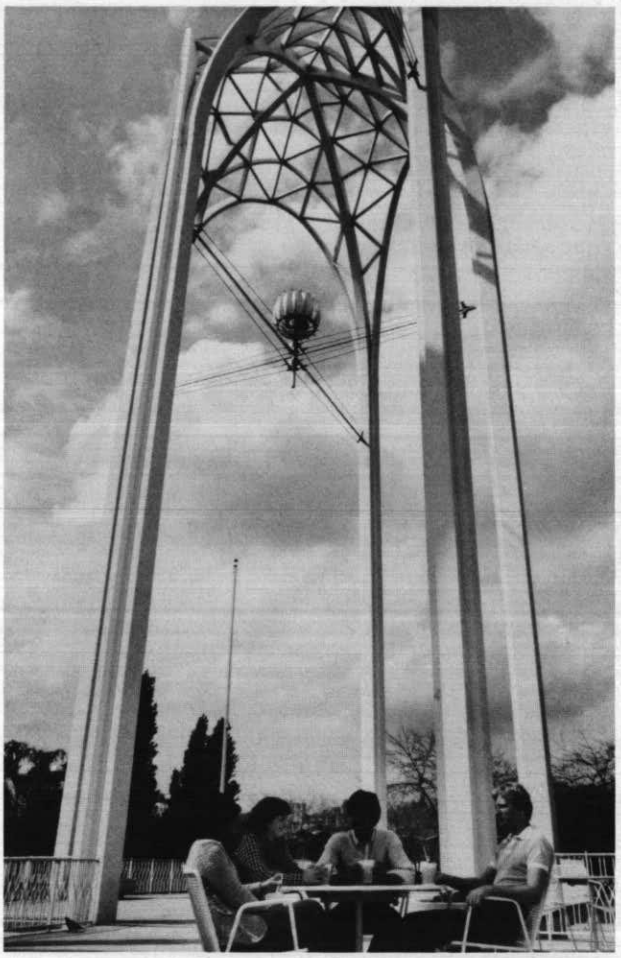
The University's physical facilities serve a current student enrollment of 4,638. Presently, the campus contains 24 buildings, including modern classrooms, student and faculty residences and service units.

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

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

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

The Student Union Building (1953), the Chieftain houses the office of the Vice President for Student Life, student offices, dining, lounge and meeting areas. A selection of auditoriums are available in A.A. Lemieux Library, the William Pigott (1957), Thomas J. Bannan (1961) and Gene E. Lynn (1979) Buildings for films, lectures, meetings and musical presentations.



The McGoldrick Student Development Center, opened in 1976, includes the Career Planning and Placement Center, Counseling and Testing, the Minority Student Affairs office, and the Campus Ministry office.

Other major campus structures include the Liberal Arts Building (1945); Bookstore Building (1964); Loyola Hall, the Jesuit faculty residence and the Gene E. Lynn Building (1979).

Seattle University is located in a seaport city surrounded by unsurpassed natural beauty. Seattle, the largest city in the Pacific Northwest and one of the 25 largest in the United States, has all the scenic and cultural variety of a metropolitan city with the unique advantage of mountains and water at its back door.

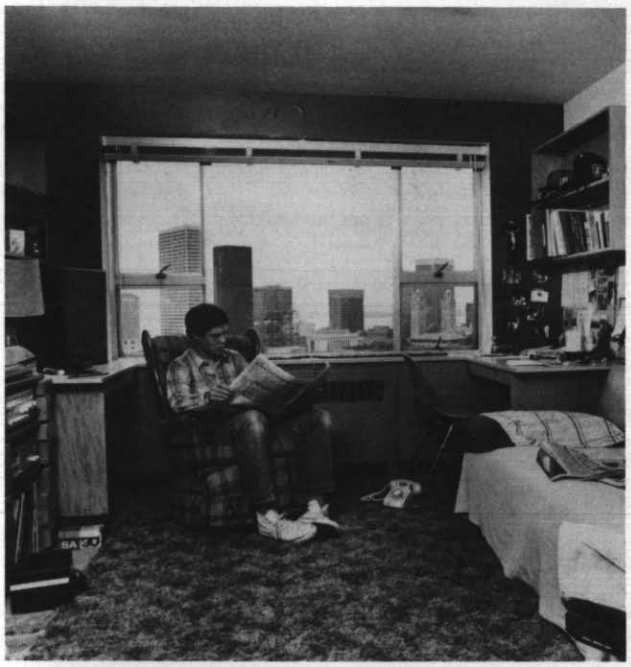
Within city boundaries, Lake Union and Lake Washington provide the opportunity for sailing, boating, water skiing and swimming.

Ski areas are within an hour's drive of the city, with night and weekend skiing during winter months. Easy hikes, with trails marked and guide books available, are popular in the spring and summer months, as well as more difficult hikes for seasoned enthusiasts.

Bicycling has become increasingly popular and trails are set aside in various areas of the city.

Golf courses, tennis courts, and indoor and outdoor pools for year-round swimming are available in addition to fishing and hunting opportunities.

Student Life



Student Life

One of the primary aims of the educational mission at Seattle University is the total development of students. This holistic growth process is enhanced by integrating opportunities for social, emotional, cultural, physical and spiritual development, in addition to intellectual growth. The Division for Student Life is committed to providing programs and services conducive to fostering an educational environment which will assist students in achieving their full potential.

Located in the McGoldrick Student Development Center, the Student Union, the Connolly Center, the Child Care Center, the International Student Center, and the three University residence halls, the professionals who comprise the Student Life staff are committed to meeting the developmental needs of Seattle University's diverse student population.

The Office of the Dean for Students provides many support and administrative services for students. Student Orientation, Student Union services and programs, leadership training and special programs for women and non-traditional students are all coordinated through the Dean's office.

The Student Activities Office coordinates all Student Union programs and supervises the Game Room, the Events Information Line (6630), the Information Booth and Tabard Inn. The Director is also the administrative adviser to the student government (ASSU) and the student senate, and coordinates advisement and activities of the over 50 clubs and organizations on campus.

The Campus Ministry team is committed to the mission of the University, particularly in the areas of personal and spiritual growth. The Campus Ministers endeavor to promote collaboration among Jesuits, lay faculty, staff and students through liturgical celebrations, retreats, volunteer programs and education for peace and justice. The Search Program is specifically for students and provides a unique experience of Christian Community, service and the opportunity for leadership training.

The Counseling Center offers opportunities for personal counseling for students focused on developing self-awareness, improving individual communication skills and interpersonal relationships. Vocational counseling is available on a personal basis, using interest inventory testing as a guide for individual planning. The Center also sponsors various workshops offered throughout the school year on subjects such as stress, management, assertion training, weight control, and test anxiety. The PACE Program, a freshman peer advising system, is also made available through this office.

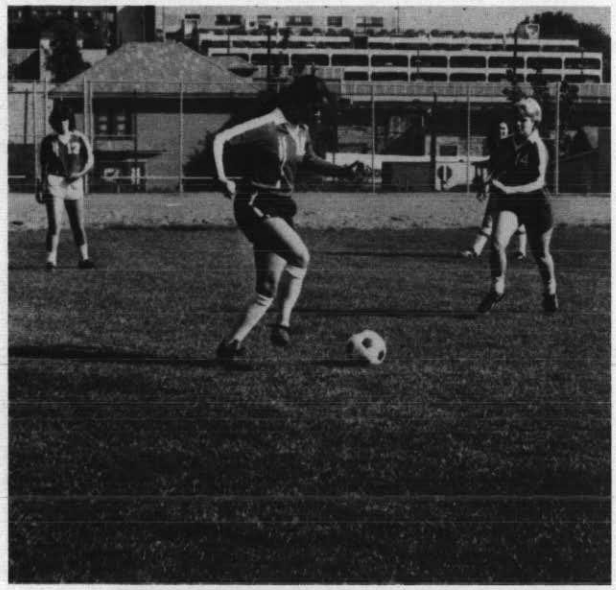
The Career Planning and Placement office makes available career counseling, job referral services, and workshops on resume writing, interviewing, and job-seeking skills to students. Coordination of the part-time work-study student employment program is also accomplished through this office as is the development of employment opportunities throughout the Puget Sound area.

The International Student Adviser is the campus liaison for all students from abroad, including those who transfer to Seattle University from other American colleges. The office provides a "home base" for these students, facilitating the assimilation of the international students into the University community.

The Minority Student Affairs Office promotes an understanding and appreciation of the cultural diversity in the University community. It is an advocate for the personal, academic, and social success of American ethnic students. On going programs include Asian Pacific Heritage Week, Martin Luther King Week, Black History Month, Pow-Wow, Oratorical Scholarship Contest, and counseling.

The Child Care Center is open to children from families of students and employees of Seattle University, and supplements the University's community program by also serving children from families within the surrounding Central City community.

The Book Store is the source of all required textbooks and course-related supplies. In addition, it offers a selection of apparel and gift items with Seattle University imprinting. Other sections include greeting cards, snack foods and sundries. Any book not in stock may be special ordered, film may be left for processing, and, at the end of each quarter, used books may be sold back for cash.



Disabled Student Resources enables students with disabilities to fulfill their academic, career and personal goals. Coordination of support services, counseling and community referrals are available. Seattle University has a continuing commitment to improve campus accessibility.

The Learning Resource Center is designed to meet the educational needs of students seeking help in achieving academic success. Services include diagnostic assessment, skill enhancement, mini-courses, personal and academic counseling, and the possibility of small-group or individualized tutoring.

The Student Union Building is considered the hub of campus activities. It offers two eating establishments, the Chieftain Dining Room and the Tabard Inn; weekly entertainment in the Tabard Inn; a Game Room; a ticket booth and information center; a commuter ride board; and student lounges. Student Life administrative offices, the Student Government (ASSU), the Spectator, student newspaper, and various club and organization offices are also located in the Student Union.

Orientation programs are sponsored each fall through the Office of the Dean for Students to facilitate social and academic adjustment of new freshmen and transfer students. A transfer student orientation is also held during winter and spring quarters.

PACE is a unique program and a one-credit Psychology class sponsored by the Counseling Center. Designed to facilitate new students' social and academic transition to University life, PACE's student-led groups meet in the Fall quarter. In PACE, students make use of a sophisticated "grapevine" of information about the campus. Professional staff provides expert training in academic skills. New students' experiences and concerns are shared, social activities planned, and new friendships often begin.

Student Clubs and Organizations provide Seattle University students with opportunities to develop leadership skills, broaden their social and professional backgrounds, and make a significant contribution to both the University and the community. Student government (ASSU), student publications, preprofessional organizations, service clubs, scholastic honoraries, and community outreach are among the varied groups in which students may choose to participate.

Security Services provides 24 hour security for the University campus community and its facilities. Security personnel are available to assist students in a variety of ways including first aid, escort services, crime prevention, lost and found, and assistance with vehicles with dead batteries or keys locked inside. Security persons are uniformed and easily recognizable should assistance be needed. For service or information call 626-5356 (24 hours). Emergency only, 626-5911 (24 hours).

Other Student Services

Academic Advisement is coordinated through the various schools within the University by the deans and department chairpersons in a student's major area. Adviser assignments are normally made during the fall Orientation period.

The Student Health Center is open to all regularly-enrolled students. Full-time students and their dependents are also eligible to participate in the University's health insurance program.

University Sports
Seattle University is a member of the National Association of Intercollegiate Athletics. The University competes in soccer, basketball, baseball and tennis for men, and volleyball, basketball, soccer, and tennis for women. The University places a high priority on its intramural and recreation programs, and provides a wide variety of activities indoor, outdoor and off-campus. The Connolly Center serves as the major sports facility for intercollegiate athletics, intramurals, recreation and physical education. A three acre field complex provides outdoor facilities for soccer, flag football, softball and jogging. University Sports offers opportunities for students of all ages and skill levels.

University Food Service
Food service is provided in the Bellarmine Dining Hall, Chieftain Dining Room, Tabard Inn and Campion Cave.

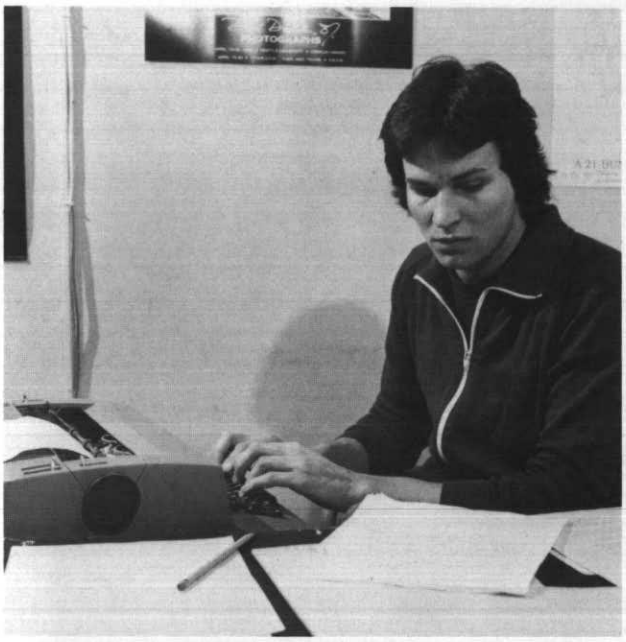
Resident students are required to purchase a meal ticket and may select from several meal plans offered by SAGA Food Service. Off-campus students may also purchase meal tickets. Further information may be obtained from the SAGA business office, Bellarmine Hall.

Housing
Seattle University requires full-time freshman students under 21 years of age to live in University housing unless they are married, living with parents or have been granted an advance waiver by the Director for Resident Student Services.

Residence Halls
Three coeducational residence halls offer convenient living accommodations, lounges and facilities for study and recreation. Bellarmine Hall, a seven-story dormitory housing over 400 students, also provides the main dining room for resident students. The largest residence hall is twelve-story Campion Tower, although only six floors are used for student occupancy. Xavier Hall, the third campus residence, has a 200 student capacity. Residence halls are supervised by resident directors, floor moderators and student resident assistants.

Application for Housing

Requests for on campus student housing are made through the Director for Resident Student Services. An eighty-five dollar ($85.00) deposit is required for reservations. See page 16 for housing cost information. Cancellation of reservations must be received by the Director for Resident Student Services no later than August 1, or the deposit will be forfeited. Residents who terminate their stay in University residence halls before the end of the quarter will suffer a financial loss.



Admission Policy

Seattle University selects for admission those students who have demonstrated in their prior studies an ability to achieve a level of academic performance necessary to earn a degree. University admission policy is established by the Vice President for Academic Affairs through the Director of Admissions/Records. 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.

Admission may be granted to qualified applicants for any of the four quarters of the academic year. All applicants for undergraduate or graduate admission must remit a $15 application fee to the University. Applicants for transient status will be charged a $10 application fee. Inquiries concerning admission should be addressed to the DIRECTOR OF ADMISSIONS/RECORDS, SEATTLE UNIVERSITY, SEATTLE, WASHINGTON 98122.

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

Seattle University does not discriminate on the basis of handicap in conformity with section 504 of the Rehabilitation Act of 1973 in admission or access to its programs and activities, or in its employment policies or practices.

George Pierce, Ph.D., is the responsible employee designated by Seattle University to coordinate its effort to comply with section 504 of the Rehabilitation Act of 1973.

This constitutes the official notice called for in Section 504, No. 84.8, Paragraph a.

Admission From Secondary Schools

To be considered for admission to the University as an undergraduate 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 in the 16 college preparatory units noted below of 2.50 or above as measured on the 4.00 scale, or rank in the upper 50 per cent of the senior class.

Have completed 16 units of college preparatory courses.

Have submitted scores from one (1) of the following examinations: Washington Pre-College Test (WPCT) or Scholastic Aptitude Test (SAT) or American College Test (ACT).

Applicants with a grade point average below 2.50 as computed by the University Admissions Office will be reviewed by a special board. Applicants with a grade point average below 2.00 will not be admitted to the University on either a regular or probationary status.

Unit Requirements

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

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

If the student lacks one of the above required units, he/she may be permitted in some cases, by way of exception, to enter with provisional standing.

Two courses of three or more quarter hours each will be considered equal to one high school unit.

Application

In the State of Washington, application blanks for those wishing to enter as freshmen may be obtained by writing Director of Admissions, Seattle University, Seattle, Washington 98122 or from any high school counseling office in the state. Out of state applicants may obtain forms by writing to the Director of Admissons.

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

1. Complete page one of the Application for Undergraduate Admission and leave the entire form with high school counselor to have the back of the page completed and forwarded directly to the Office of Admissions.
2. Submit a non-refundable application fee of $15 to the Office of Admissions. Make remittances payable to Seattle University.
3. Have your high school transcript and transcripts of any post-secondary courses attempted sent to the Admissions Office. ONLY OFFICIAL TRANSCRIPTS ARE ACCEPTABLE. Official transcripts must arrive in the Admissions Office in a sealed envelope from the issuing institution.
4. Have your scores from one of the following examinations sent to the Admissions Office:
   Washington Pre-College Test (WPCT)
   Scholastic Aptitude Test (SAT)
   American College Testing Program (ACT)

Notification of acceptance or refusal will begin December 1 for Fall quarter and continue as files are completed. However, students whose records do not give sufficient evidence of the ability to pursue college level work will be notified that a final decision will not be made until the receipt of specified information.

High school students are encouraged to apply before May 1. All applications for admission should be received no later than one month before the beginning of each quarter.

Entrance Examination
In addition to the high school record, candidates for admission to the freshman class must submit scores from one of the following examinations: the Washington Pre-College Test (WPCT) or the Scholastic Aptitude Test (SAT) of the College Board or the test of the American College Testing Program (ACT).

Test application forms and information concerning testing centers and test dates may be obtained from high school counselors and principals. Applicants planning to take the SAT may also write directly to the Educational Testing Service, P.O. Box 1025, Berkeley, California 94701, or P.O. Box 592, Princeton, New Jersey 08540. Applicants planning to take the ACT may write directly to American College Testing Program, Inc., Iowa City, Iowa. The Washington Pre-College Test is available to juniors in all Washington state high schools.

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

Early Decision Plan
Students who select Seattle University as their 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 General Studies Program under the guidance of the General Studies Director. Probation students must gain regular status by the end of the freshman year or be subject to dismissal from the University.

Placement Examinations
Placement tests in chemistry, mathematics and foreign languages are administered by these departments during Orientation. These examinations offer entering freshmen the opportunity to show the extent of their preparation, while simultaneously allowing department heads or advisers to determine the level at which entering freshmen 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 matter other than as set forth above should plan to take the Advanced Placement Tests of the College 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 Advanced Placement Tests may also be granted college credit. Advanced placement or credit may also be granted on the basis of the subject examinations of the College Level Examination Program (CLEP) of the College Board. To receive course credit through CLEP, students must submit the test results one month prior to the quarter they wish to enroll.

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

Admission From Other Postsecondary Institutions

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

1. Submit to the Director of Admissions an Application for Undergraduate Admission, a $15 application fee (make remittances payable to Seattle University) and one (1) official copy of a transcript from each postsecondary institution previously attended. Failure to furnish previous postsecondary records when applying for freshman standing, or to supply complete postsecondary credentials when applying for advanced standing, places students under penalty of immediate dismissal. The University has the option to declare all credit not presented at the time of application as non-transferable.

2. Present a minimum 2.00 academic grade point average (or the minimum required by a school/college) for postsecondary work attempted prior to transfer. Courses completed at the lowest passing grade are acceptable for transfer, but the dean or department chairman may require that such courses in the major field be repeated. No transfer applicant will be admitted with a grade point average below 2.00.

3. Transfer applicants who have completed less than one full year (45 quarter or 30 semester hours of transferable credit) at another postsecondary institution must fulfill secondary school unit requirements for admission to the freshman class. In such cases an official copy of the high school transcript must be submitted.

Students applying from other postsecondary institutions who have been placed on probation, suspended, or dismissed will not be considered for admission to Seattle University until at least one calendar year has elapsed since the dismissal, suspension or probation. At the end of this period, admission may be granted only by the Board of Admissions. In such cases two letters of recommendation are required.

In assessing the student's record for admission, grades in non-credit courses will not be counted. For work done in postsecondary institutions whose academic standing is unknown/or for work with private teachers, admission and advanced credit will be granted only upon examination. Examinations to establish credit for such work may be taken after the completion of 15 credits in residence. This credit is granted according to conditions set down under Credit by Examination.

Advanced Standing

For the purpose of guidance and registration, the Academic Evaluation Unit will make a tentative evaluation of transfer credits at the time of admission to Seattle University. All evaluations are subject to the approval of the Academic Vice President and the Dean of the appropriate school.

The following conditions apply to transfer students in granting credits acceptable to Seattle University:

1. Credit transferred from two-year colleges may be applied to University freshman and sophomore years only. Transfer of such credit may not exceed 90 quarter credits.

2. For admission with advanced standing no more than 135 quarter credits in academic subjects will be accepted toward a bachelor's degree requiring four years of college study. All transfer students must take at least two courses in their major field of study at Seattle University and meet philosophy and theology requirements. Consult page 18 for a listing of required courses in philosophy and theology.

3. Credit earned through extension courses may be accepted if the institution offering such work is a member of the National University Extension Association. Not more than 45 quarter credits of extension credit will be accepted. Credit earned through correspondence shall not exceed 12 quarter credits and must be included in the extension credit total of 45 quarter credits.

4. Credits over 10 years old will be reviewed to determine transferability.

International Students

Specific admission requirements and procedures for all international students are listed on the University's international student application form. These criteria differ from those applied to United States citizens, and international applicants should read the International Student application carefully.

Special Students

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

Transient Students

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

Audit Students

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

FINANCIAL AID

Meeting College Costs

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

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

Students are expected to arrive on registration day with sufficient funds to pay tuition, room and board and all fees. Those students who because of late application for a guaranteed student loan or for other reasons foresee that they will not have the required funds at the time of registration should make arrangements to secure a short-term loan from a relative, employer, credit union, bank or other funding source.

Types of Financial Aid

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

1. GRANT and SCHOLARSHIP — An outright award that does not require repayment.

2. LOAN — Loan programs allow liberal repayment periods and low interest rates. Repayment normally begins after graduation.

3. EMPLOYMENT — An opportunity to work at a campus job or in a Seattle area business.

Seattle University reserves the right to change its financial aid policy without notice.

How to Apply for Financial Aid

1) Apply for admission to Seattle University. A student must be ACCEPTED to Seattle University before being considered for financial aid.

2) Submit by mail the Financial Aid Form with the required fee to College Scholarship Service in Berkeley, California or Princeton, New Jersey. Be sure to indicate Seattle University as a recipient of the need analysis which will be calculated from the information you provide on the statement you mail to CSS.

3) Submit all three copies of the PELL Grant Student Aid Report (SAR) to the SU Financial Aid Office. A SAR will be generated from the information supplied on the Financial Aid Form.

4) All transfer students are required to submit a Financial Aid Transcript from each institution that they have attended prior to Seattle University.

To ensure maximum consideration for financial aid, an applicant's Financial Aid Form must be received by the College Scholarship Service by March 1. In addition, transfer students must have all financial aid transcripts into the financial aid office by March 1 and all new students must be admitted to the University by the Admissions Office by March 1. (Students previously enrolled at Seattle University, who have interrupted their education and wish to return must be readmitted to the University by March 1.)

It is the applicant's responsibility to see that the Financial Aid Office and the Admission's Office have all necessary documents. Applicants who submit documents after the March 1 deadline will be evaluated for need and will be offered aid on a funds-available basis.

Currently enrolled students, new students, and transfer students who are enrolling for fall quarter must observe the March 1st deadlines. All applicants for other than fall quarter should contact the Financial Aid Office to determine the deadline. Continuing students must reapply for Financial Aid each year.

Applicants are advised to make and retain copies of all documents submitted.

GRANTS

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

These grants are funded by Seattle University when offered. Subsequently the grant may be designated as funded by a donation to the University.

Honors Program Grants

Partial tuition grants are offered for one year and are renewable on a performance basis. Applicants should contact the Honors Program chairperson for complete information.

Merit Grants

Merit Grants are awarded by Seattle University on the basis of academic excellence or academic excellence and financial need. Applications are available from the Financial Aid Office.

Donated Grants

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

Aetna Casualty Scholarship Foundation

The Blume Family

The Boeing Company

A grant to students in engineering or business. Renewable.

Alphonse & Mary Brenner and John Brenner Grant Fund
A grant to a deserving Catholic student from the Yakima diocese.

John F. Byrne Memorial Scholarship

Ben B. Cheney Foundation

William J. Codd, S.J. Memorial Scholarship

Louella Cook Foundation

Bing Crosby Youth Scholarship Fund

John C. Erickson Memorial Scholarship
Awarded to Junior Civil Engineering student. Renewable.

Farmers Insurance Group
Renewable grants to University students in business or mathematics.

Alice Fisher Scholarship Fund
A partial grant award to junior and senior Nursing students.

Seattle University Guild Endowment Scholarship Fund
Scholarship fund available to all students.

Agnes Handley Memorial Grant

Investors Guaranty Life Insurance Co.
Recipient selected from the fields of Business and Mathematics.

Henry T. Ivers Memorial Scholarship

Richard and Kathie Ann Jones Charitable Trust
Partial grants to upperclass students.

Kaiser Franz Josef Fund
Partial scholarship and faculty recognition award to be designated by the Dean, College of Arts and Sciences.

Harry Kinerk Memorial Grant
A partial grant award in memory of the late Professor Harry Kinerk.

Elizabeth and Rhoady Lee Scholarship

Gene E. Lynn Rural Nursing Endowment Fund
See loans

Edmund Maxwell Scholarship

Rosemary McCone Memorial

Merrill Trust Scholarships

John and Margaret Nelson Trust

Paul Pigott Memorial

H.H. Thibeau Memorial Scholarships
For juniors or seniors in Marketing

Albert A. Schafer Memorial

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

Alfred & Tillie Shemanski Fund
Two scholarships awarded to students enrolled in the Corpus Program.

Ellen B. Stephenson Scholarship Fund

Washington Congress of Parents, Teachers and Students Financial Grant
A grant to an incoming first year new student with deep need. Renewable.

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

William R. Woods Business Grant
A $1000 award to a deserving upperclass or graduate student. Contact the Dean of the Albers School of Business.

Wright Schuchart Scholarship
Awarded to a sophomore engineering student. Renewable.

Wyman Youth Trust

Loans

Loans are an integral part of the financial aid award "package" offered to students. Some loans do not require payment of principal or interest until the student graduates or leaves school. At that time low interest payments, which may extend over a long period, begin. Loans are an excellent means for the student and family to assume at least a part of the cost of education. Students must be United States citizens, a resident of a Trust Territory or have Immigration Department approved permanent resident status to be eligible for loans which involve federal funds.

National Direct Student Loan (NDSL)

A long term loan based on financial need. Eligible students may borrow a total of $6000 for their undergraduate education or $12,000 for combined undergraduate and graduate education. Repayment begins six months after the student graduates or leaves school. The annual interest fee is five percent and repayment may extend 10 years, but payments may not be less than $30.00 per month. The NDSL repayment program also includes limited deferment provisions and cancellation features.

Guaranteed Student Loan (GSL)

Guaranteed Student Loan (GSL) is a long-term need-based loan arranged with a lender selected by the student. Commercial banks, credit unions, and savings and loan associations are possible lenders. Guaranteed Student Loans are guaranteed by the Washington Student Loan Guarantee Association, which means that they will repay the loan to the lender in the event that the student defaults.

Students applying for Guaranteed Student Loans must qualify on the basis of financial need. If the family's adjusted gross income, in the case of dependent students, or the student's adjusted gross income, in the case of self-sufficient students, is $30,000 or less, the student is assumed to have financial need for the loan, and is entitled to borrow up to the annual loan limit, assuming this does not exceed the student's budgeted educational costs when combined with other financial aid. If the family or student's adjusted gross income is greater than $30,000, the student's financial need for the loan will be determined through the use of the College Scholarship Service's Financial Aid Form. The determination of financial need for the loan will be performed by Seattle University and affirmed on the student's Guaranteed Student Loan Application form.

Annual loan limits are $2500 for undergraduate students and $5000 for graduate students. Students may borrow up to $12,500 for their undergraduate years. Graduate and professional students may borrow $25,000 for their undergraduate and graduate career.

All GSL's will be charged a 5% loan origination fee by the lender. An amount equal to 5% of the student's Guaranteed Student Loan will be withheld by the lender to offset the interest charged on the student's loan while the student is enrolled; with the exception of the 5% origination fee, the student does not have to pay any other interest charges while they are enrolled as a full-time student.

Repayment of the loan begins six months after the student ceases to be a half-time student.

Interest rate for the Guaranteed Student Loan is 9% for any new student borrower who obtains a loan under the program. Students with outstanding GSL's prior to January 1, 1981 may continue to borrow at the 7% interest rate. Students are required to repay the loan at a minimum of at least $50 per month. Early application for the Guaranteed Student Loan is advised, since processing of the loan paperwork may take from six to eight weeks.

Plus Loans

Plus Loans are guaranteed loans that will be made available to the parents of dependent undergraduate students. In addition, the program will provide a vehicle for both independent undergraduate students and a graduate or professional students to secure education loans when additional funding is required. Like the Guaranteed Student Loans program, loans are arranged with a lender selected by the student. Commercial banks, credit unions, and savings and loan associations are possible lenders. Borrowers under the Plus Program are required to repay the lender the full amount borrowed plus interest. Interest rate on Plus Loans is 14%. Borrowers must begin repayment of the loan within 60 days after the loan is disbursed. For additional information including annual loan limits, contact the Financial Aid Office.

Gene E. Lynn Rural Nursing Endowment Fund

The Gene E. Lynn Rural Nursing Endowment program provides financial support for eligible students entering the School of Nursing during the fall quarter of each academic year. Financial assistance under this program is provided through interest-free loans while recipients are enrolled at Seattle University. Normally such loans will be made within the guidelines established by the Guaranteed Student Loan Program. In determining the amount of such loans, all other forms of financial aid will be taken into consideration.

When recipients of these awards graduate and begin their nursing career in appropriate and approved community health-care facilities, the Gene E. Lynn Rural Nursing Endowment of Seattle University will repay the balance at a rate of 25% per year for each year of service in a rural or small-town setting. Applications for this program are available from the Financial Aid Office.

Government Grants

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

Supplemental Educational Opportunity Grant (SEOG)

The Supplemental Educational Opportunity Grant is a federally funded grant awarded to needy students. SEOG awards usually range from $200 to $1,000 in the initial year and may continue in the subsequent years. SEOG awards do not require repayment. Students with baccalaureate degrees are not eligible for SEOG funds.

The Pell Grant Program (formerly the Basic Educational Opportunity Grant Program)

Students considering Seattle University are encouraged to use either the Pell Grant application form or the CSS Financial Aid Form to apply. In approximately six weeks, the federal government will return to the student a Student Aid Report (SAR). Regardless of the reported eligibility, it is necessary for the student to forward all three copies of the SAR to the Seattle University Financial Aid Office, which will determine the Pell Grant amount; all of which is non-repayable. Up to $1,674 per year may be available. Students currently enrolled at Seattle University and receiving financial aid are required to file an application for a Pell Grant and submit the Student Eligibility Reports. Students with baccalaureate degrees are not eligible to receive Pell Grant funds.

Washington State Need Grant

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

ROTC Grants Army/Air Force

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

The United States Air Force awards scholarships to selected students enrolled in the Air Force ROTC programs. Write to Professor of Aerospace Studies, University of Washington, Seattle, Washington 98105.

Veterans, Widows & War Orphans Educational Assistance

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

Social Security Assistance

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

Student Employment

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

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

Federal College Work-Study Program

Students with established financial need are eligible for part time employment in on campus positions.

Washington State Work-Study Program

Students who qualify under a state established need formula are eligible for part time employment in positions with employers other than Seattle University.

Army ROTC Subsistence

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

Student Placement Center

The Career Planning and Placement Office maintains a listing of employment available on campus and with Seattle area employers. Literature and instruction in job-seeking skills are provided for students and alumni.

COSTS—GENERAL INFORMATION

Tuition Payment

Payment of tuition and fees includes library and health service fees, student newspaper, student organization allotments, building fund, and admission to athletic events. After a student registers for a course, the University has committed a space in each course for each student. It is the student's responsibility to pay for all fees in full whether the student attended the course(s) or not. Fees are due and payable on or before the "classes begin" date of the calendar published on page two of this bulletin unless the student has formally withdrawn prior to that date. Payments made after that date are subject to the late registration and refund policies.

Failure to pay in full all tuition and fees of any quarter or session may result in a hold on the student's transcript and may prevent registration in subsequent quarters.

Seattle University reserves the right to change its charges at any time without previous notice.

Tuition Rates 1982-83**

**Tuition rates will be changed for 1983-84; an announcement of these new rates is anticipated by March 15, 1983.

Undergraduate courses: Fall, Winter, Spring	$105.00 per credit hour
Military Science 311, 312, 313, 411, 412, 413	$ 28.00 per credit hour
Masters degree programs	
Business	$143.00 per credit hour
Public Administration	$121.00 per credit hour
Psychology	$121.00 per credit hour
Rehabilitation	$115.00 per credit hour
Education	$105.00 per credit hour
Educational Specialist	$105.00 per credit hour
CORPUS	$105.00 per credit hour
Transportation Engineering	$121.00 per credit hour
Software Engineering	$143.00 per credit hour
Doctor of Education	$146.00 per credit hour
Certificate Programs	
Alcohol Studies	$ 75.00 per credit hour
Alcohol/Drug Studies	$ 75.00 per credit hour
Applied Social Research/Corrections	$105.00 per credit hour
Rehabilitation	$105.00 per credit hour
Transporation Engineering	$121.00 per credit hour
Health Information	$105.00 per credit hour
Human Resources	$105.00 per credit hour
Auditors tuition	$ 33.00 per credit hour

A tuition prepayment of $100.00 is required of all new undergraduate students admitted for Fall quarter. This prepayment will apply toward tuition and is not refundable if the student decides after May 1 not to enroll at the University.

Late Registration

Late registration fees of $8 per day to a maximum of $80 are charged if tuition and fees are not paid in full as of the date classes begin noted on the calendar on page two of this bulletin. Late registration fees shall apply to all checks not honored by banks and returned to Seattle University.

Family Tuition Plan

Two or more members of a family living in the same household and dependent upon a common support and attending the University concurrently may apply for a tuition discount. Further information on the Family Tuition Plan can be obtained from the Financial Aid Office.

Laboratory Fees 1982-83**

**Lab fees may be changed for 1983-84; an announcement of these new rates is anticipated by March 15, 1983.

Science and Engineering	$22.00
Computer Laboratory Business 500; Psychology 390	$22.00
Education 330, 528, 547	$17.00
Physical Education and Recreation 120, 124, 131, 135, 146, 155	$11.00
Nursing 205, 312	$17.00
Nursing 206, 335, 337, 341, 409, 433 (per credit hour)	$10.00
Psychology 381	$17.00
Psychology 402	$22.00

Refunds

Withdrawals (full or partial)	
2-10 class days	80 percent
11-15 class days	60 percent
16-20 class days	40 percent
Thereafter	No refund

Refunds are based on the number of consecutive days from the first class day of the term until the official date of withdrawal or reduction in class load occurs. The official date is considered to be the date the student submits the withdrawal or change form to the Registrar. A refund to a financial aid recipient is applied first to the student's financial aid source(s) and the balance, if any, is remitted to the student. Financial aid recipients will, therefore, in all likelihood, not receive refunds.

If the tuition and/or fees have not yet been paid, the portion normally not refunded is due and payable together with late fees. Failure to pay the non-refundable tuition and fees may result in transcript holds and may prevent registration in subsequent quarters.

Fees — Non-Refundable 1982-83**

**Fees may be changed for 1983-84; an announcement of these new rates is anticipated by March 15, 1983.

Application, undergraduate and graduate (must accompany application form)	$15.00
Application, transient students	$15.00
Late registration, $8 per day	(maximum $80)
Matriculation, undergraduate and graduate	$35.00
Credit by examination (per credit hour)	$33.00
Validation of field experience (per credit hour)	$27.00
Removal of incomplete (per course)	$10.00
Graduation, undergraduate (per degree)	$30.00
Graduation, graduate (per degree)	$55.00

Graduate fees are due at the time of application for graduation, and graduation forms will be released only upon presentation of a receipt.

Certificate fee	$20.00
Thesis binding	$30.00
International student fee (per quarter)	$10.00
Cytotechnology internship (per credit hour)	$ 5.00
NLN Achievement Examination, junior year	$ 2.00
NLN Achievement Examinations, senior year	$10.00
Parking (per quarter)	$18.00

Residence Charges 1982-83**

**Residence charges will be changed for 1983-84; an announcement of these new rates is anticipated by March 15, 1983.

Room and Board (per academic year)	$2,493.00*
Deposit (refundable)	$85.00
(Private room, additional $220 per quarter)	$220.00

*Based upon 19 meals per week. Other options are also available. Further information can be obtained through the office of the Director of Resident Student Services.

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 110	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 175	Introduction to Literature __	5 credits
En 220	Introduction to Poetry ____	5 credits
En 230	Introduction to Fiction ____	5 credits
En 240	Introduction to Drama ____	5 credits
En 283	Classics of Black American Literature _____	5 credits

HISTORY SEQUENCE _____ 10 credits

Students have the option to select one of the following:

Plan 1
Hs 104: Western Civilization I and Hs 105: Western Civilization II

Plan 2
Hs 100: Origins of the Modern World and Hs 105

Plan 3
Hs 100 and any one of the following: Hs 231: Survey of the United States, Hs 241: Afro-American History, Hs 251: Survey of Latin America, Hs 271: Survey of Russian History, Hs 281: Survey of the Far East since 1900.

MATHEMATICS/SCIENCE SEQUENCE _____ 10 credits

Any two 5-credit courses in mathematics, science or engineering for which the student is qualified. The following are recommended:

Bl 101	Life Science _____	5 credits
Bl 185	Biology of Human Sexuality _____	5 credits
Bl 190	Principles of Physical Anthropology _____	5 credits
Ch 110	Fundamentals of Chemistry _____	5 credits
Ecs 113	Fundamentals of BASIC Programming _____	5 credits
Ecs 114	Fundamentals of FORTRAN Programming _____	5 credits
Isc 110	Science, Technology and Society _____	5 credits
Isc 201	To Feed the World _____	5 credits
Isc 202	To See the Light _____	5 credits
Isc 208	Ecology and Natural Resources _____	5 credits
Ics 209	Energy and the Environment _____	5 credits
Hi 230	Health Care Delivery System _____	5 credits
Mt 175	Mathematics for Liberal Arts students _____	5 credits
Ph 110	Introduction to Astronomy of the Solar System _____	5 credits

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

PHILOSOPHY SEQUENCE _____ 15 credits

Pl 110	Philosophical Problems __ The World _____	5 credits
Pl 220	Philosophical Problems __ The Human Person _____	5 credits

and any other 5-credit course in philosophy which the student is qualified to take. Consult the course listing in the Philosophy department section of this bulletin for third course options.

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

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 100	Nature of Economic Society Principles of Economics _____	5 credits
Ec 271	Principles of Economics Macro _____	5 credits
Ec 272	Principles of Economics Micro _____	5 credits
Ec 371	History of Economic Thought _____	5 credits
Pls 100	American National Government _____	5 credits
Pls 202	Government and the Economy _____	5 credits
Pls 230	Industrial Democracies _____	5 credits
Pls 260	Introduction to International Politics _____	5 credits
Pls 253	Introduction to Political Philosophy _____	5 credits
Pls 434	Comparative Politics of Asia _____	5 credits
Pls 436	Comparative Politics of Africa _____	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 200	**Perspectives in Social Psychology**	**5 credits**
Sc 210	**American Society and Culture**	**5 credits**
Sc 362	**Deviant Behavior**	**5 credits**

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

THEOLOGY AND RELIGIOUS STUDIES SEQUENCE _____ **10 credits**

Students must take in sequence one 5-credit course from Level 1 (200 numbers in the Bulletin listings) and one from Level 2 (300 numbers). Numbers in the 400s are for majors, minors and for those desiring electives beyond the core.

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

Transfer students with junior or senior standing (90 or more credits) must take one theology course from Level 1 or the level their background fits them for (consult the Chairperson). Transfer students with freshman or sophomore standing (89 or fewer credits) must take two theology courses, one from Level 1 and one from Level 2, in sequence.

Core Exceptions

Business, engineering, nursing and science students should consult individual program sections for their history, philosophy and social science requirements.

Academic Regulations

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

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

The Academic Council has discretionary powers for all cases not covered by the rules and regulations listed in this section. The University reserves the right to cancel any class which does not meet the required minimum enrollment. The enrollment and graduation of each student, the awarding of academic credits, and the granting of any award or degree are strictly subject to the disciplinary power of the University. The University reserves the right to change any requirement and to ask a student to withdraw at any time. No person is allowed to attend class unless officially enrolled with appropriate fees paid.

Regulations in this bulletin are supplemented by policy memoranda which set forth policy in greater detail.

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

Academic Terms

ACADEMIC AVERAGE — Computed by the University for each applicant to determine the quality of high school work in academic subjects such as English, algebra, history, and laboratory sciences. Non-academic high school subjects such as music, physical education, and typewriting are excluded when this average is computed.

ACCREDITED — Certified as fulfilling standards set up by regional accrediting agencies. Indicates that course work is acceptable to other colleges or universities.

ADVANCED PLACEMENT — Admission of freshmen to courses beyond the beginning level. Granted to students who pass designated advanced placement tests.

ADVANCED STANDING — Granted to transfer students who have previous college work which is acceptable to Seattle University.

ADVISER — A member of the faculty designated to assist the student in planning a 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.

CERTIFICATE — Granted by the University upon completion of a specific series of courses in a professional specialty.

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

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

CHANGE OF SCHOOL — Procedure whereby student obtains permission to change from one school of the University into another.

COLLEGE — One of the eight academic divisions of Seattle University.

CORE CURRICULUM — That body of subject matter common to programs of study and the foundation of Seattle University's liberal education.

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

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

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

COURSE OF STUDY — See program of study.

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

CREDIT HOUR — The unit of instruction used in computing University graduation requirements.

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.

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

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

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

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

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

GRADE POINT AVERAGE — An average computed on the basis of numerical values assigned to grades received by students.

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

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

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

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

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

MAJOR — The specific field of study selected by a student.

MATRICULATE — Enrollment at the University for the first time as a regular student to pursue a degree or professional program.

MINOR — The secondary field of concentration selected by a student.

PART-TIME — For academic reporting purposes, less than 12 credits is considered part-time for undergraduate students and less than nine credits part-time for graduate students.

PERMANENT RECORD — The University record (transcript) 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 college courses.

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

PROBATION — Status resulting from academic performance below the minimum university requirement.

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.

QUARTER — Term of instruction during which a student completes a series of courses. There are three quarters in a regular academic year, Fall, Winter and Spring. The summer quarter extends from June to August.

READMISSION — Procedure whereby a student who has not been in attendance for one or more quarters requests permission to re-enroll.

REGISTRATION — Official enrollment in the University. Process in which student selects courses each quarter. Student is considered officially registered when tuition is paid.

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

SPECIAL STUDENT — A student admitted temporarily to take course work that is not applicable toward a degree until regular standing is achieved.

SCHOOL — See College.

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 schools of the University according to degree requirements.

TRANSCRIPT — A copy of the student's permanent record.

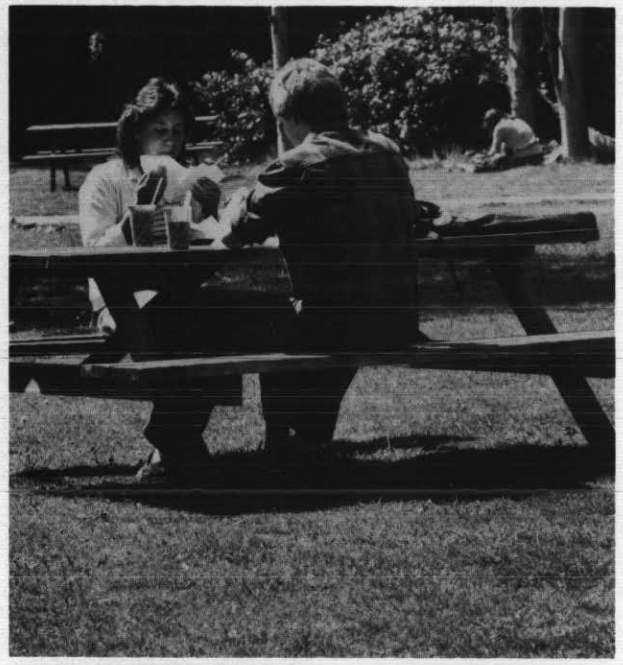
TRANSFER CREDIT — Credit awarded to a student for work completed at another college or university.

TRANSFER STUDENT — One who is admitted to Seattle University having previously completed work at another college or university.

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

Attendance Requirement

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



Classification of Students

Regular undergraduate students are classified as follows:

Freshmen— 0-44 credits completed
Sophomore— 45-89 credits completed
Junior— 90-134 credits completed
Senior— 135 or more credits completed

Other students are classified as follows:

5th year— post baccalaureate students not seeking an advanced degree but could be seeking a second bachelor's or a fifth year certificate.
Graduate— post baccalaureate students admitted to Graduate School for a master's or doctorate degree program
Special— an undergraduate student awaiting approval for regular status
Transients— non-matriculated students registering for one or two quarters only
Auditors— non-matriculated students registered for audit only not for regularly graded credit

Concurrent Enrollment at Two Colleges

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

Course Numbering System

The course numbering system at Seattle University is as follows:

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

Credit by Examination

Examinations for advanced credit in courses offered by the University may be taken by a student for work done in private study or on subject matter taken at a 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/she 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/her native language or from earlier schooling.
9. Students who wish to qualify for credit by examination must apply to the Dean, Registrar and Controller for approval.
10. No graduate credit is to be given by examination.
11. No credit by examination may be given for physical education activity courses.

Credit Load

The normal load for undergraduates is 15 credits per quarter. No student may carry excess credit hours without permission from the dean of the school.

Students on academic probation may be required by the dean of their school to carry less than the normal credit load.

Dismissal

Students who have three quarters at Seattle University with a cumulative grade point average below 2.0 or who fail to maintain standards in a professional school, or those who receive failing grades in 10 or more credits in one quarter, or those with an excessive number of I or NC grades, are subject to dismissal. If dismissed for academic reasons, request for reconsideration must be filed in writing with the dean in accordance with the policy of the individual college.

A student withdrawing voluntarily from the University is entitled to a statement of honorable dismissal if he/she is not liable to dismissal on account of scholarship, absence, breach of discipline, or financial indebtedness to the University.

Examinations

Examinations in all courses are regularly held at the middle and end of each quarter, and at such other

times as the instructor may determine. Absence from an announced written examination is excusable at the discretion of the instructor and subject to review by the dean. Students absenting themselves from a scheduled examination without justifiable cause will receive a failing grade for the examination.

Forgiveness Policy

A forgiveness policy making it possible for former SU students with poor academic records to resume their studies as adults without the encumbrance of poor grades earned previously became effective Fall Quarter, 1977. After being absent from school for at least 8 years, former SU students in undergraduate programs may apply for forgiveness only upon readmission or during the first quarter resumed at SU. For further information consult the Registrar.

Grade Changes

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

Grading System

Effective Summer 1983 the University will use the following system of grading 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 4.0 Superior performance
A- 3.7
B+ 3.3
B 3.0 Good performance
B- 2.7
C+ 2.3
C 2.0 Adequate performance
C- 1.7
D+ 1.3
D 1.0 Poor performance
D- 0.7
E 0.0 Failing

The grades of CR, I, M, N, NC, R, S, W, Y or YW have no negative quality point value.

Other Grading Symbols

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

I **Incomplete** — A temporary grade assigned at the discretion of the instructor in case a student has been in attendance and has done satisfactory work until within two weeks of the end of the quarter, provided the student has furnished proof satisfactory to the instructor that the work cannot be completed because of illness or other serious circumstances beyond the student's control. When the instructor assigns an I grade, a NOTICE OF INCOMPLETE GRADE FORM must be filed with the Dean, Registrar, student and instructor. This form will state what work remains to be completed to obtain a final grade. The student has until six weeks after the beginning of the next quarter, regardless of whether the student is enrolled, to complete the specified work. If the specified work has been completed, the student must file an official Incomplete Removal Form and pay the required fee to have the final grade posted to the transcript. However, if the grade is an E the final grade will be posted without student payment. I grades assigned spring quarter must be removed by six weeks after the beginning of the fall quarter. Prior to the end of the I-removal period, the Dean may notify the Registrar of serious reasons that require an extension of this deadline to a time certain, but under no circumstances may this be extended beyond one calendar year from the date of initial posting of the I. While on the transcript, I grades will carry no penalty; i.e., they will not be counted in credit or grade point average computations.

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

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

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

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

R **Research in Progress** — doctoral programs only.

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

W **Withdrawal** — official withdrawal.

Y **Audit** — course for which no credit is given.

YW **Audit Withdrawal** — registered but did not attend through end of course.

Grade Reports

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

Grade Point Average

Seattle University requires that undergraduate students maintain a C average which is equivalent to a cumulative 2.00 grade point average. Requirements of professional schools may be higher and individual programs may have special grade requirements. The grade point average is computed by dividing the total number of quality points achieved in one quarter by the total number of credit hours attempted in which the student earns a letter grade.

Graduate students must maintain a B average which is equivalent to a cumulative 3.00 grade point average.

Repeating A Course

An undergraduate student who receives a grade of C- or below in a course may repeat the course. The grade earned the second time will be posted to the permanent record; in the event that the grade earned the second time is higher than a C, quality points equal only to a grade of C will be computed into the cumulative grade point average. The original grade will remain on the record.

If credit has been granted for a course taken at another institution and then the course is repeated at Seattle University, the transfer credit is revoked and the Seattle U credit and grade are granted. A transfer student who has registered three or more times for a course at another institution without successfully completing it will be allowed to register for the course at Seattle University only once.

A graduate student must repeat a required graduate course graded D+ or below and may repeat a graduate course graded C+ or below only once. The grade earned the second time will be used in computing the grade point average. The original grade will remain on the record.

Credit/No Credit Option

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

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

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

3. Credit/no credit may apply to a maximum of two courses in the major or departmental requirements outside the University core; students may not select this CR/NC option for any courses in the University's core.
4. Students who elect a credit/no credit option are eligible for quarter honor roll only if credit for graded courses totals 12 or more.
5. Only one credit/no credit course may be taken in a given quarter, except those in item No. 6 below.
6. All P.E. activity courses numbered 100-499 and music practice courses shall be credit/no credit.
7. No graduate courses (500-699) are open to CR/NC grading.
8. All courses elected as credit/no credit will appear on the student's permanent record and will be graded:
   CR (credit)—PASS
   NC (no credit)—NO/PASS
9. Ninety (90) credits graded A, B, C, D, must be completed at Seattle University to qualify for honors. Courses graded CR/NC do not count toward this total of 90.

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

Probation

If a student falls below the standard required for graduation, he/she may be placed on probation and given the opportunity to improve the quality of work before final dismissal. A student will be placed on probation if the cumulative grade point average falls below 2.00 or the minimum required by a professional school.

Readmission

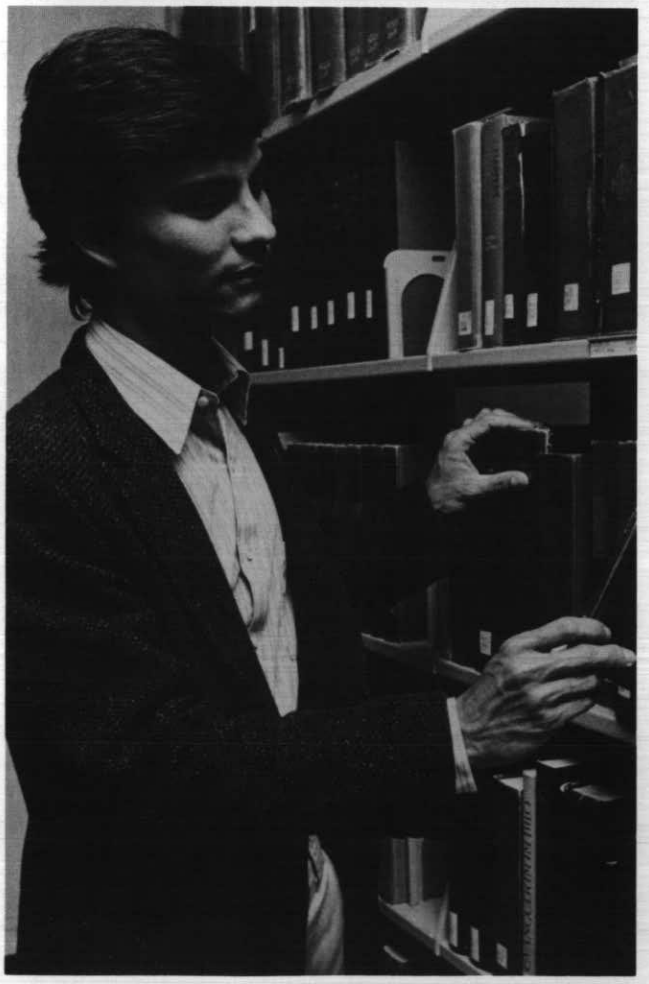
Students who have been absent from Seattle University for one or more quarters and students who have attended

another school since withdrawing from Seattle Univesity are required to fill out an application for readmission form. A re-entering student who has attended another school since withdrawal from Seattle University must submit an official transcript to the Registrar before application for admission can be considered.

Credit for courses completed elsewhere is considered not transferable unless an official transcript is filed with the Registrar at time of readmission. Credit from a two-year community college does not transfer once a student has a total of 90 quarter credits (junior status). Records of summer work must be on file by December 1 for credit to transfer.

Records

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



Registration

Newly admitted students and returning students must present themselves at the University for registration on the dates published.

No registrations are permitted after the fifth class day. A late registration fee is assessed after the first official class day of the quarter. Students registering late are held responsible for absences thus incurred.

No person may attend any University course unless officially registered.

Registration Changes

Students are held accountable for completion of every course for which they register. 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 the adviser or dean for approval. This card must be returned to the Registrar within the specified time limit. No course may be added or changed after the fifth day of class. A student who drops or changes courses without following this procedure is ineligible for tuition refund and will be assigned a grade of NC.

Transcripts

Students may obtain official transcripts from the Registrar's office. No official transcript will be sent for students with a financial obligation to the University.

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 name and address.

