

The information contained herein reflects an accurate picture of Pacific Lutheran University at the tirne of publication.
However, the University reserves the right to make necessary changes in procedures, policies, calendar, curriculuin and costs.

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# academic calendar <br> Summer Session 1974 

Mionday, June 17
Thursday, July 4
Wednesday, July 17
Thursday, July 18
Friday, August 16
Friday, August 16

Fall Semester 1974

# Suriday, September 8 - Wednesday, September 11 

Thursday, September 12
Wednesday, November 27
Monday, December 2
Friday, December 20

Interim 1975

Monday, January 6<br>Friday, January 31

Begins
Ends

Spring Semester 1975

Wednesday, February 5
Thursday, February 6
Monday, February 17
Friday, March 21
Monday, March 31
Friday, May 23
Sunday, May 25

Classes Begin, 7:30 a.m. Independence Day Holiday<br>First Term Ends<br>Classes Begin - 2nd Term<br>Summer Session Closes<br>Worship Service and Commencement

## Orientation and Registration <br> Classes Begin, 7:50 a.m. <br> Thanksgiving Recess Begins, 12:30 p.m. Thanksgiving Recess Ends, 7:50 a.m. <br> Semester Ends

## Registration

Classes Begin, 7:50 a.m. Washington's Birthday Holiday
Easter Recess Begins, 6:00 p.m.
Easter Recess Ends, 4:30 p.m.
Semester Ends
Worship Service and Commencement

## academic <br> Summer Session 1975

 calendarMonday, June 16 Friday, July 4<br>Wednescday, July 16<br>Thursday, July 17<br>Friday, August 15<br>Friday, August 15

Fall Semester 1975

Classes Begin, 7:30 a.m.<br>Independence Day Holiday<br>First Term Ends<br>Classes Begin - 2nd Term<br>Summer Session Closes<br>Worship Service and Commencement

Sunday, September 7 - Wednesday, September 10
Thursday, September 11
Wednesday, Novernber 26
Monday, December 1
Friday, December 19

## Interim 1976

Monday. January 5
Friday, January 30

Begins
Ends

## Spring Semester 1976

Wednesday, February 4
Thursday, February 5
Monday, February 16
Friday, Apill 9
Monday, April 19
Friday, May 21
Sunday, May 23

## Registration

Classes Begin, 7:50 a.m. Washington's Birthday Holiday Easter Recess Begins, 6:00 p.m. Easter Recess Ends, 4:30 p.m. Semester Ends Worship Service and Commencement

## objectives of the university

Pacific Lutheran University, born of the Reformation spirit, maintains the privilege of exploration and learning in all areas of the arts, sciences, and religion. The basic concern of Martin Luther was religious, but his rejection of church tradition as primary authority, and his own free search for religious truth. served in effect to liberate the modern mind in its quest for all truth. The total impact of Luther's stand has permanently shaped the modern world and helped provide the modern university with its basic methodology.

Pacific Lutheran University is a community of professing Christian scholars dedicated to a philosophy of liberal education. The major goals of the institution are to inculcate a respect for learning and truth, to free the mind from confinements of ignorance and prejudice, to organize the powers of clear thought and expression, to preserve and extend knowledge, to help men achieve professional competence, and to establish lifelong habits of study, reflection and learning. Through an emphasis on the liberating arts, the University seeks to develop creative, reflective, and responsible persons. At the same time, the acquisition of specialized information and technical skill is recognized as a condition of successful involvernent in the modern
world. The University seeks to develop the evaluative and spiritual capacities of the student and to acquaint him honestly with rival claims to the true and the good. It encourages the pursuit of rich and ennobling experiences and the development of significant personhood through an appreciation of man's intellectual, artistic, cultural, and natural surroundings. The University affirms its fundamental obligation to confront liberally educated men with the challenges of Christian faith and to instill in them a true sense of vocation.

By providing a rich variety of social experiences, Pacific Lutheran University seeks to develop in the student a joy in abundant living, a feeling for the welfare and personal integrity of others, good taste, and a sense of social propriety and adequacy.
Distinguishing between personal Christian ethics and normal social controls, the University adopts only such rules as seem necessary for the welfare of the educational community.

The physical development of the student is regarded as an integral part of his liberal education. Hence the University encourages participation in physical activities and respect for health and fitness.