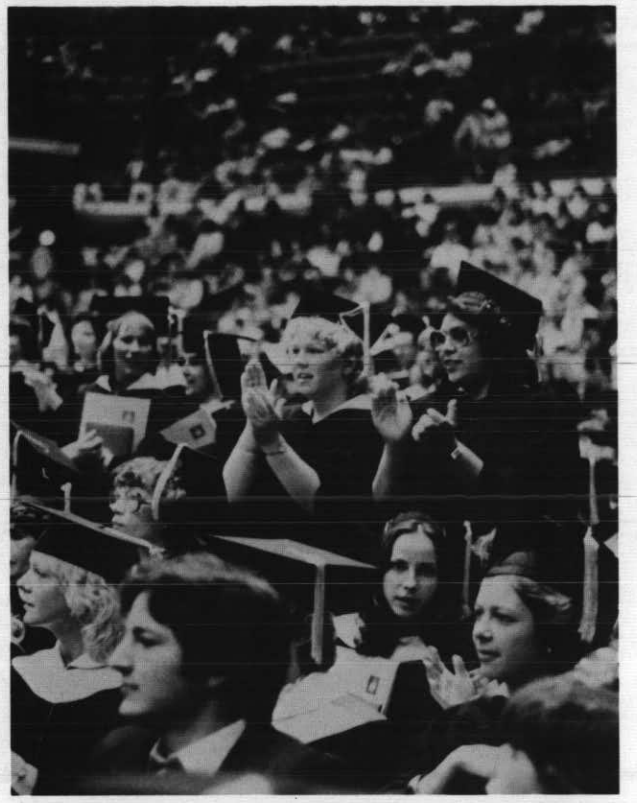
Letters of recommendation or copies of transcripts should be requested at least one week before they are required. Transcripts cannot be issued during the period of registration, examinations, or commencement.

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/her courses. The withdrawal form is obtained from the Registrar and presented to the adviser, instructor, dean and Registrar in that order for approval and signature. In an emergency, notification of withdrawal may be made by telephoning the dean of the school or Registrar.

The official withdrawal is completed only when the approved card is presented to the Registrar within the specified time limit. A grade of W will be allowed until the eighth last class day of the quarter.

Degrees

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.

Application For a Certificate

Application for a certificate must be made at the office of the Registrar within the first four weeks of the student's last quarter in a certificate program. A receipt for the certificate fee must be presented before the Registrar may issue the application forms.

Degree Requirements—Bachelor's

As a general rule, students are required to meet degree program requirements in effect at the time of their matriculation.

Candidates for an undergraduate degree must meet the requirements listed below.

1. Core curriculum requirements and specific requirements of the college or school from which the student expects to graduate must be fulfilled; A minimum overall grade point average of 2.00 must be achieved and a gpa of 2.00 is required in departmental requirements of the students major. Higher grade point average requirements pertain in certain programs. See individual program section for requirements.

2. A minimum of 180 credits is required for the baccalaureate degree except for graduates of Matteo Ricci where 135 credits is the minimum. 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.

3. A minimum of 15 credits in philosophy and 10 credits in theology and religious studies are required in all degree programs. See page 18 for specific requirements.

4. The senior year must be spent in residence at the University, which shall be understood to mean the final 45 credits of degree requirements, and the work is to be taken in the University under the direction of members of the faculty. In the case of Seattle University students enrolled in AFROTC at the University of Washington this requirement may be waived for Aerospace studies.

5. Completion of all degree requirements within 10 years of the date on which the college work was begun.

6. Satisfaction of 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. Diplomas are issued only once a year in June regardless of when student completes degree work.

8. Students working for a second baccalaureate degree, either consecutively or concurrently, must complete a minimum of 45 credits beyond the requirements of the first baccalaureate degree. These 45 credits must be completed in residence at Seattle University. A minimum of one course (5 credits) in philosophy and one course in theology and religious studies (5 credits) is required.

   Students completing this minimum of 10 credits in philosophy and theology and religious studies at

Seattle University or elsewhere as part of a first bachelor's degree will be considered as having fulfilled this requirement. Minimum academic and administrative requirements listed above must also be met.

Requirements for advanced degrees are given in the Graduate Bulletin.

Honors at Graduation

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

Cum Laude	3.40
Magna Cum Laude	3.65
Summa Cum Laude	3.90

Special Awards

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

Aerospace Studies (Air Force ROTC)

Col. Ernest L. Hansen, P.A.S., Chairman

Objectives: Air Force ROTC is offered to SU students through an agreement with the University of Washington. The objectives of Air Force ROTC are to motivate, educate, and commission highly qualified students for active duty as officers in the United States Air Force. The curriculum is designed to develop the skills and attitudes an Air Force officer will need to comprehend and cope with the scientific and techological developments of the 80s.

General Program Requirements: All classes are taught at the University of Washington, Clark Hall, Rm 210. The basic freshman and sophomore courses are open to all students and require two hours of student participation per week. Junior and Senior classes are open to selected qualified students who have received credit for the basic courses. For further information contact the Recruiting Officer at (206) 543-2360 or write Recruiting Officer, AFROTC Det 910 (DU-30) University of Washington, Seattle, WA 98195.

Commissioning Requirements:

Students who successfully complete the Air Force ROTC program and receive an academic degree from Seattle University will be offered commissions as Second Lieutenants in the U.S. Air Force Reserve.

General Military Course (GMC)

The basic division courses are open to all students. No military commitment is required to take these courses. Sophomore level students may take the freshman and sophomore level courses concurrently. Uniforms and textbooks are furnished. A four week Field Training course taken during the summer between the sophomore and junior years is required for entry into the Professional Officer Courses.

Professional Officer Courses

Cadets selected for enrollment in POC are enlisted in Air Force Reserve and receive subsistance pay of $100 per month. The Air Force will pay for up to twenty-five hours of flight instruction for students who are qualified for Air Force pilot training.

Scholarship

Four, 3½, 3, 2½, and 2-year scholarships are available for engineering and certain scientific majors. In addition, selected scholarships are available for pre-health profession majors, pilot, navigator, and missile launch officer candidates. Air Force ROTC scholarships pay for tuition, books, fees, and uniforms. In addition, scholarship winners receive $100 subsistance per month. To take advantage of these scholarships students should apply directly to AFROTC Det 910, University of Washington, Seattle, WA 98195, or call (206) 543-2360.

General Military Courses

AS 101, 102, 103 — Aerospace Studies 100 — 1 credit

Examines the role of United States military force in the contemporary world, with particular attention to the United States Air Force, its organization and mission. The functions of strategic offensive and defensive forces, general purpose forces and aerospace support forces are covered. One classroom hour and one hour of leadership laboratory per week.

AS 211, 212, 213 — Aerospace Studies 200 — 2 credits

Introduction to the study of air power. The course is developed from a historical perspective starting before the Wright brothers and continuing through the early 1970s. The development and employment of air power in military and nonmilitary operations to support national objectives is covered. One classroom hour and one hour of leadership laboratory per week. Prerequisites: 103 or equivalent for 211; 211 for 212; 212 for 213 or permission of department.

Professional Officer Courses

AS 331, 332, 333 — Aerospace Studies 300 — 3 credits

Study of Air Force leadership and management includes professional responsibilities, military justice system, leadership theory functions and practices, management principles and functions, and problem solving. Three classroom hours and one hour of leadership laboratory per week. Prerequisites: permission of department.

AS 431, 432, 433 — Aerospace Studies 400 — 3 credits

Study of United States defense policy with respect to those political, economic, and social constraints involved in its formulation and implementation. Includes an examination of the military professional, his/her role and civil-military relationship in a democratic society. Three classroom hours and one hour of leadership laboratory per week. Prerequisite: permission of department.

College of Arts and Sciences

College of Arts and Sciences

Robert D. Saltvig, Ph.D., Acting Dean

Objectives

The College of Arts and Sciences, the largest undergraduate division of Seattle University, is dedicated to the ideal that a liberal education in the arts and sciences best prepares a student for a rich and fruitful life. The philosophy upon which the College is based is one which recognizes not only that its students must be prepared to make a living, but to live fully, in a rapidly moving and complex world. All undergraduate students in the University take core courses in the College, for in them are found the intellectual, social, cultural and spiritual riches of Western civilization.

The College aims at developing not only depth in some one area of knowledge, but also the breadth of learning, understanding and truth which is essential to a rich human life. The student is led, by means of the various academic disciplines, to see the world in its major aspects of reality. Students are helped to discover the interrelationships of the physical, social, and artistic dimensions of the world, along with their own relationship to the world—especially their power and responsibility to shape it for their future.

Organization

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

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

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

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

Admission Requirements

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

Bachelor of Arts

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

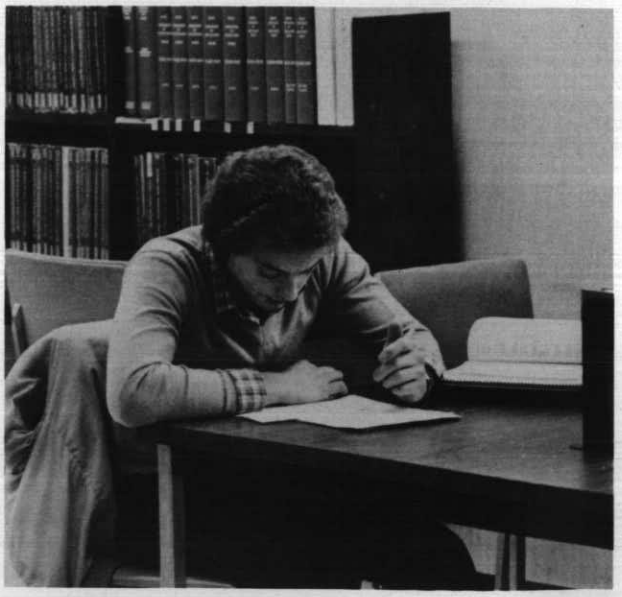
General Program Requirements

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

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.



Alcohol Studies Programs

James E. Royce, SJ, Ph.D., Director

Jerome V. Schnell, Ph.D., Executive Director

Objectives

This program is designed to provide a strong background for work in alcoholism and drug abuse treatment and rehabilitation, in education and prevention, in social services agencies, in industry or in referral centers.

It also supplements the training of degreed professionals as well as students preparing to work in psychiatry or psychology, nursing, social work, rehabilitation, criminal justice, community services or allied fields.

Degree Programs

The **B.A. in Social Science with a Specialty in Alcohol Studies** includes both the Basic and Advanced Certificates (minimum 36 credits of the 65 beyond the core, as in General Studies Program, p. 45). The Basic Certificate may also be a part of the B.A. in Community Services, Rehabilitation, Psychology, or Criminal Justice

Master's degrees with a Specialty in Alcohol Studies may be earned in Rehabilitation, or Counseling and Guidance; field experiences must be done under the appropriate graduate programs instead of ALC 407-408, but will also count for the Certificate.

Basic Certificate

A certificate in Alcohol Studies will be granted upon successful completion of 20 credits, which must include the following courses: Alc 400 (or Psy 490), 401, 402, 403, 405, 407-8 with a 2.50 minimum g.p.a. Certificate candidates may register as transient students. Basic Certificate program is a combination of classroom instruction (14 credits) and supervised field experience (6 credits) under experienced counselors. Evening classes will permit in-service training. A certificate program should be completed within three years.

Alcohol/Drug Certificate

A certificate in Alcohol/Drug Studies will be granted upon completion of the above requirements plus ALC 424 and 425 for a total of 24 credits. One of the two field experiences must be taken in an approved drug abuse agency, and the other in an approved alcoholism agency.

Advanced Certificate

An Advanced Certificate in Alcohol Studies is granted upon completion of 16 credits in approved alcohol-related courses with a minimum g.p.a. of 3.00 (B), beyond the 20 credits applied to the basic certificate, or the 24 credits applied to the Alcohol Drug Certificate. A new application must be submitted, and only those who earned the Basic Certificate with a minimum g.p.a. of 3.00 will be considered by the screening committee.

Courses taken in the basic program need not be repeated, but the credits may not count toward both the Basic and the Advanced Certificate. If ALC 405 "The Law and Alcohol" was not taken in the basic program, it will be an additional required course within the total 16 credits.

Alcoholism and Drug Abuse Courses

Alc 400 (Psy 490) Survey of Alcoholism (Symposium) 3 credits
History, scope, physiological, social, psychological and family aspects of alcohol problems. Drunk driving. Progression, symptoms, types of alcoholics. Nature of the addiction: disease concept, causality, treatment, prevention.

Alc 401 Pharmacology and Physiology of Alcohol Use 2 credits
Ingestion, absorption, metabolism. Effects of different blood alcohol levels. Psychiatric complications: damage to brain, liver and other organs. Evaluation of results. Prerequisite: Alc 400.

Alc 402 Counseling Principles and Techniques 3 credits
Interview techniques. Intake and intervention vs. long-range therapy. Supportive, motivational, directive vs. non-directive counseling. Confrontation, role-playing, video-tape playback. Prerequisite: Alc 400.

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

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

Alc 405 The Law and Alcohol **2 credits**
Legal implications and consequences of alcohol-related offenses. Deferred prosecution. Uniform Alcoholism and Intoxication Act. Impaired driving laws. Court structure and jurisdictions. Prerequisite: Alc 400.

Alc 406 Cross-Cultural Counseling **2 credits**
Special problems and techniques, understanding of cultural background and instruction by members of minority groups. Prerequisite: Alc 400 and 402.

Alc 407 Field Experience I **3 credits**
Supervised work in an agency, clinic, rehabilitation center referral center. Oral and written reports by student required. Prerequisite: Alc 400 and 402. Mandatory CR/NC

Alc 408 Field Experience II **3 credits**
Prerequisite: Alc 407. Mandatory CR/NC

Alc 409 Special Topics **1-3 credits**
Courses taught by a particular expert or on a certain aspect.

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

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

Alc 412 Group Dynamics in Treatment **2 credits**
Role playing as a means to development of self awareness; dynamics of group interaction; introduction to psychodrama. Two and one-half hours per week. Prerequisites: Alc 402, 403 and 407.

Alc 413 Alcoholism Schools Workshop **2 credits**
Goals, methods, and skills in teaching Alcohol Information Schools (AIS) and follow-up classes, and court referral schools for those driving while intoxicated (DWI). Problems with defensive and hostile clients. Prerequisite: Alc 400 or equivalent.

Alc 414 Interview and Dynamics in Treatment **2 credits**
Procedures and skills used in alcoholism referral and treatment agencies. Intake interview, client evaluation, case-writing, pre-sentence report, record-keeping and confidentiality. Prerequisite: ALC 402.

Alc 415 Modes of Therapy in Treatment **2 credits**
Overview of various therapies commonly used with recovered alcoholics and their spouses. Theory, principles and application of techniques. Individual and group practice. Prerequisites: ALC 403 and ALC 407.

Alc 416 Alcohol and Youth: Education, Problems, Prevention **2 credits**
Alcohol-related problems among young people, stressing education and prevention. Teen-age alcoholics, children of alcoholics, polydrug abuse and the young drinking driver.

Alc 417 Alcohol Problems in Business and Industry **2 credits**
Scope and cost of alcohol-related problems in American business and industry. Company policy, implementation of occupational alcoholism programs, training of supervisors. Prerequisite: ALC 402.

Alc 418 Alcoholism and The Family **2 credits**
Alcohol-related problems in the family, including alcoholic, spouse, children and significant others. Individual and group counseling. Married couples and team approach as alternatives. Prerequisite: ALC 402 and 403.

Alc 419 Advanced Physiology and Pharmacology of Alcohol and Other Drugs **2 credits**
Current research and thought regarding the effects of alcohol on all body tissues, with implications for treatment. Fetal alcohol syndrome, brain, liver, endocrine and other damage. Prerequisite: ALC 401.

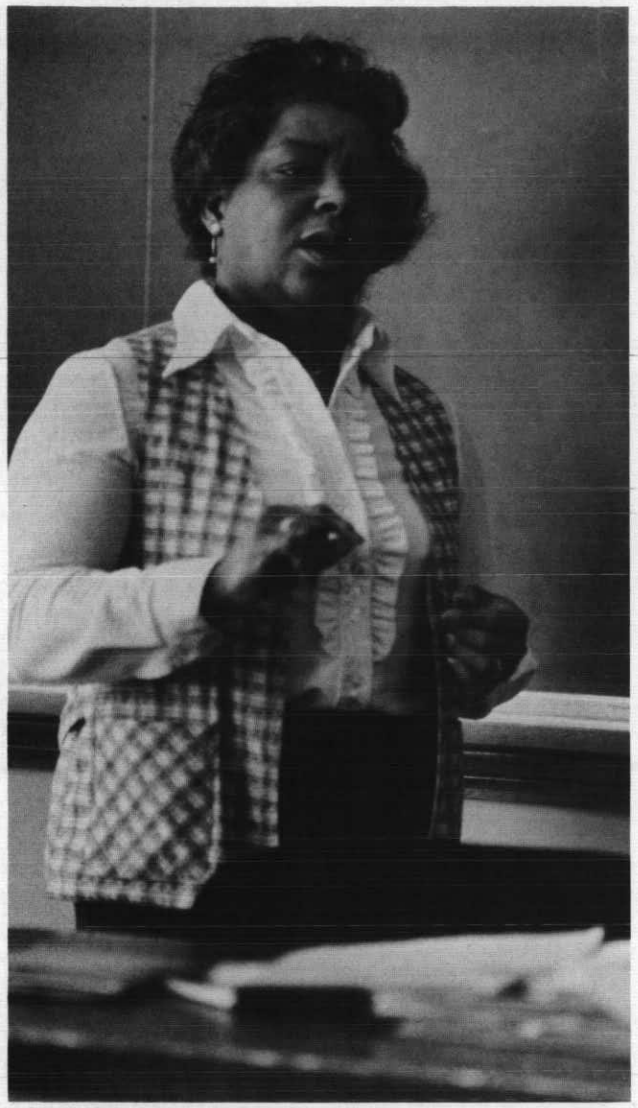
Alc 420 Alcoholism and Drug Abuse Seminar **2 credits**
An advanced seminar on selected current topics in alcoholism and alcohol-related problems. Prerequisite: 10 credits in Alcohol Studies, and permission of Director.

Alc 421 Advanced Project or Research **2-5 credits**
Replication, original research, or scholarly investigation which demonstrates mastery of basic fact-finding, experimental design, evaluation and presentation of results. A graduate project or master's thesis will substitute. Prerequisite: Basic Certificate in Alcohol Studies, and permission.

Alc 422 Alcoholics Anonymous as a Resource **1-2 credits**
History, structure, traditions and program of A.A. Psychology of the 12 Steps. Use of A.A. as a treatment resource; cooperation without affiliation.

Alc 424 Drug Abuse: Social Aspects **2 credits**
History, scope, classification of drugs, legal aspects. Patterns of use, abuse, and addiction. Treatment, recovery and rehabilitation methods and strategies. Prerequisite: Alc 400.

Alc 425 Drug Abuse: Physiological Aspects **2 credits**
Pharmacology and physiology of drug action. Prescription and non-prescription drugs. Interactions among drugs, polydrug abuse. Actions of drugs on the central nervous system. Recovery from addiction. Prerequisites: Alc 401 and 424.



Community Services

Herbert M. Kagi, Ph.D., Director

Objectives

Community Services is a program primarily involving social work courses and field experiences supported by the study of economics, political science, psychology and sociology. The primary objective is to prepare students for work in the field of social work or community service organizations immediately after the bachelor's degree. Other objectives are to contribute to the liberal education of all students, and to prepare students for admission to graduate schools of social work. The program assists students in deciding on a career choice by making known the nature of the social service field, the dynamics of community action and understanding of these fields for students preparing for advanced training in the related professions.

Supervised field experience in agencies, institutions or related organizations is a unique and vital part of the program. This experience is provided in such areas as probation and parole, public assistance, mental health facilities, youth and children's services, employment counseling and economic opportunity programs. The Community Services program is not an apprenticeship system but rather a basic program with courses and supervised field practice aimed at giving those principles, skills, knowledge and attitudes necessary for workers in the above fields. Coordinating seminars, concurrent with two required field experiences, provide each student opportunity to understand himself/herself more deeply and acquire a broad perspective of community services.

Degree Offered

Bachelor of Arts in Community Services

General Program Requirements

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

Degree Requirements

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

A minor in Community Services consists of 35 credits in Community Services to include CS 300, 374, 376, 378, 379, 478 and 479.

Bachelor of Arts in Community Services

Freshman year

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

Sophomore year

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

Junior year

Community Services 300, 374, 376	15 credits
Community Services Elective	5 credits
Economics	5 credits
Psychology	5 credits
Sociology	5 credits
Theology	5 credits
Electives	5 credits

Senior year

Community Services 378, 379, 478, 479	20 credits
Community Services Elective	10 credits
Statistics or Research Methods	5 credits
Electives	10 credits
Total	180 credits

Community Services Courses

CS 291 Special Topics **1-5 credits**
CS 292 Special Topics **1-5 credits**
CS 293 Special Topics **1-5 credits**

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

CS 305 Introduction to Community Action **5 credits**
Studies methods by which community groups and organizers can intervene in the political and social processes of a community on the neighborhood, city, county and state levels, to initiate social change.

CS 310 Social Work With Families **5 credits**
Behavioral dynamics of interpersonal relationships in the family; reciprocal nature of relationships; conceptual frameworks for individual and family therapy through study of treatment modalities. (spring)

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

CS 330 Citizen and the Law **5 credits**
Discussion of poverty law; family law, the contractual relationship, consumer law, landlord-tenant laws, and personal liability. (spring)

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

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

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

CS 377 (Sc 377) Field Experience **5 credits**
For Sociology majors only. Mandatory CR/NC (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 in a social welfare agency with the agency's clientele, services and functions in the community. Prerequisites: CS 376 or permission for 378; 378 for 379; 379 for 380. Mandatory CR/NC (fall, winter, spring)

CS 400 Grantsmanship **2-5 credits**
Trains students to write federal and foundation grants using government and foundation application kits. Examines grant components and grants management.

CS 405 Group Theory and Process **5 credits**
This course covers the historical development of groups, style or types of groups, and how groups are used in business, therapy, training or personal life situations.

CS 410 Counseling in Human Services **5 credits**
Focus is on the student development of skills to work with people through exploring growth stages a person may experience and how that process affects behavior. Counseling use of this knowledge will be emphasized.

CS 412 Adolescence and Crises **2-5 credits**
A seminar on the social dynamics of the young in this turbulent stage of development, with the major focus on maintaining/restoring the balance in his life system. (Self—family—friends—community).

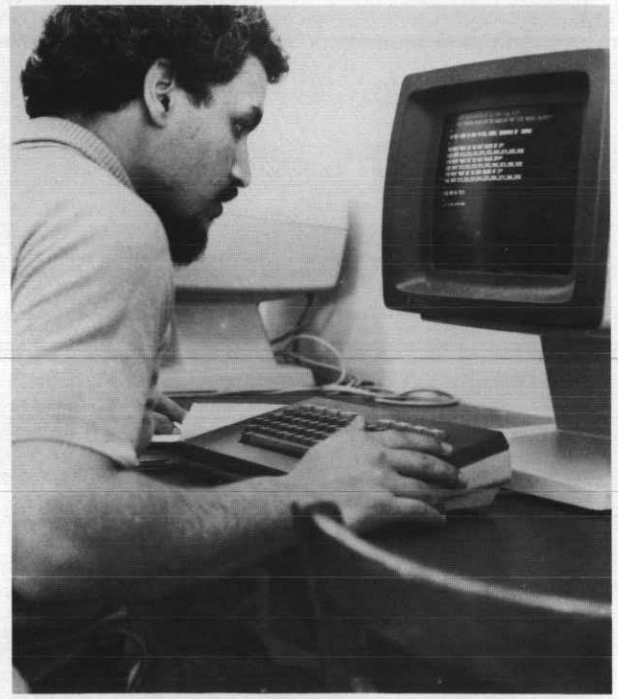
CS 420 History and Survey of Drug Abuse **5 credits**
Scope of problems arising from drug abuse. Psychology of drug addiction; patterns of progression, early symptoms and diagnosis; types of drug addicts. Theories of etiology.

CS 440 Crisis Intervention **5 credits**
Theory and practice of crisis intervention strategies. Schools, criminal justice agencies, family service agencies, public welfare agencies and crisis centers.

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

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

CS 496 Independent Study **1-5 credits**
CS 497 Independent Study **1-5 credits**
CS 498 Independent Study **1-5 credits**
Prerequisite: Upper division standing and permission.



Criminal Justice/Police Science

Herbert M. Kagi, Ph.D., Director

Objectives

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

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

Degree Offered

Bachelor of Criminal Justice/Police Science

General Program Requirements

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

Degree Requirements

Bachelor of Criminal Justice/Police Science — 55 credits in CJP, or approved related courses.

A minor in Criminal Justice consists of 35 credits in CJP or approved related courses.

Bachelor of Criminal Justice/Police Science

Freshman and Sophomore years

Criminal Justice/Police Science	10 credits
Economics	5 credits
English 110 and core option	10 credits
History core option	10 credits
Mathematics-Science core option	10 credits
Philosophy core option	15 credits
Political Science	5 credits
Psychology	5 credits
Sociology	5 credits
Theology core option	10 credits
Elective	5 credits

Junior year

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

Senior year

Criminal Justice/Police Science	35 credits
Electives	10 credits
Total	180 credits

Criminal Justice/Police Science Courses

CJP 291 Special Topics — **1-5 credits**
CJP 292 Special Topics — **1-5 credits**
CJP 293 Special Topics — **1-5 credits**

CJP 310 Law Enforcement Public Policies — **5 credits**
Discussion of public policy analytic models and application to Federal, state and local law enforcement agencies.

CJP 325 Criminal Law — **5 credits**
Study of the criminal law processes from detention to appeal; State and Federal rules of criminal procedure. Understanding of policies underlying those rules.

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

CJP 352 Comparative Police Systems — **5 credits**
Comparative analysis of police systems in the United States and selected foreign countries; emphasis on the organizational aspects, functions and process at work in foreign police systems.

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

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

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

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

CJP 366 Corrections **5 credits**
(Sc 366) Analysis of post-arrest treatment methods applied to offenders; the correctional institution and community-based corrections. Prerequisite: Upper division standing or permission.

CJP 378 Field Experience I **1-5 credits**
CJP 379 Field Experience II **1-5 credits**
Direct observation, supervised practical experience and academic study in a selected law enforcement agency of organization in the criminal justice system.

CJP 410 Juvenile Justice Systems **5 credits**
(Sc 412) Examination and study of contemporary police-juvenile operations. Theory and examination of the Juvenile Justice System. Relationship between the juvenile-officer, crime prevention and community relations.

CJP 412 Professional Criminal **5 credits**
Analysis of professional crime from the viewpoint of the sociology of work; the professional criminal's utilization of technological change and Criminal Justice System responses.

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

CJP 418 Sexual Deviance and The Law **2-5 credits**
Analysis of definition problems, formal, legal and social constraints, and the Criminal Justice System's reaction to deviants.

CJP 425 Problems of Public Service Bureaucracies **5 credits**
Descriptive analysis of the administrative side of large scale post-industrial governments. Emphasis upon coordination and conflict resolution through the budgeting and planning processes.

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

CJP 455 Criminal Justice System Planning **5 credits**
Methodology of systems planning, theories of analysis and problems of program evaluation with special attention to the criminal justice system.

CJP 460 Management Theory and Organizational Behavior **5 credits**
Tracing the development of large government bureaucracy and analysis of controlling theories. Problems in Criminal Justice Systems as functions of bureaucracy and bureaucratic conflict.

CJP 491 Special Topics **1-5 credits**
CJP 492 Special Topics **1-5 credits**
CJP 493 Special Topics **1-5 credits**
Prerequisite: Upper division standing and permission.

CJP 496 Independent Study **1-5 credits**
CJP 497 Independent Study **1-5 credits**

CJP 498 Independent Study **1-5 credits**
Prerequisites: Upper division standing and permission.

ECONOMICS

Hildegard R. Hendrickson, Ph.D., Chairperson

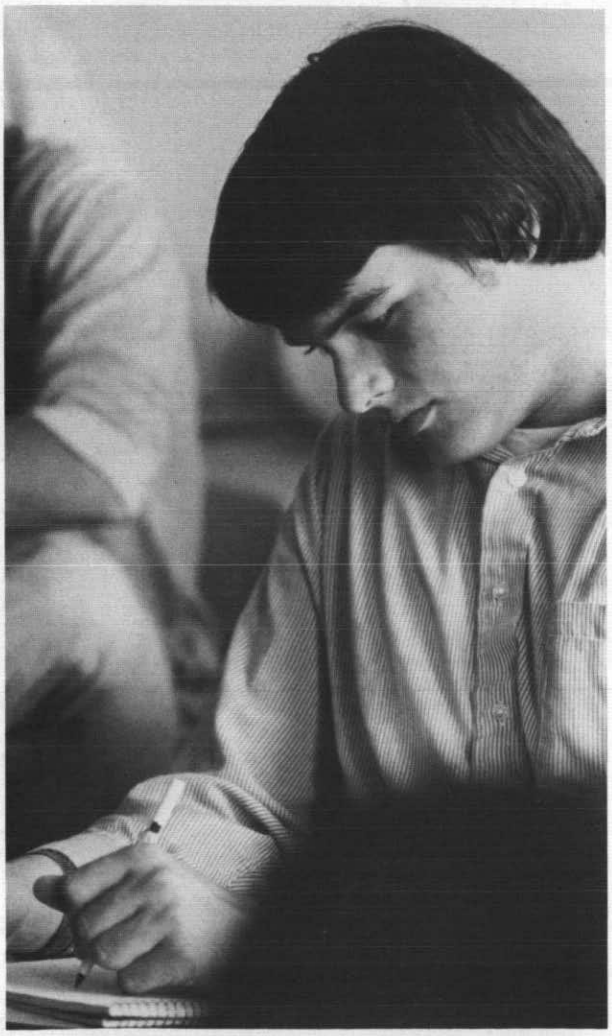
Objectives

The courses in economics are designed to acquaint the student with the economy in which he/she lives and to relate these courses to all other social sciences. The analytical approach in the economics courses provides the students with the tools of analysis necessary to solve problems and make decisions in the government and private sectors. The major courses cover topics such as economic fluctuations, income distribution, domestic and international finance, urban problems, labor relations, and economic systems.

Students who prove especially able in economics courses are encouraged to pursue graduate work in preparation for professional status as economists in government, industry or the academic world.

Degree Offered

Bachelor of Arts in Economics



English

Hamida H. Bosmajian, Ph.D., Chairperson

Objectives

The English Department offers courses in three main areas: English language, writing/rhetoric, and literature. The language courses provide the student with greater control over the lexicon, the morphology, the syntax, and the development of the English language. From the writing/rhetoric courses the student learns 1) to use and analyze the language of persuasion, argumentation, and exposition; 2) to write and speak with assurance and effectiveness; 3) to develop skills in imaginative writing (e.g., poetry and fiction). The literature courses increase in the student not only self-awareness and an understanding of human nature by the vicarious experience communicated through literary works, but also a knowledge and an appreciation of our cultural heritage and those of other parts of the world.

In the practical order an undergraduate concentration in English affords the student training in skills which will be crucial in such fields as law, social work, business, foreign service, health professions, teaching, mass communications, politics, journalism, library science, technical writing, and editing.

Degree Offered

Bachelor of Arts

General Program Requirements

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

Departmental Requirements

Bachelor of Arts (English concentration)—60 credits of English which must include the following courses: En 110, 250, 264, 265, 266, 310, 314, 315 and 330. The remaining credits must be taken in courses in the 300 and 400 series. The nature of the courses is to be determined by the student in consultation with an adviser.

Bachelor of Arts (Comparative Literature Concentration)—60 credits of English and Comparative Literature which must include the following courses: En 110, 250, 264, 265, 266, 314, 315, 414 and 416. The remaining credits must be taken in the 300 and 400 series. Recommended are En 382 and 415. The student must take one five-hour course of a foreign literature in the original language when a reading competency in that language has been demonstrated.

Teaching Major (School of Education) — 60 credits of English which must include En 110, 175 (or 220 or 230 or 240); 250, 264, 265, 301 or 401, 330, either 266, 382, 482 or 484; and either 310 or 407. The remaining 15 credits must be taken in courses in the 300 and 400 series. En 314 and 315 are strongly recommended.

Undergraduate Minor — 20 credits of English beyond En 110 and either 264, 265 or 266. These courses should be taken in the 300 and 400 series, as specified by the department. For the Journalism — English Interdisciplinary Program, see the section on Journalism.

Special Undergraduate Minor in Writing and Speech Communications — 35 credits of English and Speech, including 25 credits beyond En 110 and either En 200 or En 204. These remaining courses must include two of the following: En 175, Sph 200, En 203, En 305, En 306, and Dr 404; and three courses from the following: En 250, En 401, En 488, Sph 204, and Sph 310. Students exempted from En 110 will add an elective from the courses listed above.

Bachelor of Arts

Freshman year

English 110, 250 ..... 10 credits
Fine Arts 101, 102, 103 ..... 15 credits
or
Foreign Language (Comparative Literature concentration recommended) ..... 15 credits
History core option ..... 10 credits
Philosophy core option ..... 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 310, 314, 315, 330 (English concentration) ..... 20 credits
or
English 314, 315, 414, 415 (Comparative Literature concentration) ..... 20 credits
French or German 105, 106 ..... 10 credits
Mathematics/Science core options ..... 5 credits
Electives ..... 10 credits

Senior year

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

Total . . . . 180 credits

English Courses

En 100 Fundamentals of English Grammar and Writing — **5 credits**
Emphasis on basic patterns of grammar and composition.

En 103 Special English I — **3 credits**

En 104 Special English II — **2 credits**

En 105 English as Second Language — **5 credits**

En 110 Freshman English: Effective Thinking and Writing — **5 credits**
Includes a review of basic grammar as needed. Main stress on 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 175 Introduction to Literature — **5 credits**
Introduction to the study of novels, plays, poetry and essays.

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

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

En 204 Imaginative Writing — **5 credits**
A course designed to be individually centered in the student's choice of genre: prose fiction, poetry, personal narrative, essay, autobiographical writing. A combination of full-class participation and "workshop" activity.

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 the Eighteenth Century (1640-1798). III. Study of major British writers from the Romantic period to the present. Required of English majors.

En 283 **Classics of Black American Literature** **5 credits**
A literary and historical survey of works written by Black Americans with emphasis on DuBois, Wright, Ellison, Morrison, Brooks and other modern writers.

En 291 **Special Topics** **1-5 credits**
En 292 **Special Topics** **1-5 credits**
En 293 **Special Topics** **1-5 credits**

En 301 **Rhetoric and Literary Concepts in Teaching** **5 credits**
A course designed primarily for teachers. A study of writing techniques and literary terms, themes, and concepts, with application to the strategies of teaching.

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

En 306 **Writing Poetry** **5 credits**
Study of and practice in the modes and techniques of poetic composition.

En 307 **Advanced Writing Skills** **5 credits**
A course for upgrading writing style, critical sense, and vocabulary. Especially helpful as preparation for entrance into professional schools or graduate school. Addresses significant parts of major admission tests.

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

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

En 312 **Classics in Children's Literature** **5 credits**
In-depth humanistic and interdisciplinary analysis of basic texts in children's literature; folk tales, L. Carroll, C.S. Lewis, outstanding 20th century works.

En 313 **Mythology** **5 credits**
A comparative study of the structure and symbols, the cultural and psychological meanings of selected mythologies, including Greek mythology.

En 314 **Backgrounds of Western Literature I** **5 credits**
En 315 **Backgrounds of Western Literature II** **5 credits**
I. From the beginnings through the Renaissance. II. From 17th Century to the Moderns. Required of English majors.

En 330 **Introduction to Shakespeare** **5 credits**
Readings in the comedies, tragedies and histories. Required of English majors.

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

En 391 **Special Topics** **1-5 credits**
En 392 **Special Topics** **1-5 credits**
En 393 **Special Topics** **1-5 credits**

En 394 **Modern Tradition: Fiction** **5 credits**

En 395 **Modern Tradition: Poetry** **5 credits**

En 398 **Modern Tradition: Drama** **5 credits**

En 401 **Rhetoric, Argument and Persuasion** **5 credits**
The principles of persuasive writing as found in models both classical and contemporary, with attention to the techniques of argumentation and propaganda.

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

En 411 **Medieval Literature** **5 credits**

En 414 **Eighteenth and Nineteenth Century Continental Literature** **5 credits**

En 415 **Russian Literature** **5 credits**

En 416 **Eastern Literature** **5 credits**

En 420 **Renaissance Literature** **5 credits**

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

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

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

En 452 **Eighteenth Century English Novel** **5 credits**

En 460 **Romantic Literature** **5 credits**

En 475 **Victorian Literature** **5 credits**

En 477 **Nineteenth Century English Novel** **5 credits**

En 482 **American Literature to 1900** **5 credits**

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

En 487 **Contemporary Literature** **5 credits**

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

En 490 **Literary Criticism** **5 credits**

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

En 496 **Independent Study** **1-5 credits**
En 497 **Independent Study** **1-5 credits**
En 498 **Independent Study** **1-5 credits**

Speech

Patricia Sullivan, Ph.C., Program Director

Program

There is no major in Speech. Speech courses are under the direction of the English department, and are a valuable adjunct to other degree programs in the fields of the humanities and social sciences. Students interested in speech should include speech courses among their electives.

Objectives

Speech courses offer background and practice in the skills of oral delivery. Students are provided opportunities for creative composition and vocal interpretation in a disciplined fashion.

Speech Courses

Sph 100 Fundamentals in Speech — **5 credits**
Theory and practice of basic speech communication skills. Introduction to interpersonal communication, public communication and aesthetic communication.

Sph 200 Public Speaking — **5 credits**
Theory and practice in organizing and delivering a speech.

Sph 201 Interpersonal Speech Communication — **5 credits**
Theory and practice of skills in interpersonal situations. Emphasizes self-awareness, sensitivity to others, and a humanistic approach to communication.

Sph 202 Oral Interpretation — **5 credits**
Analysis and interpretation of literature. Practice in interpreting prose, poetry and drama.

Sph 204 Persuasion and Argumentation — **5 credits**
Principles involved in effective argumentation and persuasion, practice in forms of debate.

Sph 291 Special Topics — **1-5 credits**
Sph 292 Special Topics — **1-5 credits**
Sph 293 Special Topics — **1-5 credits**
Prerequisite: Permission of instructor.

Sph 310 The American Speaker — **5 credits**
Study and criticism of American public speaking. Practice in contemporary methods of public speaking.

Sph 320 Speech for the Classroom Teacher — **5 credits**
Emphasis on the teacher as a communicator and leader in learning communication skills. Discussion, story telling, oral interpretation and drama.

Sph 491 Special Topics — **1-5 credits**

Fine Arts

J. Kevin Waters, S.J., D. Mus. Arts, Chairperson

Objectives

The Fine Arts Department offers programs and courses designed for all students as well as for those who wish to major in Art, Drama, and Music. There are opportunities for everyone to participate in performances and exhibits, or to study voice or an instrument privately. A program in dance is also offered. Moreover, every student may pursue courses which examine changing styles, attitudes, and social conditions in the arts from an historical perspective.

Though the Fine Arts major will concentrate in either Drama, Music, or the Visual Arts, that student will have ample opportunity to study and obtain practical experience in the other related art forms as well. Then, too, in conjunction with the School of Education, students may take courses in the fine arts which will enable them to be certified as Elementary Art, Drama, or Music teachers.

Degree Offered

Bachelor of Arts

Departmental Requirements

Bachelor of Arts — Major in Art — 79 credits which must include Art 221 (6), 231 (6), 311, 312, 334, 346, 351; 21 elective credits in art. Fifteen credits of Fine Arts courses are required, FA 101, 102, and 103. In addition, fifteen credits of cross-field study must be taken in Drama and Music.

Bachelor of Arts — Major in Drama — 65 credits which must include Dr 100, 210, 221, 222, 264, 265, 267, 320, 420, 455, 480 and FA 101, 102, and 103. In addition, fifteen credits of cross-field study must be taken in Art and Music.

Bachelor of Arts — Major in Music — 100 credits which must include MU 115, 116, 117, 215, 216, 217, 315, 370, 371, 372, 373, 415, 416, 417, 418; 6 credits of ensemble and 6 credits of vocal or instrumental lessons. Music majors must be a member of a performing ensemble (choral or instrumental) each quarter in residence (either for credit or no credit). Ten credits of Fine Arts courses are required, FA 101 and 102. In addition, fifteen credits of cross-field study must be taken in Drama and Art.

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

Teaching Subject, Elementary, Drama (School of Education) — 25 credits which must include Dr 100, 210, 221, 264, 420, 421, plus 7 additional credits in Drama (electives).

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

Undergraduate Minor in Art: 30 credits which include FA 101 and Art 311 or Art 312, and 20 credits in consultation with an Art adviser.

Undergraduate Minor in Drama: 30 credits which include FA 102 and DR 210, and 20 credits in consultation with a Drama adviser.

Undergraduate Minor in Music: 30 credits which include Music 115, 116, 117; 3 credits of applied music; 3 credits of ensembles; and 9 credits in consultation with a Music adviser.

Bachelor of Arts—Major in Art

Freshman year

Art 221	6 credits
English 110 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	6 credits
Fine Arts 102	5 credits
History core options	10 credits
Mathematics/Science core option	10 credits
Philosophy core option	5 credits
Theology core option	5 credits
Art Electives	4 credits

Junior year

Art 311, 312	10 credits
Art 334, 346, 351	6 credits
Art 321	3 credits
Drama/Music electives	15 credits
Fine Arts 103	5 credits
Theology core option	5 credits

Senior year

Art 446, 451	4 credits
Art electives	10 credits
Electives	32 credits
Total	180 credits

Bachelor of Arts—Major in Drama

Freshman year

Drama 100, 210	8 credits
English 110 and core	10 credits
Fine Arts 102	5 credits
History core	10 credits
Philosophy 110	5 credits
Electives	7 credits

Sophomore year

Drama 221, 222, 264, 265	11 credits
Philosophy 220 and core	10 credits
Social Science core	10 credits
Art/Music Electives	5 credits
Electives	9 credits

Junior year

Drama 267, 320, 455	12 credits
Fine Arts 101, 103	10 credits
Theology core	5 credits
Art/Music Electives	10 credits
Electives	8 credits

Senior year

Drama 420, 480	4 credits
Math/Science core	10 credits
Theology core	5 credits
Drama electives	15 credits
Electives	11 credits
Total	180 credits

Bachelor of Arts—Major in Music

Freshman year

English 110 and core option	10 credits
History core option	10 credits
Music 115, 116, 117	15 credits
Music 130 or 131 or 135	3 credits
Music 110	2 credits
Social Science core option	5 credits

Sophomore year

Fine Arts 101	5 credits
Fine Arts electives	3 credits
Mathematics/Science core option	10 credits
Music 215, 216, 217, 371, 372, 373	24 credits
Music 130 or 131 or 135	3 credits

Junior year

Fine Arts 102	5 credits
Fine Arts electives	7 credits
Music 315, 370, 415	9 credits
Music 110, or 111	2 credits
Philosophy 110, 220	10 credits
Social Science core option	5 credits
Theology core option	5 credits
Electives	2 credits

Senior year

Fine Arts electives	3 credits
Music 110 or 111	2 credits
Music 416, 417, 418	15 credits
Philosophy core option	5 credits
Theology core option	5 credits
Electives	15 credits
Total	180 credits

Fine Arts Sequence

FA 101 **Fine Arts — Art** **5 credits**
A humanistic approach to the creative arts: painting, sculpture, architecture. An examination of the great leaps of imagination.

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 491 **Special Topics** **1-5 credits**
FA 291 **Special Topics** **1-5 credits**

Art Courses

Some art courses are designed for the student to progress in competence and skill over three terms. Instruction is individualized and students may enter the sequence in any term, registering for the course three times to obtain the maximum credit. Courses which may be taken more than once are indicated with an asterisk (*) next to the credits.

Art 221 **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. Maximum: 6 credits.

Art 231 **Design** ***2 credits**
Primary concepts and analysis of structure; problems of contemporary design; form in three-dimensional design. Maximum: 6 credits.

Art 291 **Special Topics** **1-5 credits**
Art 292 **Special Topics** **1-5 credits**
Art 293 **Special Topics** **1-5 credits**

Art 311 **History of Art** **5 credits**
Art 312 **History of Art** **5 credits**
Survey of the arts of the Western world from the earliest times to the Renaissance and from the Renaissance to the present.

Art 313 **History of Art: Non-Western** **5 credits**
Survey of arts of the world, from their genesis to the present, concentrating on those arts outside the influence of the West.

Art 321 **Advanced Drawing** ***3 credits**
Study of the human form; special problems in group composition. Maximum: 9 credits.

Art 334 **Graphics** ***2 credits**
Principles and techniques of print-making; lithography and woodcut. Maximum: 6 credits.

Art 346 **Painting** ***2 credits**
Study of the principles and practices of rendering in paint; complex composition; advanced problems. Maximum: 6 credits.

Art 351 **Sculpture** ***2 credits**
Principles and practices leading to a realization of the nature of form; dependence of design on materials; advanced problems. Maximum: 6 credits.

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**
Experimental research toward the development of a creative and personalized idiom, synthesis and research. Prerequisite: Art 346 or permission of department chairman. Maximum: 9 credits.

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

Art 496 **Independent Study** **1-5 credits**
Art 497 **Independent Study** **1-5 credits**
Art 498 **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 100 **Vocal Communication** **3 credits**
Development of the speaking voice as an instrument of communication on or off stage. Exercises in relaxation, breathing, breath control, voice production, phonetics.

Dr 210 **Pantomime** **5 credits**
Instruction in mime to express inner and outer worlds through the body. Dance movement and period style. Exercises for development of imagination, coordination, body awareness.

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

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

Dr 264 **Scene Sculpture and Painting** **3 credits**
Exposure to contemporary materials and techniques in the design, construction and painting of scene art. Lab and Lecture.

Dr 265 **Light, Color, Sound** **2 credits**
Exposure to contemporary materials, equipment and practices in the design and execution of lighting and creation of sound for theatre. Lab and Lecture.

Dr 266 **Fashion and Dress** **3 credits**
Exposure to contemporary materials, procedures and techniques in design and construction of costumes for theatre; with emphasis on the history of fashion and dress. Lab and Lecture.

Dr 267 **Makeup** **2 credits**
Exposure to contemporary materials and techniques in the design and execution of makeup for theatre; work in specialized techniques. Lab and Lecture.

Dr 291 **Special Topics** **1-5 credits**
Dr 292 **Special Topics** **1-5 credits**
Dr 293 **Special Topics** **1-5 credits**

Dr 320 **Theatre: Form and Content I** **5 credits**
Dr 321 **Theatre: Form and Content II** **5 credits**
Dr 322 **Theatre: Form and Content III** **5 credits**
A study of historical events and ideas which formed the theatre in all its aspects. I: Greeks to Elizabethans; II: 17th to 19th Century; III: 19th and 20th Century.

Dr 391 **Special Topics** **1-5 credits**
Dr 392 **Special Topics** **1-5 credits**
Dr 393 **Special Topics** **1-5 credits**

Dr 400 **Ensemble** **1-5 credits**
Dr 401 **Ensemble** **1-5 credits**
Dr 402 **Ensemble** **1-5 credits**

Dr 404 **Playwriting** **5 credits**
Study and practice in the form and method of script construction.

Dr 415 **Theatre Perspectives** **5 credits**
Study of the nature of theatrical genre: Tragedy, Comedy and mixture of these and other forms of theatre.

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

Dr 421 **Directing Experience** **2 credits**
Practical application of directing principles. Work done on campus or in the community. Prerequisite: Dr 420 or permission.

Dr 425 **Drama Internship** **1-12 credits**
Apprenticeship in specific area of study in the community or on campus under the supervision of the drama faculty. Prerequisite: Drama majors only. Permission.

Dr 455 **Theatre: Spatial and Visual** **5 credits**
Development of the stage in Western Culture from Greeks to the present; emphasis on evolution of theatre building and physical elements of theatre production. Seminar.

Dr 480 **Theatre Organization and Management** **2 credits**
Establishing and operating a theatre, including planning, budgeting and accounting, staffing, production selection, promotion, ticket sales, fund raising.

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

Dr 496 **Independent Study** **1-5 credits**
Dr 497 **Independent Study** **1-5 credits**
Dr 498 **Independent Study** **1-5 credits**

Music Courses

Applied music courses are designed for the student to progress in competence and skill over a number of terms. Instruction is individualized and students will move into the upper division with permission of the instructor. These courses, together with those in performance which may be taken more than once, are indicated with an asterisk (*) next to the credits.

Mu 110 **Piano Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits
Mu 111 **Voice Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits

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

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

Mu 120 **Violin Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits
Mu 121 **Viola Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits
Mu 122 **Cello Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits
Mu 123 **Classical Guitar Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits
Mu 125 **Organ Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits
Mu 126 **Flute Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits
Mu 130 **University Chorale** ***1 credit**
Maximum 12 credits
Mu 131 **Chamber Singers** ***1 credit**
Maximum 12 credits
Mu 135 **Fine Arts Ensemble** ***1 credit**
Instruments, singers, dancers and actors in ensemble performance. Maximum 12 credits.
Mu 136 **Orchestra** ***1 credit**
Prerequisite: Audition. Maximum 12 credits.

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

Mu 215 **Theory IV** **5 credits**

Mu 216 **Theory V** **5 credits**
Advanced musicianship, beginning part writing and analysis.

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

Mu 291 **Special Topics** **1-5 credits**
Mu 292 **Special Topics** **1-5 credits**
Mu 293 **Special Topics** **1-5 credits**

Mu 310 **Piano Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits.

Mu 311 **Voice Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits.

Mu 315 **Form and Analysis** **3 credits**
Analytic study of the larger forms of music, including two- and three-part song forms, theme and variation, and the evolution of sonata forms.

Mu 320 **Violin Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits.

Mu 321 **Viola Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits.

Mu 322 **Cello Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits.

Mu 323 **Classical Guitar Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits.

Mu 325 **Organ Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits.

Mu 326 **Flute Lessons** ***1-2 credits**
Mandatory CR/NC; maximum 12 credits.

Mu 370 **History and Literature of Music in the Middle Ages and Renaissance** **3 credits**
Historical survey of principal forms of medieval and Renaissance music, including Gregorian chant, motet, mass and madrigal.

Mu 371 **History and Literature of Music in the Baroque period** **3 credits**
Historical survey of the principal forms of baroque music, the opera, concerto and sonata.

Mu 372 **History and Literature of Music Classic Period** **3 credits**
Corequisite: Mu 216.

Mu 373 **History and Literature of Music Romantic Period** **3 credits**
Corequisite: Mu 217.

Mu 374 **World Music Cultures** **5 credits**
A socio-cultural survey and analysis of the music of Africa, the Middle East, Asia, Oceania and Latin America.

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

Mu 416 **Tonal Counterpoint** **5 credits**
Eighteenth-Century contrapuntal style as found in the music of Bach and his contemporaries. For music majors.

Mu 417 **20th Century Techniques** **5 credits**
Contrapuntal techniques as used by composers in the Twentieth Century. For music majors.

Mu 418 **Orchestration** **5 credits**
Practical application of study of the instruments and their creative use. Prerequisite: Permission of adviser.

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

Mu 496 **Independent Study** **1-5 credits**
Mu 497 **Independent Study** **1-5 credits**
Mu 498 **Independent Study** **1-5 credits**

Foreign Languages

Paul B. Milan, Ph.D., Chairperson

Objectives

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

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

Cultural — Learning about another culture and civilization, its history, geography, literature and arts through the medium of its language leads to better understanding one's self and the world. To achieve this goal all foreign language courses are taught in their cultural context. Courses in French, German and Spanish are taught in the vernacular with the exception of the following: Fr 105, Fr 106, Fr 390; Gr 105, Gr 106, Gr 390; Sp 105, Sp 106 and Sp 390.

Practical — Career opportunities involving foreign languages are good. For the university student trained in a particular field with the extra asset, proficiency in foreign languages, openings exist in the following fields: teaching, government, military, social and foreign service; professions such as international law, engineering, librarianship, foreign trade and international management.

To meet these objectives, the Foreign Languages department offers regular, intensive, specialized and multi-discipline courses and programs.

Degrees Offered

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

General Program Requirements

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

Departmental Requirements

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

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

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

Programs Abroad

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

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

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

The reading language requirements may not be satisfied by examination in a student's native language, since the intent of such a requirement is mastery of a language new to the student.

Intensive Programs are offered during the summer quarter, in which one year's work in a language can be done, earning 15 credits.

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

Bachelor of Arts — Modern Languages Recommended Study Program

Freshman year

English 110, 133, or 134 or 200	10 credits
History core	10 credits
Major Language 115, 125, 135	15 credits
Electives	10 credits

Sophomore year

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

Junior year

Major Language 315, 325, one 400 level	15 credits
Mathematics/Science core options	10 credits
Minor Language (optional) 115, 125, 135	15 credits
Theology core	5 credits

Senior year

Major Language, Two 400 level	10 credits
Minor Language (optional) 215, 225, 235, 315	20 credits
Electives	15 credits

Modern Language Courses

French Courses

Fr 105 Reading French — **5 credits**

Fr 106 Reading French — **5 credits**

An intensive two-course program of study of written French for reading and translation with accuracy and comprehension.

Fr 115 French Language I — **5 credits**

Fr 125 French Language II — **5 credits**

Fr 135 French Language III — **5 credits**

Fr 215	French Language IV	5 credits
Fr 225	French Language V	5 credits
Fr 235	French Language VI	5 credits
Fr 291	Special Topics	1-5 credits
Fr 292	Special Topics	1-5 credits
Fr 293	Special Topics	1-5 credits
Fr 296	Independent Study	1-5 credits
Fr 297	Independent Study	1-5 credits
Fr 298	Independent Study	1-5 credits
Fr 315	French Culture, Civilization, History and Geography	5 credits
Fr 325	Introduction to French Literature	5 credits
Fr 390	French Literature in Translation	1-5 credits
Fr 391	Special Topics	1-5 credits
Fr 392	Special Topics	1-5 credits
Fr 393	Special Topics	1-5 credits
Fr 396	Independent Study	1-5 credits
Fr 397	Independent Study	1-5 credits
Fr 398	Independent Study	1-5 credits
Fr 415	XIXth Century, Literary Movements	5 credits
Fr 425	XVIIth Century, Classicism	5 credits
Fr 435	XVIIIth Century, The Enlightenment	5 credits
Fr 445	XXth Century, Contemporary Literature	5 credits
Fr 450	Methodology of Teaching the French Language	5 credits
Fr 451	Teaching French Culture and Civilization	5 credits
Fr 452	Language Improvement	5 credits
Fr 455	Methodology of Teaching Foreign Languages (French)	1-5 credits
Fr 460	Theories, Techniques and Practice of teaching the French Language	5 credits
Fr 461	Theories, Techniques and Practice of Teaching French Culture and Civilization	5 credits
Fr 462	Teaching Internship	5 credits
Fr 465	Comparative Methods, Techniques and Performance Objectives of Foreign Language Teaching	3 credits
Fr 491	Special Topics	1-5 credits
Fr 492	Special Topics	1-5 credits
Fr 493	Special Topics	1-5 credits
Fr 496	Independent Study	1-5 credits
Fr 497	Independent Study	1-5 credits
Fr 498	Independent Study	1-5 credits

German Courses

Gr 105	Reading German	5 credits
Gr 106	Reading German	5 credits
	An intensive two-course program of study of written German for reading and translation with accuracy and comprehension.	
Gr 115	German Language I	5 credits
Gr 125	German Language II	5 credits
Gr 135	German Language III	5 credits
Gr 215	German Language IV	5 credits
Gr 225	German Language V	5 credits
Gr 235	German Language VI	5 credits
Gr 291	Special Topics	1-5 credits
Gr 292	Special Topics	1-5 credits
Gr 293	Special Topics	1-5 credits
Gr 296	Independent Study	1-5 credits
Gr 297	Independent Study	1-5 credits
Gr 298	Independent Study	1-5 credits
Gr 315	German Culture, Civilization, History and Geography	5 credits
Gr 325	Introduction to German Literature	5 credits
Gr 390	German Literature in Translation	1-5 credits
Gr 391	Special Topics	1-5 credits
Gr 392	Special Topics	1-5 credits
Gr 393	Special Topics	1-5 credits
Gr 396	Independent Study	1-5 credits
Gr 397	Independent Study	1-5 credits
Gr 398	Independent Study	1-5 credits
Gr 416	Literature and Culture, Beginning to the 18th Century	5 credits
Gr 426	Literature and Culture, 18th Century	5 credits
Gr 431	Literature and Culture, 19th Century	5 credits
Gr 436	Literature and Culture, 20th Century	5 credits
Gr 440	German Classicism and Romanticism	5 credits
Gr 446	Literature Trends of Modern Austria, West and East Germany	5 credits
Gr 450	Methodology of Teaching the German Language	5 credits
Gr 451	Teaching German Culture and Civilization	5 credits
Gr 452	Language Improvement	5 credits
Gr 491	Supervised Studies	2-5 credits
Gr 492	Supervised Studies	2-5 credits
Gr 493	Supervised Studies	2-5 credits
Gr 496	Independent Study	1-5 credits
Gr 497	Independent Study	1-5 credits
Gr 498	Independent Study	1-5 credits

Spanish Courses

Sp 105	Reading Spanish	5 credits
Sp 106	Reading Spanish	5 credits
	An intensive two-course program of study of written Spanish for reading and translation with accuracy and comprehension.	
Sp 115	Spanish Language I	5 credits
Sp 125	Spanish Language II	5 credits
Sp 135	Spanish Language III	5 credits
Sp 215	Spanish Language IV	5 credits
Sp 225	Spanish Language V	5 credits
Sp 235	Spanish Language VI	5 credits
Sp 291	Special Topics	1-5 credits
Sp 292	Special Topics	1-5 credits
Sp 293	Special Topics	1-5 credits
Sp 296	Independent Study	1-5 credits
Sp 297	Independent Study	1-5 credits
Sp 298	Independent Study	1-5 credits
Sp 315	Spanish Culture, Civilization, History and Geography	5 credits
Sp 325	Introduction to Spanish Literature	5 credits
Sp 390	Spanish Literature in Translation	1-5 credits
Sp 391	Special Topics	1-5 credits
Sp 392	Special Topics	1-5 credits
Sp 393	Special Topics	1-5 credits
Sp 396	Independent Study	1-5 credits
Sp 397	Independent Study	1-5 credits
Sp 398	Independent Study	1-5 credits

Sp 416	**19th Century Spanish Literature**	**5 credits**
Sp 426	**20th Century Spanish Literature**	**5 credits**
Sp 436	**Spanish American Literature before 1900**	**5 credits**
Sp 441	**20th Century Spanish American Literature**	**5 credits**
Sp 446	**Golden Age Literature**	**5 credits**
Sp 450	**Methodology of Teaching the Spanish Language**	**5 credits**
Sp 451	**Teaching Spanish Culture and Civilization**	**5 credits**
Sp 452	**Language Improvement**	**5 credits**
	(Sp 450, 451, 452 form part of the requirements for the BA in Education F/L Teaching-Spanish)	
Sp 455	**Methodology of Teaching Foreign Languages** (Spanish)	**1-5 credits**
Sp 491	**Special Topics**	**1-5 credits**
Sp 492	**Special Topics**	**1-5 credits**
Sp 493	**Special Topics**	**1-5 credits**
Sp 496	**Independent Study**	**1-5 credits**
Sp 497	**Independent Study**	**1-5 credits**
Sp 498	**Independent Study**	**1-5 credits**

Classical Language Courses

Greek Courses

Gk 101	**Greek Language I**	**5 credits**
Gk 102	**Greek Language II**	**5 credits**
Gk 103	**Greek Language III**	**5 credits**
	Functional treatment of the phonology, morphology, syntax and lexicon of Koine Greek with readings from the New Testament.	
Gk 291	**Special Topics**	**1-5 credits**
Gk 292	**Special Topics**	**1-5 credits**
Gk 293	**Special Topics**	**1-5 credits**
Gk 390	**Greek Literature in Translation**	**1-5 credits**

Latin Courses

Lt 101	**Latin Language I**	**5 credits**
Lt 102	**Latin Language II**	**5 credits**
Lt 103	**Latin Language III**	**5 credits**
	Phonology, morphology, syntax and lexicon of Classical Latin.	
Lt 291	**Special Topics**	**1-5 credits**
Lt 292	**Special Topics**	**1-5 credits**
Lt 390	**Latin Literature in Translation**	**1-5 credits**

General Studies Program

Mary Margaret Ridge, B.A., Director

Objectives

Students who have a wide range of interests and want a broad liberal arts education, AS WELL AS THOSE WHO HAVE NOT YET DECIDED UPON A MAJOR, may enroll in the General Studies Program. Such students begin their University work by taking core curriculum subjects required for all majors. They may then select courses from two or three related fields, and formulate a program that will best suit the needs of their long-range goals.

The thrust of the program looks to constructing in-depth combinations of a variety of disciplines such as fine arts, humanities, social sciences, or any other a-typical interdisciplinary synthesis.

A student admitted to the General Studies Program may also transfer to one of the traditional majors of the College of Arts and Sciences, or to one of the professional schools, such as Business, Education, Nursing, Science and Engineering. A student may change at any time as long as academic qualifications for the intended program are met.

Degrees Offered

Bachelor of Arts in Humanities
Bachelor of Arts in Social Science

General Program Requirements

Requirements of a General Studies degree are 65 credits beyond the core, of which 45 credits must be taken in courses designated 300 or 400 level.

Suggested combinations are: 45 hours in one subject and 20 in another; or 35 hours in one, 15 in a second, and 15 in a third; or 25, 20 and 20. THE SELECTION OF SUBJECTS AND THEIR MEANINGFUL COMBINATION IS THE RESPONSIBILITY OF THE STUDENTS IN CONSULTATION WITH THE PROGRAM DIRECTOR OR AN ASSIGNED ACADEMIC ADVISER.

Global Studies

Thomas J. Trebon, Ph.D., Adviser
C. Fred DeKay, Ph.D., Adviser

Objectives

The program of courses which makes up the Minor in Global Studies enables the student: to understand the major processes, structures, and issues involved in our global community; to develop the ability to live and work effectively in an interdependent, multi-cultural world; and, to apply specific disciplinary skills within a global context.

The Minor is designed to complement the student's Major by study of selected case studies in which disciplinary knowledge and skills are applied in the contexts of cross-cultural and global issues.

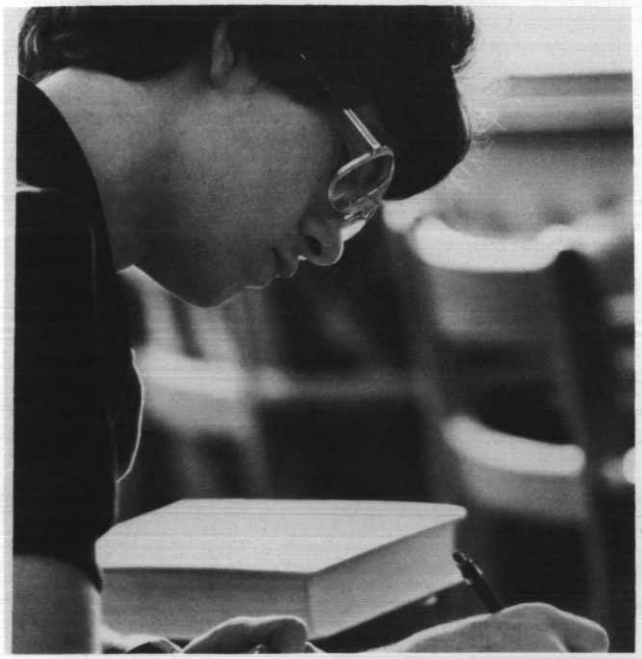
General Program Requirements

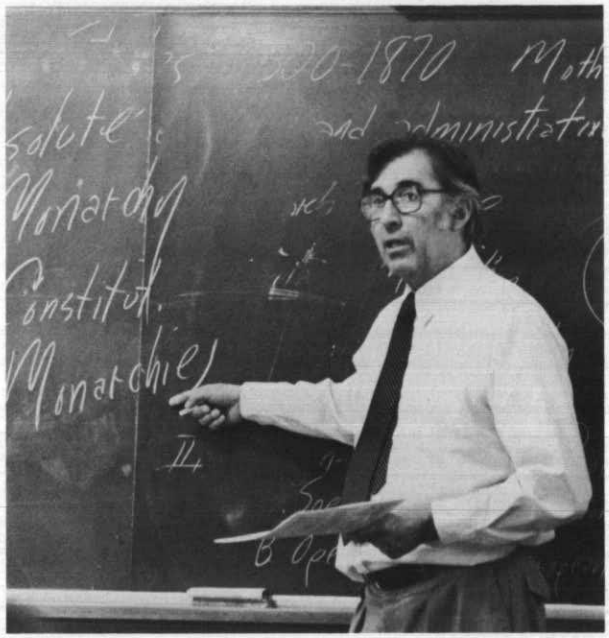
The Minor requires completion of 30 credits of course-work, including a five credit course from each of the following areas: Global Politics, Global Political Economy, Cultural Encounters, Global Issues, Non-West Studies, and Elective in Global Studies. In consultation with a Global Studies Adviser, the student will select courses appropriate to each required area, drawing from offerings in such disciplines as political science, economics, fine arts, history, literature, and interdisciplinary science. Students are strongly recommended to complete one course in western civilization and one year of a foreign language.

Courses selected for the Minor may include those which fulfill University core or elective requirements, but may not include those taken to fulfill a Major. Not more than ten credits may be taken in any one discipline. At least fifteen credits must be upper division. At least three courses must be taken at Seattle University. No more than one course may be taken under the CR/NC option.

Advising

A faculty adviser will assist the student in fulfilling the requirements of the Global Studies Minor. The student will be expected to meet with the adviser on a regular and timely basis.





History

Warren B. Johnson, Ph.D., Chairman

Objectives

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

Degrees Offered

Bachelor of Arts

General Program Requirements

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

Departmental Requirements

Bachelor of Arts — 60 credits including Hs 104 and 105, 200, 400. Of the remaining 40 credits 25 are to be taken in a specific area (Western Europe, United States, Russia-China-Japan), and must include at least 10 credits of 400 level courses. Study of a modern foreign language is highly recommended.

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

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

Bachelor of Arts

Freshman year

English 110 and core option ..... 10 credits
Hs 104, 105 and history elective ..... 15 credits
Philosophy 110 ..... 5 credits
Electives ..... 15 credits

Sophomore year

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

Junior year

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

Senior year

Modern language or electives ..... 10 credits
Hs 400, and history electives ..... 15 credits
Social Science core option ..... 5 credits
Electives ..... 15 credits
Total . . . 180 credits

History Courses

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

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

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

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

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

Hs 241 **Afro-American History** **5 credits**
(Hs 349) African origins, the slave trade, the Afro-American experience; the contributions of Afro-Americans to American culture.

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

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

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

Hs 291 **Special Topics** **1-5 credits**
Hs 292 **Special Topics** **1-5 credits**
Hs 293 **Special Topics** **1-5 credits**

Hs 303 **Foundations of European Civilization** **5 credits**
The emergence of the Carolingian Empire and Anglo-Saxon England. Western European relations with the Byzantine and Arab-Mohammedan states.

Hs 306 **Europe of the High Middle Ages** **5 credits**
Analysis of the cultural, political and social institutions of Medieval Europe.

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

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

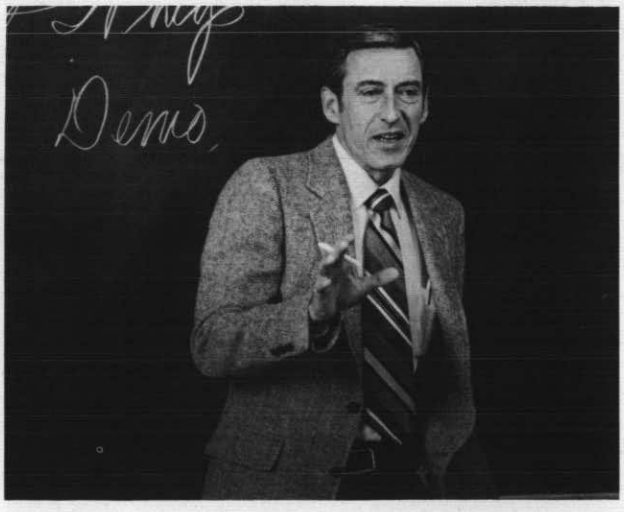
Hs 311 **Europe of the 18th Century** **5 credits**
Cultural and political ferment of Western civilization in the century of the Enlightenment and the French Revolution.

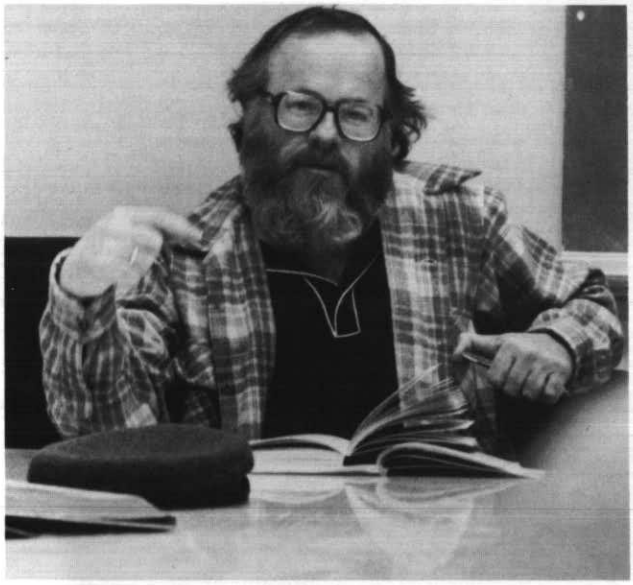
Hs 313 **Europe of the 19th Century** **5 credits**
The era of revolutions in ideas and societies, from the Napoleonic wars to the beginning of World War I.

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

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

Hs 327 **Modern Germany** **5 credits**
(Hs 414) Studies in German history and culture.





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

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

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

Hs 337 **The United States in the Progressive Era** **5 credits**
Industrialization, immigration, urbanization and their effects on American society and politics.

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

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

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

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

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

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

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

Hs 381 **Chinese Civilization** **5 credits**
The development of Chinese culture, thought, and institutions down to the late 19th century.

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

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

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

Hs 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 the approval of department chairman.

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

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

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

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

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

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

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

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

Hs 497 **Independent Study** **1-5 credits**
Hs 498 **Independent Study** **1-5 credits**

Honors Program

Rosaleen Trainor, CSJ, Ph.D., Director

Objectives

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

Scholarships/Applications

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

Program Requirements

When accepted in the Program, students complete each of the course sequences numbered Hu 101 through 243. Completion of the Honors Program satisfies University core requirements in philosophy, science, English, history and theology/religious studies. Students may elect to take Hu 398 or 499 while completing their major.

Degree Major

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. Degree majors are usually completed in two years.

Honors Program Courses

Hu 101 **Humanities Seminar - Thought** **5 credits**
Hu 102 **Humanities Seminar - Thought** **5 credits**
Hu 103 **Humanities Seminar - Thought** **5 credits**
Three quarters of critical reading and discussion of the works which have most deeply influenced the development of the Western world, including the Old Testament, Pre-Socratics, Plato, Aristotle, New Testament, St. Augustine, St. Thomas, Duns Scotus, William of Ockham.

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

Hu 121 **Humanities Seminar - History** **4 credits**
Hu 122 **Humanities Seminar - History** **4 credits**
Hu 123 **Humanities Seminar - History** **4 credits**
Historical survey which also furnishes a background discipline for humanities-thought and humanities-literature, covering Hebrew, Greek, Roman and Medieval Christian history.

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

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

Hu 191 **Interdisciplinary Seminar** **1-10 credits**
Hu 192 **Interdisciplinary Seminar** **1-10 credits**

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

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

Hu 221 **Humanities Seminar - History** **4 credits**
Hu 222 **Humanities Seminar - History** **4 credits**
Hu 223 **Humanities Seminar - History** **4 credits**
The Reformation to the present.

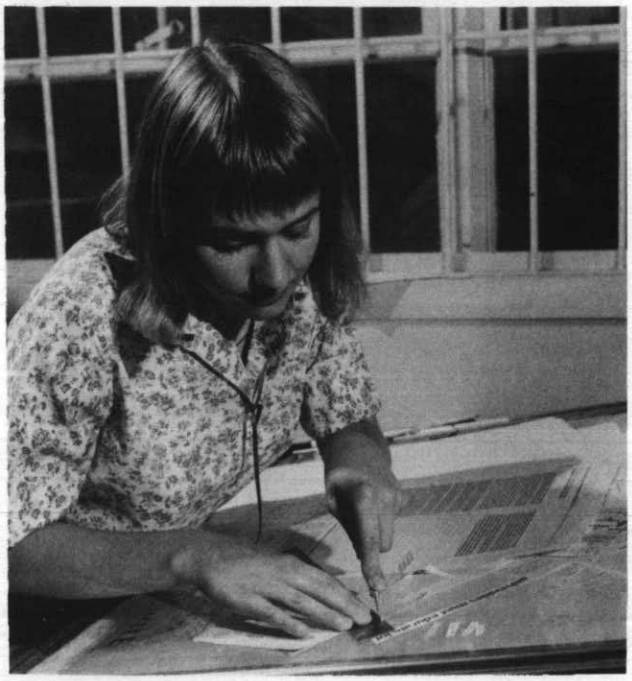
Hu 231 **Humanities Seminar - Science** **3 credits**
Hu 232 **Humanities Seminar - Science** **3 credits**
A study of some contemporary problems in the physical sciences.

Hu 243 **Humanities Seminar - Music** **2 credits**
Twentieth century music with emphasis upon historical and cultural correlations.

Hu 291 **Special Topics** **1-5 credits**
Hu 292 **Special Topics** **1-5 credits**
Hu 293 **Special Topics** **1-5 credits**

Hu 398 **Independent Study** **1-5 credits**
Private work by arrangement. Prerequisite: Approval of program director.

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



Journalism

Gary L. Atkins, M.A., Chairman

Objectives

To the University's basic liberal studies program, journalism adds courses designed to give the student an awareness of the role of mass communications in a free society and the special knowledge and skills required for effective communication.

The journalism program is specifically directed toward editorial competence, the basis for careers in all areas of mass communications. It seeks to produce graduates who can become responsible professional journalists or who can undertake graduate study in specialized areas.

Degree Offered

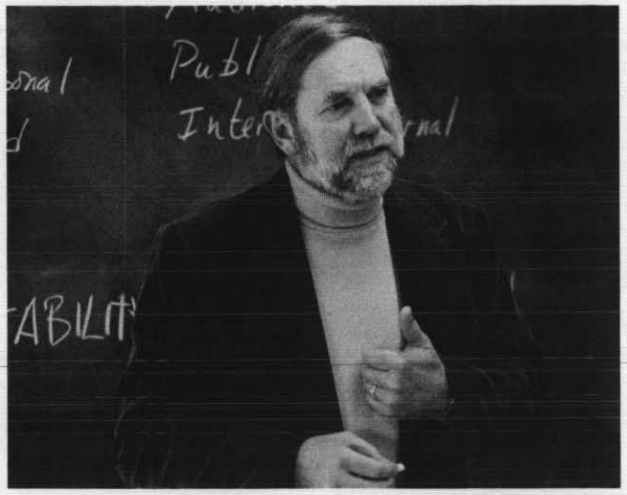
Bachelor of Arts

General Program Requirements

Students in journalism must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. Journalism students must receive a minimum grade of C in any journalism course to be applied toward major requiremnts.

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 an adviser he/she will then plan a sequence of courses, in journalism and in related areas, to meet individual requirements.

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



Departmental Requirements

Bachelor of Arts — 55 credits in journalism which include Jr 100, 200, 210, 250, 310, 330, 490 and 20 credits in courses numbered 300 and above; 10 credits of English beyond core requirements numbered 200 or above; 5 additional credits of social science; 10 credits of upper division United States history courses (or approved substitutes); 10 credits of language or fine arts and/or speech and drama courses.

Communications Sequence — Designed for students not seeking careers in editorial journalism. 50 credits in journalism or approved related disciplines including Jr 100, 200, 210, 330 and 490; 10 credits of English beyond core requirements; 5 additional credits of social science; 10 credits of upper division history courses (or approved substitutes); 10 credits of fine arts and/or speech and drama courses.

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

Undergraduate Minor (teaching) — 25 credits which must include Jr 100, 200, 210, 250 and 5 credits of approved upper division courses.

Typical Four-Year Degree Sequence
Bachelor of Arts

Freshman year

English 110 and core option ..... 10 credits
History core options ..... 10 credits
Journalism 100, 210, 250 ..... 15 credits
Social science core options ..... 10 credits

Sophomore year

English 200/300 options ..... 5 credits
Journalism 200, 380, 381, 382 ..... 8 credits
Modern Language, Fine Arts or Speech/Drama options ..... 10 credits
Philosophy 110, 220 ..... 10 credits
Social science option ..... 5 credits
Theology core options ..... 10 credits

Junior year

English 200/300 options ..... 5 credits
History 300/400 options ..... 10 credits
Journalism 300/400 requirements, options ... 17 credits
Philosophy core option ..... 5 credits
Mathematics/Science core options ..... 10 credits

Senior year

Journalism 300/400 requirements, options ... 15 credits
Electives ..... 25 credits
Total ..... 180 credits

Journalism Courses

Jr 100 **Introduction to Journalism** **5 credits**
Review of grammar for journalists. Introduction to journalistic style and terminology; writing news leads and basic news stories. (fall)

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

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

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

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

Jr 310 **Reporting Public Affairs** **5 credits**
Study of and practice in gathering and writing complex news stories based upon activities of government, judicial and community agencies. Prerequisite: Jr 210. (fall)

Jr 320 **Photojournalism I** **2 credits**
Jr 321 **Photojournalism II** **2 credits**
Jr 322 **Photojournalism III** **2 credits**
Elementary principles of newsphotography, processing and picture editing. Photography for student publications. Prerequisite: Permission of department chairman. (Biennially, I-fall, II-winter, III-spring)

Jr 330 **History of Journalism** **5 credits**
Study of the origins and growth of the American press from colonial to modern times. (Biennially)

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

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

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

Jr 380 **Publications I** **1 credit**
Jr 381 **Publications II** **1 credit**
Jr 382 **Publications III** **1 credit**
Supervised editorial work on student publications. Prerequisite: Permission of department chairman. Mandatory CR/NC. (I-fall, II-winter, III-spring)

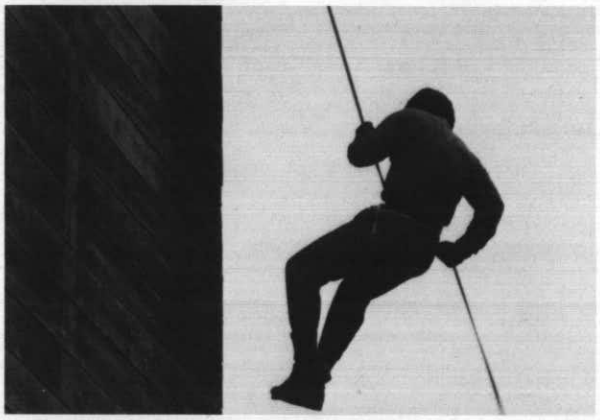
Jr 460 **Public Relations** **5 credits**
Public relations as a management function; policies, procedures and problems; program analysis and case study. (Biennially)

Jr 480 **Publications IV** **1 credit**
Jr 481 **Publications V** **1 credit**
Jr 482 **Publications VI** **1 credit**
Advanced, supervised editorial work on student publications. Prerequisite: Permission of department chairman. Mandatory CR/NC. (IV-fall, V-winter, VI-spring)

Jr 490 **Law and Ethics of Journalism** **5 credits**
Seminar in contemporary legal and ethical problems for journalists. (Biennially)

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

Jr 496 **Independent Study** **1-5 credits**
Jr 497 **Independent Study** **1-5 credits**
Jr 498 **Independent Study** **1-5 credits**
Supervised research in communications; special projects; internships on media and affiliated agencies. Prerequisite: Permission of department chairman.



Military Science

Lt. Col. David G. Tucker, M.P.A., Chairperson

Objectives

To prepare academically and physically qualified college women and men for the rigor and challenge of serving as an officer in the United States Army - Active, National Guard, or Reserve. To that end, the program stresses service to country and community through an enhancement of leadership competencies which support and build on the concept of "servant leadership."

Description of the Program

The program has been designed to meet the country's requirement for officering the corps. It is therefore, multifaceted with distinctive sub-elements to meet individual needs and requirements. For example, ROTC is traditionally a four-year program, but individuals with prior service, members of reserve or National Guard units, participants of JROTC in high school, and summer basic camp attendees may complete the program in only two years. Normally, all students participate in one class day per week (two-three hours), three workshops (leadership labs) per quarter, and one overnight field exercise per quarter. Physical fitness of all cadets is closely monitored.

The program allows for scholarship assistance for selected students, a monthly stipend for all scholarship and third and fourth year students, and attendance at confidence building courses during the summer: Air Assault School, Airborne School, Ranger School, Flight Orientation, and cadet troop leadership training. For specifics about the program please contact the Professor of Military Science for additional information. High school seniors interested in applying for a four-year scholarship must submit application by December 1 of their senior year.

Commissioning Requirements

To be commissioned in the United States Army a student must complete the military science curriculum, to include successful completion of the six-week advanced camp the summer prior to the senior year, and pass a comprehensive competency examination. To serve on active duty, an individual must also graduate from the university.

The Curriculum

Value based, the curriculum is designed to develop officership by concentrating on ethical practice, leadership and management, communication competencies, and leadership assessment, while attempting to inculcate and

clarify ideal and operational army values in concert with personal values. Professional military education (PME), military knowledge (MK) subjects, and military skills (MS) are the three pillars of the military science curriculum. Each is designed to build on the other areas, and maximize the professional competencies of the new lieutenant. PME and MK areas are covered in the classroom environment while the majority of the military skills are addressed during workshops (labs) and the quarterly field training exercise off campus. Normally, as a learning experience, senior cadets present the MS subjects to other cadets under the guidance of experienced cadre.

PME area cover military history, human behavior, management, written communication skills, and national security studies. To that end, PME subjects cover the entire curriculum; e.g., there is a writing requirement in each course. And, while the department addresses each of the PME area in individual courses, there are courses from the general university curriculum which may be substituted and meet the requirements of the ROTC program. Specific substitution of courses must be approved on an individual basis with the Professor of Military Science.

Military Science Basic Courses

MS 111 (101) **Basic Officership I** **2 credits**
An introduction to the officership environment, military science, key legislation, roles of active and reserve component units, and special programs associated with ROTC. (fall)

MS 112 (102) **Military Communication Skills** **2 credits**
Development of written and oral communication skills for the military leader. Practical application through student participation, presentations and writing projects. (winter)

MS 113 (103) **Contemporary Social Issues** **2 credits**
Explores contemporary social and political issues impacting on the Army of the eighties as they relate to the junior officer leader. (spring)

MS 211 (201) **Basic Officership II** **2 credits**
An in-depth look at the characteristics of officership, roles of the officer interaction with specific command and staff elements, and an introduction to specific competencies required of an officer. (fall)

MS 212 (202) **The US Army in History** **2 credits**
An overview of the US Army and its place in the history of our country - from the colonial wars to the present. Emphasis is on leadership, principles of war, the military and society, the ethics of war, and "just war" theories. (winter)

MS 213 (203) **Leadership Assessment** **2 credits**
Through a series of classroom simulations, participants are evaluated on their potential as leaders and managers. Includes organizational behavior, leadership theories, management competencies, communication skills, physical fitness and the leadership assessment program (LAP). (spring)

MS 214 **Military Ethics and Values** **2 credits**
Through a series of films, books, essays, and discussions the student is introduced to, and explores, military value sets and the ethics practiced within the profession of arms. (biennial)

MS 215 (204) **Basic Course Equivalent I** **0 credits**
Selected students attend six weeks at Ft. Knox, Ky, during the summer and qualify for enrollment in Advanced ROTC. Designed for sophomores and incoming juniors. Military skills oriented. All costs are paid by Department of the Army. (summer)

MS 216 **Basic Course Equivalent II** **6 credits**
An eight-week summer session, on campus, which compresses the Basic Course Program. Includes introduction to military science, roles, missions of the army, leadership, officership, communication skills, overview of military history. A detailed program. (summer)

MS 217 (208) **Army Conditioning** **1 credit**
A remedial physical fitness program for selected students to bring them up to the Army standard of physical fitness. Required prior to attendance at camps, air assault, airborne or Ranger schools. (spring)

MS 291 **Special Topics** **1-5 credits**
MS 292 **Special Topics** **1-5 credits**
MS 293 **Special Topics** **1-5 credits**

MS 296 **Independent Study** **1-5 credits**

Military Science Advanced Courses

MS 311 (302) **Advanced Officership III** **3 credits**
An orientation on the competencies required of the small unit leader, manager. Includes lower-echelon organizations, tactics, deployment and communications. Permission of instructor. (fall)

MS 312 (301) **Land Navigation Competencies** **3 credits**
Principles of land navigation using terrain analysis, map reading, aerial photograph interpretation, and the basics of orienteering. Permission of instructor. (winter)

MS 313 (303) **Officership/Leadership/Management** **3 credits**
A survey course of leadership/management and motivational theories required of the small unit leader. Includes ethics and professionalism, human behavior and the decisionmaking process. Permission of instructor. (spring)

MS 314 (304) **Advanced Camp** **4 credits**
Successful completion is a prerequisite to commissioning. During six weeks at Ft. Lewis, students are placed in a variety of roles and situations and practice their leadership and management competencies in the broader context of officership. Prerequisite: MS 311, 312, and 313. (summer)

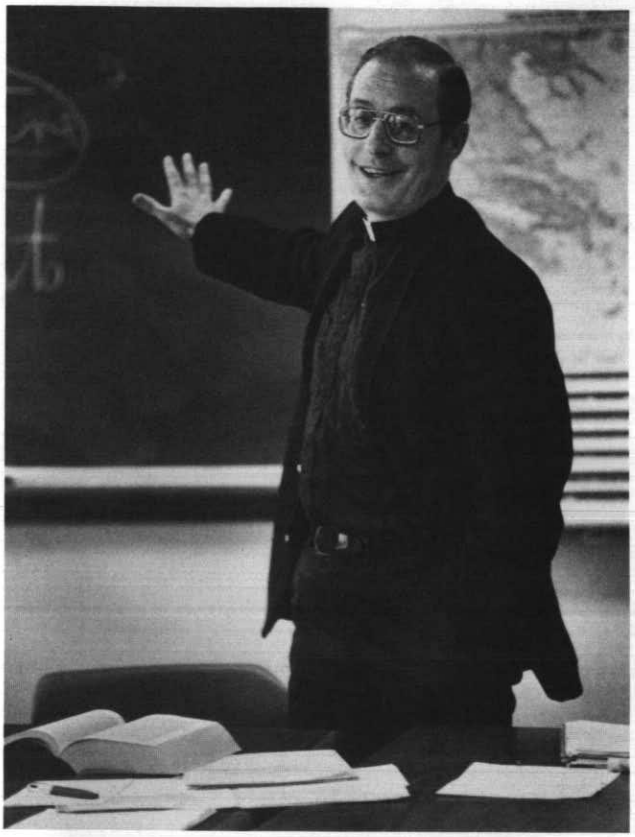
MS 315 **Advanced Camp - Nursing** **4 credits**
Successful completion is a prerequisite to commissioning. During six weeks at Madigan Army Medical Center, nursing students are placed in a variety of roles as an Army nurse to develop their professional competencies - both as a nurse and as an officer. Prerequisite: MS 311, 312, and 313. (summer)

MS 411 (402) **Special Relationships/Activities** **3 credits**
An introduction to the precommissioning year. Synthesizes organizations, components and services. Highlights logistic and justice systems and interaction of special staff and command functions. Permission of instructor. (fall)

MS 412 (401) **Professionalism and Responsibility** **3 credits**
A survey course which assists the student to come to grips with the concept of officership. Covers Army values, ethics, professionalism, responsibilities to self, subordinates and country, law of land warfare, and the resolution of ethical/value dilemmas. Permission of instructor. (winter)

MS 413 (403) **Contemporary Political and Social Issues** **3 credits**
The capstone course prior to commissioning, discusses the role of the officer and the institution in a rapidly changing world environment. Covers topics from national security. Third World Nationalism, to the Soviet Army. Permission of instructor. (spring)

MS 496 **Independent Study** **1-5 credits**



Philosophy

Patrick Burke, Ph.D., Chairperson

Objectives

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

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

Degree Offered

Bachelor of Arts

General Program Requirements

Students in philosophy must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. In addition, students in philosophy must take 10 credits of foreign language.

Departmental Requirements

Bachelor of Arts — 55 credits of philosophy which must include PI 110, 220, 233, 250 and 260 plus a program of six upper division courses. These six 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 110 and core option	10 credits
History core options	10 credits
Philosophy 110, 220	10 credits
Social Science core options	10 credits
Elective	5 credits

Sophomore year

Mathematics/Science core options	10 credits
Philosophy 233, 250, and 260	15 credits
Philosophy Seminar and electives	20 credits

Junior year

Modern language 105, 106	10 credits
Philosophy seminars	15 credits
Electives	20 credits

Senior year

Philosophy seminars	15 credits
Theology core option	10 credits
Electives	20 credits
Total	180 credits

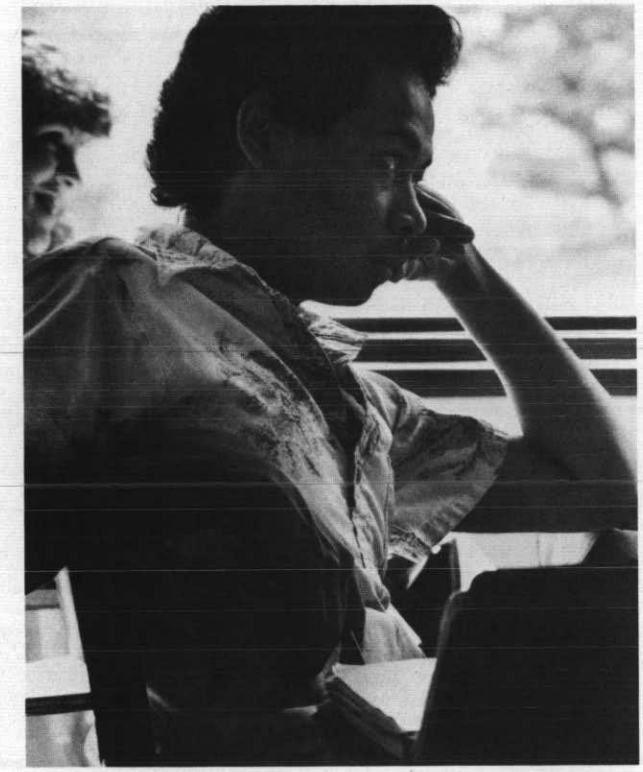
Philosophy Courses

PI 110 Philosophical Problems: World **5 credits**

A combined historical and problematic approach to the nature of philosophical inquiry. An introduction to fundamental philosophical problems of being, language, logic, knowledge, reality, human existence and God.

PI 220 Philosophical Problems: The Human Person **5 credits**

Critical examination of the nature and powers of the human person. Special emphasis on the human knowing process and the problems of human freedom and personal responsibility. Prerequisite: PI 110.



PI 231 **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. Prerequisite: PI 220.

PI 232 **Introduction to Medieval Philosophy** **5 credits**
Synthesis of medieval philosophy in its historical perspective with a particular examination of the themes of Arabic, Scholastic and Nominalist metaphysics. Prerequisite: PI 220.

PI 233 **Introduction to Modern Philosophy** **5 credits**
Readings from source material of the modern philosophers. Investigation of topics, problems and doctrines of selected authors from Descrates to Kant. 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**
Systematic treatment of traditional logic. The themes of communication and language, division and definition, propositions, syllogisms and the nature of science will be examined.

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

PI 291 **Special Topics** **1-5 credits**
PI 292 **Special Topics** **1-5 credits**
PI 293 **Special Topics** **1-5 credits**
Prerequisite: PI 220

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 the scientific view of the cosmos. Readings from significant sources. Prerequisite: PI 220.

PI 305 **Philosophy of Science — The Behavioral Science** **5 credits**
Study of the philosophical implications and presuppositions of the methodology and conceptual framework of the behavioral sciences; special emphasis on behavioral psychology and statistical analysis. Prerequisite: PI 220.

PI 307 **Philosophy of Science — The Life Sciences** **5 credits**
Consideration of the basic problems concerning the meaning, origin, evolution and structure of organic life. Prerequisite: PI 220.

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

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

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

PI 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 355 **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 360 **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 365 **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 391 **Special Topics** **1-5 credits**
PI 392 **Special Topics** **1-5 credits**
PI 393 **Special Topics** **1-5 credits**

PI 396 **Independent Study** **1-5 credits**
PI 397 **Independent Study** **1-5 credits**
PI 398 **Independent Study** **1-5 credits**

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 leading Arab and Jewish philosophers. Prerequisite: PI 220.

PI 420 **St. Thomas Aquinas** **5 credits**
Selected readings from the writings of St. Thomas Aquinas. 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 Immanuel Kant. Prerequisite: PI 220.

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

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

PI 468 **Marx** **5 credits**
A study of the historical background, philosophic origins and nature of the dialectical materialism of Karl Marx. Prerequisite: PI 220.

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

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

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

PI 484 **Merleau-Ponty** **5 credits**
His philosophy as set forth in "The Phenomenology of Perception" and "The Structure of Behavior." Prerequisite: PI 220.

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

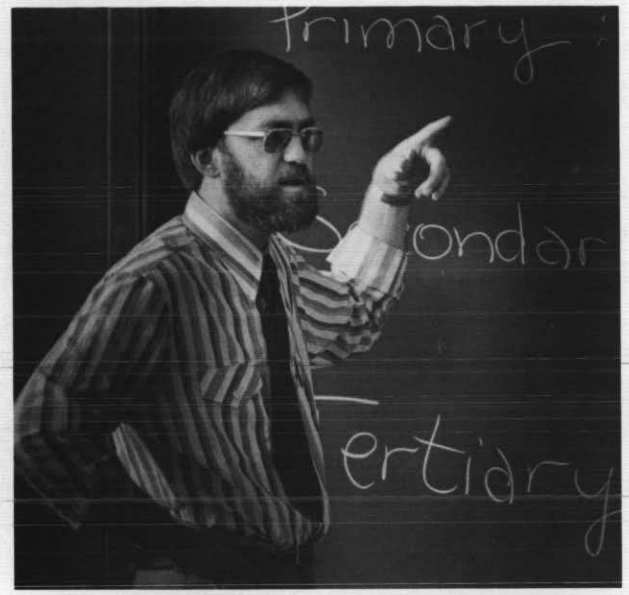
PI 491 **Special Topics in Philosophy** **1-5 credits**
PI 492 **Special Topics in Philosophy** **1-5 credits**
PI 493 **Special Topics in Philosophy** **1-5 credits**

PI 494 **Seminar** **5 credits**
PI 495 **Seminar** **5 credits**

PI 496 **Senior Seminar** **5 credits**
Specially directed projects in research. Limited to seniors in Arts and Sciences. Prerequisite: PI 220 and at least two other courses in the 300/400 series.

PI 497 **Independent Study** **1-5 credits**
PI 498 **Independent Study** **1-5 credits**

PI 499 **Thesis** **1-5 credits**
Original philosophical investigation under the direction of a faculty member appointed by the chairman of the department. Prerequisite: PI 220.



Political Science

Sr. Christopher Querin, S.P., Ph.D., Chairperson

Objectives

The curriculum in political science introduces the student to political values, trains in political analysis and informs of government processes at the international, national, state and local level. It prepares students for graduate study or for careers in government, research, teaching or private enterprise where either a knowledge of political science or a broad liberal arts background is required.

Degrees Offered

Bachelor of Arts

General Program Requirements

Students in political science must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. Ec 271 or Ec 272 is required as partial fulfillment of this social science core. Political science majors are strongly encouraged to take additional courses in English, history, philosophy and theology and religious studies and are advised to enroll in courses in economics, psychology, sociology, fine arts and languages. Students who plan to attend law school should consult the prelaw section of this bulletin and see a prelaw adviser.

Transfer students must take a minimum of four political science classes regardless of number of credits and these courses must be from each of the four subdivisions of the department.

Departmental Requirements

Bachelor of Arts — 60 credits of political science which must include Pls 100 and 190 and at least 30 credits from upper division political science courses. Majors must select two courses in two of the four major subdivisions of the department and three courses in each of the two other subdivisions. The four major subdivisions of the department and the applicable courses are: American Government and Politics — Pls 202, 208, 210, 301, 304, 310, 406, 407, 490.

International Relations and Foreign Policy — Pls 260, 361, 362, 365, 460, 462.

Comparative and Foreign Governments — Pls 230, 330, 335, 337, 434, 435, 436.

Political Thought and Theory — Pls 253, 353, 354, 355, 358, 451, 490.

Undergraduate Minor — 30 credits which must include Pls 100 and 190 and one course from each of the four major subdivisions of the department.

Bachelor of Arts

Freshman year

English 110 and core option	10 credits
History core options	10 credits
Mathematics/Science Core Option: Recommended Mt 101, 118 or 175	5 credits
Philosophy 110, 220	10 credits
Political Science 100, 190	10 credits

Sophomore year

Mathematics/Science core option	5 credits
Other social science	5 credits
Philosophy core option	5 credits
Political Science	10 credits
Economics 271 or 272	5 credits
Theology core options	10 credits
Electives	5 credits

Junior and Senior year

Recommended electives in the Junior and Senior years vary widely, according to the student's career aspirations. Students who plan to attend law school should take accounting. All students should consider foreign language, computer skills, and business electives	90 credits
Total	180 credits

Political Science Courses

Pls 100 (160) American National Government
Study of the foundations, structures, functions of the executive, legislative and judicial branches of the government and their inter-relations with the popular processes of government.

Pls 190 (150) Introduction to Politics **5 credits**
Government organization and approaches to basic political problems in a variety of cultural, social, and economic contexts. Domestic and foreign causes of the behavior of leaders, parties, pressure groups, and ordinary citizens.

Pls 202 (214) Government and the Economy **5 credits**
Government regulation and promotion of business, agricultural, labor and consumer interests. The regulatory agencies. Government corporations, anti-poverty programs. Government economic Stabilization policies, critique of American capitalism.

Pls 208 (280) The Judicial Process **5 credits**
Overview of the role of law and the judiciary in American political life; the powers and limitations of the judiciary; individual rights in legal conflicts; study of selected key cases. Designed especially for non-majors.

Pls 210 **Introduction to Local and State Politics** **5 credits**
Examination of structures and functions of political institutions at local, state, county and special district levels, especially legislative, executive and judicial systems.

Pls 230 **Industrial Democracies** **5 credits**
Social divisions, participation, policy processes in West Europe, North America, and Japan. Popular values, power distribution, and the future of democracy.

Pls 253 (289) **Introduction to Political Philosophy** **5 credits**
An overview of political ideas from East to West, from Plato to present; application of these ideas to contemporary society.

Pls 260 (249) **Introduction to International Politics** **5 credits**
Analysis of the dynamic forces in international relations; power nationalism, sovereignty, colonialism, imperialism, theories of war and peace.

Pls 291 **Special Topics** **1-5 credits**
Pls 292 **Special Topics** **1-5 credits**
Pls 293 **Special Topics** **1-5 credits**

Pls 301 (374) **The American Presidency** **5 credits**
Analysis of powers of American presidents: relationship with Congress, bureaucracy, judiciary, private sector and with foreign governments.

Pls 304 (324) **Political Parties and Interest Groups** **5 credits**
Theories, organization, strategy and leadership of American political parties, campaigns and party leadership. Role of interest groups in the American political process.

Pls 310 (372) **Urban Politics and Public Policy** **5 credits**
Problems of large American cities with special emphasis on transportation, housing, public safety and planning problems. Fiscal problems of American cities; public school politics.

Pls 330 **Soviet Union and East Europe** **5 credits**
Goals, structures, and processes of Soviet oligarchic rule. Social changes, economic dilemmas, ethnic conflict, law, dissent, and welfare. East European variations.

Pls 335 **Welfare States and Planned Societies** **5 credits**
Politics of social planning in Sweden, Britain, US, and other welfare states. Health care, pensions, urban planning, economic regulation. Public goods and private choices.

Pls 337 **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 353 **Topics in Political Philosophy** **5 credits**
Enduring problems in political philosophy will be critically examined through the systematic thought of great theorists from Plato through Hegel.

Pls 354 **Western Marxism** **5 credits**
Critical examination of the political and social philosophy of Karl Marx and selected interpretations of his philosophy.

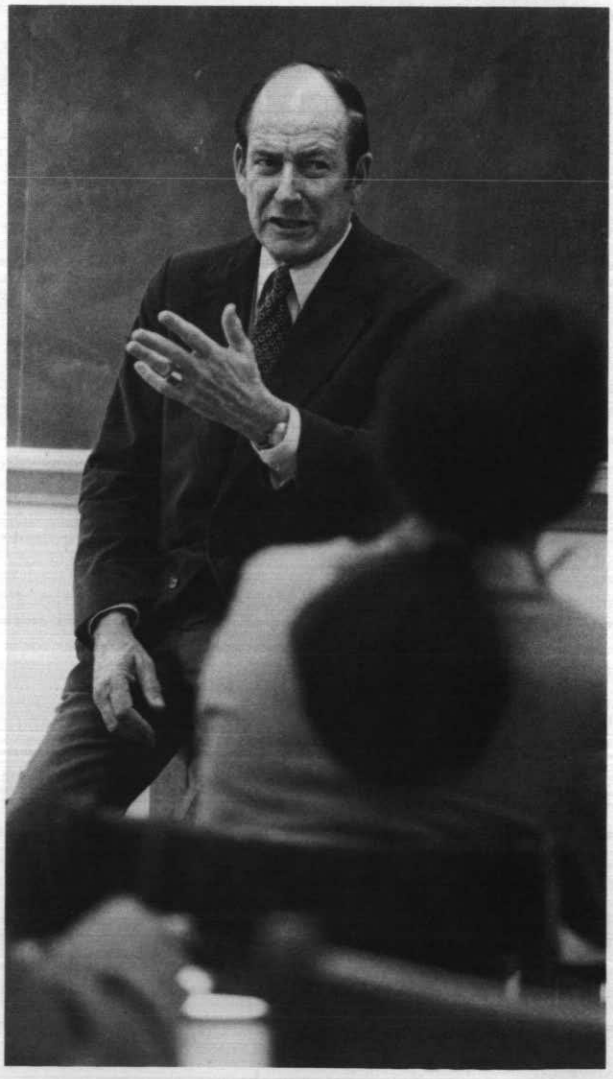
Pls 355 **Contemporary Political Thought** **5 credits**
A critical examination of selected contemporary political ideas and theories.

Pls 358 **Politics of Scarcity** **5 credits**
A study of the economic and political causes and consequences of ecological scarcity in the industrial and non-industrial world.

Pls 361 (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 362 (385) **Peace and The United Nations** **5 credits**
Introduction to the history, theories and problems of international organizations; the League of Nations and the United Nations and the Specialized Agencies.

Pls 365 (381) **United States Foreign Policy** **3-5 credits**
Constitutional framework; major factors in formulation and execution of foreign policy; American policy in Europe, the Near East, Africa, the Far East and in Latin American historically and currently.



Pls 406 (418) Constitutional Law — **5 credits**
Growth, philosophy and development of the United States Constitution as reflected in decisions of the Supreme Court with emphasis on the role of the Court in contemporary America. Prerequisite: Junior or senior standing.

Pls 407 (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 434 (440) Comparative Politics of Asia — **5 credits**
Analysis of selected Asian systems; governmental forms and ideologues; problems of nation-building; inter-state relations.

Pls 435 (442) Comparative Politics of the Middle East — **5 credits**
Nature of the political conflict between Israel and her Arab neighbors; special emphasis on the political institutions of Egypt and Israel.

Pls 436 (441) Comparative Politics of Africa — **5 credits**
Analysis of selected governments of Africa; constitutionalism, militarism, economic development and social change.

Pls 451 Modern Liberalism — **5 credits**
A critical examination of the arguments for liberalism: Montesquieu, Rousseau, Locke, Burke, Bentham, J.S. Mill, and American thought.

Pls 460 (438) Contemporary World Politics — **5 credits**
An examination of dominant political forces on today's international scene and effects of these forces on international relations, international law and international organizations.

Pls 462 (437) Peace Movements and World Government — **5 credits**
An analysis of theoretical basis of regionalism and universalism as approaches to world peace. A study of current regional experiments; proposals for revision of U.N. Charter; World Federalism and World State.

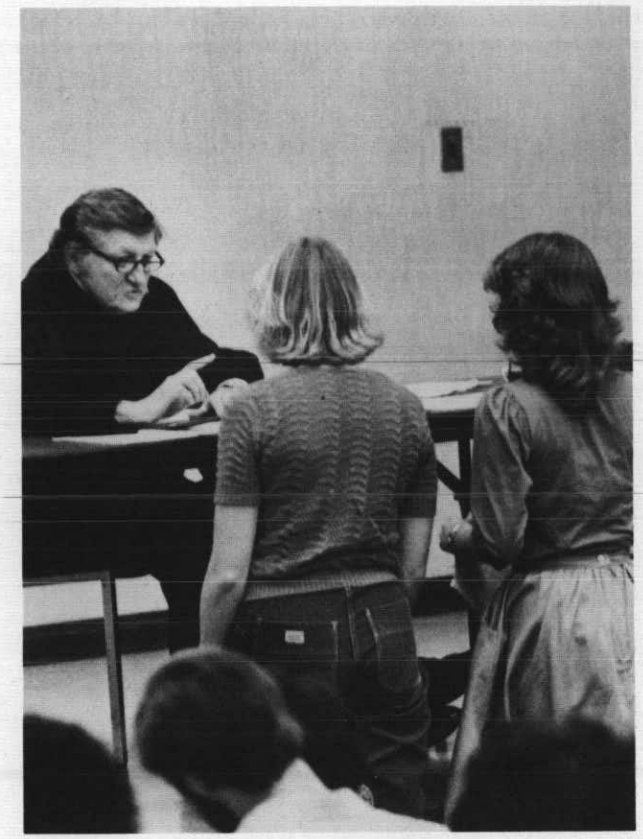
Pls 488 Internship — **2-15 credits**
On-the-job experience with appropriate governmental agency. Students may register for no more than 15 total intern credits. Mandatory CR/NC.

Pls 490 (390) Research Methods and Design — **5 credits**
Techniques of social science disciplines applied to analysis and implementation of policy; research design, data acquisition and index construction.

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**



Prelaw

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

Program

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

In advising prelaw students, Seattle University follows the recommendations of the Association of American Law 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 General Studies program. The program of study of each prelaw student must be approved by the departmental adviser and the prelaw adviser should be consulted quarterly. During their junior year, students must acquaint themselves with the entrance requirements of the law school they plan to attend and make arrangements to take the Law School Aptitude Test (L.S.A.T.). The application form and the instruction booklet for this test may be obtained from the prelaw adviser.

Psychology

Steen Halling, Ph.D., Chairperson

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 experience and behavior. The specific and unique role of the Psychology department is to provide a knowledge of psychology as a human science and as a natural science, both founded on a solid philosophical reflection on values of the human person.

Degrees Offered

Bachelor of Arts
Bachelor of Science
Master of Arts in Psychology — See graduate bulletin

General Program Requirements

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

Psychology majors may choose any minor. For social work, the recommended curriculum is a major in psychology and a minor in sociology. Premedical students may take a Bachelor of Science in psychology. Psychology majors may not register for CR/NC in the courses listed under departmental requirements; they must obtain a grade of C or higher in all those required courses; and they must maintain a 2.00 grade point average in all other psychology courses.

Departmental Requirements

Bachelor of Arts — 50 credits of psychology which must include Psy 100, 201, 301, 401, and 489.

Bachelor of Science — 50 credits of psychology which must include Psy 100, 201, 202, 301, 330, 401, 402, 489 and a minimum of 40 credits of mathematics and physical science, which may include Psy 385.

Undergraduate Minor — 30 credits of psychology which must include Psy 100.

Bachelor of Arts

Typical Program

Freshman year

English 110	5 credits
History core option	10 credits
Mathematics/Science core option	5 credits
Philosophy 110	5 credits
Psychology 100	5 credits
Electives	15 credits

Sophomore year

Mathematics/Science core option	5 credits
Philosophy 220	5 credits
Psychology 201 and elective	10 credits
Social Science core option	5 credits
Electives	20 credits

Junior year

English core option	5 credits
Psychology electives	10 credits
Social Science core option	5 credits
Theology core options	10 credits
Electives	15 credits

Senior year

Philosophy core option	5 credits
Psychology 301, 401, 489 and electives	25 credits
Electives	15 credits
Total	180 credits

Bachelor of Science

Typical Program

Freshman year

English 110 ..... 5 credits
History core option ..... 10 credits
Mathematics/Science electives ..... 15 credits
Philosophy 110 ..... 5 credits
Psychology 100 ..... 5 credits
Electives ..... 5 credits

Sophomore year

Mathematics/Science electives ..... 10 credits
Philosophy 220 ..... 5 credits
Psychology 201, 202 and elective ..... 10 credits
Social Science core option ..... 5 credits
Electives ..... 15 credits

Junior year

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

Senior year

Mathematics/Science elective ..... 5 credits
Philosophy core option ..... 5 credits
Psychology 301, 330, 401, 402, 489 ..... 25 credits
Electives ..... 10 credits

Total . . . . 180 credits

Psychology Courses

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

Psy 201 Statistics I 5 credits

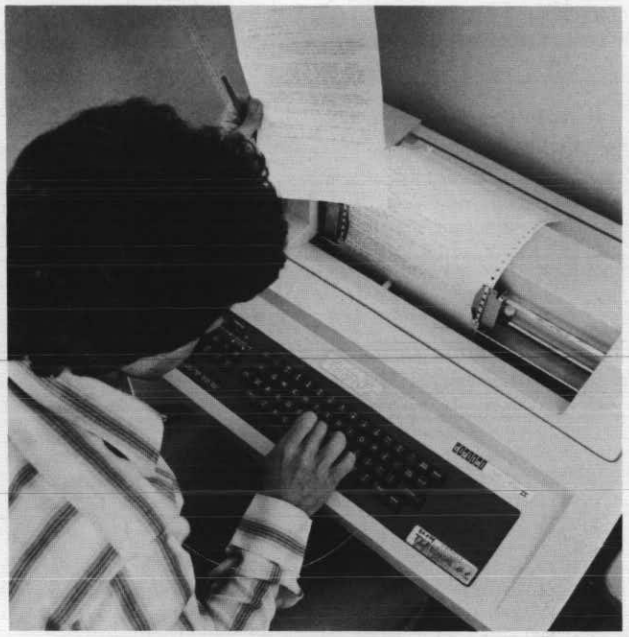
Psy 202 Statistics II 3 credits
I. Basic descriptive and inferential statistics; central tendency, variability, correlation and regression, probability, z and t tests, analysis of variance. II. Factorial designs and non-parametric statistics; Prerequisite: Psy 201 for 202. (I.-fall, winter, spring, II.-winter)

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

Psy 291 Special Topics 1-5 credits
Psy 292 Special Topics 1-5 credits
Psy 293 Special Topics 1-5 credits

Psy 296 Independent Study 1-5 credits

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



Psy 302 Contemporary Theories 5 credits
Critical examination of the major theories, issues and methodology in psychology since 1935. 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, winter, spring)

Psy 322 Psychology of Growth and Development 5 credits
Development from infancy; formative aspects of childhood; puberty; characteristics and special problems of adolescents; emotional maturation. Prerequisite: Psy 100 or equivalent. (fall, winter, spring)

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

Psy 382 Psychological Tests and Measurements 5 credits
Survey of commonly used tests; nature, types, content, limitation and measurement involved in construction, standardization and evaluation of tests. Prerequisite: Psy 201. (spring).

Psy 385 Computer Research Methods 5 credits
This non-programming course uses existing computer programs or program "packages" to solve statistical problems. The course consists of both lectures and laboratory experience at a computer terminal. Prerequisites: Psy 201 or any other elementary course in statistics. (winter)

Psy 401 Experimental Laboratory Psychology I **5 credits**

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

Psy 415 Advanced Psychopathology **3 credits**
Course aims to move beyond a symptom oriented, diagnostic approach to abnormal behavior by examining pathological styles of behavior and implications for treatment. Prerequisite: Psy 315 equivalent. (fall)

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

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

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

Psy 489 Senior Seminar **5 credits**
Reading and discussion of current issues with respect to psychology as a mental health profession, and as a discipline with a particular content and diverse methodologies. Prerequisite: Permission. (spring)

Psy 490 (Alc 400) Symposium on Alcoholism **2-5 credits**
Psychological, educational, physiological, social, industrial, psychiatric, therapeutic and rehabilitation aspects of the problem of alcoholism. Prerequisite: Junior or senior standing in psychology, sociology, premedicine or nursing, or permission. (fall, winter, spring)

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 496 Independent Study **1-5 credits**
Psy 497 Independent Study **1-5 credits**
Psy 498 Independent Study **1-5 credits**

Rehabilitation

John K. Thompson, Ph.D., Chairperson

Objectives

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

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

Emphasis is placed on supervised field experiences in a variety of rehabilitation related agencies (25 credits), in addition to giving the student knowledge in medical and psychological aspects of disability, the world of work or occupational information and community resources in rehabilitation.

Degrees Offered

Bachelor of Arts in Rehabilitation
Master of Arts in Rehabilitation — See Graduate Bulletin
Masters Degree Program accredited by Council on Rehabilitation Education

Certificate Program

The Rehabilitation Certificate is a 45 credit program that is offered late afternoons and evenings and has the following components: 10 credits of field experience; 15

credits of foundation courses (RHB 100, RHB 201, RHB 301); 20 credits to be selected by the student and the adviser. The Rehabilitation Certificate program is open to all persons, with or without a degree, who meet the University's entrance requirements. Certificate credits are applicable toward a B.A. degree. A certificate program should be completed within three years.

General Program Requirements

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

Degree Requirements

Bachelor of Arts—65 credits in rehabilitation including Rhb 100, 201, 203, 210, 301, 305, 310, 400, 403, 405, 410; 15 credits in Psychology (Psy 100, 201, 315), Soc 101, and 5 credits of Social Science or Rehabilitation elective.

Bachelor of Arts

Freshman year

English 110 and core option	10 credits
History core option	10 credits
Philosophy 110	5 credits
Psychology 100	5 credits
Rehabilitation 100	5 credits
Sociology 101	5 credits
Social Science or Rehabilitation elective	5 credits

Sophomore year

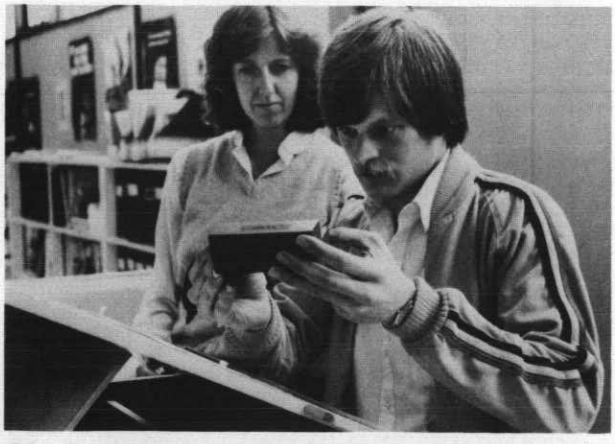
Biology 200, 210, or 270, 271	10 credits
Philosophy 220	5 credits
Psychology 201	5 credits
Rehabilitation 201, 203, 210, 301	20 credits
Theology core option	5 credits

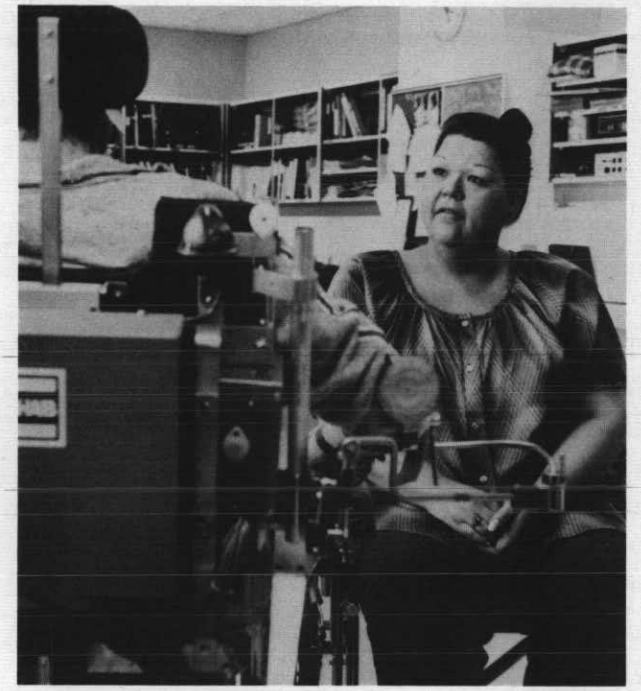
Junior year

Philosophy core option	5 credits
Psychology 315	5 credits
Rehabilitation 305, 310, 400, 403	20 credits
Theology core option	5 credits
Elective	10 credits

Senior year

Rehabilitation 405	5 credits
Rehabilitation 410	15 credits
Electives	25 credits
Total	180 credits





Rehabilitation Courses

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

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

Rhb 203 Tests and Measurement in Rehabilitation — 5 credits
Analyzes various methods of testing and evaluating disabled people and how the methods relate to the rehabilitation process.

Rhb 210 Field Experience in Rehabilitation — 5 credits
Actual experience in an agency or institutional setting within a rehabilitation framework. Coordinating seminars are an integral part of each field experience course. Prerequisite: Rhb 100. Mandatory CR/NC.

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

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

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

Rhb 310 Field Experience in Rehabilitation **5 credits**
See course description for Rhb 210. Mandatory CR/NC.

Rhb 391 Special Topics **1-5 credits**
Rhb 392 Special Topics **1-5 credits**
Rhb 393 Special Topics **1-5 credits**
By arrangement with the approval of department chairman.

Rhb 400 Rehabilitation Resources **5 credits**
Rehabilitation community organization and methods of determining, evaluating and analyzing rehabilitation resources.

Rhb 403 Case Practices **5 credits**
Caseload management, case documentation, report writing, decision making and time management.

Rhb 405 Job Placement and Development **5 credits**
Occupational information as applied to job characteristics, job development, job seeking skills, vocational theories and practical experience.

Rhb 410 Field Experience in Rehabilitation **5-20 credits**
See course description for Rhb 210. Mandatory CR/NC.

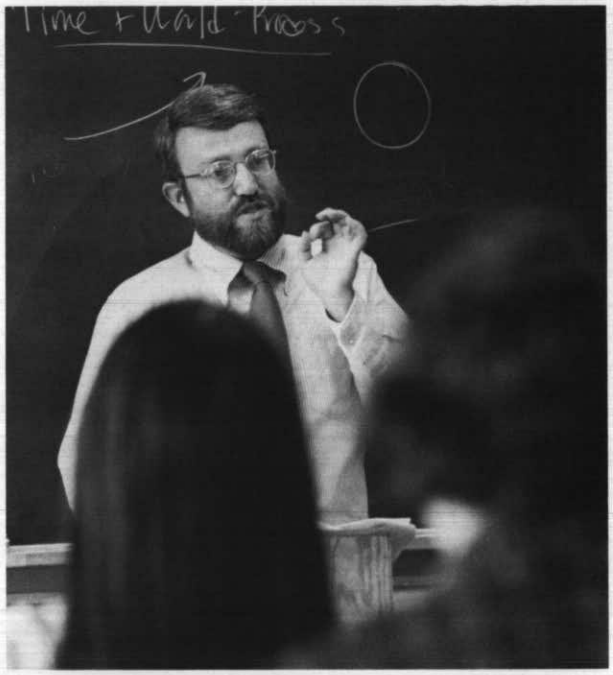
Rhb 418 Independent Living **3 credits**
Review of Independent Living legislation for persons with disabilities; study of the vital areas of Independent Living including housing, transportation, attendant care, activities of daily living, social and recreation activities. Exposure to detailed training with selected disability groups.

Rhb 420 Law and the Disabled **3 credits**
A survey of laws and litigation affecting persons with disabilities.

Rhb 425 Grief Work in Rehabilitation **3 credits**
Loss and the grieving process as they relate to illness, disability and dying.

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

Rhb 497 Independent Study **1-5 credits**
Rhb 498 Independent Study **1-5 credits**
Individualized studies by arrangement with the approval of department chairman.



Sociology

David D. McCloskey, Ph.D., Chairperson

Objectives

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

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

Degree Offered

Bachelor of Arts

General Program Requirements

Students in sociology must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin. Transfer students who are sociology majors must complete at least 20 hours in sociology at Seattle University.

Departmental Requirements

Bachelor of Arts, Sociology — 55 credits are required for a major in sociology of which 25 credits are in basic courses, including Sc 101, 200, Sc 201 and 380; and 35 credits in upper division courses. A program individualized to meet each student's special interest can be designed with department adviser.

Bachelor of Arts, Applied Sociology — Students may concentrate in two areas of Applied Sociology: Corrections and Applied Social Research. Both tracks require 60 hours for the B.A. degree. Majors in both tracks shall take: Sc 101, 200, 201, 380 and 488. Majors in Corrections shall also take Sc 362 and 366 and must also complete 25 additional hours from a list of options obtained from their departmental adviser. Majors in Applied Social Research shall also take Sc 381, 382, 491 and Psy 385, and must also complete 20 additional hours from a list of options obtained from their departmental adviser.

Certificate in Applied Sociology — Students not seeking a degree who meet the University's entrance requirements must complete 30 hours to receive a certificate in either track. Requirements for a Certificate in Corrections are the same as stated below for the minor. Students seeking a Certificate in Applied Social Research must complete 30 hours drawn from three different areas approved by their departmental adviser. Certificate credits are applicable toward the B.A. degree. A certificate program should be completed within three years.

Undergraduate Minor — 30 credits which will include Sc 101, 380, and 20 credits of upper division sociology courses. Students seeking a minor in Corrections must take Sc 101, 362, 366 and complete 15 additional credits from suggested options. Those minoring in Applied Social Research must take Sc 101, 200, 201, 380 and 10 additional credits from suggested options.

Bachelor of Arts

Freshman year

English 110 and core option	10 credits
History core options	10 credits
Psychology 100	5 credits
Sociology 101, 201	10 credits
Electives	10 credits

Sophomore year

Philosophy 110, 220	10 credits
Political Science, Psychology or Economics core option	5 credits
Sociology 200, 380	10 credits
Theology core options	10 credits
Electives	10 credits

Junior year

Mathematics/Science core options	10 credits
Philosophy	5 credits
Sociology electives	15 credits
Electives	15 credits

Senior year

Fine Arts option	5 credits
Sociology electives	15 credits
Electives	25 credits
Total	180 credits

Bachelor of Arts — Corrections Track and Applied Social Research Track

Freshman year

English 110 and core option	10 credits
History core options	10 credits
Psychology 100	5 credits
Sociology 101, 201	10 credits
Electives	10 credits

Sophomore year

Philosophy 110, 220	10 credits
Political Science, Psychology or Economics core option	5 credits
Psychology 380	5 credits
Sociology 200, 380, 381	10 credits
Theology core options	10 credits
Elective	5 credits

Junior year

Mathematics/Science core option	10 credits
Philosophy	5 credits
Sociology 382, 491, and Track elective	15 credits
Electives	15 credits

Senior year

Sociology 488 and 497	10 credits
Sociology Track Electives	15 credits
Fine Arts	5 credits
Electives	15 credits
Total	180 credits

Sociology Courses

Sc 101 **Fundamentals of Sociology** **5 credits**
A description of the science of sociology; an analysis of interpersonal relations, of associations and social institutions, and of the way these affect one another and are affected by culture.

Sc 200 **Perspectives in Social Psychology** **5 credits**
Consideration of theories and methods in contemporary explanations of the behavior of individuals in social contexts and social situations. Prerequisites: Sc 101 and Psy 100 recommended. Exceptions with permission of Professor.

Sc 201 (Psy 201) **Social Statistics** **5 credits**
Review of basic statistical principles and processes in social science research.

Sc 210 **American Society and Culture** **5 credits**
Analysis of selected institutions and the social structure; dominant values and the American character; basic changes in contemporary American society and culture.

Sc 256 **Criminology** **5 credits**
A review of the theories of the causes of criminal behavior; sociological explanations of criminal interactions, criminal systems and their functions.

Sc 257 **Juvenile Delinquency** **5 credits**
Analysis of the offenses of juveniles as distinct from those of adult offenders, and sociological explanations of these behaviors within contemporary conceptual models.

Sc 260 **Sociology of the Family** **5 credits**
The structure and functions of the family as a social system; the use of sociological perspectives to interpret the position of the American family in an era of social change.

Sc 266 **Interracial and Interethnic Relations** **5 credits**
Analysis of the factors involved in intergroup relations. Prerequisite: Upper division standing or permission.

Sc 280 **Urban Community** **5 credits**
Urban community structures and institutions; historic city types; the process of urbanization; world cities; aspects of American urban communities. Prerequisite: Upper division standing or permission.

Sc 291 **Special Topics in Sociology** **1-5 credits**
Sc 292 **Special Topics in Sociology** **1-5 credits**
Sc 293 **Special Topics in Sociology** **1-5 credits**

Sc 300 (Cs 300) **Introduction to Social Work** **5 credits**
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.

Sc 310 **Sociology of American Sport** **5 credits**
Inquiry into social structure of sports organizations; impact of industrialization and urbanization; the culture of sports including values; how sport integrates with education, economics, government and religion; stratification, racism and sexism in sports.

Sc 320 **Sociology of Medicine and Health Care** **5 credits**
Analysis of the structure and problems of medicine and health care systems, the changing nature of illness and health, and critical review of alternatives for the future.

Sc 350 **Close-Knit Groups** **5 credits**
Sociological models and methods for analyzing small, interpersonal systems of interaction, their dynamics and structures, as well as their potentials for change and growth.

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

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

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

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

Sc 363 **Population Problems** **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 365 (CJP 365) **Probation and Parole** **5 credits**
Examination of current trends and issues in probation and parole supervision, personnel qualifications, legal aspects, and research on results and prediction of outcome.

Sc 366 (CJP 366) **Corrections** **5 credits**
Analysis of post-arrest treatment methods applied to offenders, the correctional institution and community-based corrections. Prerequisite: Upper division standing or permission.

Sc 376 (CS 376) **Factors of Interviewing** **5 credits**
The interview as one of the major methods of helping people; study of the knowledge and skills needed for proficient interviewing to provide a basis for future development. Prerequisite: Sc 300 or permission.

Sc 377 (CS 377) **Supervised Field Experience** **5 credits**
Direct observation and academic study in a selected community agency with stress placed upon the agency's clientele, its services and its function in the community. Prerequisite: Sc 300 and 376. Mandatory CR/NC.

Sc 380 **Methods of Sociological Research I** **5 credits**
Sc 381 **Methods of Sociological Research II** **2 credits**
I. Logical structure and procedures of data gathering and analysis. II. Practicum: student research project. Prerequisites: Sc 101 and 201 for 380; 380 for 381.

Sc 382 **Evaluation Research** **5 credits**
Application of basic research design and logic to programs for the purpose of evaluation of performance. Also, the techniques for making social, economic and evaluation impact assessment. Prerequisites: Sc 201, 380, 381

Sc 385 **Values and the Future of Society** **5 credits**
Focus on the problem of identifying social values, considering ways of measuring and predicting value system changes in the future. In what way do value systems and technology interplay.

Sc 405 **White-Collar Crime** **5 credits**
A comprehensive overview of criminal activity in the upper and middle echelons of American society; e.g. corporate offenses, consumer fraud, misuse of computers, illegal practices in professions, political corruption.

Sc 412 (CJP 410) **Juvenile Justice Systems** **5 credits**
Examination and study of contemporary police-juvenile operations. Theory and examination of the juvenile justice system. Relationship between the juvenile officer, crime prevention and community relations.

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

Sc 420 **The History of Punishment** **5 credits**
A social history of the punishment response to the phenomenon of crime, considering the origins, principles, science and society's justification for punishment.

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 488 **Internship** **1-15 credits**
On-the-job experience in a selected organization. May be taken up to a maximum of 15 credits.

Sc 491 **Special Topics in Sociology** **1-5 credits**
Sc 492 **Special Topics in Sociology** **1-5 credits**
Sc 493 **Special Topics in Sociology** **1-5 credits**

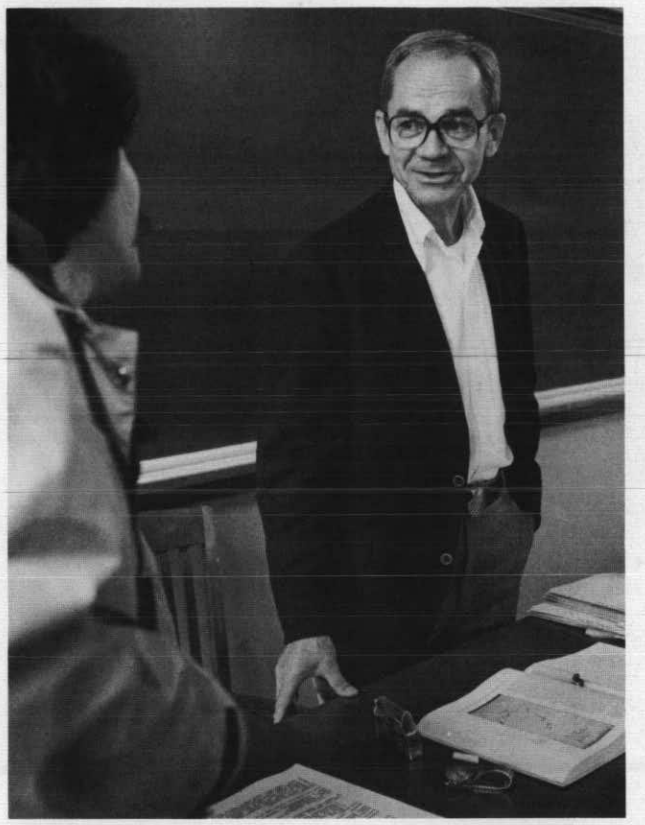
Sc 494 **History of Sociological Thought** **5 credits**
Historical survey and evaluation of selected leading thinkers who have contributed to the development of sociology as an independent discipline. Prerequisite: Upper division standing or permission of instructor.

Sc 496 **Independent Study** **1-5 credits**

Sc 497 **Individual Research** **3-5 credits**
Design and execution of a research project supervised by a faculty member.

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.



Theology and Religious Studies

Richard H. Ahler, SJ, S.T.D., Chairperson

Objectives

Theology and religious studies contribute to the fostering and formation of students' human and personal growth by helping them develop attitudes, skills, and knowledge that will enable them to deal perceptively, intelligently, and critically with the religious dimension of human life, especially with the beliefs, practices, and values of the Catholic Christian tradition. To this end the department supplies two levels of courses for the core curriculum. Level 1 courses (200 numbers on the Bulletin course listings) aim at recognition and appreciation of the existence and function of God's presence in human experience and history; Level 2 courses (300 numbers in the course listings) aim at enabling students to learn how to make a religious tradition their own, carefully and critically.

The Department also offers a program of courses, some from courses designed for the core curriculum, some special for majors and minors (400 numbers in the listings), leading to a Bachelor of Arts degree in Theology and Religious Studies.

Degrees Offered

Bachelor of Arts
Master of Religious Education (SUMORE) — See Graduate Bulletin
Master of Ministry (SUMORE) — See Graduate Bulletin
Master of Pastoral Ministry (CORPUS) — See Graduate Bulletin
Certificate in Pastoral Ministry (CORPUS) — See Graduate Bulletin

General Program Requirements

Students who major in theology and religious studies must satisfy core curriculum requirements of the University as given on page 18 of this bulletin. In addition majors must take an added five credits in social science and five credits in philosophy.

Departmental Requirements

Bachelor of Arts — 50 credits in theology and religious studies beyond core requirements. Students are required to fulfill the following program of courses: 1) Judaeo-Christian Origins (RS 200); one New Testament course (RS 211, 217, 221); one additional scripture course on any level; one course from RS 230, 243, 252. 2) Two courses from RS 300, 303, 310, 317, 321; one course from RS 325, 334, 338, 341. 3) one religious studies course (RS 263, 267, 271, 275, 371); the sequence RS 425, 426, 427; and RS 460, the senior seminar.

Undergraduate minor — 30 credits in theology and religious studies which must include RS 200 and one New Testament course; two courses from RS 300, 303, 310, 312, 317, 321; one course from RS 325, 334, 338, 341 and one from RS 263, 267, 271, 275.

Bachelor of Arts

Freshman year

English 110 and core option	10 credits
History core option	10 credits
Philosophy 110, 220	10 credits
Social Science core options	10 credits
Theology and Religious Studies 200	5 credits

Sophomore year

Philosophy core option	5 credits
Social Science elective	5 credits
Theology and Religious Studies	15 credits
Electives	20 credits

Junior year

Mathematics/Science core options	10 credits
Philosophy elective	5 credits
Theology and Religious Studies 425, 426, 427	15 credits
Electives	15 credits

Senior year

Theology and Religious Studies 460	5 credits
Theology and Religious Studies electives	20 credits
Electives	20 credits
Total	180 credits

Theology and Religious Studies Courses

Note: courses numbered in the 200s are Level 1; those in the 300s are Level 2; those in the 400s are special courses for majors or minors and also occasionally offered electives for all. (See Core Curriculum, page 18.)

Numbers in parentheses indicate differently numbered equivalent courses from earlier Bulletins. Equivalent courses cannot be retaken for credit.

RS 200 Judaeo-Christian Origins — **5 credits**
Historical backgrounds and development of Israelite and Jewish religious experience and tradition; its contribution to the foundations of belief in the Christ.

RS 203 (240) Prophets and Wisdom — **5 credits**
The function of the tradition's message in the Former Prophets in relation to the Torah is analyzed to serve as the basis for analyzing the thought of the Latter Prophets, culminating in II Isaiah's Suffering Servant poems which lead into the major themes of the Wisdom Literature: unmerited suffering, the mystery of evil, the relation of wisdom and discipline.

RS 211 (210) The Gospel of Jesus Christ — **5 credits**
Examination of some New Testament writings in their religious and cultural context and in their literary provenance in an effort to discover something of the Christian community's experience of the message and person of Jesus as guide for and object of present-day Christian believing.

RS 217 (220) The Message of Paul — **5 credits**
Description of the Christian experience given to us in the Pauline letters; Paul's experience of Christ; development of his thought in some dominant themes or perspectives; the influence of the believing community and of contemporary history and culture on his experience and development; relation of his message to all times and people.

RS 221 (215) John: What I Have Seen and Heard — **5 credits**
The message of faith in the Gospel and letters of John; the roots of John's message, its relation to the community's experience of Jesus Christ present in the Spirit; Johannine themes and perspectives on the "world," on Christ and the salvation he brings, on the function of faith and love in Christian living; the universality of the message.

RS 230 (330) Foundations of Believing — **5 credits**
The human activity and structures of believing; the inevitability of believing; problems and obstacles to believing in God in today's world; the validity and invalidity of modern critiques of religion; the development of an authentic notion of God.

RS 243 (475) The Christian in Action: Moral Decision-Making — **5 credits**
The contemporary Christian as decision-maker in present society; reflection on dilemmas and situations in which students are engaged to develop an awareness of self as moral agent, the basis of a theory of the person as empowered by the Spirit of God for action in love and justice.

RS 252 Prayer for Life — **5 credits**
Introduction to the phenomenon of authentic religion as it is expressed in prayer and paths of spiritual growth and renewal; the relationship between personal and community prayer in life and faith processes; methods and models of West and East.

RS 263 (290) Religious Experience East and West — **5 credits**
The phenomenon of religious experience and mysticism as it has been described in spiritual classics of both eastern and western religions; the nature and meaning of these phenomena.

RS 267 (289) History of Religions — **5 credits**
Exploration of the basic human drive in religious experience; investigation of the why-where-when-how of the Holy and mysterious in the Eastern religions and in Christianity; historical data and sources for the experience at the root of various traditions.

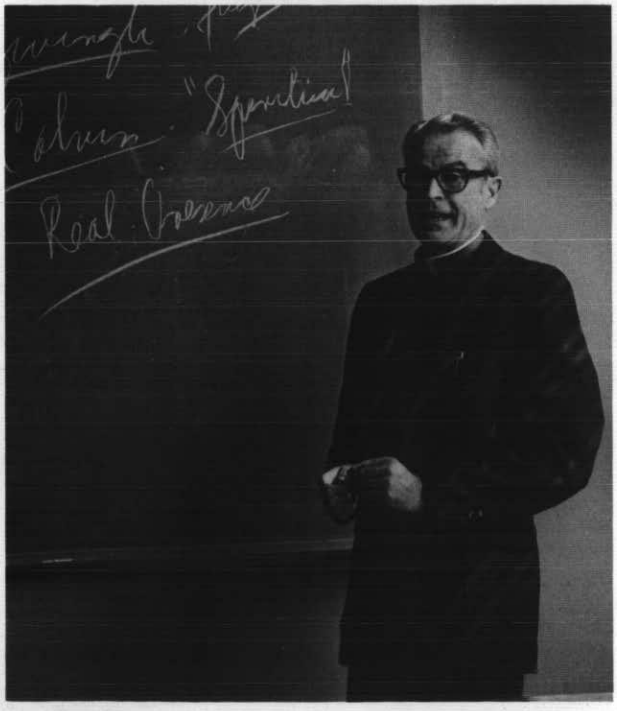
RS 271 (347) The Black Religious Experience — **5 credits**
Description of the particular religious experience of black people, developing themes of freedom, proclamation, power, hope. Themes explored reveal convergence with religion in general, yet divergence into a particular black religious experience.

RS 275 (478) (479) Jewish History and Theology — **5 credits**
Survey of Jewish history, going back to biblical times, to discover the religious generative force expressed in developing beliefs, practices, and ways of understanding.

RS 291 Special Topics — **2-5 credits**
RS 292 Special Topics — **2-5 credits**
RS 293 Special Topics — **2-5 credits**

RS 300 (320) Fundamental Themes in Theology — **5 credits**
Origins, traditional formulations, relevance to present life-experiences of some basic affirmations of Christian belief: faith, revelation, incarnation, redemption; investigation of the reasonableness and inter-connection of the truths affirmed; how these truths function as the core of a personal faith-synthesis.

RS 303 (340) A Theology of the Human — **5 credits**
Investigation of human persons in their relation to God, to other humans, to the world; questions and Christian responses to questions about human structures, purpose, meaning, fulfillment, self-identity, and function in a world marked by suffering and sin — and by the salvation brought by Christ.



RS 307 A Theology of the Feminine — **5 credits**
Investigation of what has been communicated to women historically about who and what they are, what their role is in Church and society; a look at the changing understanding of what it is to be human generated by a rising consciousness of the equality of women; attempt to show what still needs to be said and done to improve our Christian consciousness of the human and the feminine.

RS 310 (335) Christ for Our Times — **5 credits**
The historico-cultural context of questions about who Jesus Christ is; exploration of past and present foundations and content of Christians' affirmation of Jesus as the Christ; development in understanding the mystery of Jesus; the effects on Christian life of making Jesus Christ the center and focus of believing.

RS 312 (330) God in the Christian Tradition — **5 credits**
Study of formulations in the Bible and in later times that express and guide the experience and growth in understanding of who God is in the living tradition of Christians; formulations that have or are causing problems in understanding; contemporary approaches to an understanding of who God is, how he acts, when and where he is encountered.

RS 317 (344) The Community That Is Church — **5 credits**
Central biblical themes bearing on the origin and nature of the Christian community; models for understanding the community in its dynamic growth-process and self-structuring in history; elements in the dynamic: authority and freedom, tradition and change.

RS 321 (420) Christian Sacraments — **5 credits**
Biblical investigation of the origin of the sacraments in Christ and the Church; nature of symbolism as evocative and healing; the doctrinal, liturgical, and moral aspects of the sacraments within a community's ongoing life and worship.

RS 325 (476) Society, Justice, and Theology — **5 credits**
Reflection on the relationship between Christian faith and justice in society; relation of justice and faith in Scripture and tradition; a theology of the social focused on the revelation of God through his activity in the structures of contemporary society; Christian social teachings as an expression of the theology of the social; the inter-relation of Christian community and the society in which it exists.

RS 334 (450) Liberation and Theology — **5 credits**
Discovery of situations and structures (social, political, economic), experienced as oppressive, that cry out for liberation; themes from the biblical and Christian tradition that speak to the issues of liberation, justice, and peace; contemporary models for analyzing, interpreting and applying the Christian message.

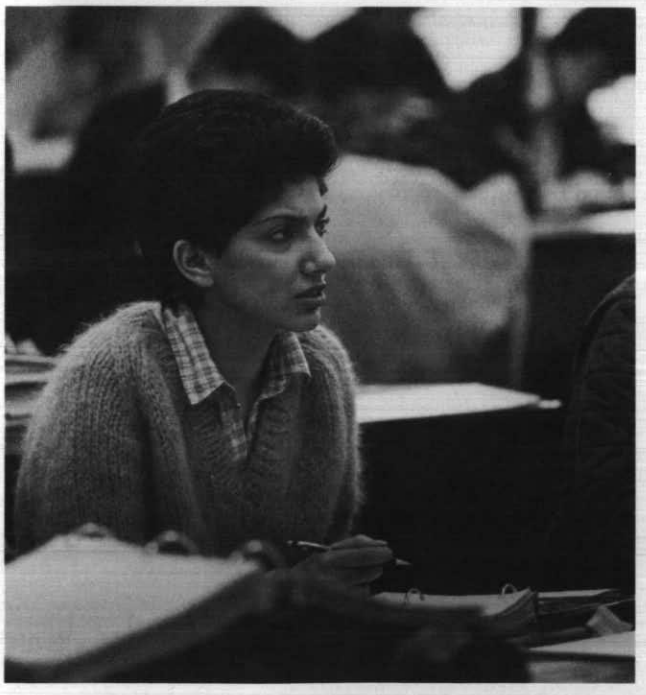
RS 338 (433) Christian Views of Love, Sexuality, and Marriage — **5 credits**
The meaning of love experiences and their expression in human sexuality in light of God's loving relation with each person; examination of moral/spiritual dimensions of sexuality; relationship of human sexuality and marriage; marriage as a symbol and sacramental expression of God's love; present procedures and regulations for marriage.

RS 341 (477) Contemporary Issues in Christian Ethics — **5 credits**
An examination and analysis of such important contemporary issues as nuclear disarmament, war and peace, world hunger, medical ethics, revolution and violence, the criminal justice system; focus on one such issue in light of the Christian traditions of social teachings and contemporary Christian viewpoints; principles and rules for evaluating particular issues.

RS 371 Dialogue, East and West — **5 credits**
Comparative study of Western and Eastern religious traditions; common categories for understanding what people seek in any religion — knowledge of the holy, harmony with the real world, significant moral value, and what differentiates one tradition from another; principles for inter-faith dialogue that avoid obstacles to development within traditions and obstacles to dialogue between traditions.

RS 391 Special Topics — **2-5 credits**
RS 392 Special Topics — **2-5 credits**
RS 393 Special Topics — **2-5 credits**

RS 396 Independent Study — **2-5 credits**
RS 397 Independent Study — **2-5 credits**
RS 398 Independent Study — **2-5 credits**



RS 405 (481) The Songs of the Community of Israel — **5 credits**
Analysis of the literary form and types of the Psalms; Psalm I as showing why the Psalms rank as the major book in the Wisdom Literature: how meditation/reflection differs from prayer; how prayer constitutes the community of Israel; how community constitutes the essential condition for prayer.

RS 414 (210) The Synoptics: Matthew, Mark and Luke — **5 credits**
Investigation of the oral traditions of the Gospels by form criticism; study of the theology of Matthew, Mark and Luke by means of source criticism and redaction criticism.

RS 425 (355) Early Christian Theology — **5 credits**
Theological, historical and literary analysis of writings of some of the leading early and later Fathers of the Church; e.g., Justin, Irenaeus, Tertullian, Origen, Augustine. Majors and minors or permission by chairperson.

RS 426 (357) Scholastic Theology — **5 credits**
Seminar: the origin and main lines of scholastic theology, its spirit and aim formulated by St. Anselm, Abelard, St. Bernard, Alexander of Hales, St. Albert, St. Bonaventure, Duns Scotus, William of Occam, St. Thomas Aquinas. Prerequisite: RS 425.

RS 427 (358) Reformation Theology — **5 credits**
The theological dispute of the Reformation on justification by faith alone; controversies among Catholics, Lutherans, Calvinists and Jansenists; the Enlightenment and Vatican Council I. Prerequisite: RS 426.

RS 431 (487) Modern Protestant Theology — **5 credits**
Theological position, history and trends of some major Protestant denominations; principle leaders of modern Protestant thought and their tenets: Bultmann, Tillich and Niebuhr.

RS 441 (485) Religious Themes in Literature — **5 credits**
Study of selected literary works in terms of their theological implications and religious insights.

RS 460 Trinity, Grace, and Life in the Spirit — **5 credits**
Study of God's life as Trinity and as shared with us (grace); theological method and relation to spiritual theology. Seminar for majors, minors.

RS 491 Special Topics — **2-5 credits**
RS 492 Special Topics — **2-5 credits**
RS 493 Special Topics — **2-5 credits**

RS 496 Independent Study — **2-5 credits**
RS 497 Independent Study — **2-5 credits**
RS 498 Independent Study — **2-5 credits**

Religious Studies Center

Religious Studies Center designates an agency established under the cooperative auspices of Seattle University and the Archdiocesan Office of Religious Education, committed to planning and providing programs in continuing religious formation for adults, professional and lay. Religious Studies Center courses are generally a continuing education service. Continuing Education Units may be earned for most of these courses and, although for some of them credit may be earned, such credit is not automatically applicable toward meeting degree requirements. Information on Religious Studies Center courses is available from the Archdiocesan Office of Religious Education.

Albers School of Business

Albers School of Business

John D. Eshelman, Ph.D., Dean

Merwyn A. Bogue, Jr., M.Ed., Assistant Dean

Thomas F. Gleed Chair: David Lee Kurtz, Ph.D.
Rainier National Bank Professor of Finance: Hildegard R. Hendrickson, Ph.D.

Department Chairpersons

Accounting and Legal Environment:
Gerald Cleveland, Ph.D., Chairperson
Administration: Harriet Stephenson, Ph.D., Chairperson
Economics: Hildegard Hendrickson, Ph.D., Chairperson

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 Albers School of Business implement the purpose of the University by providing professional guidance and instruction for developing those qualities which lead to competent leadership and service in the various fields of economic endeavor. The School seeks to prepare graduates capable of assuming responsible roles in the economic development of the Pacific Northwest, as well as national and international sectors, and in both private enterprise and government.

Accreditation of Bachelor of Arts in Business Administration

American Assembly of Collegiate Schools of Business —graduate and undergraduate levels.

Organization

The Albers School of Business has two principal divisions, undergraduate and graduate studies. Undergraduate majors are offered in five business fields: accounting, finance, general business, management and marketing. In addition, the School contains the Economics department which offers a bachelor's degree program and an undergraduate minor.

Admission Requirements

All entering Freshman and undergraduate transfer students who meet the University's regular admission standards may be admitted to the Albers School of Business for lower division courses and all courses in Economics.

Admission to Junior Status in the Business Majors

No student will be permitted to take Business courses numbered 300 or above prior to being admitted to Junior status in the Business major. (Students who are Juniors or Seniors in other majors may request permission to take 300 or 400 level business courses.) To be admitted to Junior status in the Business major, a student must have at least 90 quarter credit hours and a cumulative grade point average of no less than 2.25. The student must have completed Mt 118 and Mt 130, or their equivalents, and at least four of the seven other required lower division courses in Business Mathematics and Economics (Bus 230, 231, 260, 270, Ec 271, 272, and Ecs 113 or 114). The grade point average in the lower division required Business, Economics and Mathematics courses must be no less than 2.25.

Students with 90 or more quarter credit hours who do not meet these standards will be subject to dismissal from the School of Business. A Business student who has completed more than 120 quarter hours of degree requirements, and been dismissed, ordinarily will not be considered for readmission.

To be granted the BABA degree, a student must achieve a cumulative gpa of 2.25 overall and in all required coursework in Business, Mathematics, Economics and Computer Science.

Degrees Offered

Bachelor of Arts in Business Administration
Bachelor of Arts in Economics
Master of Business Administration (evening classes only)—See Graduate Bulletin

Curriculum

The program of required study for the bachelor's degree in business has three principal components: the arts and sciences, the business core and area of specialization. All students in the baccalaureate degree program fulfill requirements in English, mathematics, philosophy, a natural science, social sciences and theology and religious studies. The business core includes courses in accounting, administrative processes, economics, finance, information systems, legal environment, management, marketing and statistics. Specialization in one of the five major fields is required. No course in the area of specialization may be taken through independent study.

General Program Requirements

A minimum of 180 credits is required for bachelor degrees in business or economics. See the degree requirements for specific course requirements.

Students transferring from another institution normally must earn at least 45 hours of upper division credit in Business and/or Economics at Seattle University.

Students transferring within the University from other majors to Business must meet the requirements of the Business major applicable at the time they enter the Albers School of Business.

Business students who withdraw from the University for one calendar year or more are subject to the requirements for the Business major at the time they are readmitted.

No transfer credit is granted for courses in which the grade earned is less than C or 2.00 for the required courses in Business, Mathematics, Economics and Computer Science.

Degree Requirements

Bachelor of Arts in Business Administration (all majors except accounting) — Students seeking this degree complete a program with the following components:

1. Requirements in arts and sciences ..... 75 credits

   English 110 and a literature course; Mathematics 118, 130; Computer Science 113 (ECS 114 may be substituted); Philosophy 110, 220 and a five-credit philosophy elective; social sciences, ten credits (Psychology 100 and Sociology 101 recommended); ten credits in theology and religious studies selected from two different areas; five credits in natural science; and ten credits chosen with the direction of an adviser. Economics courses cannot be used.

2. Business core requirements ..... 60 credits

   Business 230, 231, 260, 270, 340, 350, 360, 380, 460, 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

Bachelor of Arts in Business Administration

(All majors except accounting)

Freshman year

English 110 and a core literature course	10 credits
Mathematics 118, 130	10 credits
Natural Science	5 credits
Philosophy 110	5 credits
Social Sciences (Psychology 100, Sociology 101 or Political Science 190 recommended)	10 credits
Elective	5 credits

Sophomore year

Business 230, 231, 260, 270	20 credits
Economics 271, 272	10 credits
Computer Science 113 (recommended) or 114	5 credits
Philosophy 220	5 credits
Theology and religious studies	5 credits

Junior year

Business 340, 350, 360, 380	20 credits
Business major (300-499)	5 credits
Theology and religious studies	5 credits
Electives other than business or economics	15 credits

Senior year

Business 460, 482	10 credits
Business major (300-499)	15 credits
Philosophy	5 credits
Electives	15 credits
Total	180 credits

A minor in computer science for business majors consists of the following 30 credits: ECS 113 or 114, ECS 220, 310, 370, 420, Bus 460.

Finance

Objectives

The finance curriculum is designed to afford an understanding of the financial functions in business and the management of assets for financial institutions and individuals.

Requirements for the finance major are: Bus 341, 343, 441 and Ec 372. Ec 471, 472 and 473 are strongly recommended.

General Business

Objectives

The general business major provides the opportunity for a broad survey of business subjects. It is designed for students who intend to operate their own business enterprises, those who expect to attain greater specialization through on-the-job programs, or those who plan later to study in a specific area.

General Business majors must complete at least 20 credits of upper division work in Business and/or Economics selected with the approval of his or her adviser. The courses selected must be from at least three different areas.

Management

Objectives

The general area of management is concerned with the administration of private business or public enterprise. It includes relating the goals of an enterprise with the goals of those individuals and groups of individuals who make the enterprise a continuing process. The management major is designed for students seeking careers in administration, personnel or industrial relations in business or government.

Requirements for the management majors are: Bus 381, 383, 384 and at least 5 credits from Bus 481, 483 and Psy 461 and 462. Ec 476 is recommended.

Marketing

Objectives

Marketing is the study of the flow of goods and services to ultimate consumers and users. Career opportunities in marketing are found in manufacturing, wholesaling and retailing, marketing research and in the promotional areas of advertising and personal selling.

The requirements for the marketing major are: Bus 351, 352, 451 and 452. Ec 374, 472 and 473 are strongly recommended.

Accounting

Objectives

Professionally trained accountants serve in diverse roles in private business, government, non-profit organizations, and other entities. After meeting the state requirements, many acounting graduates pursue careers as certified public accountants.

Students seeking the Bachelor of Arts in Business Administration with an accounting major must complete the following requirements:

1. Arts and Sciences ..... 75 credits
   In addition to the requirements specified above for the Bachelor of Arts in Business Administration, the ac-

counting program requires Speech 100 **or** 200 and thus has only 5 required elective credits in arts/sciences.

2. Business core — as listed for B.A. in Business Administration ..... 60 credits
3. Accounting major: ..... 35 credits
   Business 330, 332, 333, 334, 336, 431, 435
4. Electives ..... 10 credits

Total ..... 180 credits

Bachelor of Arts in Business Administration
Accounting Major

Freshman year

English 110 and 132 or 133 or 134 or 220 or 230 or 240 or 383 ..... 10 credits
Mathematics 118, 130 ..... 10 credits
Natural Science ..... 5 credits
Philosophy 110 ..... 5 credits
Social Sciences (Psychology 100, Sociology 101 or Political Science 190 Recommended) ... 10 credits
Speech 100 or 200 ..... 5 credits

Sophomore year

Business 230, 231, 260, 270 ..... 20 credits
Economics 271, 272 ..... 10 credits
Computer Science 113 (recommended) or 114 ..... 5 credits
Philosophy 220 ..... 5 credits
Theology and religious studies ..... 5 credits

Junior year

Business 340, 350, 380 ..... 15 credits
Accounting major:
Business 330, 332, 333, 334, 336 ..... 25 credits
Theology and religious studies ..... 5 credits

Senior year

Business 360, 460, 482 ..... 15 credits
Accounting major:
Business 431, 435 ..... 10 credits
Philosophy ..... 5 credits
Electives (of which 5 credits must be arts/sciences electives) ..... 15 credits

Total ..... 180 credits

Business Courses

Bus 230 Principles of Accounting I (Financial) 5 credits
Introduction to financial accounting concepts with emphasis on the development of the student's ability to understand and interpret financial statements of business entities. Prerequisite: Sophomore standing. (fall, winter, spring).

Bus 231 Principles of Accounting II (Managerial) 5 credits
Introduction to the use of accounting information for decision-making in planning and controlling the operation of business organizations. Prerequisite: Bus 230 and Sophomore standing. (fall, winter, spring).

Bus 260 (211) Business Statistics 5 credits
Business application of basic statistics, probability concepts, probability distributions, expectation, sampling, estimation, hypothesis testing, index numbers, time series analysis and introduction to simple linear models. Prerequisite: Mt 130 and Sophomore standing. (fall, winter, spring).

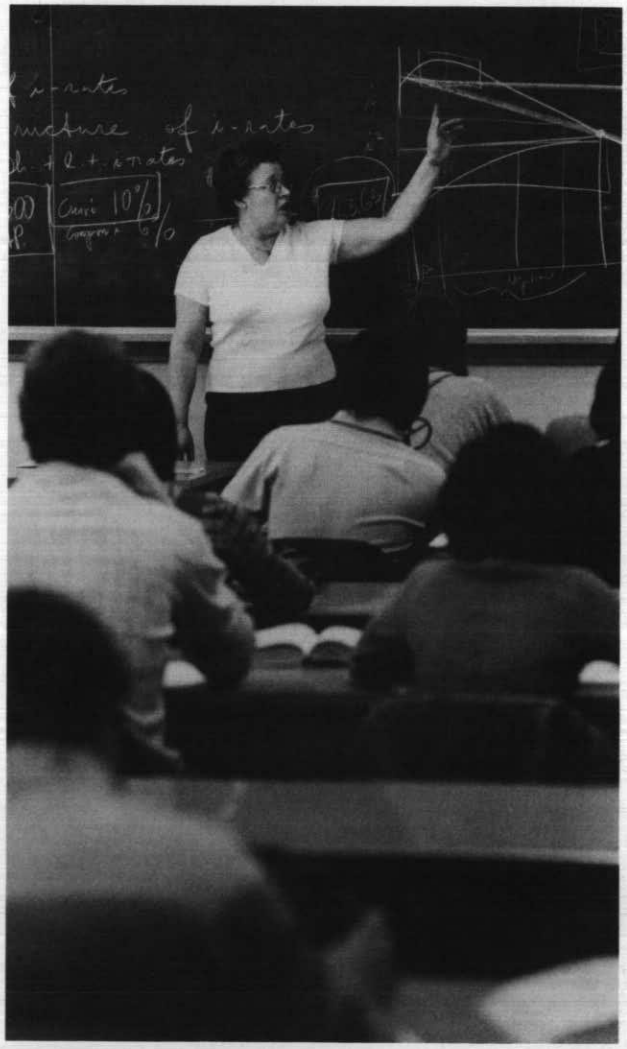
Bus 270 Law & Business 5 credits
Nature and development of law; structure and functions of the court; civil and criminal procedure; role of attorneys and an introduction to the law of contracts. Prerequisite: Sophomore standing. (fall, winter, spring).

Bus 291 Special Topics 1-5 credits
Bus 292 Special Topics 1-5 credits
Bus 293 Special Topics 1-5 credits

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 and Junior standing.

Bus 332 Intermediate Accounting I 5 credits
Theory and development of accounting principles; evolution of theory as relates to the current state of accounting for the assets of the entity and the measurement and reporting of periodic income. Prerequisite: Bus 321, and Junior standing.

Bus 333 Intermediate Accounting II 5 credits
Theory and development of accounting principles; evolution of theory as relates to the current state of accounting for liabilities and owners' equities. Prerequisite: Bus 332.



Bus 334 Intermediate Accounting III **5 credits**
Study of advanced topics in accounting theory and practice with emphasis upon financial reporting. Selected areas include: accounting for income taxes, inflation accounting, accounting changes, interim and segment reporting, statement of changes in financial position, disclosure requirements and contemporary issues. Prerequisite: Bus 333.

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 231, and Junior standing.

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 and Junior standing. (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 Institution and Markets **5 credits**
Nature and function of bank and non-bank financial institutions and markets and their relationships and interdependence. Prerequisites: Ec 271.

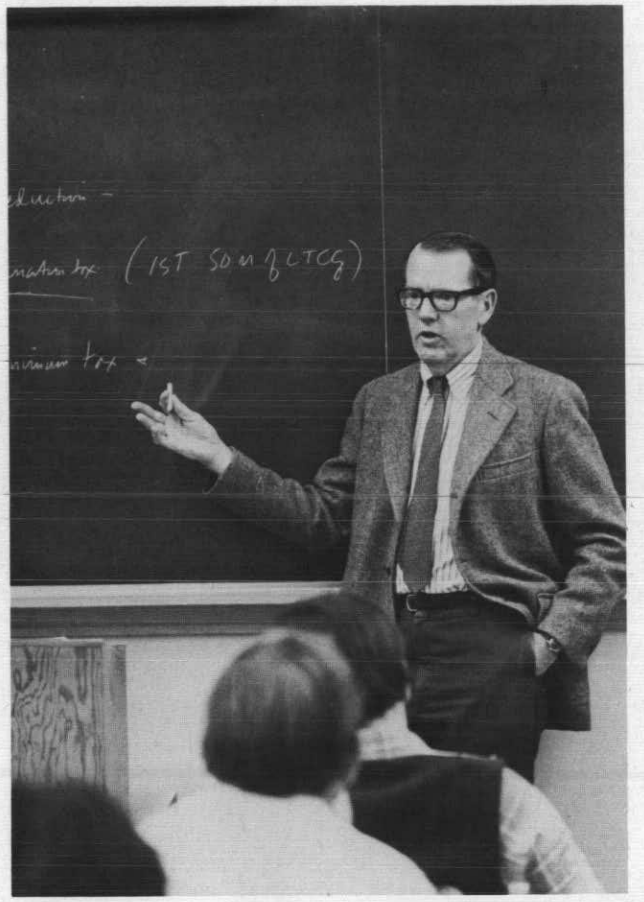
Bus 350 Introduction to Marketing **5 credits**
Survey of institutions and essential functions in the marketing system. Analysis of the marketing mix; product, place, promotion and price strategies. Prerequisites: Junior standing, permission. (fall, winter, spring)

Bus 351 Consumer Behavior **5 credits**
Application of behavioral sciences to explore consumer decision-making processes. Characteristics of goods, shopper behavior, opinion leadership, market segmentation, concepts relevant to personal selling. Prerequisite: Bus 350.

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 360 (480) Production and Operations Management **5 credits**
Survey of the system analysis, design and operating techniques for manufacturing and service organizations, including topics in facility location, linear programming, inventory control, work measurement, forecasting techniques, scheduling and quality control. Prerequisites: Bus 260, Bus 340, and ECS 113 or 114. (fall, winter, spring).

Bus 370 Advanced Law and Business **5 credits**
Commercial law, including contracts, business structures and property relationships; legal aspects of government and business, including credit and environmental legislation. Prerequisite: Bus 270 and Junior standing.



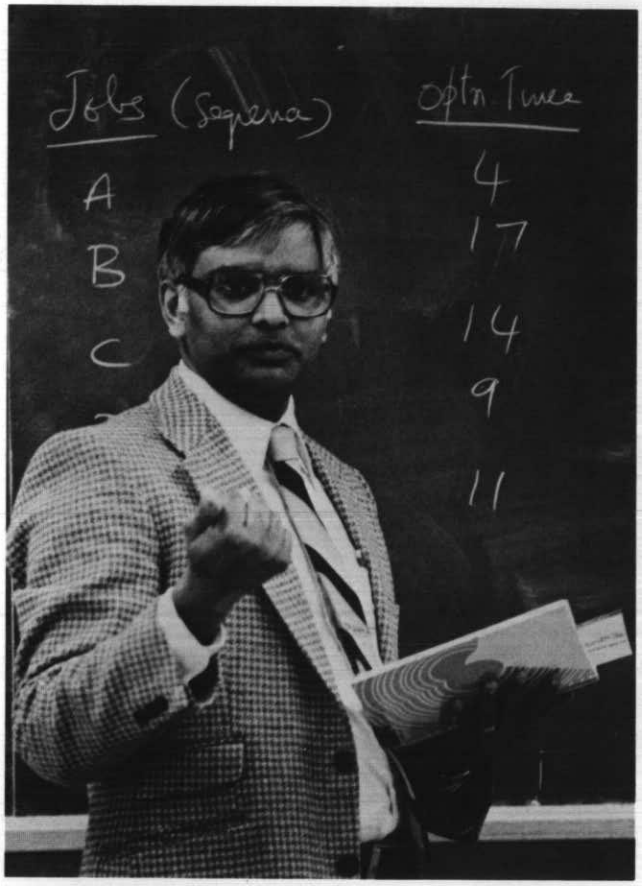
Bus 380 Organization Behavior **5 credits**
Develops understanding of organizational behavior, with focus on basic processes, methods involved in diagnosing human situations. Experiential exercises and analysis of concepts. Prerequisite: Junior standing. (fall, winter, spring).

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

Bus 383 Personnel I **5 credits**
Inducting personnel into the organizational structure; maintenance of the personnel system: compensating, employee-labor relations, discipline, personnel research, the personnel system and organizational culture. Prerequisite: Bus 380.

Bus 384 Personnel II **5 credits**
Utilization of human resources: evaluating performance, recruitment and selection, training and placement, perspectives on current affirmative action and equal opportunity legislation. Prerequisite: Bus 380.

Bus 431 Advanced Accounting I **5 credits**
Special accounting problems associated with partnerships and business combinations. Particular emphasis on consolidated financial statements and price-level adjusted financial statements. Prerequisite: Bus 333.



Bus 433 Seminar in Accounting Theory **5 credits**
Critical examination of accounting theories; concepts, postulates and principles related to income measurement, assets, liabilities and equities. Prerequisite: Bus 333.

Bus 435 Auditing **5 credits**
Purpose, scope, concepts and methods used in examining and attesting to financial statements. Current issues concerning professionalism, and role of the public accountant. Prerequisite: Bus 333.

Bus 436 Federal Income Tax II **3 credits**
Tax returns of partnerships and corporations; problems related to installment sales, cash basis and accrual basis. Prerequisite: Bus 336.

Bus 441 Case Problems in Finance **5 credits**
Variables relevant to financial problems; skill, techniques and judgment necessary to make financial decisions. Prerequisite: Bus 340.

Bus 451 Marketing Research **5 credits**
Purpose, methods and techniques of marketing research. Prerequisites: Bus 211, and 350.

Bus 452 Marketing Management **5 credits**
Case studies of corporate problems, decision-making. Student participation in various roles of marketing. Organization planning, execution and control of marketing programs. Prerequisites: Bus 231 and 350. Seniors only.

Bus 460 (410) Computer-Based Management Information Systems **5 credits**
Examination of background management elements related to data processing systems. Planning and design of information flows and business systems. Analysis of selection criteria and implementation methodology. Review of data base systems and data processing management and control. Prerequisite: ECS 113 or 114, Bus 340 and Senior standing. (fall, winter, spring).

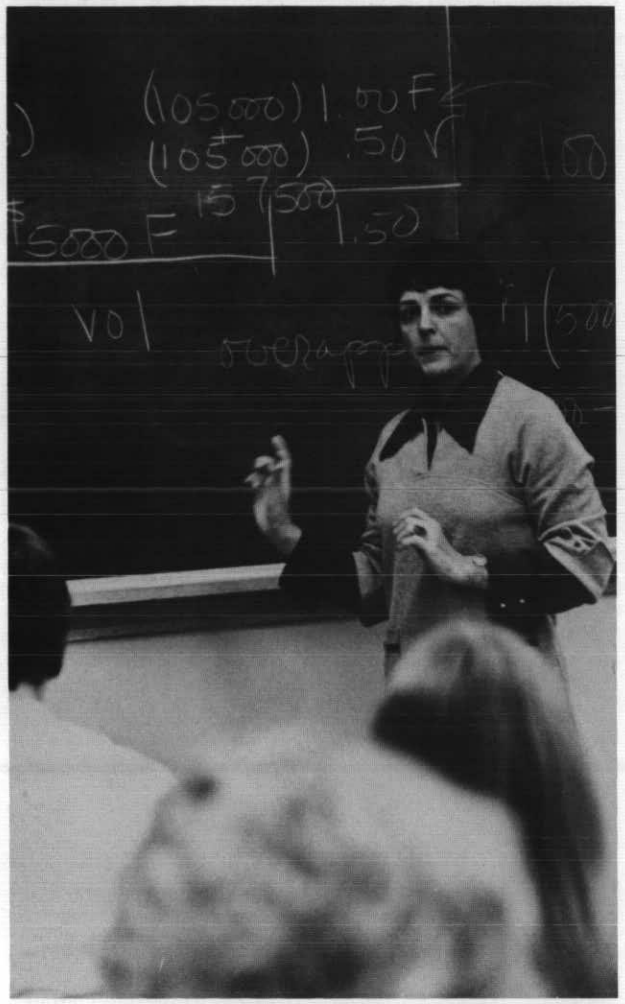
Bus 481 Small Business Management **5 credits**
Procedures and problems in starting and operating a successful small business enterprise. Prerequisite: Senior standing.

Bus 482 Business Policy and Organization **5 credits**
Case studies of policy and administration of business; intellectual discipline which permits understanding a problem, planning a program of action, progression to execution and constant review; original work in analysis and policy decisions. Prerequisite: All Business Core; Senior standing. (fall, winter, spring)

Bus 483 Management Seminar **5 credits**
Development of a specific area of management. Various approaches to study of organizations, conceptual and analytical models, research methodologies, trends in management. Prerequisite: Bus 360, 381, 383, Senior standing.

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

Bus 496 Independent Study **1-5 credits**
Bus 497 Independent Study **1-5 credits**
Bus 498 Independent Study **1-5 credits**
Supervised individual research. Open to senior business majors with the approval of the student's adviser.



Economics

Objectives

The courses in economics are designed to acquaint the student with the economy in which he/she lives and to provide for the application of these courses to all other social sciences. The tools of analysis necessary to solve such problems as income distribution, domestic and international finance, economic fluctuations and business organizations are acquired and opportunity is given to apply the various methods of solution. Graduates are prepared for a wide range of positions where analytical skills are required in business, government and the non-profit sector. Economics is also excellent preparation for students going to law school. Students who prove especially able in economics courses are encouraged to pursue graduate work in preparation for professional status as economists in government, industry or the academic world.

Degree Offered

Bachelor of Arts in Economics

General Program Requirements

Students in economics must satisfy the core curriculum of the University on page 18 of this bulletin. In fulfilling the core, Pls 160, Mt 118 and 130 are required. To be granted the Bachelor of Arts in Economics degree a student must achieve a cumulative gpa of not less than 2.00 in all required course work in economics.

Departmental Requirements

Bachelor of Arts — 55 credits of economics which must include Ec 271, 272, 372, 374 and seven additional economics courses not including Ec 100, 375 (Bus 343 may be substituted for one); Bus 260 and 230 and ECS 113 (recommended) or ECS 114.

Undergraduate Minor — 30 credits of economics which must include: Ec 271, 272, 372, 374 or 375 and any two courses in economics selected with the assistance of an adviser.

Bachelor of Arts in Economics

Freshman year

English 110 and core option	10 credits
History core option	10 credits
Mathematics 118, 130	10 credits
Philosophy 110	5 credits
Political Science 160	5 credits
Computer Science 113 or 114	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 electives	25 credits
Electives	20 credits
Total	180 credits

Economics Courses

Ec 100 Nature of Economic Society — 5 credits
Evolution of economic institutions, with emphasis on market capitalism, its critics and problems, past and present. Changing roles and responsibilities of government and the private sector.

Ec 271 Principles of Economics - Macro — 5 credits
Organization, operation and control of the American economy in its historical and socio-political settings; problems of inflation, unemployment, taxation, the public debt, money and banking, growth. Prerequisite: Sophomore standing. (fall, winter, spring).

Ec 272 Principles of Economics - Micro — 5 credits
Operation of the American economy with emphasis on prices, wages, production and distribution of income and wealth; problems of the world economy. Prerequisite: Sophomore standing. (fall, winter, spring).

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

Ec 371 History of Economic Thought **5 credits**
Major historical developments in economic thought, ancient to contemporary, Christian influence, merchantilism, laissez faire; German and Austrian schools, Marx and socialists; Keynes and neo-Keynesian analysis.

Ec 372 National Income Analysis **5 credits**
Determination of levels of national income, employment and prices. Problems of unemployment and inflation. Policies for stabilization and growth. Prerequisite: Ec 271.

Ec 374 Intermediate Price Theory **5 credits**
Demand, supply, costs and market prices under competitive and imperfectly competitive market conditions. Relationships between price and costs; income and its functional distributions in a capitalistic society. Prerequisite: Ec 272.

Ec 375 Managerical Economics **5 credits**
Theory of the consumer, the firm, the industry; with special emphasis on using the analytical tools of micro-economics for managerial decision-making within the firm. Prerequisite: Ec 272. This course does not satisfy a major requirement.

Ec 377 Government and Business **5 credits**
Development in the United States of public policy. Government regulation of industry and commerce and application to mergers, business concentration and restrictive business practices, regulation of public utilities. Prerequisite: Ec 272.

Ec 378 Urban Economics **5 credits**
The causes and consequences of the interdependencies of firms, individuals, households and governmental units within the constrained space of urban areas. Problems of land, housing, transportation, labor and public services.

Ec 471 Government Finance **5 credits**
Revenues, expenditures and debts of federal, state and local governments; economic theories; constitutional limitations; government finance as means for social reform; shifting and incidence of taxes. Prerequisites: Ec 271, 272.

Ec 472 International Trade and Development **5 credits**
Pattern, organization and promotion of U.S. and world trade. Trade theories. Exchange rates. Foreign prices and payments. Protection and free trade. G.A.T.T. European Community. Multinationals in foreign trade. Prerequisite: Ec 271, 272.

Ec 473 International Finance and Investment **5 credits**
Foreign Exchange Market. Balance of Payments. Gold standard and developments. Bretton Woods system, the I.M.F. and current problems. Oil prices and inflation. Post-war international investment. Eurodollars. Prerequisite: Ec 271, 272.

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.

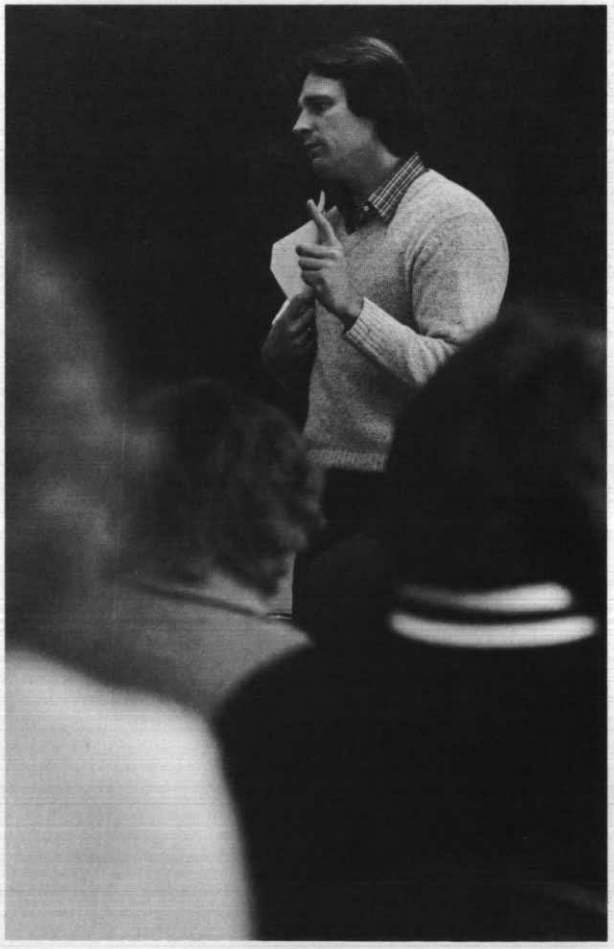
Ec 477 Economic Development **5 credits**
Developing nations and agriculture, industry, population, education, technology, exports, imports, capital and savings, unemployment. Commodity agreements. Special preferences. Foreign aid. U.N.C.T.A.D. Prospects and limits. Prerequisite: Ec 271, 272.

Ec 478 Comparative Economic Systems **5 credits**
Economic systems in theory and practice. Classical, Marxian, Neoclassical, Keynesian, post-Keynesian theories. Soviet agricultural and industrial organization and operation. Market socialism. Future trends. Prerequisites: Ec 271 and 272.

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

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

Ec 496 Independent Study **1-5 credits**
Ec 497 Independent Study **1-5 credits**
Ec 498 Independent Study **1-5 credits**
Ec 499 Independent Study **2-5 credits**
Supervised individual research. Open to senior economics majors with approval of adviser.



School of Education

School of Education

John J. Gilroy, Ph.D., Dean

Department Chairperson

Counselor Preparation:
R. Michael O'Connor, Ph.D., Chairperson

Curriculum and Instruction:
Margaret M. Haggerty, Ph.D., Chairperson

Doctoral Studies in Educational Leadership:
John A. Morford, Ed.D., Chairperson

Educational Administration and Special Programs:
Robert E. Lowery, E.D., Chairperson

Physical Education and Recreation:
Lawrence E. Vance, Ph.D., Chairperson

Teacher Education:
Bonnie J. Denoon, Ph.D., Chairperson

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 preschool, elementary, secondary school and adult education.

The School offers program leading to Washington initial and continuing teaching certificates. Programs are available which lead to initial and continuing certification for principals, counselors, program administrators and superintendents. Also available are programs to prepare teachers in the areas of early education, Montessori, mentally retarded and gifted.

Through reciprocal agreements School of Education graduates also qualify for certification in many other states.

Accreditation

The School is accredited by the National Council for Accreditation of Teacher Education and approved by the Washington State Board of Education. The American Montessori Society accredits the Montessori Teacher Education program.

Organization

The School of Education is organized into six departments: Teacher Education, Curriculum and Instruction, Physical Education and Recreation, Counselor Preparation, Educational Administration and Special Programs, and Doctoral Studies in Educational Leadership. Close cooperation exists among all departments, schools and colleges of the University in working out a program of preparation for the individual student.

Degrees Offered

Bachelor of Arts in Education
Bachelor of Education
Master of Arts in Education—See Graduate Bulletin
Master of Education—See Graduate Bulletin
Master of Counseling—See Graduate Bulletin
Educational Specialist—See Graduate Bulletin
Doctor of Education—See Graduate Bulletin

Undergraduate Programs

Teacher Education—Undergraduate Programs

Admission Requirements

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

Criteria and Procedure for Admission into Upper-Division Candidacy in the Teacher Education Programs

Requirements for entrance into upper-division candidacy in the teacher education program are higher than those for graduation. Therefore, students must make application for and be accepted into the program prior to registration in Ed 325 and 326, or 434, 435, 437 or 442.

For undergraduates, this application will usually be made during the quarter in which Ed 322 is taken, usually in the sophomore year. Transfer students must complete one quarter at Seattle University before

unconditional entrance into upper-division candidacy. Students entering initially as post-bachelor students are evaluated at the time of admission and need not make a separate application for entrance into upper-division candidacy. An interview with a School of Education adviser is required of all applicants, and a plan for completion of upper-division work must be approved by the adviser and submitted with the application.

Applicants for the teacher education program are evaluated by the undergraduate faculty on the following basis: (1) personal interview; (2) academic record; (3) evidence of interest in teaching as a professional career; (4) demonstrated competency in basic skills.

The School will place each applicant into one of four categories:

1. Accepted — may begin upper-division work toward teaching certificate. Criteria are: Unconditional recommendation from adviser; cumulative grade point average of 2.5 and for secondary candidates a 2.5 grade point average in the major teaching field; evidence of interest in teaching as a professional career; satisfactory performance on test of basic skills.
2. Accepted conditionally — may begin work toward teaching certification provided the conditions set forth are met. Conditions most commonly, but not always, relate to the achievement of certain grades or grade point averages. Criteria are: (any one is sufficient reason for conditional acceptance).

   Conditional recommendation from adviser; grade point average below 2.5 but above 2.0 in both cases; evidence of insufficient interest in a career in teaching; unsatisfactory performance in test of basic skills.
3. Deferred without prejudice — may not begin or continue upper division professional work toward teaching certification but may apply at a later date if certain conditions set forth in the deferral are met. Criteria are: (Any one is sufficient cause for deferral).

   A recommendation that this be done from the adviser; a grade point average below 2.0 overall or in teaching major; unsatisfactory performance in test of basic skills.
4. Rejected — may not begin or continue work toward teaching certification. Ordinarily, rejected applicants will not be reconsidered at a later date. Criteria are: (Any one is sufficient cause for rejection).

   A recommendation that this be done from the adviser; a grade point average below 2.0.

Applicants may appeal the classification by the Chairperson of Teacher Education to the Dean. Appeals must be made in writing within one week of notification of classification.

The status of any student is reviewed automatically if the student receives a grade of D or lower in a professional course, drops below the required grade point average or the adviser so recommends.

Admission to Student Teaching

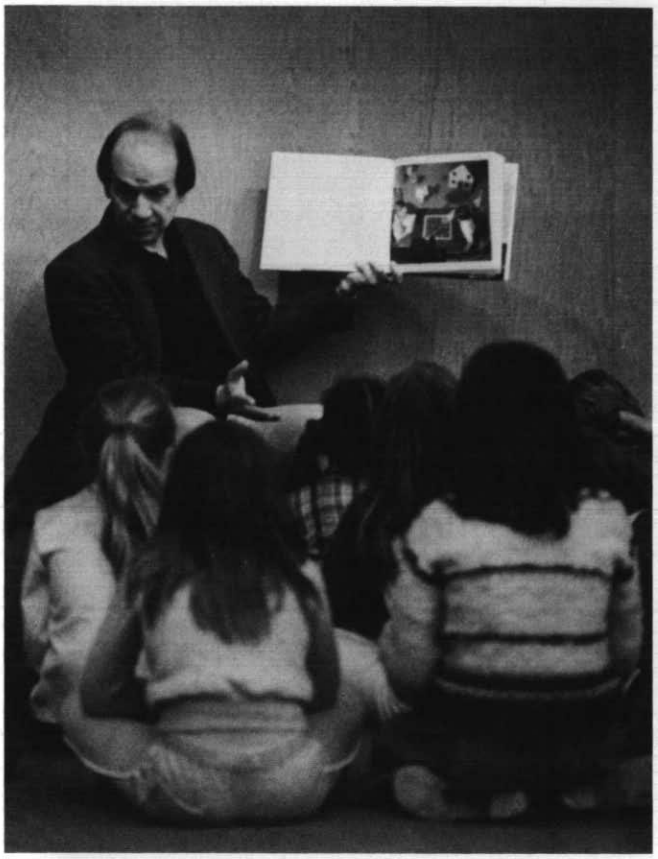
Acceptance into upper-division candidacy in the teacher education program and completion of prerequisite courses does not guarantee admittance into student teaching. An application must be submitted to the Chairperson of the Department of Teacher Education by the end of the fourth week of the quarter prior to the one in which the student wishes to fulfill the student teaching requirement. Specific dates during which forms may be obtained and submitted are announced each quarter.

Categories and criteria for acceptance are the same as those listed above except, recommendation from the faculty in the School of Education is also considered, and the student must have a grade point average of 2.5 in three areas: cumulative, in the teaching field (secondary), and in professional education courses.

Curriculum

The teacher preparation curriculum at Seattle University encompasses three components:

The liberal core of arts and sciences offered at Seattle University comprises about 35 per cent of the prospective teacher's curriculum. Forty per cent of the program is utilized in gaining a depth of knowledge in a teaching major for the secondary school teacher or two teaching areas for the elementary school teacher. The remaining 25 per cent of the 190 quarter hour basic teaching preparation is received in professional courses in foundations of education, psychology of child and adolescent development and learning, the principles, materials and technology of teaching, and closely supervised and assisted student teaching and appropriate laboratory experience in schools throughout the area. At least one course having primary emphasis on multi-cultural or ethnic heritage must be included.



Typical Program

Freshman year

English core options	10 credits
History core options	10 credits
Philosophy core options	5 credits
Social Science core option	5 credits
Major or electives	15 credits

Sophomore year

Education 322	5 credits
Mathematics/Science core options	10 credits
Philosophy core options	10 credits
Theology core options	10 credits
Major or electives	10 credits

Junior year

Education 324, 325, 326, 330, 337	20 credits
Physical Education	5 credits
Major or electives (including course in teaching of major)	25 credits

Senior year

Education 439	3 credits
Student Teaching	12 credits
Major and electives	35 credits
Total	190 credits

General Program Requirements

Bachelor of Arts in Education Secondary

Bachelor of Arts in Education (middle school, junior high school, or senior high school teaching) — 1) All University core requirements as found on page 18: 60 credits, 2) A teaching major of at least 45 credits in any subject commonly taught in secondary schools. (See departmental sections of the bulletin for exact requirements in each teaching major. Where no requirements are shown in a departmental section, an individualized program must be developed jointly). 3) Professional education courses: 45 credits. 4) Electives: 40 credits. Students are advised to use electives to complete additional teaching fields.

For recommendation to Comprehensive Social Studies the following are required: 1) a major in **one** of the social studies fields, 2) at least 25 hours in history, including American, Western, non-Western and Pacific Northwest and 3) a minimum total of 70 quarter credits in the social studies, including courses in at least three social studies areas in addition to history.

For recommendation in Business Education the following must be completed: 1) Bus 230, 231, 270, 340, and 380; 2) Econ. 271 and 272; 3) Ed 430, Teaching Secondary Subjects: Business: 4) proficiency must be demonstrated in **two** of these skills — typing, shorthand, office machines.

Bachelor of Education
Elementary

Bachelor of Education (elementary, middle school, junior high school or Montessori school teaching — 1) All University core requirements: 60 credits. The B.Ed. requires certain specific core courses as shown in the program outline. See page 18 for remaining core requirements. 2) Common courses: 25 credits. Includes work in art, music, geography, literature, speech and physical education needed by all elementary and middle school teachers. 3) A teaching major of at least 25 credits and a teaching minor of at least 20 credits in subjects or areas commonly taught in elementary or junior high schools. Junior high candidates must take the 25 hour teaching major in a specific subject taught at the junior high level. 4) Professional education courses: 50 credits. 5) Electives: 10 credits. These vary slightly for students seeking either special education or Montessori training.

Ten of the 190 credits required for the degree and initial certification also count toward the continuing certificate teachers must earn once they begin teaching.

Students interested in Montessori teaching should confer with the Montessori Program Coordinator early in their studies.

Elementary
Typical Program

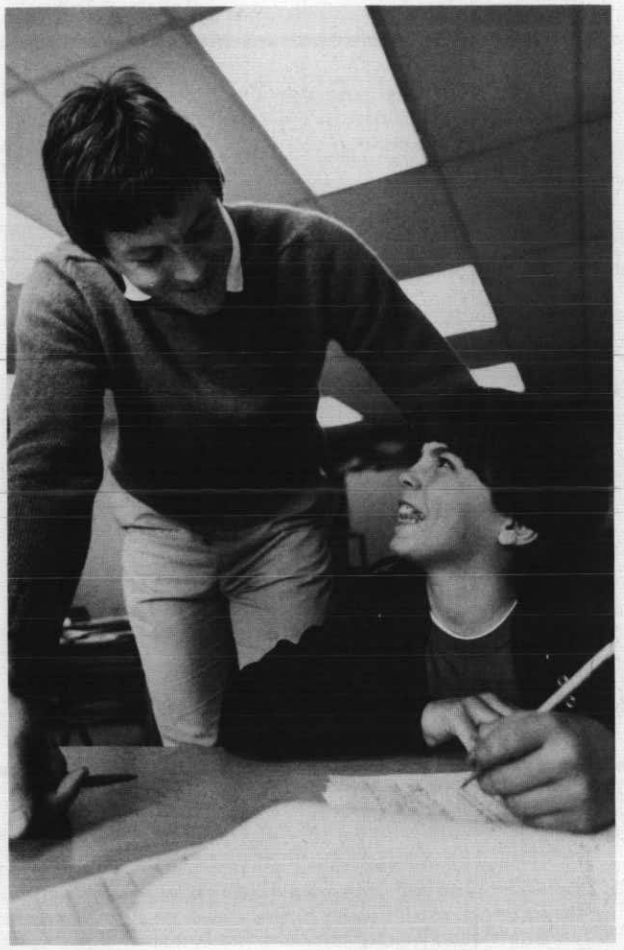
Freshman year
English core (include American Literature) .10 credits
History core (include U.S. History) .....10 credits
Philosophy core option..... 5 credits
Social Science core option ..... 5 credits
Teaching subject or supporting area .....15 credits

Sophomore year
Art 370, Music 114 .....10 credits
Biology elective; Mathematics 200 .....10 credits
Education 322..... 5 credits
Philosophy core options.....10 credits
Theology core options .....10 credits

Junior year
Education 324, 325, 326 .....10 credits
Physical Education..... 5 credits
Education 330, 336, 340 .....15 credits
Teaching subject and electives .....20 credits

Senior year
Education 438..... 3 credits
Student teaching .....12 credits
History 341 or Education electives and 420 ... 15 credits
Teaching subject and supporting
area and electives .....20 credits

Total . . . . 190 credits



Typical Program
Elementary with Montessori Emphasis

Freshman year
English core (include American Literature) .10 credits
History core (include U.S. History) .....10 credits
Philosophy core option..... 5 credits
Social Science core option ..... 5 credits
Teaching subject or supporting area .....15 credits

Sophomore year
Art 370, Music 114 .....10 credits
Biology elective; Mathematics 200 .....10 credits
Education 322..... 5 credits
Philosophy core options.....10 credits
Theology core options .....10 credits

Junior year
Education 328, 329 .....10 credits
Physical Education..... 5 credits
Education 336 and 340.....10 credits
Teaching subject and electives .....22 credits

Senior year
Student teaching (½ day for a year) .....18 credits
Education 434, 435, 437, 442 .....20 credits
One of Ed 374, Hs 341, or Ed 420 ..... 5 credits
Teaching subjects.....10 credits

Total . . . . 190 credits

Typical Program
Special Education: Teaching Mentally Retarded

Freshman year
English core (include American Literature) .... 10 credits
History core (include U.S. History) .....10 credits
Philosophy core option..... 5 credits
Social Science core option ..... 5 credits
Teaching subject or supporting area .....15 credits

Sophomore year
Art 370, Music 114 .....10 credits
Biology elective; Mathematics 200 .....10 credits
Education 322..... 5 credits
Philosophy core options.....10 credits
Theology core options .....10 credits

Junior year
Education 324, 325, 326 .....10 credits
Education 330, 336, 340 .....15 credits
Education 438 and 425 ..... 6 credits
PE 352 and 410 ..... 6 credits
Teaching subjects .....13 credits

Senior year
Student teaching .....12 credits
Education 424, 426, 427 ..... 9 credits
Education Electives ..... 5 credits
Teaching subjects and elective .....24 credits

Total . . . . 190 credits

Special Non-Degree Programs

A number of programs may be taken in addition to or separately from degree requirements:

For bachelor's degree holders **without** teacher training: (at least 30 hours must be completed at Seattle University in these programs to receive our recommendation.)

a) Elementary teaching initial certification,
b) Secondary teaching initial certification,
c) Montessori teaching certification.

For bachelor's or master's degree holders with teacher certification or its equivalent:

a) Continuing certification (fifth-year); may be either a non-degree program or combined with a master's degree.
b) Initial principal's credential.
c) Continuing principal's credential.
d) School counselor's certification.
e) Initial program administrator's credential.
f) Continuing program administrator's credential.
g) Montessori Teaching Certification.

See Graduate Bulletin for further details.

Education Courses

Ed 101 **Developmental Reading/Writing** **3-5 credits**
Designed to help students apply the structure of the English language to reading and writing and overcome weaknesses in basic skills. Mandatory CR/NC. (fall, winter, spring).

Ed 102 **College Study Skills** **1-5 credits**
Course to develop skills in note-taking, test taking, outlining, effective textbook reading and time management. Mandatory CR/NC.

Ed 103 **Essay Development/Reading and Writing** **2-3 credits**
Emphasis on reading comprehension and writing scholarly papers. Mandatory CR/NC.

Ed 104 **Developmental Mathematics** **1-6 credits**
An individualized program for the student needing to develop a mathematics background in preparation for Math. 100. Mandatory CR/NC. (fall and winter).

Ed 322 **Psychology of Development** **5 credits**
Developmental changes in the normal human being with emphasis on application to the school age years. Includes observations in the field. (fall, winter, spring)

Ed 324 **Foundations of American Education** **3 credits**
Foundation study of the philosophy, sociology and history of public, private and Catholic education in the United States; field experience to support classroom theory and laboratory work. Prerequisite: Ed 322; corequisite: Ed 325 and 326. (fall, winter).

Ed 325 **Psychology of Learning** **4 credits**
Study of learning in classroom; theories of learning; organization and retention of knowledge; evaluation of mental processes; factors in the economy of learning. Includes field experience. Prerequisite: Ed 322; corequisite: Ed 324 and 326. (fall, winter)

Ed 326 **Measurement and Evaluation in the Classroom** **3 credits**
Concentrated practice in the planning and construction of classroom tests based on instructional objectives, and an overview of standardized tests commonly used in schools.

Ed 328 **Montessori Orientation** **5 credits**
Basic philosophy, principles and procedures of environmental learning within a "prepared environment." Perceptual-motor education as utilized by everyday living and learning experiences of the young child. (fall)

Ed 329 **Sensorial Education** **5 credits**
Experience with the education of the senses in isolation. Also a study of the acquisition of practical skills within the child through his absorptive and imitative tendencies which lead gradually to abstraction. (fall)

Ed 330 **General Methods, Media and Materials** **5 credits**
Application of principles of learning and development to preparing, organizing and presenting learning units. Field experience. Prerequisites: Ed 324, 325; corequisites: Ed 340 and 336 or 337. (winter, spring)

Ed 336 **Fundamentals of Reading Instruction — Elementary** **5 credits**
Nature of the reading process, sequence of skills K-6, recommended practices, materials, methods of diagnosis and evaluation. Includes field experience. Prerequisites: Ed 322, 325; corequisite: Ed 330. (fall, winter, spring)

Ed 337 Fundamentals of Reading Instruction—Secondary **5 credits**
Development of reading and study skills; reading in content areas; diagnosis and evaluation, special reading programs. Includes field experience. Prerequisite: Ed 325; corequisite: Ed 330. (winter, spring)

Ed 340 Fundamentals of Mathematics Instruction — Elementary **5 credits**
Study of number systems including basic operations and properties of numbers; principles of teaching these concepts K-6; includes field experience. Prerequisite: Mt 200. (winter, spring)

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

Ed 391 Special Topics **1-5 credits**
Ed 392 Special Topics **1-5 credits**
Ed 393 Special Topics **1-5 credits**

Ed 420 Teaching Elementary School Subjects **5 credits**
Methods of teaching in specific subject areas and levels of the elementary school. Required concurrently with student teaching. Prerequisite: Ed 330. (fall, winter, spring)

Ed 424 Introduction to Learning Disabilities **3 credits**
History and current practices in diagnosis and remediation of learning disabilities.

Ed 425 Psychology of the Exceptional Child **3 credits**
Study of the atypical child who deviates from the normal to well above or below the average; tests for evaluation; consideration of remedial techniques. Prerequisite: Ed 322 or permission of instructor.

Ed 426 Special Education—Introduction to Mental Retardation **3 credits**
Study of the syndromes and behavioral characteristics of the mentally retarded and survey of the current trends in the field.

Ed 427 Special Education—Methods in Mental Retardation **3 credits**
Application of principles of learning and development in designing instructional programs for the mentally retarded. Prerequisite: Ed 426.

Ed 428 Language Development **3 credits**
An introduction to critical features of the developmental processes of receptive and expressive language with consideration of diagnosis, curriculum and method.

Ed 430 Teaching Secondary School Subjects **5 credits**
General methods of teaching in specific subjects, areas and levels of the secondary school. Prerequisite: Ed 330.

Ed 431 Early Education and Child Development **3 credits**
Current issues and trends in early childhood education — birth through eight years. Emphasis on preschool and kindergarten. Topics will include infant programs, management of learning centers, and parent participation in early education.

Ed 434 Montessori Language Arts Methods & Materials **5 credits**
Development of language and communication skills in young children, readiness for reading and writing, materials and methods for teaching language arts. Supervised practice. (winter).

Ed 435 Montessori Mathematics Methods & Materials **5 credits**
Development of logico-mathematical processes in the young child, introduction to number and its properties, basic operations leading to abstraction. Supervised practice. (winter).

Ed 436 Early Education Practicum **3 credits**
Supervised field experience in an early education setting.

Ed 437 Montessori Geography and Science **5 credits**
Theory and practice of observation; comparative study of current models in early education, including public and private kindergartens, infant centers, Montessori schools, and programs for special children. (spring).

Ed 438 Laboratory Experience—Elementary **1-6 credits**
Mandatory CR/NC. (fall, winter, spring)

Ed 439 Laboratory Experience—Secondary **1-6 credits**
Mandatory CR/NC. (fall, winter, spring)

Ed 440 Student Teaching — Elementary **12 credits**
One quarter of full-day supervised teaching experience on the elementary school level. Prerequisite: Ed 330 and permission of the Dean. Corequisite: Ed 420. (fall, winter, spring)

Ed 441 Montessori Student Teaching **3-18 credits**
Supervised teaching within Montessori preschool. A half day (daily) session in an approved or credentialed school under a Montessori teacher. (8 credits in fall; 5 credits in other quarters.) Mandatory C/NC

Ed 442 Montessori Geography and Science **5 credits**
Study of the world, flora, fauna and people through concrete materials, supervised practice. (spring).

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

Ed 446 Student Teaching — Supplementary **5-15 credits**

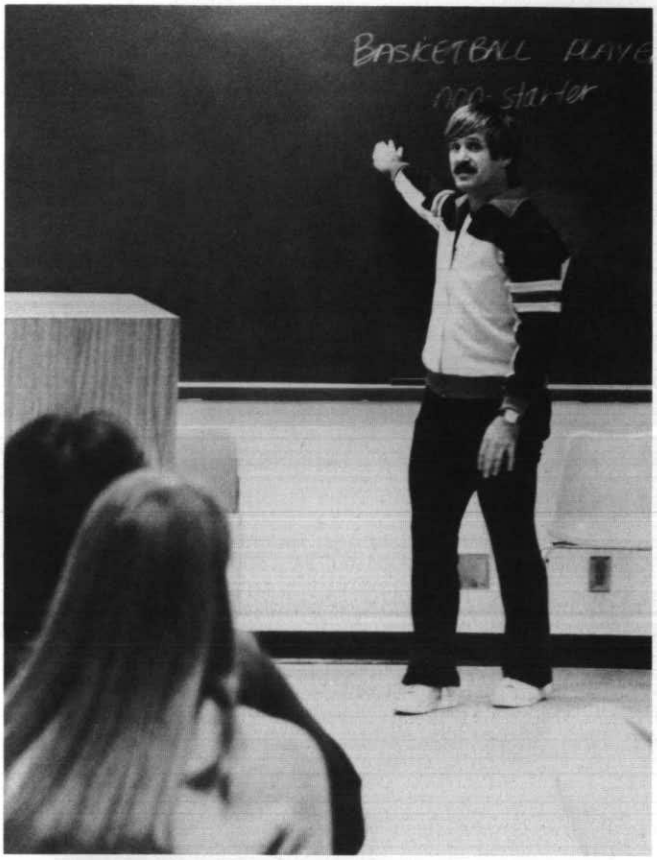
Ed 450 Gifted Education: Introduction **3 credits**
An introduction to gifted education including definition of areas of giftedness, identification, curriculum modes, program organization, parent involvement, attitudes concerning giftedness, evaluation of student performance.

Ed 451 Gifted Education: Workshop I **3 credits**
Current issues in gifted education including, identification procedures, right brain/left brain research, evaluation of the gifted student and a sharing forum on giftedness. Prerequisite: Ed 450.

Ed 452 Gifted Education: Workshop II **3 credits**
Curriculum for the gifted including differentiating the curriculum, gifted student and the arts, counseling the gifted student and a sharing forum on giftedness. Prerequisite: Ed 450.

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

Ed 496 Independent Study **1-5 credits**
Ed 497 Independent Study **1-5 credits**
Ed 498 Independent Study **1-5 credits**



Physical Education and Recreation

Lawrence E. Vance, Ph.D., Chairperson

Objectives

The Physical Education and Recreation department has as its prime objectives the physical and neuromuscular skill development and the recreational welfare of all students. The department fulfills two major functions at Seattle University. These are:

To prepare young men and women to assume professional careers in the field of physical education.

To provide a broad range of instructional and recreational activities designed to meet the physical needs of college men and women.

Degrees Offered

Bachelor of Arts in Education
Master of Education — See Graduate Bulletin
Master of Arts in Education — See Graduate Bulletin

General Degree Requirements

Students in the fields of physical education and recreation must satisfy University core curriculum requirements as given on page 18 of this bulletin and those of the School of Education.

All students planning to receive a teaching certificate must be accepted by the School of Education but such acceptance does not imply that the student will be permitted to pursue this teaching field. Students may indicate their interest in this area at the time of application for admission to the School of Education. During the succeeding months their aptitude and promise for the field of physical education will be evaluated.

Counseling, designed to assist the student to develop in ways requisite for successful teaching and leadership in the field, will be offered. Candidates must demonstrate superior physical skills, intellectual competency, and desirable personality and character traits before they will be accepted.

Candidates for teaching certificates will complete the required courses in teacher education. Upon graduation, certified teachers will have, in addition to the general and professional education requirements, a total major area of 55 credits or for the minor, 25 credits in physical education course areas.

Departmental Requirements

Bachelor of Arts in Education (Physical Education and Recreation) — 55 credits in physical education and recreation courses which must include: PE 200, 205, 215, 220, 230, 350, 460; 15 credits in selected major activities and 12 credits of approved area electives.

Undergraduate Teaching Minor (Physical Education and Recreation) — 25 credits which must include PE 220, 230, 350, 460 and 7 credits in approved activities.

Minor in Athletic Coaching — 27 credits which must include PE 205 and PE 215, PE 220, PE 320, 5 credits of approved Major Activities and 8 credits selected from coaching theory classes which must include PE 409. This sequence is recommended for teachers of any subject matter with an interest in assuming coaching responsibilities in elementary or secondary schools.

Master's Degree in Educational Administration — Emphasis in the administration of physical education and recreational organizations. — See Graduate Bulletin.

Bachelor of Arts in Education

Freshman year

English 110 and core option	10 credits
History core option	10 credits
Major, minor or electives	21 credits
Mathematics/Science core option	5 credits
Social Science core option	5 credits

Sophomore year

Education	10 credits
Major, minor or electives	20 credits
Mathematics/Science core option	5 credits
Philosophy 110, 220	10 credits

Junior year

Education	15 credits
Major, minor or electives	29 credits
Philosophy core option	5 credits

Senior year

Education 445	15 credits
Major, minor or electives	20 credits
Theology core options	10 credits
Total	190 credits

Physical Education and Recreation Courses

Basic instructional courses in activities indicated are designed to meet the physical and recreational needs of college students. All 100-level physical education courses are graded CR/NC, and also may be repeated to a maximum of 2 credits.

PE 120	**Badminton**	**1 credit**
PE 121	**Bowling**	**1 credit**
PE 122	**Golf**	**1 credit**
PE 123	**Gymnastics**	**1 credit**
PE 124	**Swimming**	**1 credit**
PE 125	**Tennis**	**1 credit**
PE 126	**Volleyball**	**1 credit**
PE 127	**Racquet Ball**	**1 credit**
PE 129	**Skiing**	**1 credit**
PE 130	**Paddle Sports**	**1 credit**
PE 131	**Archery**	**1 credit**
PE 132	**Handball—Squash**	**1 credit**
PE 135	**Fencing**	**1 credit**
PE 138	**Conditioning**	**1 credit**
PE 139	**Basketball**	**1 credit**
PE 142	**Developmental Physical Education**	**1 credit**
PE 143	Modern Dance	1 credit
PE 146	Scuba	1 credit
PE 147	Folk-Square Dance	1 credit
PE 148	**Self-Defense—Men and Women**	**1 credit**
PE 149	**Synchronized Swimming**	**1 credit**
PE 150	Horseback Riding	1 credit
PE 151	Back Packing	1 credit
PE 152	**Golf-Intermediate and Advanced**	**1 credit**
PE 153	**Gymnastics—Intermediate and Advanced**	**1 credit**
PE 154	**Swimming—Intermediate and Advanced**	**1 credit**
PE 155	**Swimnastics**	**1 credit**
PE 158	**Aerobic Dance**	**1 credit**

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 205 **Human Anatomy** **3 credits**
Anatomical foundations of physical education and sports' activities including skeletal, muscular and circulo-respiratory structures and systems.

PE 215 **Kinesiology** **3 credits**
The study of human movement with emphasis on the analysis of physical education and sports skills.

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 **Standard First Aid and Personal Safety** **2 credits**
Skills, knowledge, teaching methods. American Red Cross standards and certification. (winter)

Major Activities: Concentrated study of skills, techniques, and teaching methodologies pertinent to elementary and secondary physical education activities.

PE 250 **Major Activities I** **5 credits**
Badminton, Volleyball, Golf and Tennis

PE 251 **Major Activities II** **5 credits**
Movement Exploration, Gymnastics

PE 252 **Major Activities III** **5 credits**
Track, Soccer, Football and Speedball

PE 253 **Major Activities IV** **5 credits**
Wrestling and Weight Training, Baseball, Basketball

PE 254 **Major Activities V** **5 credits**
Folk-Square Dancing, Bowling and Archery

PE 255 **Major Activities VI** **5 credits**
Swimming, Life Saving, WSI

PE 256 **Major Activities VII** **5 credits**
Basketball - Women, Track and Field

PE 257 **Major Activities VIII** **5 credits**
Recreational Games

PE 258 **Major Activities IX** **5 credits**
Field Sports - Women

PE 291 **Special Topics** **1-5 credits**
PE 292 **Special Topics** **1-5 credits**
PE 293 **Special Topics** **1-5 credits**

PE 320 **Care and Prevention of Athletic Injuries** **4 credits**
Common athletic injuries and problems with emphasis on prevention. Includes pre and post injury care, such as taping and conditioning. (spring)

PE 330 **Test and Measurements in Physical Education** **3 credits**
Utilization of available testing procedures in physical education; evaluation of student achievement in terms of objectives. Includes statistical analysis of data. (winter)

PE 350 **Principles and Practices in Physical Education** **5 credits**
Concentrated analysis and study of the foundational principles of physical education. Application of these principles to problems in curriculum, methodology, administration and evaluation. (fall)

PE 352 **Orientation to Physical Education and Recreation — 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 Physical Education and Recreation — Secondary** **3 credits**
Objectives, content services and relationship to the total school program. Required of secondary education majors. (fall, winter, spring)

PE 380 Camp Counseling and Administration 5 credits
The educational significance and social impact of camping, organization and practical application of activities, and problems of administration and leadership.

PE 409 Psychology of Coaching 5 credits
Principles and practices applicable to the coaching of sports on any level of learning. Empirical theories resulting from observations of coaches in the handling of youth who are qualifying for school teams. (fall, summer)

PE 410 Perceptual Motor Development 3 credits
Principles of perceptual motor development and their application in the education of the exceptional child. (spring)

PE 420 Elementary Physical Education Workshop 5 credits
Improving the classroom teacher's background in physical education through basic movement skills and rhythmic activities. (summer)

PE 460 Organization and Administration of Physical Education 5 credits
Summary professional course in physical education; includes service, intramural and inter-scholastic programs; stresses curriculum, scheduling, facilities. Prerequisites: Upper division standing and departmental approval. (fall)

PE 465 Program Development in Recreation 3 credits
Organization and administration of recreation programs to include the practical aspects of: staffing, budgeting, funding, activities and public relations.

Coaching Courses: Concentrated study of the philosophy, practice, organization, theory and techniques of coaching interscholastic athletics.

PE 470	**Football Coaching**	**2 credits**
PE 471	**Basketball Coaching**	**2 credits**
PE 472	**Baseball Coaching**	**2 credits**
PE 473	**Track and Field Coaching**	**2 credits**
PE 474	**Gymnastics Coaching**	**2 credits**

PE 480 Current Issues in Physical Education 3 credits
Trends and factors influencing physical education and other movement-oriented programs; implications for meeting student and community needs in implementing relevant programs in schools and colleges.

PE 482 Historical Foundations of Physical Education 3 credits
Traces the historical development of physical education and athletics from the early societies to modern culture. Emphasis on current applications.

PE 484 The Drug Scene 3 credits
A survey of the misuse and abuse of licit and illicit drugs. Scientific information for concerned school personnel presented by professional people working with drug problems and users.

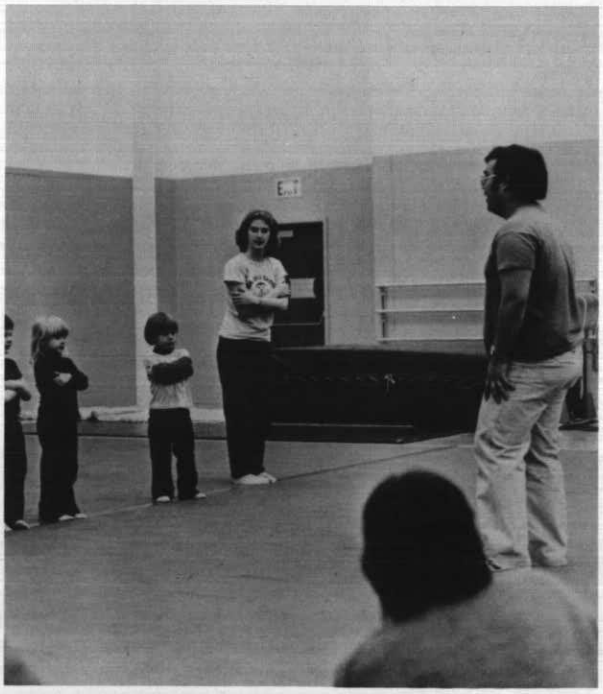
PE 485 Philosophy of Recreation 3 credits
Social impact of recreation: city-county, institution, industry, agency; special groups—handicapped, geriatrics; issues.

PE 486 Women in Sport 3 credits
A historical, sociological and biophysical approach to women in sport with emphasis on concepts, impacts and implications related to American and World culture, past, present, and future.

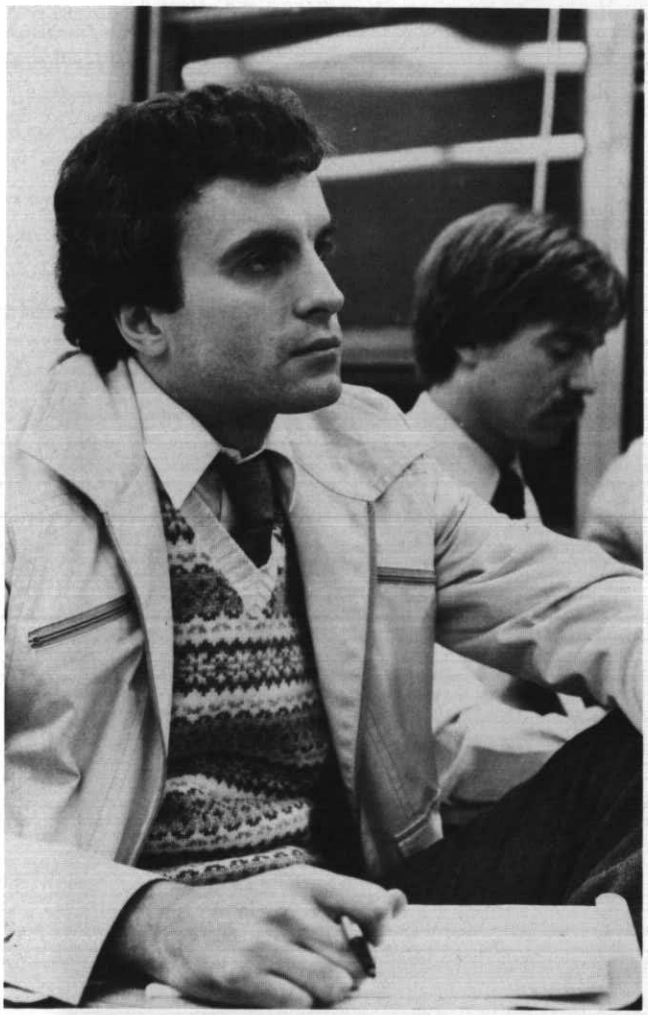
PE 488 Seminar: Sports and American Culture 3 credits
Reviews development and purposes of intercollegiate, interscholastic and professional sports. Focuses on issues, problems, opportunities and challenges, particularly for minorities.

PE 491 Special Topics 1-5 credits
(fall, winter, spring, summer)

PE 498 Independent Study 1-5 credits



Institute of Public Service



Institute of Public Service

Esther Ray Mills, Ph.D., Acting Director

Public Administration

Objectives

The Bachelor of Public Administration degree prepares individuals for careers in public management. The program emphasizes the development and implementation of public policy as well. The BPA curriculum is interdisciplinary and draws upon the knowledge base of diverse disciplines, including political science, economics, philosophy, business and mathematics. Through a field work internship, the relationship between theory and practice is encouraged and demonstrated.

Human Resources is a significant component of the BPA curriculum. It is concerned with the effective development and utilization of individuals in organizations. It investigates the interaction between organizational needs for productivity and individual needs for self-fulfillment and employment. The growing complexity of work and the environment in which it is performed require high levels of human resource skill and knowledge on the part of public managers, as well as of managers in the private profit and non-profit sectors.

Organization

The Institute of Public Service is an interdisciplinary center offering both undergraduate and graduate studies. Academic programs are oriented to the needs of working professionals as well as full-time students. Most courses are scheduled in the late afternoon, in the evening, and on the weekends.

The Institute's approach to education includes substantial opportunities for applying new knowledge and skills through case study analysis, practica and internships. In addition, the Institute is involved in activities to cultivate professional development in the fields of public administration and human resources, including conferences, seminars, research and technical assistance.

Degrees Offered

Bachelor of Public Administration
Certificate in Human Resources
Master of Public Administration — See Graduate Bulletin

General Program Requirements

Degree students must satisfy the core curriculum requirements for entering or transferring students as explained on page 18 of this bulletin.

Degree Requirements

The 65 credit major consists of two components. 40 credits are earned in core requirements, and 25 credits are earned in emphasis courses.

1. BPA Core Requirements — 40 credits

Pls 100	American National Government
Pls 210	Introduction to Local and State Politics
Pls 490	Research Methods and Design
PUB 280	Introduction to Public Administration
PUB 340	Issues in Human Resources
PUB 380	Management in Public Organizations
PUB 410	Administrative Process and Advocacy
PUB 416	Policy Analysis and Public Planning

2. Emphasis Courses — 25 credits

Pls 335	Welfare States and Planned Societies
Pls 358	Politics of Scarcity
Pls 310	Urban Politics and Public Policy
Ec 378	Urban Economics
Ec 471	Government Finance*
Ec 476	Labor Economics*
Pl 312	Contemporary Social Ethics*
Bus 383	Personnel I*
Bus 384	Personnel II*
Psy 201	Statistics I, or
Sc 201	Social Statistics
ECS 113	Fundamentals of Basic Programming
ECS 114	Fundamentals of FORTRAN Programming
PUB 341	Employment Policy
PUB 349	Collective Bargaining
PUB 372	Fiscal Management
PUB 431	Independent Sector Management
PUB 444	Training and Development
PUB 452	Human Services Planning
PUB 494	Practica
PUB 495	Internship
PUB 497	Independent Study

Undergraduate Public Administration Minor: 30 credits comprised of six of the following eight core courses: Pls 100, Pls 210, Pls 490, PUB 280, PUB 340, PUB 380, PUB 410 and PUB 416.

*Prerequisites required as specified by offering department.

Bachelor of Public Administration

Freshman year

PIs 100 American National Government	5 credits
English 110 and core option	10 credits
History core options	10 credits
Mathematics/Science core options	10 credits
Electives	10 credits

Sophomore year

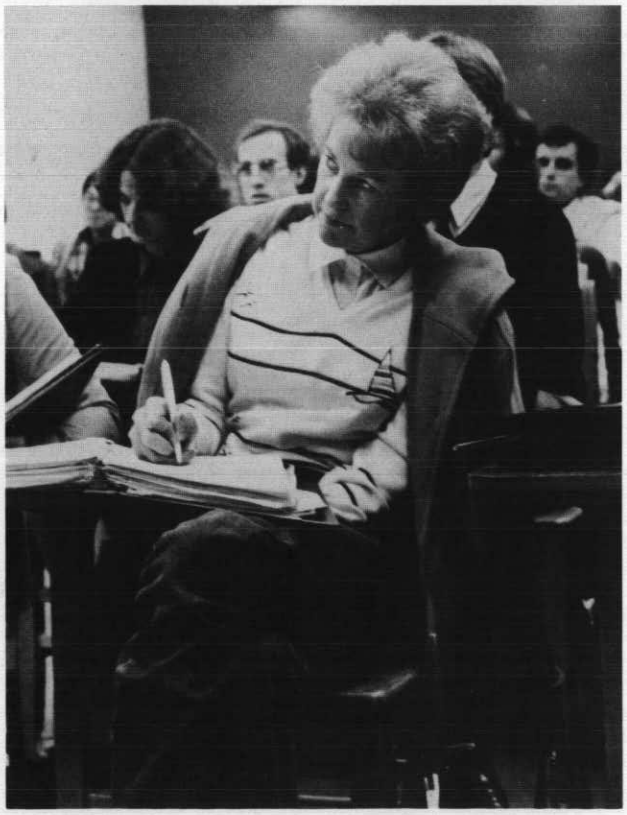
PIs 210 Introduction to Local and State Politics	5 credits
PUB 280 Introduction to Public Administration	5 credits
Philosophy core option	5 credits
Social Science core options	10 credits
Public Administration emphasis courses	5 credits
Electives	15 credits

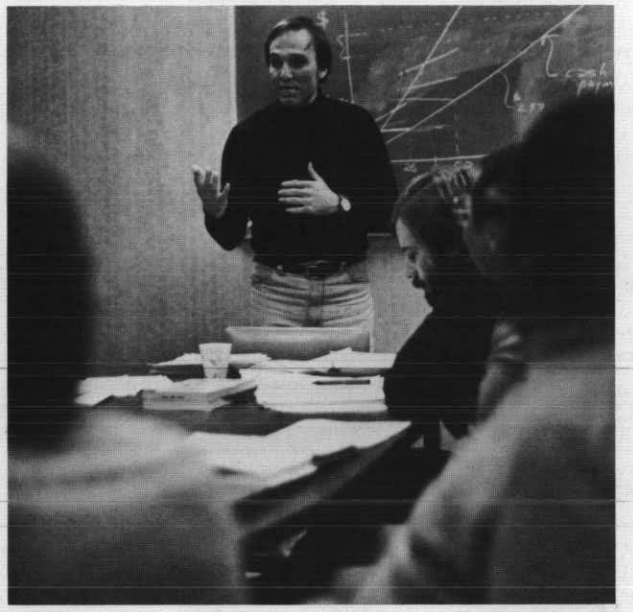
Junior year

PUB 340 Issues in Human Resources	5 credits
PUB 380 Management in Public Organizations	5 credits
PIs 490 Research Methods and Design	5 credits
Philosophy core options	10 credits
Theology core option	5 credits
Public Administration emphasis courses	10 credits
Electives	5 credits

Senior year

PUB 410 Administrative Process and Advocacy	5 credits
PUB 416 Policy Analysis and Public Planning	5 credits
Theology core option	5 credits
Public Administration emphasis courses	10 credits
Electives	20 credits
Total	180 credits





Certificate in Human Resources

The Institute awards a 25-credit certificate for successful completion of PUB 340 (5 credits) and PUB 494 (5 credits), plus 15 additional credits — 5 credits from the organization component of courses, and 10 credits in emphasis courses. A certificate program must be completed within three years.

Typical Program

1. Required courses — 10 credits

PUB 340 Issues in Human Resources	5 credits
PUB 494 Practica	5 credits

2. Organization Component (select one)

Bus 380 Organization Behavior	5 credits
PUB 380 Management in Public Organizations	5 credits
PUB 431 Independent Sector Management	5 credits

3. Emphasis courses (select two)

PUB 341 Employment Policy	5 credits
PUB 349 Collective Bargaining	5 credits
PUB 444 Training and Development	5 credits
PUB 452 Human Services and Planning	5 credits
Ec 476 Labor Economics*	5 credits
Bus 383 Personnel I*	5 credits
Bus 384 Personnel II*	5 credits
Total	25 credits

*Prerequisites required as specified by offering department.

Institute of Public Service Courses

PUB 280 Introduction to Public Administration **5 credits**
The scope and origins of public administration. The role of administration in policy formation; intergovernmental and implementation contexts. Implications of administrative practice for democratic theory; problems of ethics and political control.

PUB 291 Special Topics **1-5 credits**
PUB 292 Special Topics **1-5 credits**
PUB 293 Special Topics **1-5 credits**

PUB 340 Issues in Human Resources **5 credits**
Examination of the relationship between the worker and the working environment, including factors affecting human development and employability. Investigation of the fields of personnel, training and development, employment and training, and labor and industrial relations.

PUB 341 Employment Policy **5 credits**
Analysis of contemporary labor market issues and impending changes in the institutions of work, including productivity and growth, full employment, robotics, retraining, work alienation, and leisure and retirement.

PUB 349 Collective Bargaining **5 credits**
Basic statutory requirements, dynamics and strategies of labor-management relations. Simulation of a realistic collective bargaining situation.

PUB 372 Fiscal Management **5 credits**
The role of financial management in the public sector, including statement interpretation, financial administration, audit, sources of credit, and sources and structure of long-term capital.

PUB 380 Management in Public Organizations **5 credits**
Public sector/private sector distinctions. Influence of scientific management, human relations, and bureaucracy upon managerial behavior. The manager's role in decision-making, conflict regulation, and employee relations.

PUB 410 Administrative Process and Advocacy **5 credits**
Administrative law, due process, interpretation of statutes and regulations; advocacy. Emphasis on public sector issues.

PUB 416 Policy Analysis and Public Planning **5 credits**
Examination of alternative theories and methods of policy analysis, including normative and quantitative models, and how the nature of the political and institutional environment affects choice of method.

PUB 431 Independent Sector Management **5 credits**
Managerial processes and administrative behavior in the private non-profit sector. Community based organizations, volunteer administration, roles of board and staff. Emphasis on historic contributions and present challenges.

PUB 444 Training and Development **5 credits**
Application of behavioral science concepts in human resource development, including adult learning theory and roles and competencies of the training and development professional. Instructional methods include lecture, group discussion, information interviewing, simulation and action research.

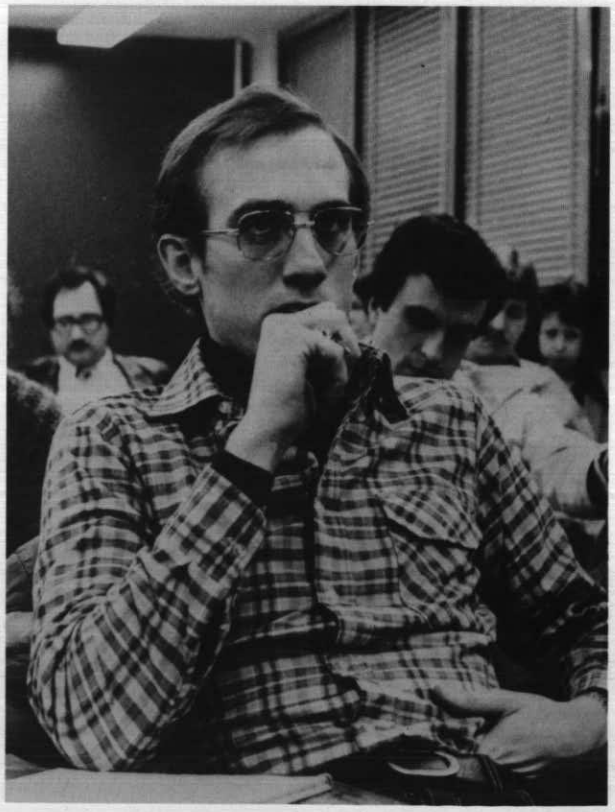
PUB 452 Human Services Planning **5 credits**
User- or client-oriented approach to planning by addressing human needs from a holistic perspective. Needs assessment, client analysis, alternative program design and client involvement.

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

PUB 494 Practica **1-5 credits**
Short courses to integrate theory and practice in human resources, public and non-profit management. Topics vary with contemporary student interest. Courses are offered on Friday evenings and Saturdays.

PUB 495 Internship **2-5 credits**
Supervised work with seminars on job expectations, organizational setting, client relationships and performance.

PUB 496 Independent Study **1-5 credits**
PUB 497 Independent Study **1-5 credits**
PUB 498 Independent Study **1-5 credits**



Matteo Ricci College-II

Matteo Ricci College — II

Edwin H. Weihe, Ph.D., Dean
Thomas J. Trebon, Ph.D., Assistant Dean

Matteo Ricci College is a coordinated and integrated six year program which begins with the traditional freshman year of secondary school and concludes with the granting of a baccalaureate degree by Seattle University. Form One, the first three years of the program, operates out of the Interlaken Campus of Seattle Preparatory School. Form Two, the subsequent three years, is an academic division of Seattle University on the Seattle University campus.

Objectives

Matteo Ricci College seeks to develop students who shape their personal and social futures through responsible choices. The objectives of the Form II program are to continue the harmonious development of the student's cognitive, affective, and valuative potential; bring the student to a reflective consciousness of "how" he or she learns; and foster an inquiring, caring community of learners and teachers. Focusing on the student's intellectual, aesthetic, emotional, ethical, and religious life, the curriculum is designed to sharpen and test generalizable learning skills; exercise and develop verbal and non-verbal communication skills; develop specific skills, both in a broad range of traditional disciplines and in an area of specialization; expose a variety of values clarifying themes and problems for interdisciplinary investigation; and encourage prescriptive self-assessment.

While the Matteo Ricci College program does not attempt to advance the student in only six years to the level of vocation-oriented specialization sometimes acquired in eight, it does provide a foundation for, and initiation into, professional training, effectively preparing the student to pursue either a second baccalaureate or graduate degree.

Admission Requirements

Only students who have successfully completed the academic program of Matteo Ricci College-I will be admitted to the academic program of Matteo Ricci College-II at Seattle University.

Degree Offered

Bachelor of Arts

General Program Requirements

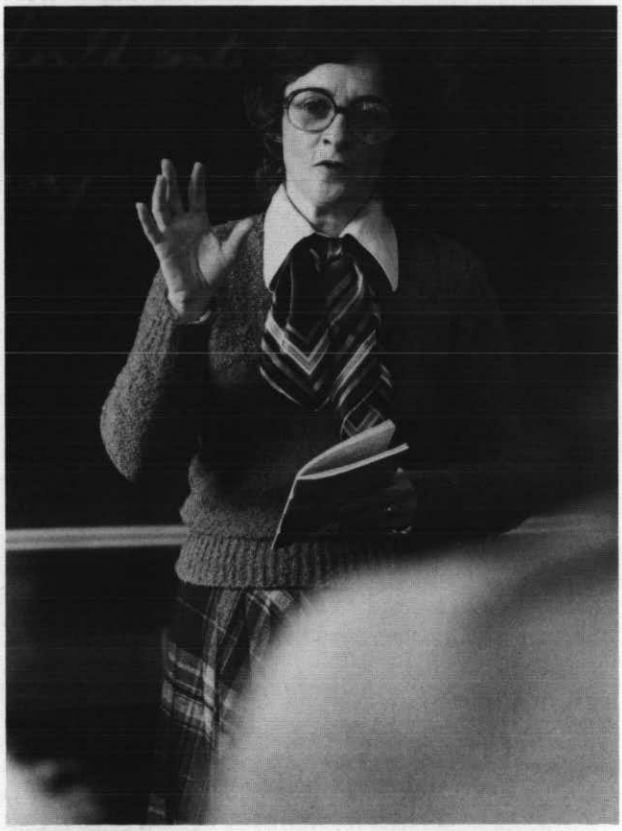
The MRC-II Advisory Panel members serve as the principal advisers to all MRC-II students on academic and academically-related matters. Consequently, an MRC-II student may not register for any Seattle University course, either in the summer session or during the regular academic year, without first consulting and receiving the written permission of an Advisory Panel member.

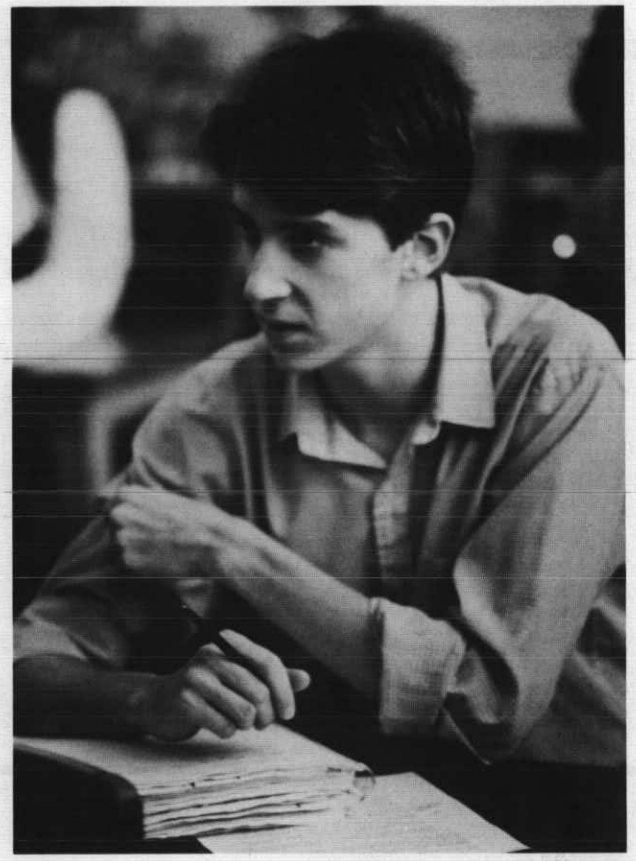
An MRC-II student is expected to maintain a cumulative academic grade point average of 2.5 or above, and to make normal progress toward completing the required courses in sequence. Students failing to meet these expectations will be placed on probation for two quarters, and thereafter are subject to dismissal from the MRC program.

Degree Requirements

135 credits which must include: 60 credits in MRC/HUManities courses; 4-5 credits in Fine Arts; 5 credits in Science and Technology; a maximum of 45 credits in either a General Studies/Humanities area or a single discipline focused in the College of Arts and Sciences, **or** a maximum of 55 credits in a General Studies/Science area, in Pre-Professional Studies, or in a single discipline focused in one of the University's professional schools; and the remaining credits in courses approved by the student's MRC-II adviser.

MRC-II students who have successfully completed a Pre-Professional course of study may apply these 55 credits toward a second baccalaureate degree, subject to the approval of the appropriate professional school, and the University regulation of 45 minimum additional credits for a second baccalaureate degree.





Typical Schedule

Year/4

HUM 100, 200 series courses	30 credits
Fine Arts course	4-5 credits
Major and Approved Courses	10-11 credits

Year/5

HUM 280 and 300 series	15 credits
Science and Technology course	5 credits
Major and Approved Courses	25 credits

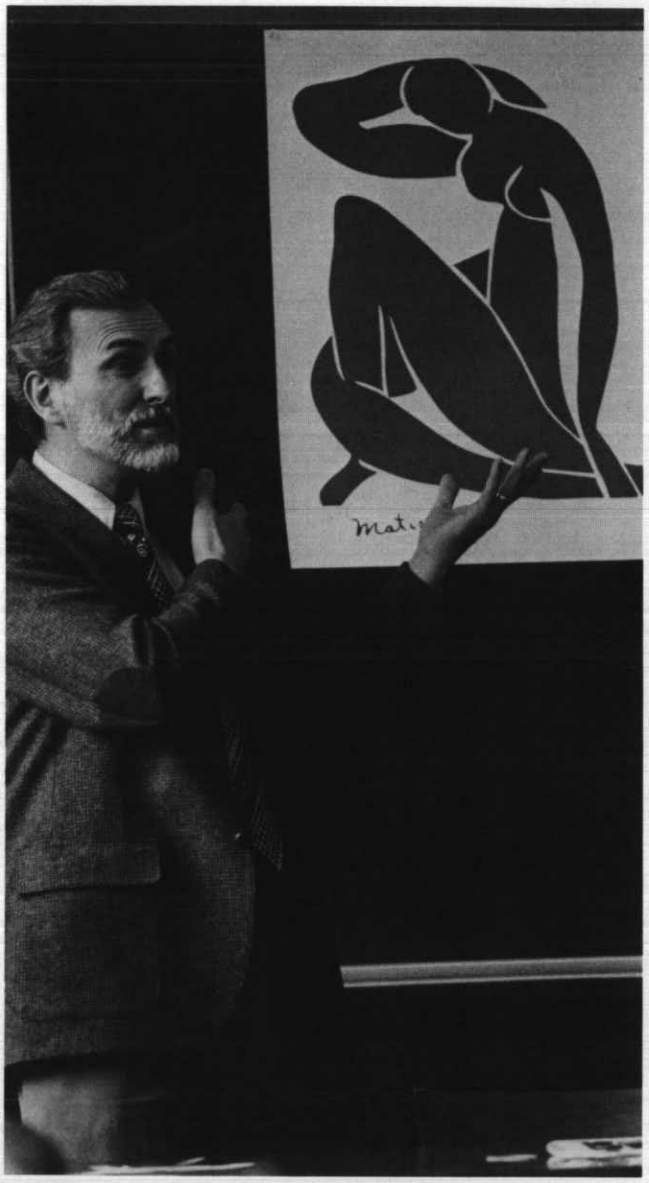
Year/6

HUM 400 series	15 credits
Major and Approved Courses	30 credits
Total	135 credits

Matteo Ricci College/HUM Courses

HUM 150 Composition: Language and Thought 5 credits
Study and practice in informal logic and argumentation, with emphasis upon the composition of clear, persuasive writing.

HUM 151 Composition: Language and the Arts 5 credits
Interdisciplinary study of artistic composition in a variety of art forms, with emphasis upon, and practice in, literary composition.



HUM 170 Social Ecology **5 credits**
Experiential inquiry into the political, social, and economic environment; emphasis on interrelated aspects of a particular social problem and on gathering and interpreting data.

HUM 180 Western Cultural Traditions I **5 credits**
HUM 181 Western Cultural Traditions II **5 credits**
A two-quarter, interdisciplinary study of the evolution of major systems of meaning and value in Western Civilization; emphasis on understanding and evaluating criteria for judging claims to truth and morality as basis for action.

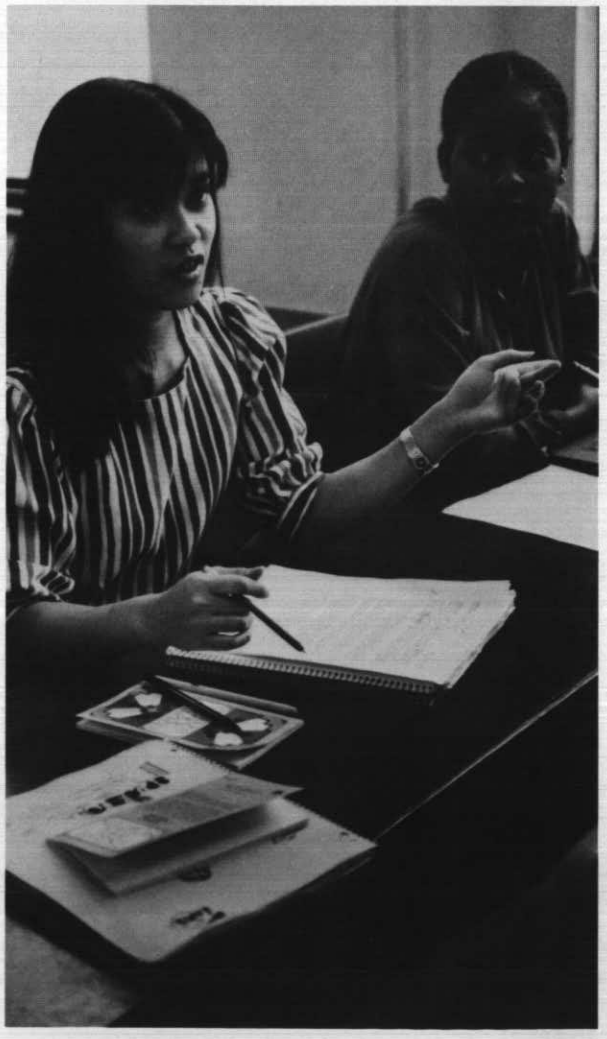
HUM 260 Modes of Inquiry: Humanistic **5 credits**
Study and practice in the data gathering and interpretive methods in the social sciences; comparison of these methods with those in the natural sciences and the arts.

HUM 280 Cultural Interface **5 credits**
Interdisciplinary study of the elements of human behavior which define culture, and the processes of interaction between European culture and cultures of Asia and Africa.

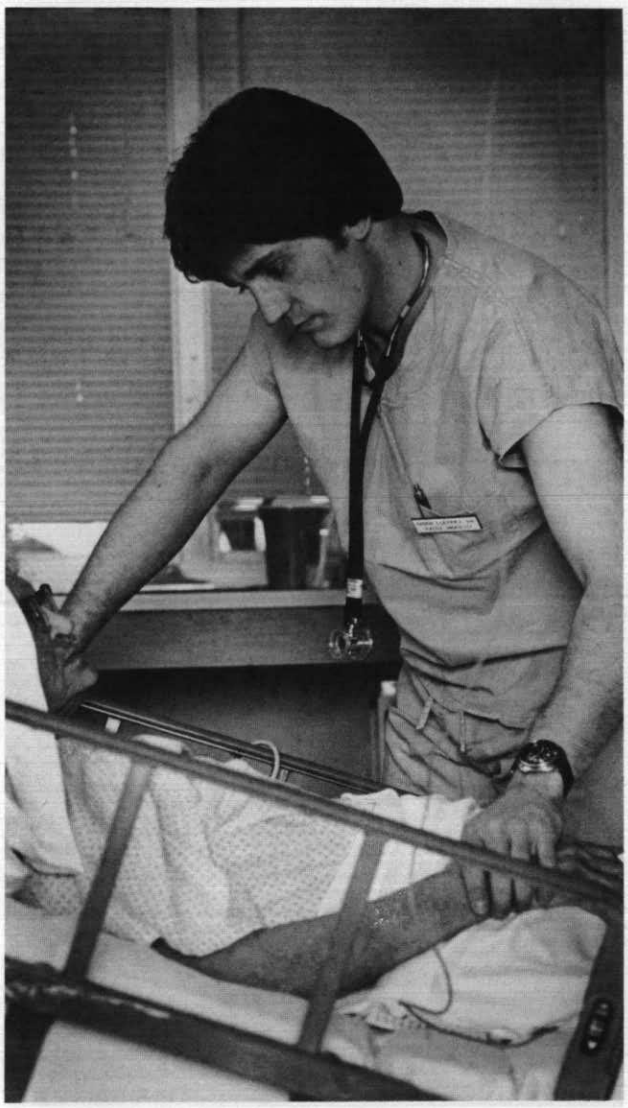
HUM 291 Special Topics **1-5 credits**
HUM 292 Special Topics **1-5 credits**
HUM 293 Special Topics **1-5 credits**

HUM 301 Perspectives on the Human Person I **5 credits**
HUM 302 Perspectives on the Human Person II **5 credits**
Study of the relationships between individuals, and between individuals, society, the world, and God through the history of philosophical and theological questions and their answers from Plato to the present day.

HUM 400 MRC Seminar **5 credits**
HUM 401 MRC Seminar **5 credits**
HUM 402 MRC Seminar **5 credits**
Required seminars, which include a research and writing project; focus on the development of grounds for a human ethic, interdisciplinary problems and transdisciplinary modes of thinking, on "valuing," and on integrating the academic and the "real world."



School of Nursing



School of Nursing

Patricia A. Ferris, Ph.D., Dean

Objectives

The aim of the School of Nursing is to provide educational preparation for professional practice that reflects an appreciation of the heritage and responsibilities of nursing. The philosophy of the University is expressed through educational opportunities that are broadly based in the humanities, social and biological sciences and in nursing. The school seeks to prepare graduates capable of applying their knowledge and skills in the promotion, maintenance and restoration of health and who are able to assume responsible roles in a variety of health care settings.

Accreditation

National League for Nursing
Washington State Board for Nursing

Organization

The School of Nursing is organized within the University structure under the direction of a dean, offering an undergraduate program in nursing.

Admission Requirements

All entering freshmen, transfer students from accredited institutions of higher learning and registered nurses who wish to complete requirements for the Bachelor of Science degree in Nursing must meet University entrance requirements described in the admissions section of this bulletin. Chemistry is the required laboratory science for entering freshmen. Additional requirements for registered nurses are:

- Graduation from an approved school of professional nursing.
- Current nursing licensure in the State of Washington
- Report of complete physical examination within six months before entrance
- Recommendation from the Director of the Nursing Program and from previous employer

Degree Offered

Bachelor of Science in Nursing

Curriculum

The baccalaureate degree program is designed for high school graduates, transfer students and registered nurses who wish to complete requirements for the degree. The program is planned to provide the student with a foundation in the liberal arts and nursing, to stimulate students to assume responsibility for self-directed learning and professional development, and to provide a basis for post baccalaureate education.

The professional portion of the curriculum includes study of man with a variety of health problems requiring different modalities of care with a focus on the individual, the family and the community.

Clinical experience is provided through cooperating teaching units which include Cherry Heights Villa Care Center, Children's Orthopedic Hospital and Medical Center; Group Health Cooperative Hospital and Clinics, Harborview Medical Center, the Mason Clinic, Northwest Hospital, Overlake Memorial Hospital, Providence Medical Center, Seattle King County Health Department, Seattle King County Visiting Nurse Service, Seattle Public Health Hospital, Swedish Hospital Medical Center, Veterans Administration Medical Center, Virginia Mason Hospital and other selected health agencies.

General Program Requirements

Students in the School of Nursing must satisfy core curriculum requirements of the University given on page 18 of this bulletin. For additional required sequences see the program of study which follows.

A cumulative academic grade point average of 2.50 or above from high school or another college or university is the minimum requirement for admission into the School of Nursing.

A student in the School of Nursing must have achieved a cumulative grade point average of 2.50 or above by the end of the sophomore year, and a grade of C or above in the Nursing, chemistry and biology courses, for approval to proceed into the upper division nursing courses. The academic and clinical performances of each nursing student are evaluated at the end of each year to determine progression in the program. National League for Nursing Achievement Examinations must be taken after completing core nursing courses. Specific requirements for progression may be obtained from a faculty adviser.

Students are responsible for the expenses of the annual physical examination and health assessment, uniforms, and transportation costs to, from and while in cooperating teaching units. A current driver's license and car covered by insurance as prescribed by state law are recommended for all clinical courses. Professional liability insurance is recommended for clinical nursing courses. It is strongly recommended that students have adequate health insurance coverage.

Bachelor of Science in Nursing

Freshman year

Chemistry 101, 102 ..... 10 credits
English 110 and core option ..... 10 credits
History core option ..... 10 credits
Philosophy 110 ..... 5 credits
Psychology 100 ..... 5 credits
Elective ..... 5 credits

Sophomore year

Biology 200, 210, 220 ..... 15 credits
Nursing 205, 206, 300 ..... 15 credits
Philosophy 220 ..... 5 credits
Psychology or Education 322 ..... 5 credits
Theology core option ..... 5 credits

Junior year

Nursing 312, 314, 316, 330, 332, 335, 337, 340, 341 ..... 45 credits

Senior year

Nursing 408, 409, 432, 433 ..... 25 credits
Philosophy 255 or 250 ..... 5 credits
Theology core option ..... 5 credits
Electives ..... 10 credits

Total ..... 180 credits

Transfer Students Who Are Registered Nurses

Registered nurses not holding bachelors' degrees in nursing are encouraged to apply for admission as transfer students. In order to earn a B.S. degree in Nursing, registered nurses must complete a minimum of 180 quarter credits of course work. Those RN's transferring from associate degree programs in Washington State community colleges which have signed transfer agreements with Seattle University may transfer a maximum of 90 credits, as determined by the University's Registrar. Registered nurses transferring from other programs will have all previous training evaluated on a course by course basis by the University's Registrar.

Registered nurses must complete the equivalent of the Seattle University CORE, which includes:

History ..... 10 credits
Literature ..... 5 credits
Philosophy ..... 15 credits
Religious Studies ..... 5 credits

In addition, all registered nurses must earn a minimum of 45 credits in upper division nursing classes, including the following courses:

Pathophysiology ..... 5 credits
Health Appraisal ..... 5 credits
Research and Trends in Nursing ..... 5 credits
The Childbearing Family: Current Perspectives ..... 5 credits
Psychiatric/Mental Health Nursing ..... 10 credits
Community/Advanced Nursing ..... 15 credits

Nursing Courses

N 205 Basic Nursing I — **5 credits**
Introduction to scope of practice and nursing roles; focus on nursing process, people's needs as consumer of health services, concepts and skills related to comfort and safety; simulated laboratory practice. Concurrent with BI 200 fall or BI 210 winter.

N 206 Basic Nursing II — **5 credits**
Theory and practice focused on concepts of anxiety, communications, immobility and nutrition, principles and skills related to pre- and post operative care and oxygenation. Supervised practice in direct patient care. Prerequisites: BI 200, 210 and N 205. Concurrent with BI 220 and N 300.

N 300 Pathophysiology — **5 credits**
Study of the functional changes of the body which accompany illness and form the basis for nursing intervention. Prerequisites: Ch 101, Ch 102, BI 200, BI 210, N 205. Concurrent with BI 220, N 206 or RN student.

N 312 Health Appraisal — **5 credits**
Introduction to basic techniques and skills necessary to assess and describe a person's health state. Common behavioral, developmental and physiological parameters are assessed to form basis for making sound judgments. Variations and modifications for differences in age groups and ethnicity are included. Prerequisites: BI 200, BI 210, or BI 270-271; N 205, N 206, N 300 and Ed 322 or Psy 322. Concurrent with either N 335, N 337, or N 341 or RN student.

N 314 Mental Health Concepts — **5 credits**
Concepts basic to assisting self and others to maintain wellness and cope with reactions to the stress of illness. Organized around behavioral science principles which promote the nursing skills necessary for developing the inherent capabilities of the student and the patient. Prerequisites: BI 200, BI 210 or BI 270, BI 271 and BI 220, N 205, N 206, N 300 and Ed 322 or Psy 322; concurrent with either N 335, N 337 or N 341.

N 316 Research and Trends in Nursing — **5 credits**
Legal, ethical and professional issues are studied in relation to concepts of power, authority, responsibility in present and emerging health care patterns. The research process is stressed. Prerequisites: BI 200, BI 210 or BI 270, BI 271 and BI 220; N 205, N 206, N 300 and Ed 332 or Psy 322; concurrent with either N 355, N 337 or N 341, or RN student.

N 330 **Medical-Surgical Nursing I** **4 credits**
Problems in various phases of illness; nursing process in assisting individuals to maintain-regain health or adapt to chronic illness; nursing care related to pulmonary, renal and gastro-intestinal problems and alterations in fluid and electrolyte and acid-base balance. Prerequisites: N 205, N 206, N 300; concurrent with N 312 or N 314 and N 335 or N 337.

N 332 **Medical-Surgical Nursing II** **4 credits**
Further development of the nursing process; nursing care needs related to neuro-sensory, endocrine, musculo-skeletal and cardiovascular problems. Prerequisites: N 205, N 206, N 300; concurrent with N 312 or N 316 and N 335 or N 337.

N 335 **Nursing Care of Children** **6 credits**
Experiences are arranged in a variety of settings selected to provide opportunities to apply concepts and principles from theory courses, N 330 and N 332. Prerequisites: N 205, N 206, N 300; concurrent with N 312, N 314 or N 316 and either N 330 or N 332.

N 337 **Nursing Care of Adults** **6 credits**
Experiences are arranged in a variety of settings, selected to provide opportunities to apply concepts and principles from theory courses, N 330 and N 332. Prerequisites: N 205, N 206, N 300; concurrent with N 312, N 314 or N 316 and either N 330 or N 332.

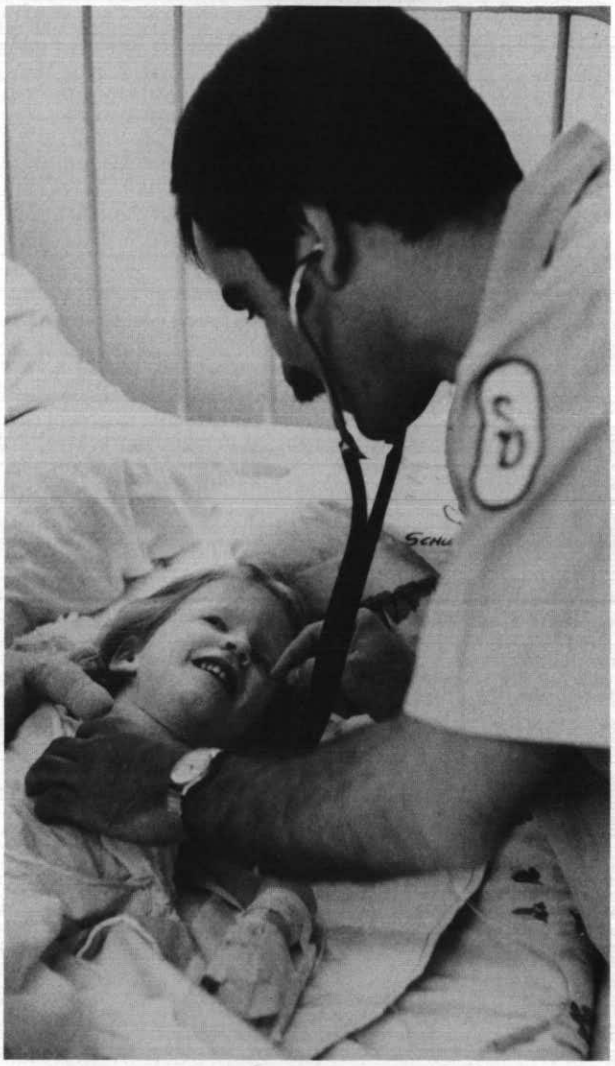
N 340 **Maternal-Child Nursing: Family and Community** **4 credits**
Assessment of family dynamics and parental roles; family system and its use of community resources; current concepts in women's health care. Prerequisites: N 205, N 206, N 300; concurrent with N 312, N 314 or N 316 and N 341.

N 341 **Maternal-Child Nursing Practice: Family and Community** **6 credits**
Clinical practice to promote application of concepts from N 340; supervised experience with childbearing families in a range of community settings. Prerequisites: N 205, N 206, N 300; concurrent with N 312, N 314 or N 316 and N 340.

N 345 **The Childbearing Family: Current Perspectives** **5 credits**
Combined theory and clinical practice individualized to broaden experiential base, focused on health supervision during reproductive cycle. Registered Nurse students only.

N 408 **Psychiatric-Mental Health Nursing** **4 credits**
Psychodynamics, psychopathology, and group interaction in psychiatric nursing care; use of behavioral science principles to promote mental health and provide care for individuals with emotional problems. Prerequisites: All N 300 courses or RN student; concurrent with N 409.

N 409 **Psychiatric-Mental Health Nursing Practice and Assertiveness Training** **6 credits**
Clinical practice to promote application of concepts from N 408 in a manner that facilitates growth and constructive problem solving in client, family and student. An assertiveness training component includes the theory and practice of assertive communication skills. Prerequisites: All N 300 courses or RN student; concurrent with N 408.



N 432 **Community/Advanced Nursing** **5 credits**
Interrelated health-illness problems examined in a framework of the decision making process; concepts of family and family systems are studied. Relies on concepts and principles from previous nursing courses. Prerequisites: All N 300 numbered courses or RN student; concurrent with N 433.

N 433 **Community/Advanced Nursing Practice** **10 credits**
Clinical practice to promote application of concepts, principles and processes from N 432; experiences in hospitals, clinics and other community agencies with individual clients, groups of clients/patients and families. Prerequisites: All N 300 courses or RN student; concurrent with N 432.

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

N 496 **Independent Study** **2-5 credits**
N 497 **Independent Study** **2-5 credits**
N 498 **Independent Study** **2-5 credits**

School of Science and Engineering

School of Science and Engineering

Terry J. van der Werff, D.Phil, Dean

Objectives

The programs of the School of Science and Engineering seek to combine a liberal education with preparation for a professional career or graduate school in one of the sciences, mathematics or engineering. More generalized programs are offered for those students who wish a strong scientific or engineering background as part of a liberal education.

Accreditation

Individual programs within the school are accredited by the following professional bodies:

American Chemical Society

Accreditation Board for Engineering and Technology

American Society of Clinical Pathologists

American Medical Record Association

Council on Allied Health Education and Accreditation

Organization

The School of Science and Engineering offers degrees in Biology, Chemistry, Clinical Chemistry, Cytotechnology, Diagnostic Ultrasound, General Science, Health Information, Mathematics, Medical Technology, Nuclear Medicine Technology, Physics, Radiation Therapy Technology, and in Civil, Electrical, Mechanical, Software and Transportation Engineering.

Students interested in other scientific, technical, and health-related careers, such as medicine or dentistry, may enroll for suitable pre-professional programs prior to transfer to the appropriate professional training center.

Admission Requirements

In addition to the requirements for admission to Seattle University, freshmen applicants for admission to the School of Science and Engineering (except for health information) must have completed at least three years of high school mathematics, preferably including trigonometry, and applicants for admission to engineering programs must have completed at least two years of laboratory science. Transfer applicants will be considered when their overall college GPA is 2.50 or better and when their cumulative GPA in all engineering, mathematics, or science courses must be graded C (2.00) or above. Transfer admission is on the basis of space available, with academic performance being the prime consideration. A history of withdrawals, incompletes, and repeated courses lessens the chances for admission.

Degrees Offered

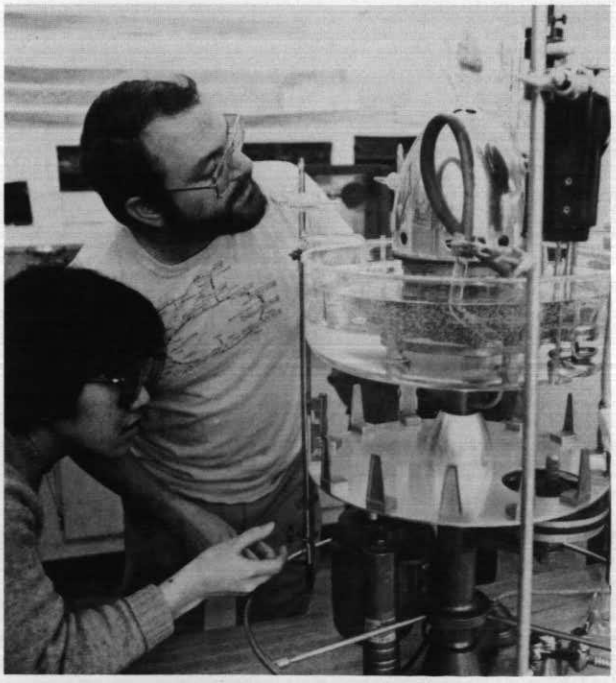
Bachelor of Arts with a major in Biology, Chemistry, Mathematics or Physics

Bachelor of Science with a major in Biology or Mathematics.

Bachelor of Science in Biology, Chemistry, Clinical Chemistry, Cytotechnology, Diagnostic Ultrasound, General Science, Health Information, Mathematics, Medical Technology, Nuclear Medicine Technology, Physics, and Radiation Therapy Technology.

General Program Requirements

Students seeking the Bachelor's degree in the School of Science and Engineering must complete 180 credits, with the exception of the three engineering degrees which require 184 credits and the radiation therapy technology degree which requires 182 credits, including the University core requirements shown on page 18 of this bulletin. The history and social science core requirements have been modified for several of the degree programs, as described in the individual departmental sections of this bulletin. Students also must complete the specific departmental requirements for their particular degree.



Allied Health Technology

Joan P. Baker, RDMS, MSR, Program Director

Degrees Offered

Bachelor of Science in Cytotechnology
Bachelor of Science in Diagnostic Ultrasound
Bachelor of Science in Medical Technology
Bachelor of Science in Nuclear Medicine Technology
Bachelor of Science in Radiation Therapy Technology

General Program Requirements

Students in any of the Allied Health Technology programs must satisfy the core curriculum requirements of the University as given on page 18 of this Bulletin for English, philosophy and theology and religious studies. Core requirements for history and social science are 15 credits for all Allied Health Technology programs.

Departmental Requirements

Bachelor of Science in Cytotechnology — 50 credits of biology including BI 165, 166, and Chemistry 101 and 102 or Ch 121, 122, 131 and 132; Mt 112; and 45 credits of AH 310, 311 and 312, which must be completed in an American Medical Association accredited cytotechnology school. AH 415 and HI 322, 425, 426 and 450 are recommended. Biology electives recommended are BI 200, 210 (or 270, 271), 220 (or 300), 310, 330, 350, 351, and 380.

Bachelor of Science in Diagnostic Ultrasound — 25 credits of biology, including BI 165 or 167, BI 200 and 210 (or BI 270 and 271), BI 305 (or HI 425, 426, 6 credits). 13 credits of Physics, including either Ph 106 or 201 and Ph 350, HI 322; Mt 112, 131; ECS 113 or 114, AH 370, 375, 455, 470, 471 and 472. A calendar year internship is necessary for entry into professional employment and certification. This internship is a part of the degree and follows after the academic course requirements are met.

Bachelor of Science in Medical Technology — 45 credits of biology, including 10 credits of BI 165, 166, 167; BI 200 and 210 (or BI 270 and 271), 300, 350, 351, 360, and 380. 47 credits in chemistry, including Ch 121, 122, 131, 132, 219, 470, 471, 472. Mt 131; ECS 113 or 114; 10 credits in physics; and AH 410, 415 and 420. Professional certification requires one year of internship in an approved laboratory training program after completion of the degree.

Bachelor of Science in Nuclear Medicine Technology — 48 credits in allied health, including AH 370, 440, 441, 442, 447, 448, 449, 450, 451, 452, 453, 456, 457, 458, 459; 35 credits in computer science physics and mathematics, including either Ph 107 or 202, Ph 375 (or Ch 461), Mt 112, Mt 131; ECS 113 or 114; 15 credits in biology, including either BI 200, 210 or 270, 271 and 305; HI 322, and 27 credits in chemistry, including Ch 242 and 252. HI 425 and 426 (6 credits) may be taken instead of BI 305. Admission to internship requires an interview with the Nuclear Medicine admissions committee for all students with less than 3.0 gpa. Interviews are held Spring quarter prior to a Fall internship. A minimum gpa of 2.5 must be achieved in the 44 credits of AH courses in the internship.

Bachelor of Science in Radiation Therapy Technology — BI 165, 200, 210 and 305 (or HI 425 and 426); Ch 101 and 102; Mt 112, 131; ECS 113 or 114; Ph 105, 106, 107 and 375; AH 361, 363, 365, 366, 367, 370 and 455. A calendar year of clinical internship is required for both the degree and the national certifying agency. This internship is based at Swedish Tumor Institute. Successful completion of the national certifying examination is required for the degree. The required internship courses, AH 460, 461, 462 and 463 are mandatory credit/noncredit. Unsuccessful completion of national certifying examinations requires registration at Seattle University and payment of a lab fee as outlined in this bulletin under "Costs". Tuition is also charged by Swedish Tumor Institute. Clinical internship requires three months of orientation in the summer between the sophomore and junior year at no tuition cost.

Bachelor of Science in Cytotechnology

Freshman Year

Biology 165, 166, 167	15 credits
English 110 and core option	10 credits
History/Social Science core options	10 credits
Mathematics 112	5 credits
Philosophy 110	5 credits

Sophomore year

Biology 200, 210 (or 270, 271) 220 (or 300), 380	20 credits
Chemistry 101, 102 (or 121, 122 and 131, 132)	10 credits
Philosophy 220	5 credits
Theology core options	10 credits

Junior year

Allied Health 415	3 credits
Biology 310, 330, 350, 351	15 credits
History/Social Science core option	5 credits
Health Information 322, 425, 426, 450	12 credits
Philosophy core option	5 credits
Elective	5 credits

Senior year

Allied Health 310, 311, 312	45 credits
Total	180 credits

Bachelor of Science in Diagnostic Ultrasound

Freshman year

English 110 and core option	10 credits
History/Social Science core option	5 credits
Mathematics 112, 131	10 credits
Biology 165, 200, 210 (or 270, 271), elective	15 credits
Computer Science 113 or 114	5 credits

Sophomore year

Biology 305 (or HI 425, 426)	5 credits
Philosophy 110, 220, core option	15 credits
Physics 105, 106	10 credits
Theology core option	5 credits
Health Information 323	3 credits
Allied Health 370	3 credits
Electives	3 credits

Junior year

Psychology 110	5 credits
History/Social Science core option	5 credits
Theology core option	5 credits

Allied Health 375, 455, 470, 471, 472 ..... 22 credits
Physics 350 ..... 3 credits
Biology elective ..... 5 credits

Senior year
Allied Health 483 (4 times), 484 (2 times) ..... 12 credits
Allied Health 473, 474 (3 times) ..... 34 credits

Total ..... 180 credits

Bachelor of Science in Medical Technology

Freshman year
Biology 160 series ..... 10 credits
Chemistry 121, 122, 131, 132 ..... 10 credits
English 110 and core option ..... 10 credits
Mathematics 112 ..... 5 credits
History/Social Science core option ..... 5 credits
Computer Science 113 or 114 ..... 5 credits

Sophomore year
Biology 200, 210 or 270, 271 ..... 10 credits
Chemistry 123, 133 ..... 5 credits
Mathematics 131 ..... 5 credits
Philosophy 110, 220 ..... 10 credits
Physics 105, 106 ..... 10 credits
Theology core option ..... 5 credits

Junior year
Allied Health 410, 415, 420 ..... 9 credits
Biology 300 and elective ..... 10 credits
Chemistry 219, 241, 242, 251, 252, 455 ..... 22 credits
Electives ..... 4 credits

Senior year
Biology 380, 350, 351, 360 ..... 15 credits
Chemistry 470, 471, 472, 475 ..... 10 credits
History/Social Science core option ..... 10 credits
Philosophy core option ..... 5 credits
Theology core option ..... 5 credits

Total ..... 180 credits

Bachelor of Science in Nuclear Medicine Technology

Freshman year
English 110 ..... 5 credits
Mathematics 112, 131 ..... 10 credits
Biology 200, 210 (or 270, 271), 305 (or HI 425, 426 for BI 305) ..... 15 credits
Computer Science 113 or 114 ..... 5 credits
Theology core option ..... 5 credits
Philosophy 110 ..... 5 credits

Sophomore year
Chemistry 121, 122, 123, 131, 132, 133 ..... 15 credits
Physics 105, 106, 107 (or 200, 201, 202) ..... 15 credits
Philosophy 220 and elective ..... 10 credits
Theology core option ..... 5 credits

Junior year
Chemistry 241, 242, 251, 252 ..... 12 credits
History/Social Science core options ..... 15 credits
Physics 375 (or Ch 461 elective) ..... 5 credits
Health Information 322 ..... 3 credits
Allied Health 370 ..... 3 credits
English core option ..... 5 credits
Elective ..... 2 credits

Senior year
Allied Health 440, 441, 442 ..... 9 credits
Allied Health 447, 448, 449 ..... 3 credits
Allied Health 450, 451, 452, 453 ..... 26 credits
Allied Health 456, 457, 458, 459 ..... 7 credits

Total ..... 180 credits

Bachelor of Science in Radiation Therapy Technology

Freshman year
Biology 165 ..... 5 credits
Chemistry 101 and 102 ..... 10 credits
Mathematics 112 and 131 ..... 10 credits
English 110 and core option ..... 10 credits
Philosophy 110 ..... 5 credits
History/Social Science core option ..... 5 credits

Sophomore year
Biology 200 and 210 (or 270 and 271) ..... 10 credits
Computer Science 113 or 114 ..... 5 credits
Physics 105, 106 and 107 ..... 15 credits
Religious Studies ..... 10 credits
History/Social Science core option ..... 5 credits

Junior year
Biology 305 (or HI 425, 426) ..... 5 credits
Allied Health 361, 363, 365, 366 and 367 ..... 15 credits
Allied Health 370 and 455 ..... 8 credits
Physics 375 ..... 5 credits
Philosophy 220 and core option ..... 10 credits
History/Social Science core option ..... 5 credits

Senior year
Based at Swedish Tumor Institute for calendar year (Allied Health 460, 461, 462, 463 and 464) ..... 44 credits

Total ..... 182 credits

Allied Health Courses

AH 310 **Cytotechnology Internship I** **15 credits**
AH 311 **Cytotechnology Internship II** **15 credits**
AH 312 **Cytotechnology Internship III** **15 credits**

AH 361 **Radiation Oncology Technique** **5 credits**
Introduction to principles of radiation therapy. Methods of treating malignant disease by radiation therapy based on anatomical site, treatment fields, dose fractionation, tissue tolerance, reactions to treatment and post treatment care.

AH 363 **Radiation Physics and Protection** **2 credits**
Interaction of ionizing radiation within the human body. Instrumentation used in radiation physics and treatment. Regulations concerning the safe use of ionizing radiation.

AH 365 **Methods of Patient Care** **2 credits**
Basic concepts of patient care, including consideration of patient physical and psychological conditions. Vital sign determination, emergency management, medical-surgical asepsis, and infection control. Factors influencing patient general health during and following a course of radiation therapy will be identified. Concepts of medical ethics will be discussed.

AH 366 **Oncology/Pathology** **3 credits**
The study of malignant disease including basic concepts, primary and metastatic tumors, possible causes of neoplasms.

AH 367 **Radiobiology** **3 credits**
The study of cells and their abnormal growth. Methods of controlling or modifying their growth. Effects of ionizing radiation upon cells, organs and systems. Delayed effects of radiation.

AH 370 **Management and Professionalism** **3 credits**
Methods of budgeting, hiring and firing, and departmental administration. The technologist's role in relation to the patient, physician and staff and the study of medical ethics. (winter)

AH 375 Ultrasound Instrumentation **4 credits**
Understanding the operation of diagnostic ultrasound equipment, including 'A' and B mode, M mode and 2D scanners of the heart and Real-time systems knobology. (spring)

AH 391 Special Topics **1-5 credits**
AH 392 Special Topics **1-5 credits**
AH 393 Special Topics **1-5 credits**

AH 396 Independent Study **1-5 credits**
AH 397 Independent Study **1-5 credits**
AH 398 Independent Study **1-5 credits**

AH 410 Clinical Hematology **3 credits**
Automated and manual cell counting; cellular morphology; testing procedures related to red and white cell disorders. Prerequisite: permission.

AH 415 Fundamentals of Immunology **3 credits**
Properties and occurrence of antigens and haptens; nature of antibodies, blood groups, and autoimmune response; transfusions; tumor specialties.

AH 420 Clinical Viology and Mycology **3 credits**
Medically important viruses, classification, tissue culture and serological methods of identification, viral immunology and chemotherapy. Terminology, taxonomy, laboratory diagnosis of pathogenic dermatophytes and systemic fungi.

AH 440 Basic Science of Nuclear Medicine I **5 credits**
AH 441 Basic Science of Nuclear Medicine II **2 credits**
AH 442 Basic Science of Nuclear Medicine III **2 credits**
I. Review of basic principles of radioactive decay, interaction of radiation with matter, radiation detection. Rectilinear and Anger-type imaging devices; collimaters, resolution, sensitivity, contrast and modulation transfer function. II. Radiopharmaceuticals and radiopharmacy: drugs, drug distribution, radionuclide production, radiopharmaceutical dosimetry. Radiation biology. III. Tracer methodology and non-imaging uses of radionuclides: in-vivo function studies, in-vitro tests. Prerequisites for I, II, III: permission. (Offered in sequence: I-fall; II-winter; III-spring.)

AH 447 Clinical Nuclear Medicine I **1 credit**
AH 448 Clinical Nuclear Medicine II **1 credit**
AH 449 Clinical Nuclear Medicine III **1 credit**
Applications of nuclear medicine procedures in medical diagnosis. Relative role of in-vivo and in-vitro radionuclide studies in diagnostic process. Prerequisite: permission. (I-fall; II-winter; III-spring.)

AH 450 Applied Nuclear Medicine Technology I **5 credits**
AH 451 Applied Nuclear Medicine Technology II **7 credits**
AH 452 Applied Nuclear Medicine Technology III **7 credits**
AH 453 Applied Nuclear Medicine Technology IV **7 credits**
Practical experience in static organ imaging, dynamic radionuclide studies, in-vivo and in-vitro testing, hematologic studies, gastro-intestinal absorption, and radioassay procedures. Prerequisite: permission. (Offered in sequence: fall, winter, spring, summer.)

AH 455 Human Cross Section Anatomy **5 credits**
Survey of cross section anatomy with emphasis on organs of body amenable to ultrasound diagnostic techniques. Prerequisites: BI 200 and 210 (or 270 and 271).

AH 456 Nuclear Medicine Seminar I **1 credit**
AH 457 Nuclear Medicine Seminar II **2 credits**
AH 458 Nuclear Medicine Seminar III **2 credits**
AH 459 Nuclear Medicine Seminar IV **2 credits**
Student and faculty discussions of topics of professional interest; critical examination of current literature. Prerequisite: permission. (Offered in sequence: fall, winter, spring, summer.)

AH 460 Radiation Therapy I **11 credits**
AH 461 Radiation Therapy II **11 credits**
AH 462 Radiation Therapy III **11 credits**
Five 8-hour days per week in Swedish Tumor Institute (or affiliated hospital) under the direction of Dr. Hibbs. Prerequisites: Completion of the academic course requirements.

AH 463 National Certifying Examination **7 credits**
Successful completion of national certifying examination.

AH 464 Radiation Therapy Seminar **1 credit**
Seminar to review and discuss student's progress in clinical internship. Program requires this course be taken four times for a maximum of four credits.

AH 470 Diagnostic Ultrasound I **5 credits**
AH 471 Diagnostic Ultrasound II **5 credits**
Review of acoustical physics, modes of display, introduction to equipment, Pathophysiology of organ systems visualized by ultrasound and their ultrasonic appearance.

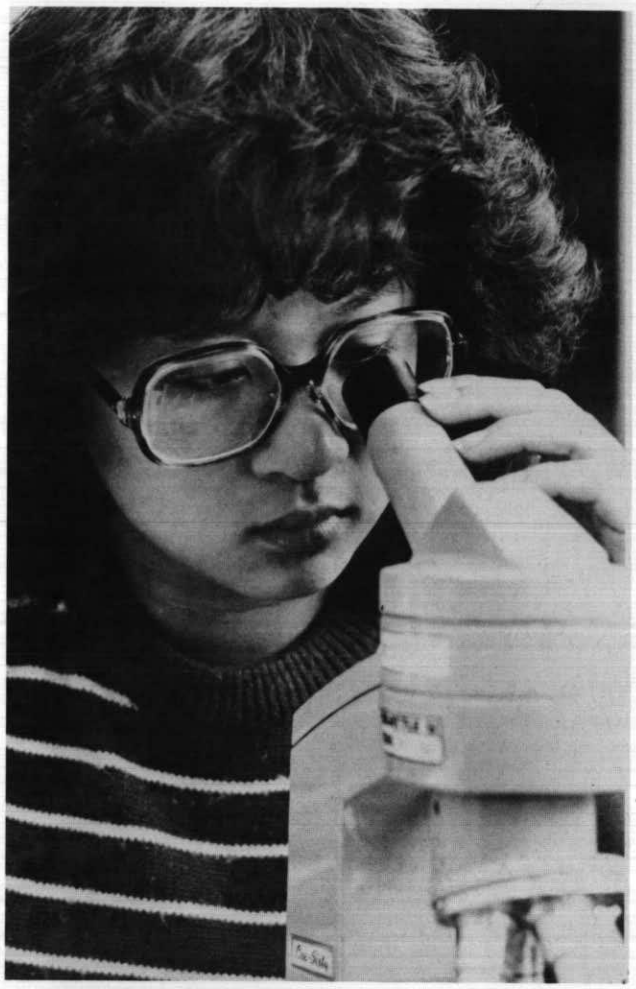
AH 472 Echocardiography **3 credits**
Anatomy, physiology and pathological conditions of the adult and pediatric heart, their visualization and evaluation with real-time imaging and M-mode echocardiography.

AH 473 Clinical Orientation to Ultrasound **10 credits**
Five days per week spent in a hospital environment, learning patient care, practical medical ethics, observing and performing ultrasound procedures and other diagnostic modalities. Prerequisite: permission.

AH 474 Clinical Experience in Ultrasound I **8 credits**
Five 8-hour days per week in an approved ultrasound department of a hospital. Prerequisite: permission. Program requires this course be taken 3 times for a maximum of 24 credits.

AH 483 Ultrasound Seminar I **2 credits**
Seminar to review and discuss cases performed by students. Seattle based students will meet one day every other week. Students based outside Seattle area will have projects assigned by correspondence, by the faculty and staff. Prerequisite: permission. Program requires this course be taken 4 times for a maximum of 8 credits.

AH 484 Basic Science of Ultrasound **2 credits**
Project of professional interest given by faculty involving critical examination of current literature. Prerequisite: permission. Program requires this course be taken for a maximum of 4 credits.



Biology

Margaret L. Hudson, Ph.D., Chairman

Objectives

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

Degrees Offered

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Biology

General Program Requirements

Students in biology must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy, and theology and religious studies. Core requirements for history and social science are as follows: for the Bachelor of Arts degree, 20 credits in history or social science, including Psychology 100; Bachelor of Science degree, 15 credits in history or social science; and Bachelor of Science in Biology degree, 15 credits in history or social science, including Psychology 100.

Departmental Requirements

Bachelor of Arts — 50 credits of biology which must include Bl 165, 166 and 167 with additional credits, which must include at least one credit of Seminar (three credits is the maximum that can be applied toward the degree), selected in consultation with the biology adviser; and 25 credits of chemistry. A year of physics and a course in calculus are recommended. Ch 455 may be considered as a biology elective.

Bachelor of Science — 60 credits of biology which must include Bl 165, 166 and 167 and at least one seminar credit (three credits is the maximum that can be applied toward the degree); 30 credits of mathematics or science electives. Ch 455 may be considered as a biology elective.

Bachelor of Science in Biology — 60 credits of biology which must include Bl 165, 166 and 167; at least 30 credits of biology courses at the 300-499 level; additional credits in consultation with the biology adviser, which must include at least one credit of Seminar (three credits is the maximum that can be applied toward the degree). Also required are 25 credits of chemistry; 15 credits of physics; reading knowledge of a modern language (equivalent to 106, as determined by examination); Psy 100 and Mt 112. Ch 455 may be considered as a biology elective. Additional courses in biology, calculus, biochemistry and statistics are recommended. Students with 3 units of high school chemistry may elect to begin their chemistry sequence during the freshman year.

Students in this program may elect to complete a sequence leading to secondary teacher certification. For details contact the School of Education.

Teaching Major (School of Education) — Secondary: 45 credits in biology which must include Bl 165, 166 and 167 and 30 credits of approved electives. Elementary: 25 credits in biology which must include Bl 165, 166, 167, 275 and 370.

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

Sample schedules which satisfy degree requirements:

Bachelor of Arts

Freshman year

Biology 165, 166, 167	15 credits
English 110 and core option	10 credits
Philosophy 110, 220	10 credits
Psychology 100	5 credits
Electives	5 credits

Sophomore year

Biology electives	15 credits
Chemistry 121, 122, 123, 131, 132, 133	15 credits
History or Social Science core options	10 credits
Philosophy core option	5 credits

Junior year

Biology electives	10 credits
Chemistry 241, 242, 251, 252	12 credits
Social Science or History core option	5 credits
Theology core options	10 credits
Electives	8 credits

Senior year

Biology electives	10 credits
Electives	35 credits
Total	180 credits

Bachelor of Science

Freshman year
Biology 165, 166, 167 ..... 15 credits
English 110 and core option ..... 10 credits
Philosophy 110, 220 ..... 10 credits
Mathematics or science electives ..... 10 credits

Sophomore year
Biology electives ..... 15 credits
History or Social Science core options ..... 15 credits
Science or mathematics electives ..... 10 credits
Philosophy elective ..... 5 credits

Junior year
Biology electives ..... 15 credits
Science or mathematics electives ..... 10 credits
Theology core options ..... 10 credits
Electives ..... 10 credits

Senior year
Biology electives ..... 15 credits
Electives ..... 30 credits

Total . . . . 180 credits

Bachelor of Science in Biology

Freshman year
Biology 165, 166, 167 ..... 15 credits
English 110 and core option ..... 10 credits
Mathematics 112 ..... 5 credits
Modern Language 105, 106 ..... 10 credits
Electives ..... 5 credits

Sophomore year
Biology electives ..... 15 credits
Chemistry 121, 122, 123, 131, 132, 133 ..... 15 credits
History or Social Science core options ..... 10 credits
Psychology 100 ..... 5 credits

Junior year
Biology electives ..... 15 credits
Chemistry 241, 242, 251, 252 ..... 12 credits
Philosophy 110, 220 and core option ..... 15 credits
Theology core option ..... 5 credits

Senior year
Biology electives ..... 15 credits
Theology core option ..... 5 credits
Physics 105, 106, 107 ..... 15 credits
Electives ..... 8 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. Five lecture hours per week. (spring)

BI 165 General Biology I 5 credits
BI 166 General Biology II 5 credits
BI 167 General Biology III 5 credits
Survey of the biological world, concepts and principles. 1—cell biology, metabolism, respiration, photosynthesis, genetics. 2—evolution, diversity and comparisons of groups of living organisms. 3—development and differentiation; comparative functions of tissues and organ systems; animal behavior; ecology. May be taken in any order. (1—fall, 2—winter, 3—spring.)

BI 182 Elementary Human Anatomy and Physiology 5 credits
A one-quarter survey of structure and function of the human body. Two three-hour lecture-laboratory sessions per week. (fall)

BI 185 Biology of Human Sexuality 5 credits
The course covers the development of sexuality of the human being from in utero to old age. Emphases are on family relationships, bonding, healthy modeling for younger persons, biological aspects of conception, intrauterine development, and birthing. Practical problems are considered in each of these areas. (winter)

BI 190 Principles of Physical Anthropology 5 credits
Evidence for primate evolution from the fossil record and from the morphological, physiological, genetic and behavioral variability of living primates. Two 3 hour lecture-laboratory sessions per week. (fall)

BI 200 Anatomy and Physiology 5 credits
Major structural and functional systems of the human body. Cells, tissues, bone, muscle and nervous system. Laboratory emphasis on microscopic and gross anatomy. Credits not applicable for biology major. Three lecture and four laboratory hours per week. (fall)

BI 205 Biophysical Principles 5 credits
Inter-relationships between biology, earth science and physical science as applied to the teaching of elementary level science. Credits not applicable for biology major. Three lecture and four laboratory hours per week.

BI 210 Anatomy and Physiology II 5 credits
Major structural and functional systems of the human body. Digestive, circulatory, respiratory, endocrine, urinary and reproductive systems. Physiological interactions among systems. Laboratory emphasis on physiology. Credits not applicable for biology major. Three lecture and four laboratory hours per week. 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 235 Invertebrate Zoology 5 credits
Survey of invertebrate phyla including their anatomy, morphology, taxonomy and ecology. Four hours lecture and three hours laboratory per week. Prerequisite: BI 165, 166, 167. (fall)

BI 241 Vertebrate Zoology 5 credits
Structure, physiology, ecology and behavior of Hemichordata and Chordata. Three lectures and four laboratory hours per week. Prerequisite: BI 165, 166, 167. (fall, 1983)

BI 251 Plant Morphology 5 credits
Study of plant form, structure and development. Three lecture and four laboratory hours per week. Prerequisite: BI 165, 166. (spring, 1984)

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 165, 166. (spring, 1983)

BI 270 **Human Structure and Function I** **5 credits**
BI 271 **Human Structure and Function II** **5 credits**
I. Integrated study of microscopic and gross structure and the functions of the human organism; basic tissues, skeletal, muscular, nervous, circulatory and respiratory systems. II. Digestion and metabolism, the excretory, endocrine and reproductive systems. Introduction to regional anatomy. Prerequisites: BI 165, 166, 167, Ch 101, 102 for 270; 270 for 271. (I-winter, II-spring)

BI 275 **General Physiology** **5 credits**
Chemical and physical processes inherent in living organisms. Three lecture and four laboratory hours per week. Prerequisite: BI 165, 166, 167, or permission. (fall)

BI 291 **Special Topics in Biology** **1-5 credits**
BI 292 **Special Topics in Biology** **1-5 credits**
BI 293 **Special Topics in Biology** **1-5 credits**
Courses offered on a one-time basis or experimental courses at the lower division level.

BI 296 **Independent Study** **1-5 credits**
BI 297 **Independent Study** **1-5 credits**
BI 298 **Independent Study** **1-5 credits**
Prerequisite: permission of chairman.

BI 300 **Microbiology** **5 credits**
Morphology, physiology and distribution of microorganisms. Three lecture and four laboratory hours per week. Prerequisite: Permission of instructor. (winter)

BI 305 **Pathophysiology**
A conceptual study of the derangements of the physiologic mechanisms and the compensatory responses involved in the disease process. Special attention is given to correlations between physiological changes and signs, symptoms and the development of basic pathology at the cellular, molecular and systemic levels. Forms the basis for the rationale of medical and nursing intervention. Prerequisites: BI 200 and 210, or BI 270 and 271. Recommended: BI 310, 330. Permission of instructor.

BI 310 **Comparative Vertebrate Embryology** **5 credits**
Early development of the frog and chick with consideration of the early development of the human. Three lecture and four laboratory hours per week. Prerequisite: BI 165, 166, 167. (fall)

BI 315 **Bioethics** **5 credits**
Indepth look at the problems created by a vast and highly complex technological society. Directed toward questions for which solutions are currently being sought. Lectures, discussions and directed readings.

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 165, 166, 167. (spring)

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 muscula systems of selected vertebrates. II. Comparative study of the digestive, respiratory, excretory and reproductive systems, circulatory and nervous systems and sense organs of selected vertebrates. Three lecture and four laboratory hours per week. Prerequisite: BI 165, 166, 167. (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: Permission of instructor. (winter)

BI 350 **Genetics** **3 credits**
Classical and molecular principles of the transfer of hereditary information. Three lecture hours per week. Prerequisite: One year of biology. (winter)

BI 351 **Genetics Laboratory** **2 credits**
Experience in genetic experimentation. Four laboratory hours per week. Prerequisite: BI 350 or taken concurrently. (winter)

BI 352 **Biophysical Chemistry** **5 credits**
Introduction to physical chemistry. Principles of thermodynamics, kinetics, molecular structure and radioactivity applied to biology. Four lecture and three laboratory hours per week. Prerequisite: Ch 219 or permission.

BI 360 **Parasitology** **5 credits**
Study of parasitic protozoa, helminths and arthropods. Three lecture and four laboratory hours per week. Prerequisite: BI 165, 166, 167; Recommended: BI 235.

BI 371 **Field Ecology** **3 credits**
Field studies including techniques used in ecological research and analysis. Two hours of lecture and three hours of laboratory per week, and one weekend field trip. Prerequisites: BI 165, 166, 167; recommended: BI 252, 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. Prerequisite: BI 165, 166, 167; recommended, BI 235. (spring 1984)

BI 380 **Cell Physiology** **5 credits**
Control of fundamental life processes in plant and animal cells. Four hours of leclture and three hours of laboratory per week. Prerequisites: BI 165, 166, 167, CH 241, 251, 252. Recommended: BI 275, Mt 112. (winter)

BI 430 **Endocrinology** **5 credits**
Structure and function of the glands of internal secretion of vertebrates. Prerequisite: Advanced standing in biology and Ch 242 (fall, 1983)

BI 440 **Neurobiology** **5 credits**
Pathways of the vertebrate nervous system, gross and microscopic study of the human brain and spinal cord. Three lecture and four laboratory hours per week. Prerequisite: BI 200, 210 or 270, 271 or 310 or 326. Permission. (fall 1984)

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 165, 166; recommended: BI 470 (spring)

BI 465 **Population Biology: Evolution** **5 credits**
Causes and mechanisms of genetic adaptation of organisms. Five lectures per week. Prerequisite: BI 350 or permission. (spring)

BI 470 **Entomology** **5 credits**
Structure, function, classification, ecology, behavior and economic importance of insects. Three lecture and four laboratory hours per week. Prerequisite: BI 165, 166.

BI 486 **Seminar** **1 credit**
BI 487 **Seminar** **1 credit**
BI 488 **Seminar** **1 credit**
Problems in modern biology. Prerequisite: Junior or Senior standing. (fall, winter, spring)

BI 491 **Special Topics in Biology** **1-5 credits**
BI 492 **Special Topics in Biology** **1-5 credits**
BI 493 **Special Topics in Biology** **1-5 credits**
Courses offered on a one-time basis or experimental courses offered at the upper division level.

BI 496 **Independent Study** **1-5 credits**
BI 497 **Independent Study** **1-5 credits**
BI 498 **Independent Study** **1-5 credits**
Prerequisite: permission of chairman and upper division standing.

BI 499 **Undergraduate Research** **1-5 credits**
Literature and laboratory investigation of a basic research problem. Preparation of a written report. Prerequisite: permission of chairman. (fall, winter, spring)

Chemistry

David L. Thorsell, Ph.D., Chairman

Objectives

Programs offered by the Chemistry department are designed to prepare the student for professional work in the various fields of basic and applied chemistry. The Bachelor of Science in Chemistry degree program is recommended to students who wish to prepare themselves for graduate studies in chemistry, or for medical school. By completion of 12 additional approved credits in chemistry, beyond the minimum requirements for this degree, the student is eligible for certification of the degree by the Committee on Professional Training of the American Chemical Society.

The Clinical Chemistry degree program is suited to those students interested in a career in the important field of clinical chemistry. The degree also provides preparation for graduate studies in clinical chemistry, biochemistry, or (with additional biology) medicine or dentistry.

The Bachelor of Arts degree is recommended for those desiring a solid foundation in chemistry along with greater freedom of choice for elective courses from programs such as education, business, engineering or other fields within the University.

Degrees Offered

Bachelor of Arts
Bachelor of Science in Chemistry
Bachelor of Science in Clinical Chemistry

General Program Requirements

Students in chemistry must satisfy the core requirements of the University given on page 18 of this Bulletin for English, philosophy and theology and religious studies. Core requirements for history and social science are as follows: Bachelor of Arts degree, 10 credits in history and 10 credits in social science; Bachelor of Science in Chemistry degree, 10 credits in history or social science; and Bachelor of Science in Clinical Chemistry, 10 credits in history or social science.

Departmental Requirements

Bachelor of Arts — 45 credits of chemistry which must include Ch 121, 122, 123, 131, 132, 133, 219, 241, 242, 251, 252 and either 352 or 361 and 363, plus electives from the following: Ch 243, 244, 360, 362, 364, 415, 436, 455, 461, 499, and special topics or independent study courses. Fifteen credits of mathematics including two quarters of calculus and 15 credits of physics.

Bachelor of Science in Chemistry — 60 credits in chemistry which must include Ch 121, 122, 123, 131, 132, 133, 219, 241, 242, 243, 251, 252, 326, 360, 361, 362, 363, 364, one year of calculus (Mt 134, 135, 136), ECS 113 or 114, and one year of calculus-based physics. A student is eligible for certification of the degree by the American Chemical Society if 12 additional credits of approved advanced work in chemistry, physics or mathematics are taken. This certification is recommended for students planning graduate work. Mt 233, Mt 234 and Ph 204, 205 are strongly recommended as electives. Students in this program may elect to complete a sequence leading to secondary teacher certification. For details contact the School of Education.

Bachelor of Science in Clinical Chemistry — 69 credits in chemistry which must include Ch 121, 122, 123, 131, 132, 133, 219, 241, 242, 251, 252, 326, 361, 362, 363, 364, 455, 470, 471, 472, 475, 481, 482, 483; 20 credits in mathematics and computer science which must include two quarters of calculus and either ECS 113 or 114; and one year of introductory physics. Recommended electives: Ch 243, 244, 360; Bl 280, 300, 330 and 350.

Teaching major (School of Education) — Secondary: 45 hours of chemistry are required which must include Ch 121, 122, 123, 131, 132, 133, 219, 241, 242, 251, 252, 361 and 363. Additional courses in physics (Ph 105, 106, 107) a year of college mathematics and courses in biology are highly recommended.

Bachelor of Arts

Freshman year
Chemistry 121, 122, 123, 131, 132, 133 ..... 15 credits
English 110 and core option ..... 10 credits
Philosophy 110 ..... 5 credits
Electives ..... 15 credits

Sophomore year
Chemistry 241, 242, 251, 252 ..... 12 credits
Mathematics 112, 134, 135 ..... 15 credits
Philosophy 220 and core option ..... 10 credits
Theology core option ..... 5 credits
Electives ..... 3 credits

Junior year
Chemistry 219 ..... 5 credits
History core options ..... 10 credits
Physics 105, 106, 107 ..... 15 credits
Social Science core option ..... 10 credits
Theology core option ..... 5 credits

Senior year
Chemistry 361 and 363 ..... 5 credits
Chemistry elective ..... 8 credits
Social Science core option ..... 5 credits
Electives ..... 27 credits

Total ..... 180 credits

Bachelor of Science in Chemistry

Freshman year
Chemistry 121, 122, 123, 131, 132, 133 ..... 15 credits
English 110 and core option ..... 10 credits
Mathematics 134, 135, 136 ..... 15 credits
Physics 200 ..... 5 credits

Sophomore year
Chemistry 241, 242, 243, 251, 252 ..... 15 credits
Computer Science 113 or 114 ..... 5 credits
Philosophy 110 ..... 5 credits
Physics 201, 202 ..... 10 credits
Electives ..... 10 credits

Junior year
Chemistry 219, 360, 361, 362, 363, 364 ..... 18 credits
History or Social Science core ..... 5 credits
Philosophy 220 ..... 5 credits
Theology core options ..... 10 credits
Electives ..... 7 credits

Senior year
Chemistry 470, 471, 472, 475, 476, 481, 482, 483 ..... 17 credits
Philosophy core option ..... 5 credits
Theology core option ..... 5 credits
Electives ..... 16 credits

Total ..... 180 credits

Bachelor of Science in Clinical Chemistry

Freshman year
Biology ..... 5 credits
Chemistry 121, 122, 123, 131, 132, 133 ..... 15 credits
English 110 and core option ..... 10 credits
Mathematics 134, 135, 136 ..... 15 credits

Sophomore year
Chemistry 241, 242, 251, 252, 455 ..... 17 credits
Computer Science 113 or 114 ..... 5 credits
Philosophy 110, 220 ..... 10 credits
Physics 105, 106, 107 ..... 15 credits

Junior year
Biology 270, 271 ..... 10 credits
Chemistry 219, 326, 361, 362, 363, 364 ..... 20 credits
History or Social Science elective ..... 10 credits
Theology core options ..... 5 credits

Senior year
Chemistry 461, 470, 471, 472, 475, 476, 481, 482, 483 ..... 20 credits
Philosophy core option ..... 5 credits
Theology core option ..... 5 credits
Electives ..... 18 credits

Total ..... 180 credits

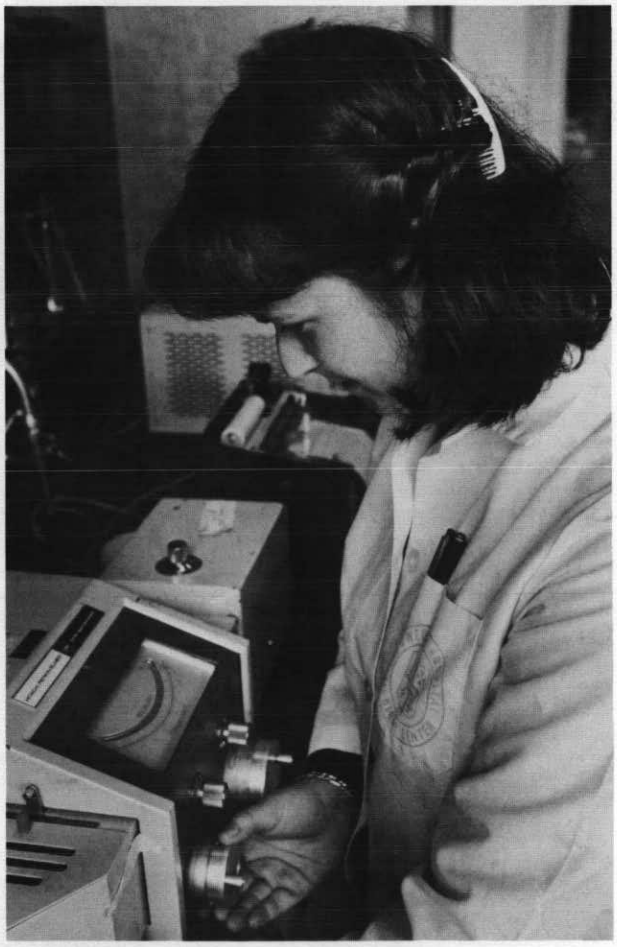
Chemistry Courses

Ch 101 Introductory General Chemistry 5 credits
Survey of inorganic and some organic chemistry treating the basic principles and descriptive material relevant to the health sciences. Four lecture and three laboratory hours per week. (fall, winter)

Ch 102 Introductory Organic and Biochemistry 5 credits
Continuation of organic chemistry and introduction to biochemistry with application to the health sciences. Four lecture and three laboratory hours per week. Prerequisite: Ch 101 or equivalent. (winter, spring)

Ch 110 Fundamentals of Chemistry 5 credits
An introduction to Chemistry designed for students with little or no preparation in science. Also for students desiring a review of high school chemistry prior to enrolling in Ch 101 or Ch 121. (fall, spring)

Ch 121 General Chemistry 1 4 credits
Ch 122 General Chemistry 2 4 credits
Ch 123 General Chemistry 3 4 credits
1. Atomic and molecular structure, weight relationships, states of matter, thermodynamics. 2. Solutions, kinetics, chemical equilibrium, Acids, bases, solubility equilibria, thermodynamics, hydrogen, oxygen and water. 3. Transitions metals, kinetics, oxidation, reduction, electro chemistry, chemistry of the non-metals, the metallic state, nuclear chemistry. Four lecture hours per week. Prerequisites: High school algebra for 121; 121 for 122; 122 for 123; corequisites: 131 for 121; 132 for 122; 133 for 123. (121, fall, winter; 122, winter, spring; 123, spring).



Ch 131 General Chemistry Lab 1 1 credit
Ch 132 General Chemistry Lab 2 1 credit
Introduction to basic laboratory procedures and safety, practice in modes of scientific inquiry, including observation, measurement, data collection, interpretation and evaluation of results and reporting. Three lab hours per week. Corequisites: 121 for 131; 122 for 132. (131, fall, winter; 132, winter, spring).

Ch 133 General Chemistry Lab 3 1 credit
Introduction to qualitative chemical analysis on a semimicro scale. Experimentation in the chemistry of ionic systems and basic quantitative analytical methods. Corequisite: Ch 123; Prerequisite: 132. (spring).

Ch 215 BASIC Computer Applications in Chemistry 2 credits
Introduction to BASIC; application of microcomputers to problems in chemistry; 1 lecture, 2 laboratory hours per week.

Ch 219 Quantitative Analysis 5 credits
Theory, methods and techniques of gravimetric, volumetric, electro-analytical and chromatographic procedures in quantitative analysis. Two lecture and eight laboratory hours per week. Prerequisite: Ch 123 and 133 (fall).

Ch 241 Organic Chemistry 1 4 credits
Ch 242 Organic Chemistry 4 credits
Structural theory; functional groups; nomenclature; properties, applications, reactions and syntheses of organic compounds; stereochemistry; reaction mechanisms; kinetic and thermodynamic properties of reactions. Compounds and reactions of biological interest. Four lecture hours per week. Prerequisite: Ch 123 for 241; 241 and 251 for 242. (241, fall and summer; 242, winter and summer).

CH 243 Organic Chemistry 3 3 credits
Synthesis of organic compounds; ultraviolet, visible, infra-red and nuclear magnetic resonance spectra; laboratory work in problem-oriented investigations; practical applications of spectroscopy in laboratory work. Two lecture and three laboratory hours per week. Prerequisite: Ch 242, 252. (spring)

Ch 244 Qualitative Organic Analysis 3 credits
Methods of identification of organic compounds through preparation of derivatives; and use of modern spectroscopic methods. Six laboratory hours per week, plus discussion of principles. Prerequisite: Ch 242.

Ch 251 Organic Chemistry Lab 1 2 credits
Theory and practice of laboratory techniques; experimental study of properties of organic synthesis; introduction to organic synthesis; Four hours per week. Prerequisite: Ch 123. Corequisite: Ch 241. (fall, summer)

Ch 252 Organic Chemistry Lab 2 2 credits
Application of laboratory techniques in simple and multi-step syntheses; qualitative and quantitative measurements of properties of organic compounds; determination of kinetic and thermodynamic parameters. Four hours per week. Prerequisite: Ch 251; Corequisite: Ch 242. (winter, summer).

Ch 260 Laboratory Safety 1 credit
Important aspects of hazardous chemicals and laboratory safety including pertinent laws and regulations. Establishing and maintaining a safe working environment in the laboratory. Prerequisite: Ch 241, 251. (spring).

Ch 291 **Special Topics** **1-5 credits**
Ch 292 **Special Topics** **1-5 credits**
Ch 293 **Special Topics** **1-5 credits**

Ch 326 **Instrumental Analysis** **5 credits**
Theory and techniques of instrumental methods representative of spectrophotometric electroanalytical and chromatographic techniques. Two four-hour laboratory periods including discussion of principles. Prerequisite: Ch 219, 361, 363.

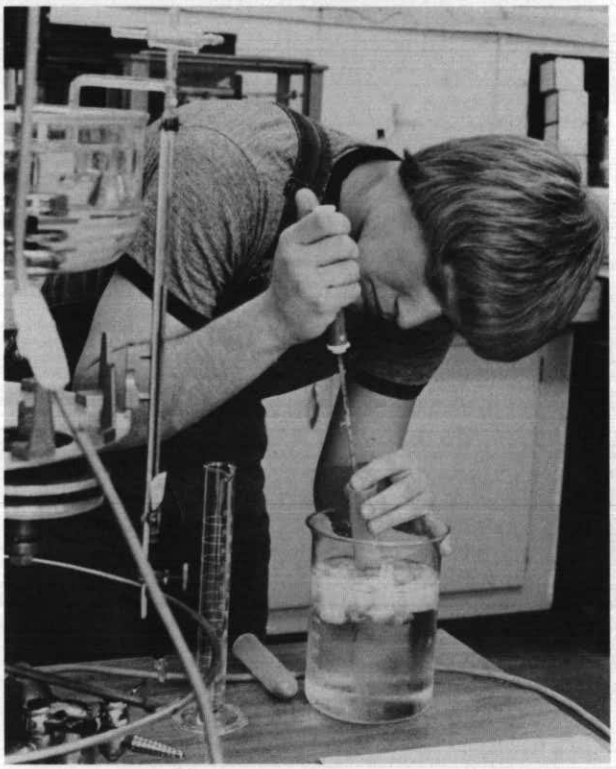
Ch 360 **Physical Chemistry 1** **3 credits**
Ch 361 **Physical Chemistry 2** **3 credits**
Ch 362 **Physical Chemistry 3** **3 credits**
1. Quantum chemistry, spectroscopy, photochemistry. 2. Gases, thermodynamics, changes of state, solutions. 3. Chemical equilibrium, electrochemistry, kinetic molecular theory, reaction kinetics. Three lectures per week. 1. may be taken either before or after 2. and 3. Prerequisites: Ch 123, 133, Mt 136 and one year of physics for 360 and 361; 361 for 362. (1.-fall, 2.-winter, 3.-spring).

Ch 363 **Physical Chemistry Laboratory 1** **2 credits**
Ch 364 **Physical Chemistry Laboratory 2** **2 credits**
Quantitative measurements of physical chemical phenomena, detailed data analysis, evaluation. Four laboratory hours per week. Prerequisites: Ch 219 for 363; 363 for 364. Ch 361 is a pre- or co-requisite for 363; Ch 362 is a pre- or co-requisite for 364. (1.-winter; 2.-spring).

Ch 391 **Special Topics** **1-5 credits**
Ch 392 **Special Topics** **1-5 credits**
Ch 393 **Special Topics** **1-5 credits**

Ch 396 **Independent Study** **1-5 credits**
Ch 397 **Independent Study** **1-5 credits**
Ch 398 **Independent Study** **1-5 credits**

Ch 415 **Advanced Inorganic Chemistry** **3 credits**
Advanced topics in inorganic chemistry with particular attention to bonding, thermodynamics, spectral and magnetic properties of the transition metals and their compounds. Prerequisites: Ch 360 and 361 or permission. (Alternate years with Ch 436)



Ch 436 **Advanced Organic Chemistry** **3 credits**
Spectrometric identification of organic compounds: mass spectrometry, nuclear magnetic resonance, infrared, ultraviolet and visible; thermodynamic variables and kinetic relationships. Directed reading and/or lectures. Prerequisite: One year of physical and one year organic chemistry or permission. (Alternate years with Ch 415)

Ch 455 **Biochemistry** **5 credits**
Composition and metabolism of carbohydrates, lipids, proteins, enzymes and body fluids. Four lecture and three laboratory hours per week. Prerequisite: Ch 242, 252 (fall).

Ch 460 **Advanced Physical Chemistry** **3 credits**
Quantum chemistry, vibrational and rotational energies, absorption and emission of radiation, molecular symmetry, group theory, electronic spectra. Prerequisite: One year of physical chemistry.

Ch 461 **Radiochemistry** **3 credits**
Theory of radioactivity, use of radioisotopes in studying chemical reactions and structure. Two lecture and four laboratory hours per week. Prerequisite: One year of physical chemistry or permission. (winter)

Ch 470 **Clinical Chemistry 1** **3 credits**
Ch 471 **Clinical Chemistry 2** **3 credits**
Ch 472 **Clinical Chemistry 3** **3 credits**
1. Theory and techniques of spectrophotometry, atomic absorption spectroscopy, flame photometry, fluorimetry and infrared analysis; electrophoretic techniques and densitometry; specific ion electrodes; automated analysis in clinical laboratory use. 2. Critical comparison of analytical methodologies for carbohydrates, lipids, electrolytes, enzymes, hemoglobins and prophyr-

ins; emphasis on biosynthesis, metabolism, analytical methods of importance, normal ranges, and pathological conditions leading to abnormalities, statistics and normal values. 3. Toxicology, steroids, catecholamines, gas chromatographic and radioimmunossay techniques, renal and hepatic function assessment. Two lectures per week. Prerequisites: Ch 219, 455 or permission. (Offered in sequence: fall, winter, spring)

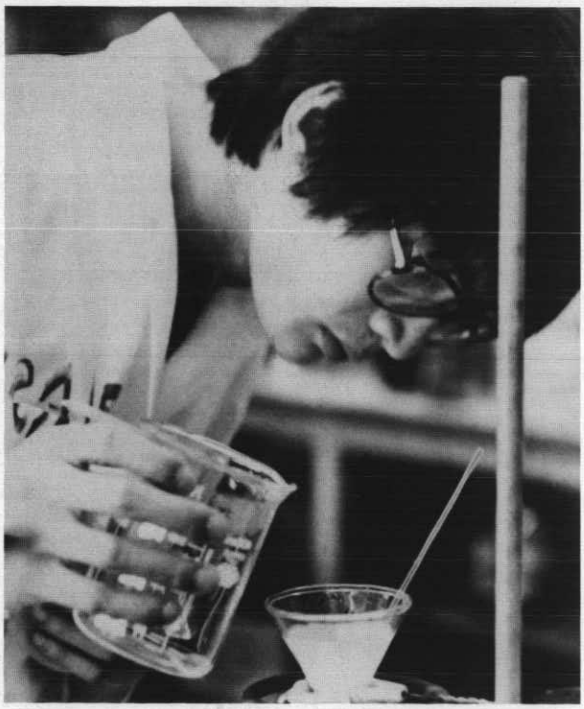
Ch 475 Clinical Chemistry Laboratory 1 — 1 credit
Ch 476 Clinical Chemistry Laboratory 2 — 1 credit
Practical experience in instrumental techniques and analytical methodologies of importance to the clinical chemist, including colorimetry, atomic absorption, gas chromatography, infrared, enzymatic assays and statistical treatment of data. Three laboratory hours per week. Prerequisite: Simultaneous enrollment in Ch 470 or Ch 471. (Offered in sequence: fall, winter)

Ch 481 Clinical Practice — 2 credits
Ch 482 Clinical Practice — 2 credits
Ch 483 Clinical Practice — 2 credits
Practical experience in approved hospital clinical laboratory. Six laboratory hours per week. Mandatory CR/NC. Prerequisite: Permission.

Ch 491 Special Topics — 1-5 credits
Ch 492 Special Topics — 1-5 credits
Ch 493 Special Topics — 1-5 credits
Directed reading and/or lectures at an advanced level. Prerequisite: Permission.

Ch 496 Independent Study — 1-5 credits
Ch 497 Independent Study — 1-5 credits
Ch 498 Independent Study — 1-5 credits

Ch 499 Undergraduate Research — 1-6 credits
Literature and laboratory investigation of a basic research problem. Six laboratory hours per week. Prerequisite: Permission.



Civil Engineering

Harry Majors, Jr., M.S., Acting Chairperson

Objectives

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

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

Degrees Offered

Bachelor of Civil Engineering
Bachelor of Engineering

General Program Requirements

Students in Civil Engineering must satisfy the core curriculum requirements of the University as given on page 18 of this Bulletin for English, philosophy and theology and religious studies. Ten credits of history or social science are required.

Departmental Requirements

Bachelor of Civil Engineering — 71 credits in civil engineering which must include ECL 211, 321, 323, 331, 335, 337, 351, 353, 371, 402, 403, 445, 485, 487, 488, and 489. Also required are Mt 134, 135, 136, 233, and 234; EML 105, 113, 281, and 321; Ph 200, 201, and 202 (or Ch 122, 132); Ch 121, 131; and ECS 230. With approval, qualified students may substitute equivalent or more advanced courses for those listed. Required 300 level courses have junior civil engineering standing as a prerequisite. Required 400 level courses have senior civil engineering standing as a prerequisite, except for ECL 402.

Bachelor of Engineering — 55 credits in engineering, 25 credits in mathematics, at least 3 credits in computer science, and at least 10 credits in physics, chemistry, or biology. Not intended to be an entry-level degree into the engineering profession.

Bachelor of Civil Engineering

Freshman year

English 110 and core option	10 credits
Mathematics 134, 135, 136	15 credits
Mechanical Engineering 105, 113	10 credits
Philosophy 110	5 credits
Physics 200	5 credits

Sophomore year

Chemistry 121, 131	5 credits
Civil Engineering 211, 321	10 credits
Computer Science 230	3 credits
Engineering or Science Elective	5 credits
Mathematics 233, 234	10 credits
Mechanical Engineering 281	5 credits
Philosophy 220	5 credits
Physics 201, 202	10 credits

Junior year

Civil Engineering 323, 331, 335, 337, 351, 353, 371	26 credits
Mechanical Engineering 321	5 credits
Philosophy elective	5 credits
Theology core options	10 credits

Senior year

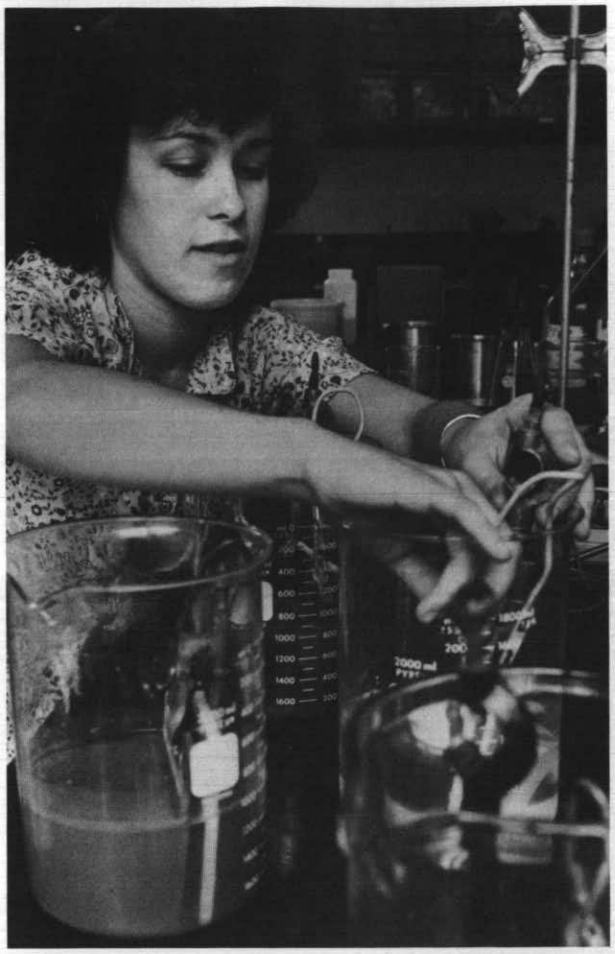
Civil Engineering 402, 403, 455, 485, 487, 488, 489 and electives	22 credits
Engineering	13 credits
History/Social Science electives	10 credits
Total	184 credits

Civil Engineering Courses

ECL 211 Engineering Measurements **5 credits**
Engineering measurements as applied to civil engineering. Planning for surveys. Introduction to photogrammetry. Public Land and State Plane Coordinate Systems. Prerequisite: Sophomore standing. Four lecture and one laboratory period per week. Prerequisite: Mt 112, EML 105. (spring)

ECL 291 Special Topics **1-5 credits**
ECL 292 Special Topics **1-5 credits**
ECL 293 Special Topics **1-5 credits**

ECL 321 Strength of Materials I **5 credits**
Mechanics of solid deformable bodies; relationships between the external forces acting on elastic bodies and the stresses and deformations produced. Members subjected to tension, compression, flexure and torsion. Five lecture and one laboratory period per week. Prerequisite: EML 113, Mt 233, EML 281 corequisites. (fall, winter, spring)



ECL 323 Strength of Materials II **5 credits**
Continuation of the mechanics of solid deformable bodies. Beam topics, stability of columns, combined stresses and strains, fatigue and energy relationships. Five lecture and one laboratory period per week. Prerequisite: ECL 321, Mt 234. (winter, spring)

ECL 331 Fluid Mechanics **5 credits**
Fluid static and dynamics. Topics include fluid properties, continuity equation, Euler's equation; laminar and turbulent flow regimes. Prerequisites: EML 281, Mt 135. (fall)

ECL 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, open channel flow. Prerequisite: ECL 331. (winter)

ECL 337 Fluids Laboratory **2 credits**
Experimental calibration of various flow meters, loss coefficients and pipe friction factors. Experimental verification of various principles of fluid mechanics. One lecture and one four-hour laboratory per week. Prerequisite: ECL 331. (winter, spring)

ECL 351 Engineering Geology **3 credits**
Elementary study of the material structure and internal condition of the earth and of the physical and chemical processes at work upon and within it. Three lecture hours per week. Prerequisite: Junior standing. (winter)

ECL 353 Soil Mechanics and Foundations **5 credits**
Engineering properties of soils; consolidation, shear strength, permeability. Fundamentals of slope stability and earth pressure theories. Fundamentals of foundation design. Four lecture and one laboratory session per week. Prerequisites: ECL 321, ECL 351. (spring)

ECL 371 Water Resources I **3 credits**
Conception, planning, design, construction, and operation of facilities to control and utilize water. Stream and flood analysis. Prerequisite: ECL 331. (spring)

ECL 391 Special Topics **1-5 credits**
ECL 392 Special Topics **1-5 credits**
ECL 393 Special Topics **1-5 credits**

ECL 402 Engineering Economy **3 credits**
Elements of immediate and long-term economy of design and maintenance; interest rates, present rates, present worth and prospective return on investment; depreciation and replacement studies. Prerequisite: Junior standing. (winter, spring)

ECL 403 Project/Construction Management **3 credits**
Introduction to project and construction management. How to plan and organize these services. Network scheduling, contracting procedures, risk analysis and estimating. Prerequisite: Senior standing. (spring)

ECL 445 Structural Mechanics **5 credits**
Classical and matrix methods in structural mechanics. Basic structural theory in both classical and matrix notation. Introduction to structural computer programs. Prerequisite: ECL 323. (fall)

ECL 447 Structural Design I **5 credits**
ECL 449 Structural Design II **5 credits**
Design of basic structural members and connections. Specific structural design building codes. I. Steel design. II. Reinforced and prestressed concrete design. Prerequisites: ECL 445 for I, 447 for II. (I. winter, II. spring)

ECL 461 Transportation Systems **3 credits**
Development of transportation systems and social and economic effects. Planning present and future systems. Methods of public and private financing. Prerequisite: Senior standing. (fall)

ECL 471 Water Resources II **3 credits**
Geologic and hydrologic occurence of ground water, underground flow, and ground water supply. Other selected related topics. Prerequisite: ECL 371. (fall)

ECL 485 Sanitary Engineering I **5 credits**

ECL 486 Sanitary Engineering II **5 credits**
I. Examination of water and waste. Physical treatment processes. Laboratory experiments in microbial, bacteriological and chemical examination of water and wastes. Chemical and biological treatment, sludge disposal, disinfection, reuse of water, comprehensive planning. Four lectures and one laboratory per week. II. Stream pollution and self-purification. Analysis of industrial wastes. Four lectures per week plus one laboratory or field trip each week. Prerequisites: Ch 121, 131, for 485; ECL 485 and 486. (I. fall, II. spring)

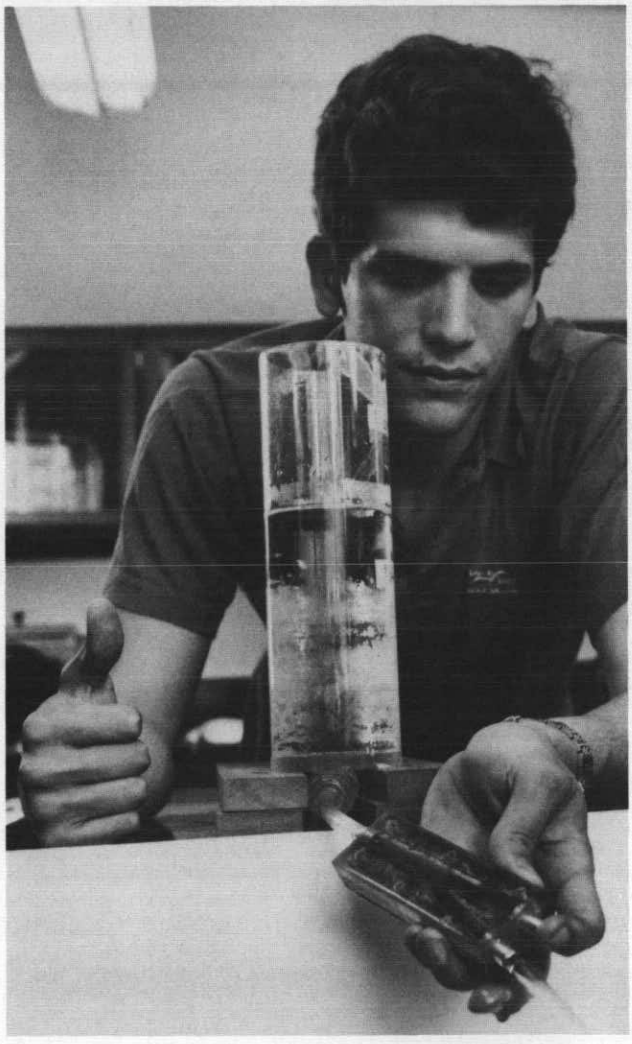
ECL 487 Seminar I **2 credits**
ECL 488 Seminar II **2 credits**
ECL 489 Seminar III **2 credits**
Development of oral and written communication skills through preparation and presentation of a technical paper. Prerequisite: Senior standing (I. fall, II. winter, III. spring.)

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

ECL 495 Thesis **1-5 credits**
Problem in analysis or design at the level of undergraduate research. Prerequisite: Senior standing.

ECL 496 Independent Study **1-5 credits**
ECL 497 Independent Study **1-5 credits**
ECL 498 Independent Study or Research **1-5 credits**
Under the direction of a faculty member.

ECL 499 Undergraduate Research **2-5 credits**
Research under the direction of a faculty member.



Electrical Engineering

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

Objectives

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

The Electrical Engineering program strives to provide a broad foundation based on mathematical and scientific principles that will prepare the graduate to take his/her place in any of the various fields of study. It does not provide for undergraduate specialization in various fields.

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
Bachelor of Engineering

General Program Requirements

Students in electrical engineering must satisfy the specific core curriculum requirements of the University as given on page 18 of this Bulletin for English, philosophy and theology and religious studies. Ten credits of history or social science are required.

Departmental Requirements

Bachelor of Electrical Engineering — 68 credits in electrical engineering which must include EEL 105, 301, 303, 311, 341, 343, 346, 349, 411, 421, 433, 435, 448, 451, 478, 485, and 487. Also required are Mt 134, 135, 136, 233, and 234; EML 105, 113, and either EML 281 or Ph 310; Ph 200, 201, 202, 205, 330 and 361, and ECS 230. With approval, qualified students may substitute advanced courses in nuclear physics for electrical engineering courses. Required 300 level courses have junior electrical engineering standing as a prerequisite. Required 400 level courses have senior electrical engineering standing as a prerequisite. This degree is approved by the Accreditation Board for Engineering and Technology.

Bachelor of Engineering — 55 credits in engineering. 25 credits in mathematics, at least 3 credits in computer science, and at least 10 credits in physics, chemistry, or biology. Not intended to be an entry-level degree into the engineering profession.

Bachelor of Electrical Engineering

Freshman year

Electrical Engineering 105	5 credits
English 110	5 credits
Mathematics 134, 135, 136	15 credits
Mechanical Engineering 105, 113	10 credits
Philosophy 110	5 credits
Physics 200	5 credits

Sophomore year

Computer Science 230	3 credits
English core options	5 credits
Mathematics 233, 234	10 credits
Mechanical Engineering 281 or Physics 310	5 credits
Philosophy 220 and core option	10 credits
Physics 201, 202, 203	13 credits

Junior year

Electrical Engineering 301, 303, 311, 341, 343, 346, 349	25 credits
Physics 330, 361	10 credits
Theology core options	10 credits

Senior year

Electrical Engineering 411, 421, 433, 435, 448, 451, 478, 485, 487 and electives	38 credits
History or Social Science	10 credits
Total	184 credits

Electrical Engineering Courses

EEL 105 Digital Operations and Computation — 5 credits
Digital processing of information and data, number systems, Boolean algebra; design of hardware for registers, counting and arithmetic operations; organization of computers, storage and input/output. Elementary concepts of programming and assembly language. (fall, winter)

EEL 296 Independent Study — 1-5 credits

EEL 297 Independent Study — 1-5 credits

EEL 298 Independent Study — 1-5 credits

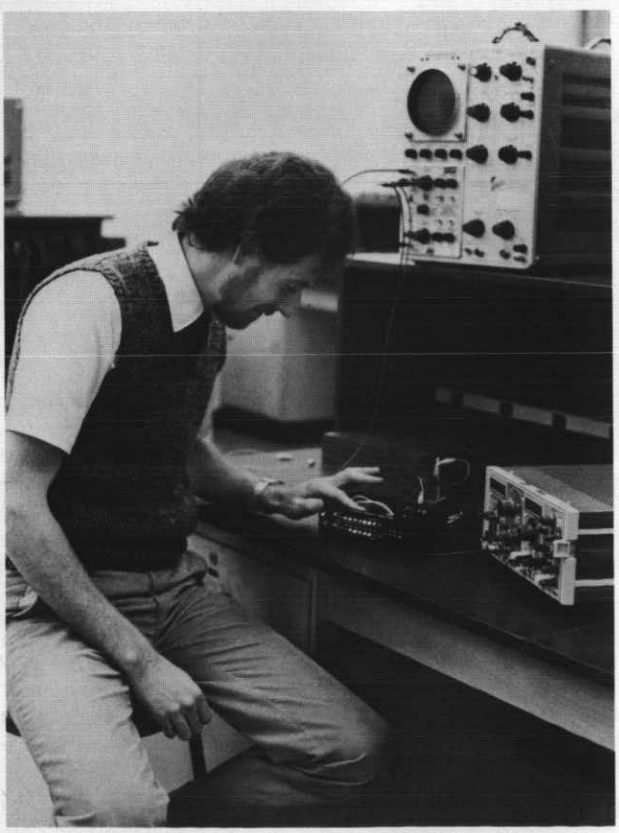
EEL 301 Electrical Circuits 1 **5 credits**
Fundamental concepts and units; Kirchoff's laws, mesh and total analysis; equivalent circuits, linearity and superposition; first and second order circuits; natural and forced responses, initial condition; Laplace transform techniques, introduction to convolution. Prerequisites: Mt 234 and Ph 201 and permission of the Department chairperson. (fall, winter)

EEL 303 Electrical Circuits 2 **5 credits**
The sinusoidal steady-state; phasers and impedance; system functions and the s-plane; analytical and graphical techniques of frequency response description, Bode diagrams; two-port analysis; AC power; Fourier series; introduction of the digital computer in circuit analysis and design. Four hours lecture and one four-hour laboratory per week. Prerequisites: EEL 301. (winter, spring)

EEL 311 Seminar **0 credits**
Attendance required for junior year Electrical Engineering students. (spring, fall)

EEL 315 Elements of Electrical Engineering **5 credits**
For non-majors, an introductory course to electrical engineering. Basic circuit theory: linear systems; steady-state solutions; Laplace transform and transient analysis; magnetic fields, transformers and basic electromechanical energy conversion on basic electronic devices and circuits. Prerequisites: EML 281, Mt 234, Ph 201. (fall, winter)

EEL 341 Semiconductor Circuits **5 credits**
Solid state linear circuit models, biasing methods, elementary amplifiers, cascaded circuits, gain-frequency characteristics and bandwidth control Circuit operation and design procedures are included. Prerequisites: Ph 361. Corequisite: EEL 303. (winter, spring)



EEL 343 (443) Semiconductor Circuits Design **5 credits**
Linear power, push-all, feedback, Class AB, B and C, and tuned amplifiers; gain-frequency characteristics; oscillators. Prerequisite: EEL 341. (spring, fall)

EEL 346 (446) Electronics Laboratory **2 credits**
Laboratory problems in analysis and design for electronic communication and control for electrical engineering seniors; analog and digital systems. One hour lecture and one four-hour laboratory per week. Prerequisites: EEL 341, 343 concurrently. (spring, fall)

EEL 349 (449) Digital System Design **3 credits**
Analysis of various logic types, system design using integrated circuits, A/D and D/A conversion and memory systems. EEL 105, 341, 343 concurrently. (spring, fall)

EEL 391 Special Topics **1-5 credits**
EEL 392 Special Topics **1-5 credits**
EEL 393 Special Topics **1-5 credits**

EEL 396 Independent Study **1-5 credits**
EEL 397 Independent Study **1-5 credits**
EEL 398 Independent Study **1-5 credits**

EEL 411 Seminar **2 credits**
Each student is required to prepare a technical paper and to present it orally to the class. Prerequisite: EEL 311, Senior standing in electrical engineering. (spring, fall)

EEL 421 Linear Analysis and Synthesis **3 credits**
Review of linear analysis as it applies to the synthesis problem. Ladder and bridge circuits. Synthesis of passive circuits by the methods of Cauer and Foster. Synthesis of special forms; Butterworth and Chebyshev filters for the approximation of frequency response characteristics; frequency scaling and transformations. Prerequisite: EEL 303. (fall, winter)

EEL 433 Digital Signal Processing **4 credits**
Linear, time invariant, discrete systems; finite moving average and recursive digital filters; Z-transform; discrete Fourier transform; fast Fourier transform. Prerequisite: EEL 421. (winter, spring)

EEL 435 Electromechanical Energy Conversion **5 credits**
Electromechanical energy conversion principles and design. Application and details of electromechanical devices such as relays, transformers, rotating machinery and special devices. The laboratory emphasizes measurement and design principles and relates this to the lecture. Four hours lecture and one four-hour laboratory per week. Prerequisites: EEL 421, EML 281, Mt 234. (winter, spring)

EEL 448 Electrical Design Laboratory **2 credits**
Continuation of EEL 346. One hour lecture and four-hour laboratory per week. Prerequisites: EEL 343, 346, 349. (fall, winter)

EEL 451 (351) Distributed Systems **5 credits**
Analysis of distributed systems; steadystate and transient analysis of loss-less lines; lossy lines; waveguides. Four lectures, one four-hour laboratory per week. Prerequisites: EEL 303, Ph 330. (spring, fall)

EEL 461 Control Systems **4 credits**
Fundamentals of classical and modern system theory; analysis and design of closed-loop systems with emphasis on stability and transient response using Nyquist, Bode, s-plane and state-space techniques. Prerequisites: EEL 433, 435. (spring, fall)

EEL 478 Electrical Engineering Design **3 credits**
Project design by students working in groups. Designs are built, tested and evaluated. Class meets two hours per week for review and critique of the assigned projects. Require senior standing in electrical engineering. One lecture and supervised design project. Prerequisites: EEL 343, 421, 448. (winter, spring)

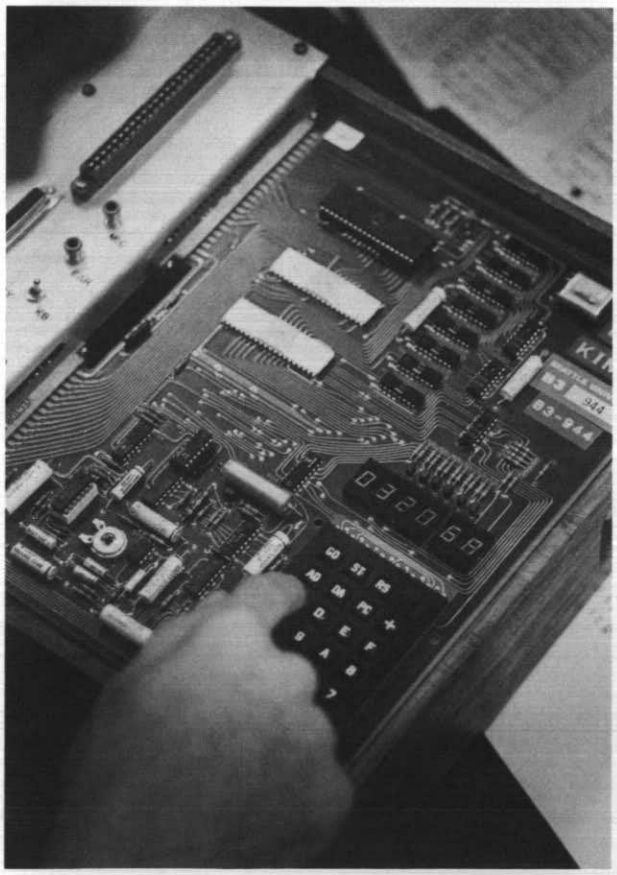
EEL 485 Communication Systems **3 credits**
Analysis and design of signal transmission systems that include amplitude, phase, frequency and pulse modulation. Sub system synthesis and design with comparative analysis. Prerequisites: EEL 303, 343, Ph 330. (fall, winter)

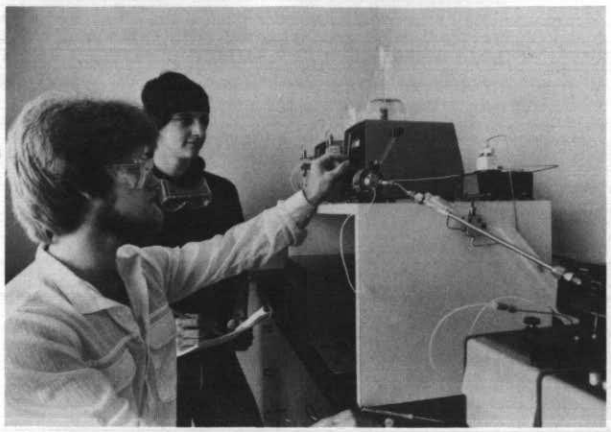
EEL 487 Microprocessor Design **3 credits**
Design of electrical digital components and systems which employ microprocessors. Assembly language programming, peripheral access, memory, interfacing the microprocessor to the external system. Two lectures and one four-hour laboratory. Prerequisite: EEL 349. (winter, spring)

EEL 489 Power Systems **4 credits**
Analysis of power systems, symmetrical components, faults on power systems, power system parameters, steady-state operation. Prerequisites: EEL 435, 451, Ph 330. (spring, fall)

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

EEL 496 Independent Study **1-5 credits**
EEL 497 Independent Study **1-5 credits**
EEL 498 Independent Study **1-5 credits**





General Science

Robert J. Smith, B.S., Director

Objectives

The General Science program provides special opportunities to students interested in interdisciplinary fields such as ecology, environmental science, global studies, and premedical or predental studies; or in special programs of study which differ significantly from the established programs in other departments. The program provides a broad background in the basic sciences. Judicious use of electives permits the student to specialize in other technical areas such as computer science or in business. Each student's curriculum is tailor-made in consultation with the Director of the Program.

A prime objective is to provide students with a better understanding of the human ramifications of science and technology and to help them think realistically and creatively about intellectual, moral, and social issues related to science and technology.

Degree Offered

Bachelor of Science in General Science

General Program Requirements

Students in General Science must satisfy the core curriculum requirements of the University.

Degree Requirements

This degree requires 90 credits chosen from the following fields: allied health technology, biology, chemistry, computer science, health information, interdisciplinary science, mathematics, physics, psychology, and engineering. For this purpose all engineering courses are considered as being in one field. (Only Psy 201, 330 and 401 can be counted toward an interdisciplinary science degree.) At least 30 credits must be in one of these fields, 20 credits in a second field, 10 credits each in biology, chemistry, mathematics, and physics (chosen from the following allowed combinations of courses), and 5 credits in computer science.

Biology:	BL 165, 166, 167, 190, 200, 210
Chemistry:	Ch 101 and 102; 121 and 131; 122 and 132
Mathematics:	Mt 134 and 135; 112 and 131; 118 and 130
Physics:	Ph 105 and 106; 200 and 201

At least 10 credits must be from 300 or 400 level courses. A further 15 hours must be from 300, 400, or approved 200

level courses. This may require prerequisites beyond the minimal degree requirements. The approved 200 level courses are Ch 219, 241, 242, 243, 244, 251, 252; Mt 232, 233, 234; and Ph 202, 204 and 205.

Interdisciplinary Science Courses

ISC 110 Science, Technology and Society **5 credits**
The study of the nature and structure of science and technology, the interactions of science and technology and the impact of science and technology on society.

ISC 201 To Feed The World **5 credits**
The history, production, and distribution of food from the perspectives of paleontology, archaeology, anthropology, ecology, biology and chemistry; modes of scientific examination and interpretation; interrelationships of science, technology and human needs. Team taught. Active participation by students: lectures, discussions, student projects.

ISC 202 To See The Light **5 credits**
A hands-on approach to the nature and uses of light: the many faces of light as seen by philosophers, artists and scientists; theories of color; physiology and psychology of perception, light and color in art; laser optics; camera systems; current optical technology; "light" student projects. Three hours lecture/discussion and one four-hour laboratory/field trip per week.

ISC 208 (ECL 208) Ecology and Natural Resources **5 credits**
The role of technology in the deterioration of the environment and its restoration. An introduction to ecology, population, agriculture, pesticides, fertilizers, and water pollution.

ISC 209 (ECL 209) Energy and the Environment **5 credits**
The generation, use, and conservation of energy including a discussion of air pollution, solid wastes, and recycling.

ISC 310 Evolution: Development of a Theory **5 credits**
Basic statements and ideas of evolutionary theories from an interdisciplinary perspective. This will include both an historical perspective and a consideration of modern debates. Prerequisites: ISC 110 and one laboratory science course; or two science courses, one with laboratory experience.

ISC 320 Geology and Mineralogy of the Pacific Northwest **2 credits**
The general geologic setting and basic mineralogy of the Northwest. Weekend field trips are in conjunction with the Field Biology course. Prerequisites: Two laboratory science courses.

ISC 330 Field Biology of Washington **2 credits**
Life zones, habitats, and plants and animals of special interest in the State. Weekend field trips are in conjunction with the Geology and Mineralogy course. Prerequisites: Two laboratory science courses.

ISC 401 The Human Response to Science and Technology **5 credits**
A comparative-historical approach to the scientization of culture and its contemporary and projected consequences; critical evaluation of competing claims about science and technology as enlightening allies of human progress; a personal search for appropriate intellectual and ethical perspectives on science as a way of knowing and on technology as a way of living. Seminar format; guest lecturers; small group paper conferences; student-led seminars. Prerequisites: Junior standing or higher; PI 220; HS 104 or 105.

Health Information

Kathleen A. Waters, M.Ed., R.R.A., Chairman

Objectives

The Health Information program is designed to prepare the student for a career in an administrative health care profession by providing a comprehensive four-year program of liberal arts and science. In the fourth year emphasis is on professional activities and interaction with the health care industry. Special attention is given to computerization of health information. Students who complete the program are eligible for registration with the American Medical Record Association.

Degree Offered

Bachelor of Science in Health Information

General Program Requirements

Degree candidates in health information must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy, and theology and religious studies. Additional core requirements are 15 credits in history or social science.

Certificate Program

Students who already possess a baccalaureate degree in any field may be eligible for the Certificate in Health Information Services Program, as fifth year students. Prerequisites for admission to the certificate program are acceptable college credits in human anatomy and physiology (with laboratory), principles of digital computers, statistics, and management practices.

Departmental Requirements

Bachelor of Science in Health Information — 55 credits in health information which must include HI 230, 322, 401, 402, 403, 425, 426, 440, 441, 455, 470, 475, 476, 477, and 480; 20 credits in biology or chemistry, which must include BI 200 and 210; 5 credits of mathematics, Sph 200 or 201, ECS 113 or 114; Bus 380; Psy 201.

Students who have completed a program for medical record technicians, approved by the American Medical Association, may be placed in appropriate advanced Health Information courses.

Certificate in Health Information — 49 credits in Health Information, equivalent to HI 230, 322, 401, 402, 403, 425, 426, 440, 441, 455, 470, 475, (or Bus 410), 476, and 480.

Bachelor of Science in Health Information

Freshman Year

Biology or Chemistry elective	5 credits
English 110 and core option	10 credits
History or social science electives	15 credits
Mathematics	5 credits
Philosophy 110	5 credits
Elective	5 credits

Sophomore year

Biology or Chemistry elective	5 credits
Speech 200 or 201	5 credits
Health Information 230	5 credits
Computer Science 113 or 114	5 credits
Philosophy 220	5 credits
Theology and Religious Studies options	10 credits
Electives	10 credits

Junior year

Biology 200, 210	10 credits
Business 380	5 credits
Health Information 475	5 credits
Health Information 401	5 credits
Philosophy core option	5 credits
Psychology 201	5 credits
Electives	10 credits

Senior year

Health Information 322, 402, 403, 425, 426, 440, 441, 455, 470, 476, 477 and 480	36 credits
Health Information electives	4 credits
Elective	5 credits
Total	180 credits

Health Information Courses

HI 230 **Health Care Delivery System** **5 credits**
An overview of the health care system in the United States. Facilities, organization and personnel with emphasis on current issues and trends: marketing of health care, distribution of services, cost containment, rise of the consumer, impact of the wellness movement. (fall)

HI 322 (422) **Medical Terminology** **3 credits**
Prerequisite BI 200, 210 or permission of instructor. (fall, spring)

HI 401 **Introduction to Health Records** **5 credits**
Development, present scope and future direction of the health record profession. Initial development of skills for record analysis and control, medical statistics, record, retrieval and disease coding. Prerequisite: BI 200, 210 or permission (fall)

HI 402 **Management of Health Information Systems I** **5 credits**

HI 403 **Management of Health Information Systems II** **5 credits**
I. Coordination of record systems and information centers in health facilities. II. Use of standards designed by JCAH, AMA, DHEW, and other agencies to raise level of health care quality; effects of standards on health record administration. Prerequisites: HI 401 for I; I for II. (I-winter; II-spring)

HI 425 **Medical Science I** **3 credits**
Systems approach introduction to general principles of disease and the disorders that affect the body as a whole. Genetic causes of disease, tissue damage, inflammation, infection, immune response, growth disorders, tumors, nutrition, metabolic disease, blood disorders, circulatory system (winter)

HI 426 **Medical Science II** **3 credits**
Disorders that affect specific organ systems; heart, respiratory tract, digestive system, reproduction, liver, gall bladder, pancreas, endocrine glands, bones, joints and muscles, skin, special senses, mental illness, central nervous system. (spring)

HI 440 **Practicum** **2 credits**
HI 441 **Practicum** **2 credits**
Practicum is designed to help students develop themselves through utilizing opportunities to participate in current health information activities with professional medical record administrators and other professionals in the health field. Prerequisite to HI 440-HI 401. (fall, winter, spring, summer)

HI 450 **Development of Management Resources** **3 credits**
Utilization of management methods and resources in the effective direction of a department, system or function with emphasis on budget, layout, work simplification, job analysis and equipment selection. (fall, winter)

HI 455 **Comprehensive Communication Skills** **3 credits**
Development of skills needed to select and use communications media in effective leadership. Personnel selection and evaluation, educational and training programs, skill in relating information. (winter, spring)

HI 470 **Legal Concepts for Health Fields** **3 credits**
Principles of law as applied to the health field, with particular reference to all phases of medical record practice. (fall, spring)

HI 475 **Health Information Computer Systems** **5 credits**
Systems analysis in health information with stress on computer resources in problem solving. Computerized patient information processes in clinical and administrative health care settings. Prerequisite: HI 401 (winter)

HI 476 **Health Information Computer Applications** **3 credits**
Analysis and evaluation of current computer applications in health information. Hospital computer systems, ambulatory care systems, community health networks and data base management systems including role of minicomputers and microprocessors. Prerequisite: HI 475. (spring)

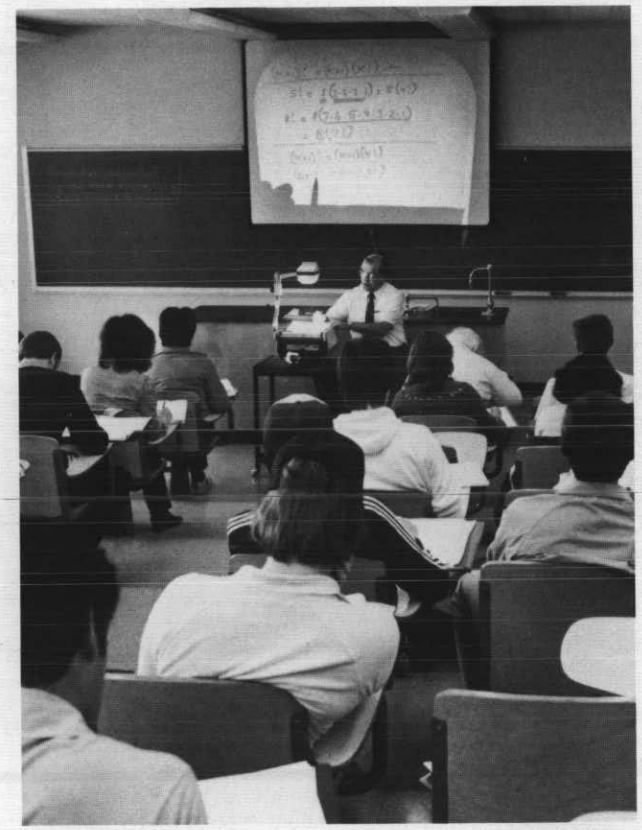
HI 477 **Health Information Computer Applications Laboratory** **2 credits**
Health information case analysis using computers and microprocessors. Corequisite: HI 476. (spring)

HI 480 **Problem Solving and Decision Making—Seminar** **2 credits**
(winter, spring)

HI 491 **Special Topics** **2-5 credits**
HI 492 **Special Topics** **2-5 credits**

HI 496 **Independent Study** **1-5 credits**

HI 497 **Independent Study** **1-6 credits**
Prerequisites: Senior standing; permission. (fall, winter, spring)



Mathematics

Mary B. Ehlers, Ph.D., Chairman

Objectives

The Mathematics Department offers training in three distinct programs. The first, leading to the Bachelor of Science in Mathematics, prepares the student for advanced study and professional work in mathematics. The others are more flexible programs which provide for work in a secondary field and lead to either the Bachelor of Arts or the Bachelor of Science degree.

Degrees Offered

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Mathematics

General Program Requirements

Students in mathematics must satisfy the core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy and theology and religious studies. Additional core requirements are as follows: for the Bachelor of Arts degree, 10 credits in history, 10 credits in social science and 15 credits in physical or life science, psychology or economics; Bachelor of Science degree, 15 credits in history or social science; and Bachelor of Science in Mathematics degree, 15 credits in history or social science. French or German is recommended to students planning to pursue graduate work. A minimum grade of C is required in all mathematics courses applied toward the major. See programs of study 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 in Mathematics degree. No special distinction will be made in the degree earned by students completing the program.

Departmental Requirements

Bachelor of Arts — 45 credits in mathematics which must include Mt 134, 135, 136, 233, 234, 315 or 381, 411 or 431 and 10 additional credits of approved upper division mathematics; ECS 113 or 114. General physics is recommended.

Bachelor of Science — 60 credits of mathematics or computer science of which at least 15 credits are in approved upper division courses and 30 credits of physical science, psychology or economics.

Bachelor of Science in Mathematics — 70 credits in mathematics which must include Mt 134, 135, 136, 233, 234, 411, 412, 413, 431, 432, 433; 15 additional credits in upper division mathematics; and 15 credits of physics, economics or computer science. In certain circumstances, with the approval of the 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.

Undergraduate Minor — 30 credits in mathematics which must include MT 134, 135, 136 and 15 credits of approved mathematics electives beyond college algebra.

Teaching Major (School of Education) — 45 credits in mathematics which must include Mt 134, 135, 136, 233, and 321 or 322 and 20 credits of approved mathematics or computer science elective beyond college algebra.

Bachelor of Arts

Freshman year

English 110 and core option	10 credits
History core option	10 credits
Mathematics 134, 135, 136	15 credits
Philosophy 110	5 credits
Social Science core option	5 credits

Sophomore year

Computer Science 113 or 114	5 credits
Mathematics 233, 234	10 credits
Philosophy 220 and core option	10 credits
Physical or Biological Science, Psychology or Economics	15 credits
Social Science core option	5 credits

Junior year

French or German 105, 106	10 credits
Mathematics 315 or 381 and electives	10 credits
Theology core options	10 credits
Electives	15 credits

Senior year

Mathematics 411 or 431 and elective	10 credits
Electives	35 credits
Total	180 credits

Bachelor of Science

Freshman year

Mathematics	15 credits
English 110 and core option	10 credits
History or Social Science core option	5 credits
Philosophy 110	5 credits
Physical Science, Psychology or Economics	10 credits

Sophomore year

Mathematics	15 credits
History or Social Science core option	10 credits
Physical Science, Psychology or Economics	10 credits
Philosophy 220 and core option	10 credits

Junior year

Mathematics or Computer Science	15 credits
Physical Science, Psychology or Economics	10 credits
Theology core options	10 credits
Electives	10 credits

Senior year

Mathematics or Computer Science	15 credits
Electives	30 credits
Total	180 credits

Bachelor of Science in Mathematics

Freshman year

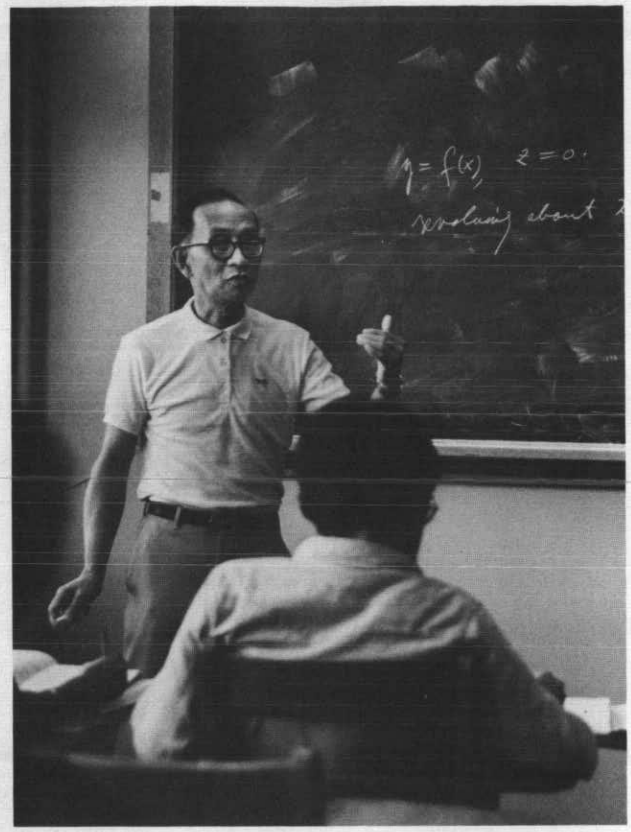
English 110 and core option	10 credits
History/Social Science core options	15 credits
Mathematics 134, 135, 136	15 credits
Philosophy 110	5 credits

Sophomore year

Mathematics 233, 234, and 315 or 381	15 credits
Philosophy 220 and core option	10 credits
Physics 200, Economics 200 or ECS 114	5 credits
Electives	15 credits

Junior year

Mathematics 411, 412, 413 or 431, 432, 433	15 credits
Physics 201, 202, Economics 271, 272 or 201, 210	10 credits
Theology core options	10 credits
Electives	10 credits



Senior year

Mathematics 431-432-433 or 411-412-413 and electives ..... 25 credits
Electives ..... 20 credits

Total . . . . 180 credits

Proper Sequence for Taking Courses

The normal sequence of elementary mathematics courses is Mt 101; Mt 112 or Mt 118; Mt 130, Mt 131 or Mt 134; Mt 135; Mt 136; Mt 233; and Mt 234. A student, who has received a C or better in any course of this sequence or its equivalent, cannot receive credit for a course which appears before it in the sequence. A student may not receive credit for more than two courses among Mt 101, Mt 175, and Mt 200. A student may not receive credit for more than one course from each of the following groups: Mt 112 and 118; Mt 130, Mt 131 and Mt 134.

Mathematics Courses

Mt 101 **Intermediate Algebra** **5 credits**
Sets and numbers, polynomials, fractions, linear equations and inequalities, exponents, quadratic equations and inequalities; systems of equations; functions and graphing. Prerequisite: One year each of high school algebra and geometry.

Mt 112 **College Algebra and Trigonometry** **5 credits**
Sets; relations; algebra of functions; exponential, logarithmic, trigonometric, inverse trigonometric functions; equations; graphs. Prerequisite: Mt 101 or one-and-one-half years of high school algebra. (fall, winter, spring)

Mt 118 **College Algebra for Business** **5 credits**
Sets; relations and functions, graphing; linear, quadratic, exponential, logarithmic functions; systems of linear equations; inequalities; linear programming; applications to business. Prerequisite: Mt 101 or equivalent. (fall, winter, spring)

Mt 130 **Elements of Calculus for Business** **5 credits**
Rate of change; derivative, basic differentiation formulas, extrema; area under a curve; limits of sequences; the definite integral and applications. Prerequisite: Mt 118. (fall, winter, spring)

Mt 131 **Calculus for Life Sciences** **5 credits**
Limits; rate of change; derivatives, basic differentiation formulas, extrema; the definite integral. Applications to the Life and Social Sciences. Prerequisite: Mt 112 or equivalent. (Spring)

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. Review of precalculus subjects; limits and derivatives; applications of limits and derivatives. II. Theory, technique, and applications of integration; differentiation and integration of trigonometric, exponential and logarithmic functions. III. Indeterminate forms; improper integrals; infinite series; Taylor's theorem; vectors, polar coordinates; solid analytic geometry. Prerequisites: Mt 112 or qualifying examination for 134; 134 for 135; 135 for 136. (All three offered fall, winter, spring)

Mt 175 **Mathematics for the Liberal Arts Student** **5 credits**
Elementary logic; sets, relations and functions; topics chosen from geometry, abstract algebra, linear algebra, computer science, statistics and probability. Satisfies core requirement. (fall, winter, spring)

Mt 200 **Theory of Arithmetic** **5 credits**
Systems of numeration; elementary logic; sets; relations, equivalence classes; number systems and the integration of these concepts. Prerequisite: Mt 101 or 175, or equivalent. (fall, winter)

Mt 232 **Multivariable Calculus** **3 credits**
Partial derivatives, multiple integration, and applications. Prerequisite: Mt 136. Credit not granted for both Mt 232 and Mt 233. (fall, winter)

Mt 233 **Multivariable Calculus and Linear Algebra** **5 credits**
Partial derivatives, multiple integration and applications; matrices, derminants, vector spaces, linear transformations. Prerequisite: Mt 136. (fall, winter, spring)

Mt 234 **Differential Equations** **5 credits**
First and second order differential equations; linear differential equations; systems of differential equations; power series solutions. Prerequisite: Mt 233 (fall, winter, spring)

Mt 291 **Special Topics** **1-5 credits**
Mt 292 **Special Topics** **1-5 credits**
Mt 293 **Special Topics** **1-5 credits**

Mt 296 **Independent Study** **1-5 credits**

Mt 300 **Methods for Secondary** **5 credits**

Mt 315 **Number Theory** **5 credits**
Divisibility and the Euclidean algorithm; congruences; quadratic reciprocity law; numerical functions; the Mobius inversion formula. Prerequisite: Mt 135.

Mt 321 **Foundations of Euclidean Geometry** **5 credits**
Axiomatic foundations of Euclidean geometry; ruler and compass constructions; problems of antiquity; the 5th postulate and non-Euclidean geometries. Prerequisite: Mt 135.

Mt 322 **Topics in Geometry** **5 credits**
Selected topics in Advanced Geometry. 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; finite differences, numerical integration; numerical solution of differential equations. Three lecture and two computer laboratory hours per week. Prerequisites: Mt 136 and ECS 113 or 114.

Mt 381 **Elementary Topology** **5 credits**
Set theory; topology of the real line; topological spaces; compactness; connectedness; product spaces; metric spaces. Prerequisite: Mt 233. (spring of alternate years)

Mt 411 **Introduction to Abstract Algebra I** **5 credits**
Mt 412 **Introduction to Abstract Algebra II** **5 credits**
Mt 413 **Introduction to Abstract Algebra III** **5 credits**
Theory of groups, rings, fields and field extensions; vector spaces and linear transformations; special topics. Prerequisites: Permission for 411; 411 for 412; 412 for 413. (offered in sequence: fall, winter, spring of alternate years)

Mt 431 **Introduction to Real Analysis I** **5 credits**
Mt 432 **Introduction to Real Analysis II** **5 credits**
Mt 433 **Introduction to Real Analysis III** **5 credits**
Rigorous introduction to real analysis; limits, continuity, differentiation of real functions; functions on metric spaces; applications of compactness and connectedness; Riemann-Stieltjes integrals; sequences and series of functions; elements of Lebesque theory. Prerequisites: Permission for 431; 431 for 432; 432 for 433. (Offered in sequence: fall, winter, spring of alternate years)

Mt 437 **Introduction to Complex Variables** **5 credits**
The complex number system, analytic functions, integration, series, residues, conformal mapping. Prerequisite: Mt 234.

Mt 491 **Special Topics** **2-5 credits**
Mt 492 **Special Topics** **2-5 credits**
Mt 493 **Special Topics** **2-5 credits**
May be repeated for a maximum of 12 credits. Prerequisite: Permission.

Mt 497 **Independent Study** **1-5 credits**
Mt 498 **Independent Study** **1-5 credits**
Mt 499 **Independent Study** **1-5 credits**
May be repeated for a maximum of 10 credits. Prerequisite: Permission.

Mechanical Engineering

Robert F. Viggers, 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, and 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 radiation, 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.

The mechanical engineering program provides a broad engineering base, combining both theoretical and laboratory training.

Degrees Offered

Bachelor of Engineering
Bachelor of Mechanical Engineering
Certificate in Transportation Engineering — See Graduate Bulletin
Master of Transportation Engineering — See Graduate Bulletin

General Program Requirements

Students in mechanical engineering must satisfy core curriculum requirements of the University as given on page 18 of this bulletin for English, philosophy and theology and religious studies. Ten credits of history or social science are required.

Departmental Requirements

Bachelor of Mechanical Engineering — 66 credits in mechanical engineering which must include EML 105, 113, 281, 321, (or Ch 361, 363), 371, 380, 425, 426, 430, 472, 473, 484, 485, 487, 488 and 489. Also required are Mt 134, 135, 136, 233 and 234; ECL 321, 323, 331, 337 and 402; EEL 315; Ph 200, 201 and Ph 202 (or Ch 122, 132). With approval, qualified students may substitute equivalent or more advanced courses for those listed. This degree is approved by the Accreditation Board for Engineering and Technology. Required 300 level courses have Junior ME standing as a prerequisite except EML 430.

Bachelor of Engineering — 55 credits in engineering, 25 credits in mathematics, at least 3 credits in computer science, and at least 10 credits in physics, chemistry or biology. Not intended to be an entry-level degree into the engineering profession.

Bachelor of Mechanical Engineering

Freshman year

English 110 and core option	10 credits
Mathematics 134, 135, 136	15 credits
Mechanical Engineering 105, 113	10 credits
Physics 200	5 credits
Philosophy 110	5 credits

Sophomore year

Chemistry 121, 131	5 credits
Computer Science 230	3 credits
History/Social Science elective	5 credits
Mathematics 233, 234	10 credits
Mechanical Engineering 281	5 credits
Philosophy 220	5 credits
Physics 201, 202	10 credits
Theology core option	5 credits

Junior year

Civil Engineering 321, 323, 331, 337	17 credits
Electrical Engineering 315	5 credits
Mechanical Engineering 321 or Chemistry 361, 363, and ME 371, 380	14 credits
Philosophy core option	5 credits
Theology core option	5 credits

Senior year

Civil Engineering 402	3 credits
History/Social Science elective	5 credits
Mechanical Engineering 425, 426, 430, 472, 473, 484, 485, 487, 488, 489	37 credits
Total	184 credits

Mechanical Engineering Courses

EML 105 Engineering Graphics and Analysis **5 credits**
Engineering Communication. Drafting instruments, lettering, orthographics, isometrics, free-hand sketching, dimensioning. Descriptive geometry. Vector algebra. Elementary programming. Five two-hour sessions per week.

EML 113 Statistics **5 credits**
Vector algebra. Equilibrium of forces and moments, distributed factors, hydrostatics, friction, virtual work; all applied to simple bodies. Four lectures, one-hour problem session per week. Prerequisites: Mt 135, Ph 200.

EML 281 Dynamics **5 credits**
Vectors applied to kinematics and kinetics. Particle, system of particles, and rigid bodies related to translation, rotation, plane motion, relative motion, forces. Impulse-momentum, work, energy. Four lecture hours, one-hour problem session. Prerequisites: EML 113, Mt 136, Ph 200. (winter)

EML 291 Special Topics **1-5 credits**
EML 292 Special Topics **1-5 credits**
EML 293 Special Topics **1-5 credits**

EML 321 Engineering Thermodynamics **5 credits**
Thermal properties of ideal and real gases, liquids, vapors and mixtures. Conservation of energy. Convesion of thermal energy to work. Power, efficiency, cycles, compressible gas flow. Prerequisite: ECL 331.

EML 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. Prerequisites: ECL 323, 331.

EML 380 Heat Transfer I **5 credits**
Heat transfer — conduction, convection, and radiation. Conduction in one and two dimensions, steady state and transient. Forced and natural convection with phase change. Applications. Four lecture hours, one four-hour laboratory per week. Prerequisite: EML 321.

EML 425 Power Plants I **5 credits**
Thermodynamics applied to ideal and real cycles, internal and external combustion engines, fans, blowers, compressors, nozzles, refrigeration, air conditioning, liquifaction of gases. Four lectures, one four-hour laboratory per week. Prerequisite: EML 321.

EML 426 Power Plants II **5 credits**
Thermodynamics, heat transfer, fluid mechanics applied to design of modern thermal power stations and auxiliaries with economic and ecologic integration into regional power systems. Four lectures, one four-hour laboratory per week. Prerequisite: EML 425, EML 380.

EML 428 Environmental Engineering **4 credits**
Man-machine systems. Engineer's approach to multi-disciplinary aspects of environmental control. Psychological and physiological principles of one's interrelation with the surroundings. Three lectures, one four-hour laboratory per week. Prerequisite: EML 321.

EML 430 Principles of the Properties of Materials I **5 credits**
Atomic structure. Metallic bond. Structure of metals and non-metals. Equilibrium diagrams. Time-dependent transformations. Relation of structure to properties. Elastic and plastic deformation. Four lectures, one four-hour laboratory per week. Prerequisite: Junior engineering standing.

EML 472 Machine Design II **3 credits**
EML 473 Machine Design III **3 credits**
EML 474 Machine Design IV **1-5 credits**
II. Philosophy of design, a creative approach, and a comprehensive design project; planning, organizing and leading an engineering project; exercising judgment and considering economic factors. III. Integrated aspects of creative design and analysis; case studies; design of a novel device or system; electromechanical, hydraulic and pneumatic systems; energy conversion. IV. Project work. Prerequisites: EML 371 for 472; 472 for 473; 473 for 474.

EML 477 Experimental Mechanics **1-5 credits**
Measurements by means of mechanical, electric, magnetic, optical sensing devices. Control systems. Vibration, shock and impact measurements. Interpretation of results. Prerequisites: ECL 337, EML 371.

EML 478 Compressible Flow **5 credits**
One-dimensional gas dynamics including flow in nozzles and diffusers, normal shocks, frictional flows and flows with heat transfer and energy release. Prerequisites: ECL 331, EML 321.

EML 479 Theoretical Hydrodynamics **5 credits**
Ideal fluid motion. Euler's equation. Potential flow. LaPlace equation. Hydrodynamics singularities, two and three dimensional flow. Conformal transformation. Flow around objects. Prerequisite: Permission.

EML 481 Heat Transfer II **5 credits**
Advanced topics in conduction, convection, and radiation. Mass transfer and diffusion. Four lectures, one four-hour laboratory per week. Prerequisite: EML 380.

EML 484 Linear Systems Analysis **5 credits**
Dynamics of linear systems. Classical and transform methods of differential equation analysis. Experimental methods. Analog and digital computer methods. Four lectures, one four-hour laboratory per week. Prerequisite: Junior engineering standing, EEL 315.

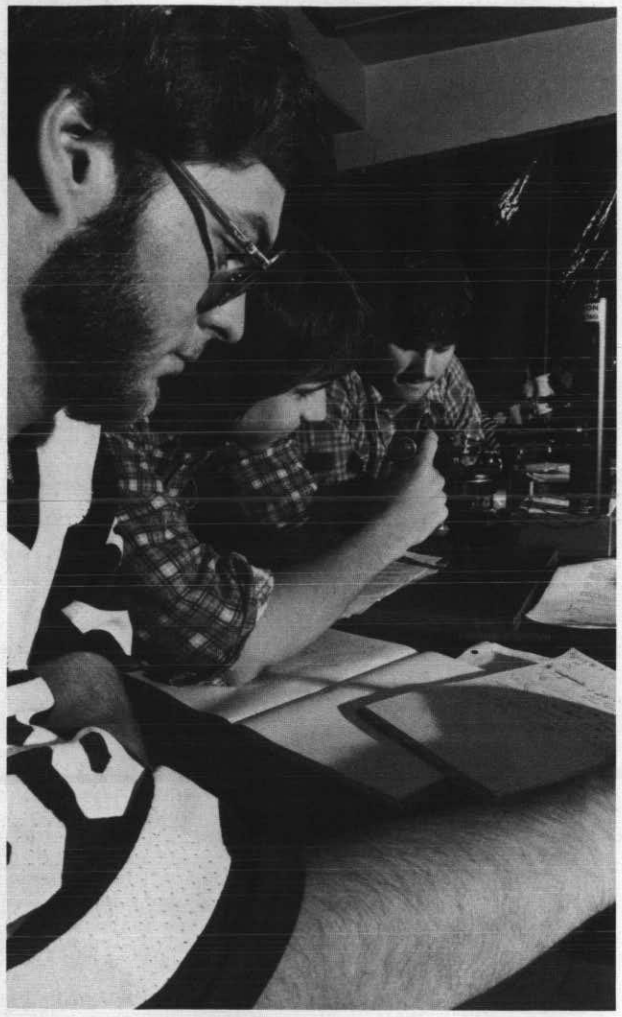
EML 485 Control Systems **5 credits**
Feedback control system analysis. System elements and their transform functions. Criteria and plots. Analog and digital computer simulation. Four lectures, one four-hour laboratory per week. Prerequisite: EML 484 (spring)

EML 487 Seminar 1 **2 credits**
EML 488 Seminar 2 **2 credits**
EML 489 Seminar 3 **2 credits**
Development of oral and written communication skills through preparation and presentation of a technical paper. Prerequisite: Senior ME standing.

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

EML 495 Thesis **1-6 credits**
In special cases a thesis may be substituted in place of seminar with the approval of the department chairman. Prerequisite: Senior ME standing.

EML 496 Independent Study **1-5 credits**
EML 497 Independent Study **1-5 credits**
EML 498 Independent Study **1-5 credits**
Selected subjects of current interest in mechanical engineering; assigned reading and/or experiments on an individual basis in consultation with the instructor; written report and oral delivery required. Prerequisite: Senior ME standing.



Physics

Reed A. Guy, Ph.D., Chairman

Objectives

The Physics department offers two degree programs. For those who wish a career in physics, the Bachelor of Science in Physics program takes the student from classical mechanics through quantum mechanics, including advanced laboratory courses emphasizing nuclear and nuclear reactor physics. This curriculum is designed to prepare students for advanced work in pure and applied physics or for graduate study. The Bachelor of Arts program is ideal for those who desire a solid background in physics along with a broad liberal arts education.

Degrees Offered

Bachelor of Arts
Bachelor of Science in Physics

General Program Requirements

Students majoring in physics must satisfy the core curriculum requirements of the University as given on page 18 of this Bulletin, except that for the Bachelor of Science in Physics degree, 15 credits of history and/or social science are required.

Bachelor of Arts — 45 credits in physics which must include Ph 200, 201, 202, 204, 205, 310, 330 and 375. A minimum of 15 additional credits in a related science is required.

Bachelor of Science in Physics — 60 credits in physics, which must include Ph 200, 201, 202, 204, 205, 310, 311, 330, 481, and 485. Ten credits, approved by the student's adviser, in related science are required. Mathematics 134, 135, 136, 233, and 234 are required. Ph 110 and 111 may not be counted toward the 60 credits.

Teaching Major (School of Education) — 45 credits in physics and mathematics; 30 credits in physics which must include Ph 105, 106, 107, 110, and 10 elective credits. Ph 200, 201, 202 may be taken in place of 105, 106, 107 for those students who desire a more rigorous background in general physics. The required 15 credits in mathematics must include 10 credits in calculus and computer. (Mt 134, ECS 114).

Undergraduate Minor — 30 credits in physics which must include either Ph 105, 106, 107 or Ph 200, 201, 202, 204, 205, Ph 110, and 111 may not be counted toward the minor.

Bachelor of Science in Physics

Freshman year

Physics 200	5 credits
Mathematics 134, 135, 136	15 credits
Core options	20 credits
Electives	5 credits

Sophomore year

Physics 201, 202, 204, 205	15 credits
Mathematics 233, 234	10 credits
Core options	15 credits
Electives	5 credits

Junior year

Physics 310, 311, 330, 331	16 credits
Physics elective	5 credits
Related science elective	5 credits
Core options	10 credits
Electives	9 credits

Senior year

Physics 481, 485	10 credits
Physics electives	9 credits
Related science elective	5 credits
Core options	5 credits
Electives	16 credits
Total	180 credits

Physics Courses

Note: Ph 105, 106, 107, 200, 201, 202, 290, 375, and 475 have four lectures and one laboratory per week.

Ph 105 Mechanics and Sound **5 credits**
Non-calculus survey of classical mechanics. Statics, kinematics, and dynamics of particles and systems; fluids; harmonic motion, waves, and sound. Prerequisite: Mt 112 or equivalent. (fall)

Ph 106 **Electricity, Magnetism and Thermodynamics** **5 credits**
Survey of electromagnetism. Electrostatics, magnetostatics, electromagnetic fields, dc and ac circuits, introduction to thermodynamics. Prerequisite: Ph 105. (winter)

Ph 107 **Survey of Modern Physics** **5 credits**
Optics, including reflection, refraction, interference, diffraction and polarization. Introduction to atomic and nuclear physics. Prerequisite: Ph 106 (spring).

Ph 110 **Introduction to Astronomy of the Solar System** **5 credits**
Apparent motions of heavenly bodies. Real motions and physical properties of the sun, moon, planets, and minor bodies of the solar system; telescopic observation available. Core science option.

Ph 111 **Introductory Stellar Astronomy** **5 credits**
Survey of the nature and evolution of the stars; neutron stars, pulsars, black holes; nebulae, galaxies, quasars; the origin and evolution of the universe; telescopic observation available. Core science option.

Ph 200 **Mechanics** **5 credits**
Vector mathematics; kinematics; conservation of momentum and collisions; relative motion and reference frames; force and Newton's laws; work, energy, and power; rotational dynamics; rigid body motion, gravitation. Prerequisite: Mt 134.

Ph 201 **Electricity and Magnetism** **5 credits**
Electric charge, forces, fields, flux; Gauss' law; electric potential; conductors, dielectrics, capacitance; current and resistance; DC circuits; magnetic forces, fields; inductance. Prerequisites: Ph 200 and Mt 135.

Ph 202 **Waves, Optics and Thermodynamics** **5 credits**
Harmonic Motion; mechanical and electromagnetic waves; reflection, refraction, dispersion, interference, diffraction and polarization. Temperature, ideal gases, kinetic theory, second law of thermodynamics. Prerequisite: Ph 201.

Ph 204 (203) **Relativity and Kinetic Theory** **2 credits**
An introduction to special relativity and the kinetic theory of matter. Prerequisites: Ph 201 and Mt 135.

Ph 205 (203) **Introduction to Quantum Physics** **3 credits**
Evidence for the quantization of light, matter, and energy; the nuclear atom; wave-particle duality; the uncertainty principle; the Schrodinger equation and its applications. Prerequisites: Ph 202 and Mt 136.

Ph 290 **Measurement and Instrumentation Fundamentals** **5 credits**
Measurement of quantities such as flow, position, strain, radiation, velocity, current, power, temperature, voltage. Conversion by transducers into electrical signals and processing for recording, observation or control. Prerequisites: Mt 134 and Ph 106 or 201.

Ph 291 **Special Topics** **1-5 credits**
Ph 292 **Special Topics** **1-5 credits**
Ph 293 **Special Topics** **1-5 credits**

Ph 296 **Independent Study** **1-5 credits**
Ph 297 **Independent Study** **1-5 credits**
Ph 298 **Independent Study** **1-5 credits**
Directed reading and/or lectures at a lower division level. Prerequisite: Permission of instructor.

Ph 310 **Intermediate Mechanics I** **5 credits**
Vector calculus; kinematics of a particle; one-dimensional motion of a particle; two and three dimensional dynamics of a particle; moving reference systems; central forces and celestial mechanics. Prerequisites: Ph 200, Mt 234.

Ph 311 **Intermediate Mechanics II** **3 credits**
General motion of a rigid body; Lagrange's equations; small vibrations. Prerequisite: Ph 310.

Ph 330 **Electromagnetic Field Theory** **5 credits**
Static electric fields in vacuum and material media; solutions of Laplace's and Poisson's equations in curvilinear coordinates; static magnetic fields; time-varying fields and Maxwell's equations. Prerequisites: Ph 201, Mt 234.

Ph 331 **Electromagnetic Field** **3 credits**
Derivations and solutions of wave equations; plane waves in vacuum and material media; electro magnetic fields and waves. Prerequisite: Ph 330.

Ph 350 **Acoustics** **3 credits**
Oscillation; waves; reflection and refraction of sound waves; attenuation; superposition of acoustical waves; ultrasonics. Prerequisites: Ph 107 or equivalent, Mt 131 or 134, enrollment in Allied Health Technology or permission.

Ph 361 **Solid State Physics and Devices** **5 credits**
Crystal structure and defects; interatomic binding; thermal and electrical properties; energy bands, carrier statistics and carrier transport phenomena. Semiconductor devices. Prerequisite: Ph 205.

Ph 375 **Nuclear Instrumentation** **5 credits**
Ionizing radiation. Nuclear decay processes, interaction of radiation with matter, instrumentation for the detection of photons, charged particles, and neutrons. Prerequisite: Ph 107 or Ph 205.

Ph 391 **Special Topics** **1-5 credits**
Ph 392 **Special Topics** **1-5 credits**
Ph 393 **Special Topics** **1-5 credits**

Ph 396 **Independent Study** **1-5 credits**
Ph 397 **Independent Study** **1-5 credits**
Ph 398 **Independent Study** **1-5 credits**

Ph 470 **Nuclear Physics** **5 credits**
Structure and properties of nuclei and elementary particles; symmetries and conservation laws; electromagnetic, weak, and hadronic interactions; nuclear models. Prerequisite: Ph 204, 205, Mt 234, or permission.

Ph 475 **Nuclear Fission and Fusion Reactors** **5 credits**
Physics of fission and fusion reactors; experiments on operational parameters of fission reactors. Discussion of environmental impact. Prerequisites: Ph 204, 205 and junior standing or permission.

Ph 481 **Theoretical Physics** **5 credits**
Topics in theoretical physics selected from statistical, thermal, and modern physics. Prerequisites: Ph 204, 205 and Mt 234; and 330.

Ph 485 **Quantum Mechanics** **5 credits**
Wave-particle duality, the state function, the Schrodinger equation, one-dimensional problems, the operator formalism, matrices, central forces, angular momentum, spin, identical particles. Prerequisites: Ph 204, 205 and Mt 234, or permission.

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

Ph 496 **Independent Study** **1-5 credits**
Ph 497 **Independent Study** **1-5 credits**
Ph 498 **Independent Study** **1-5 credits**

Premedical and Predental

Thomas W. Cunningham, Ph.D., Adviser

Students wishing to enter professional schools of human, dental, or veterinary medicine or graduate schools in biomedical studies, should matriculate in a program of studies leading to a bachelor's degree in any academic field which will give a broad training in the liberal arts and allow them to fulfill the proper requirements in the physical and biological sciences. Premedical students may choose any academic major; most students elect biology, chemistry, physics, general science or psychology. Within the framework of any one of the degree programs, students obtain strong backgrounds in the liberal arts through the core curriculum. For further clarification of degree requirements and the core curriculum, see page 18 of this bulletin.

Most medical, dental or veterinary schools require the following undergraduate science sequences: Chemistry 121, 122, 123, 131, 132, 133, 241, 242, 243, 251, 252; Biology 165, 166, 167, 310 and 326, 327 or 280, 330 (Bl 300 is required for pre-dental students); and Physics 105, 106, 107. Bl 270, 231 and 350 are highly recommended. Professional schools also recommend calculus, biochemistry, or physical chemistry. Students are advised to consult the bulletins of the professional schools to which they wish to apply to acquaint themselves with specific requirements other than those listed. Students should plan to complete preprofessional requirements by the end of their junior year, at which time they should take the MCAT or DAT tests. Application for admittance to professional schools should be made during the summer or fall of the senior year.

Software Engineering

Kyu Y. Lee, Ph.D., Chairman

Objectives

The Software Engineering Department exists to meet the growing demand for trained software engineering professionals, both technical and managerial. In addition to the Master of Software Engineering degree, the Department offers an undergraduate minor in computer science.

Degrees Offered

Master of Software Engineering — see Graduate Bulletin.

Departmental Requirements

Computer Science Undergraduate Minor — 30 credits in computer science which must include ECS 113 or 114; 201 (or BUS 460); 210 or 220; 310; 320; and 420.

Computer Science Courses

ECS 113 Fundamentals of BASIC Programming 5 credits
Introduction to the BASIC language. Overview of data management, hardware, languages, and trends in computer usage. Laboratory using the computer center, four lecture and one laboratory hours per week. (fall, winter, spring)

ECS 114 Fundamentals of FORTRAN Programming 5 credits
FORTRAN language including flowcharting, debugging, input/output, loops, sub-programs. Laboratory programming assignments in a variety of disciplines. Four lecture and one laboratory hours per week. Prerequisite: Mt 101 or equivalent. (winter, spring)

ECS 201 Introduction to Computer Science 5 credits
Fundamentals of computing and computer science. Algorithms, programs, information representation, and computer organization are introduced. Prerequisite: ECS 113 or ECS 114.

ECS 210 Intermediate Programming with PASCAL 5 credits
More advanced concepts and techniques of programming are introduced. Students will use the PASCAL level language to write intermediate level programs. Four lecture and one laboratory hours per week. Prerequisite: ECS 201, Mt 135.

ECS 220 Intermediate Programming with COBOL Programming 5 credits
Language designed for business application. Four lecture and one laboratory hours per week. Prerequisite: ECS 113 or ECS 114.

ECS 230 Fortran for Engineers 3 credits
Fortran language including flowcharting, debugging, input/output, loops, arrays, and sub-programs. Introduction to numerical techniques. Laboratory programming assignments will be drawn primarily from the fields of engineering. Prerequisites: EML 281 and Mt 233.

ECS 310 Fundamentals of Data Structures 5 credits
Basic concepts of data, linear, lists, linked lists, and arrays, representation of trees and graphs; storage systems and structures, storage allocation and collection techniques. Applications to computing such as internal sorting and symbol table searching techniques. Prerequisite: ECS 210 or 220; Mt 130, 131 or 134.

ECS 320 File Structures 5 credits
Record and file structures, characteristics of storage media, file manipulation techniques. Sequential, random, and indexed sequential files. Introduction to database systems. Four lecture and one laboratory hours per week. Prerequisite: ECS 310.

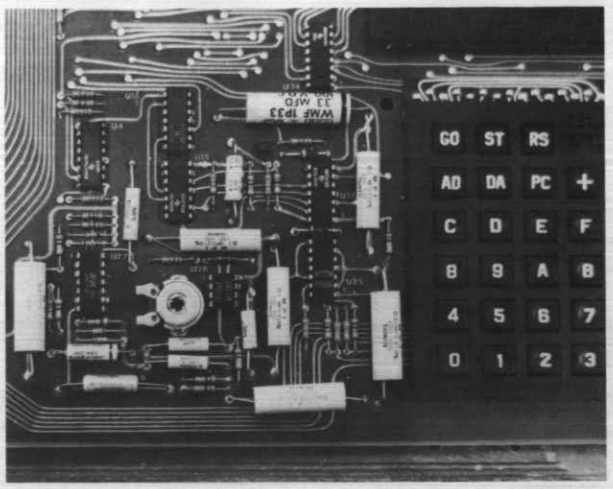
ECS 391 Special Topics in Computer Science 1-5 credits

ECS 396 Independent Study 1-5 credits
ECS 397 Independent Study 1-5 credits
ECS 398 Independent Study 1-5 credits
Prerequisite: Permission

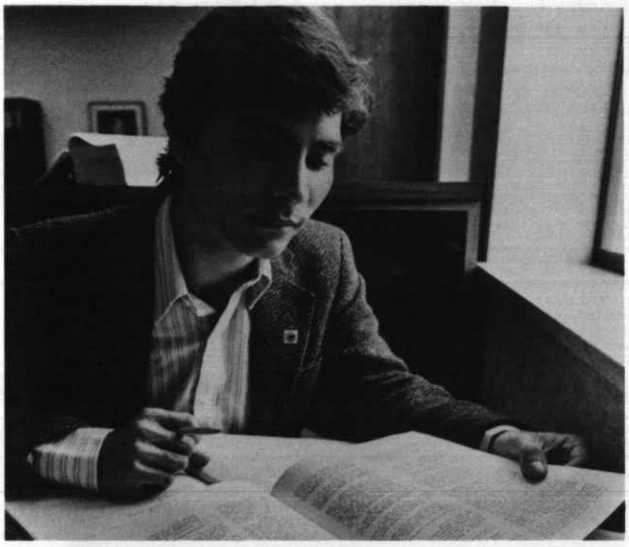
ECS 420 Introduction to Database Systems 3 credits
Needs of database management systems (DBMS). Survey of DBMS and their use. Database architecture and design. Lecture and laboratory. Prerequisite: ECS 320

ECS 491 Special Topics in Computer Science 1-5 credits

ECS 496 Independent Study 1-5 credits
ECS 497 Independent Study 1-5 credits
ECS 498 Independent Study 1-5 credits
Prerequisite: Permission



Graduate School



Graduate School

Marylou Wyse, Ph.D., Dean

Graduate studies directed toward the master's degree were first offered at Seattle University in 1910 in a division of its College of Arts and Sciences. In 1935, graduate courses became an integral part of the University's teacher education program. As the demand for specialization increased, additional graduate programs were devloped. In 1976, the first doctoral program was implemented, and in 1980 the educational specialist degree was approved.

Objectives

Graduate programs endeavor to offer advanced in-depth education to individuals seeking specialized knowledge and skills in a particular field. Graduate students are encouraged to develop high level thinking abilities including application and synthesis which, in turn, can be translated into effective speaking and writing. Expertise in the examination of ethical and value-laden issues in various fields is an important component of graduate education at Seattle University.

Efforts are made to stimulate participants' curiosity while at the same time providing the investigative skills needed to seek answers to challenging questions. It is hoped that individuals who complete graduate programs will have developed personal and professional competencies that will contribute to the improvement of their field and to the betterment of those whom they serve.

Organization

The Dean of the Graduate School and the Graduate Council are responsible for administration of the Graduate School and supervision of all programs leading to the master's educational specialist and doctoral degrees. The Dean of the Graduate School and the Council establish and maintain requirements for degrees according to the recommendations of the graduate committee of each school of the University.

The component schools and various departments provide courses of instruction for graduate students, direct their studies, conduct examinations, maintain requirements and make recommendations. Academic transactions involving admission, registration and awarding of degrees are supervised by the University's Registrar. Actual admission to graduate study is granted through the Dean of the Graduate School in consultation with the appropriate graduate program director.

Degrees Offered

For admission and program requirements see the Seattle University Graduate Bulletin.

Graduate Degrees offered by the University are:

ARTS AND SCIENCES
- Master of Arts—Psychology
- Master of Arts—Rehabilitation
- Master of Ministry (summer only)
- Master of Pastoral Ministry
- Master of Religious Education (summer only)

BUSINESS
- Master of Business Administration

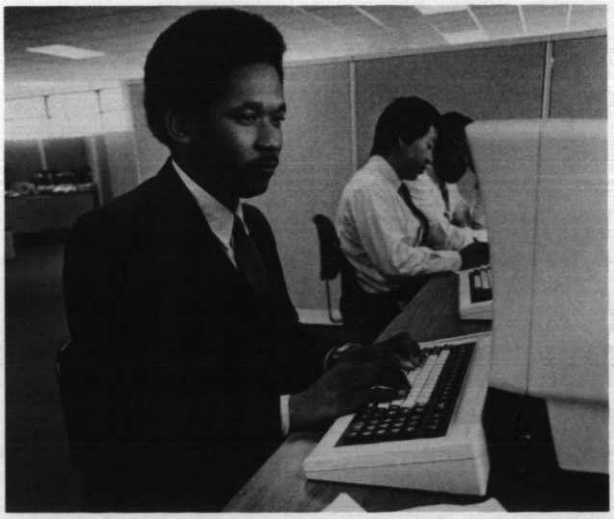
EDUCATION
- Master of Arts in Education
- Master of Education

  These two degrees may be earned with specialization in the following areas: administration, counseling, curriculum and instruction.
- Master of Counseling
- Educational Specialist

  This degree may may be earned in Administration or Educational Diagnostics/School Psychology.
- Doctor of Education

PUBLIC SERVICE
- Master of Public Administration

SCIENCE AND ENGINEERING
- Master of Software Engineering
- Master of Transportation Engineering



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Seattle, Washington

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Dean, School of Science and Engineering

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Acting Director, Institute of Public Service

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Assistant to the Vice President for
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Director, Continuing Education and Summer School

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Director, General Studies

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University Librarian

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Kip Toner, B.C.S., Business Manager

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David W. Boisseau, M.D. Director, Health Center

Minnie A. Collins, M.A. Director, Minority Student Affairs

Curt DeVere, B.A. International Student Adviser

William Eddy, M.A. Director, Child Care Center

Lyle Geels, G.A. Director, Saga Food Service

Joan Harte, O.P., M.Ed., M.F.A., M.A.
Director, Campus Ministry

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Director, McGoldrick Center and Career Planning

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Director, Resident Student Services

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Al Zappelli, B.A., Director of Alumni Relations

FACULTY

The dates following faculty names indicate initial and subsequent appointments or return from leave to the University faculty. Asterisks preceding names denote faculty members on leave of absence. Daggers (†) following names indicate Graduate School faculty members.

Clarence L. Abello, B.Econ. (1953)
Professor Emeritus
B.Econ., 1933, University of London; Contrador Publico Nacional, 1937, Universidad Nacional de Buenos Aires, Facultad de Ciencias Economicas.

Josef C. Afanador, Ed.D. (1975)†
Associate Professor of Rehabilitation
B.A., 1963, Butler University; M.S., 1967, Purdue University; Ed.D., 1971, University of Arizona.

Richard H. Ahler, S.J., S.T.D. (1977)†
Chairman, Theology and Religious Studies
Associate Professor of Theology and Religious Studies
A.B., 1954, Ph.L., 1956, St. Louis University; M.A., 1957, Marquette University; S.T.L., 1963, St. Louis University; S.T.D., 1975, Gregorian University.

Mary A. Alberg, Ph.D.. (1979)
Assistant Professor of Physics
B.A., 1963, Wellesley College; M.S., 1970, Ph.D., 1974, University of Washington.

Julian B. Andersen, Ph.D. (1970)†
Associate Professor of Business
A.S., 1958, Weber State College; B.S., 1960, Ph.D., 1966, Utah State University.

Gary L. Atkins, M.A. (1978)
Chairman, Journalism
Assistant Professor of Journalism
A.B., 1971, Loyola University; M.A., 1972, Stanford University

Engelbert M. Axer, S.J., Ph.D. (1941; 1955: 1971)
Professor Emeritus
A.B., 1930, Valkenburg, Holland; S.T.L., 1940, St. Louis University; M.A., 1941, Gonzaga University; Ph.D., 1949, Georgetown University.

Joan P. Baker, M.S.R.-R.D.M.S. (1977)
Director, Allied Health Technology
Assistant Professor of Allied Health
Member Society Radiographers, England, 1960; American Registry Diagnostic Medical Sonographers, 1975.

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; 1964; 1971)
Professor of Chemistry
A.B., 1944, M.A., 1945, Gonzaga University; S.T.L., 1952, Alma College; Ph.D., 1957, University of Notre Dame.

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Seattle University
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or, by calling the main switchboard at (206) 626-6200. Mail for student residence halls must be addressed to their respective locations.

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Director of Admissions/Records

Alumni

Alumni Association

Bulletins and Catalogs

Director of Admissions/Records

Campus Ministry

Director of Campus Ministry

Career Planning, Placement, and job finding assistance

Director of Career Planning and Placement

Correspondence relating to the general interest of the University

President

Counseling

Director of Counseling

Curriculum, scholastic problems, degree programs

The Dean of the particular school or Vice President for Academic Affairs

Degrees and Graduation

Registrar

Financial Aid, Scholarships, Grants, Loans, Work-Study Eligibility

Financial Aid Director

Foreign Students

Director of Admissions or International Student Adviser

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University Sports Director

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Teachers Certification and Teacher Placement

Dean, School of Education

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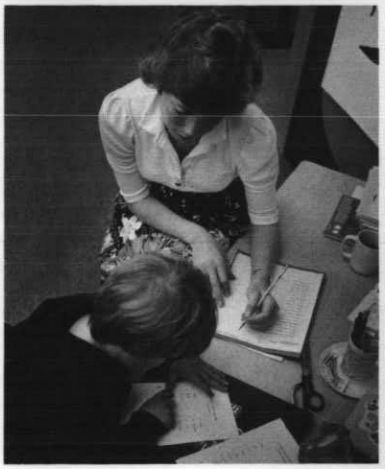
INDEX — with departmental course abbreviations in parenthesis



Seattle University

FOUNDED 1891