Professing a concern for the entire
nature of man, the faculty of the University encourages wholesome development of Christian faith and life by providing opportunities for worship and meditation, offering systematic studies of religion, and encouraging free investigation and discussion of basic religious questions. The University believes the essence of Christianity to be personal faith in God as Creator and Redeemer, and it believes that such faith born of the Holy Spirit generates integrative power capable of guiding men to illuminating perspectives and worthy purposes. The University community confesses the faith that the ultimate meaning and purposes of human life are to be discovered in the person and work of Jesus Christ.

As an educational arm of the Church, Pacific Lutheran University provides a locus for the fruitful interplay of Christian faith and all of human learning and culture, and as such holds it a responsibility to discover, explore, and develop new frontiers. Believing that all truth is God's truth, the University, in achieving its educational and spiritual goals, maintains the right and indeed the obligation of faculty and students to engage in an unbiased search for truth in all realms.

Adopted, 1963


## HISTORY:

Pacific Lutheran University was
founded in 1890 by men and women of of the Lutheran Church in the Northwest, and by Reverend Bjug Harstad in particular. Their purpose was to establish an institution in which their people could be educated. Education was a venerated part of the Scandinavian and German traditions from which these pioneers came.

The institution opened as Pacific Lutheran Academy. Growing in stature, PLA became a junior college in 1921. Ten years later, it was organized into a three-year normal school which became a college of education in 1939.

After 1941, it expanded as Pacitic Lutheran College until it was reorganized as a University in 1960,
reflecting the growth of both its professional schools and liberal arts core.

## ACCREDITATION:

Pacific Lutheran University is tully accredited by the Northwest Association of Secondary and Higher Schools as a four-year institution of higher education and by the National Council for the Accreditation of Teacher Education for the preparation of elementary and secondary teachers, principals and guidance counselors with the Master's degree as the highest degree approved. The University is also approved by the American Chemical Society. The School of Nursing is accredited by the National League for Nursing. The School of Business Administration is
accredited by the American Association of Collegiate Schoois of Business.

## INSTITUTIONAL MEMBERSHIPS:

The university is a member of:
Association of American Colleges
American Association of University Professors
American Association of University Women
American Council on Education
National Lutheran Educational Conference
Northwest Association of Private Colleges and Universities
Independent Colleges of Washington, Incorporated
Washington Friends for Higher Education
Western Interstate Commission for Higher Education

President Wiegman and student leaders: Kelsey Redlin, Dan Frazier, Chuck Mitchell and Beth Flagg.


## GROUNDS:

Located in suburban Parkland, PLU has a picturesque 126-acre campus, truly representative of the natural grandeur of the Pacific Northwest.

## ENROLLMENT:

2,487 full time students 884 part-time students

## FACULTY

174 full-time farculty
62 part-time faculty
STUDENT/FACULTY RATIO: 14:1

MAJOR FIELDS:
26



ACADEMIC PROGRAM: In 1969, Pacific Lutheran University adopted the 4-1.4 calendar which consists of two fourteen-week semesters bridged by a four-week interim period. With this calendar adaptation, the transition was made from the cr dit to course system. The course system reduces wasteful fragmentation of student and faculty time. With fewer courses laveraging 3-4 each semester, one course for the Interim) each student is free to pursue independent research and self education.

Course credit is computed by hours. The majority of courses are offered for 4 hours. Each undergraduate degree candidate is expected to complete 128 hours with an overall grade point average of 2.00 .

Degree requirements are specifically stated in this catalog. Each student should become familiar with these requirements and prepare to meet them.

## INTERIM:

The interim calendar is aimed at achieving freedom for individual academic pursuit. The interim month offers to students and faculty the opportunity to make a clean break from the normal semester routine. The study optioris are various: innovative semesters, foreign studies, interdepartmental offerings and off-campus exchange programs with other interim institutions.


## academic structure

## COLLEGE OF ARTS AND SCIENCES

Division of Humanities
English
Foreign L.anguages
fhilosophy
Religion
Division of Natural Sciences
Biology
Chemistry
Earth Sciences
Mathernatics
Physics

## SCHOOL OF BUSINESS ADMINISTRATION

SCHOOL OF EDUCATION
SCHOOL OF FINE ARTS
Art
Commurtication Arts
Music
SCHOOL OF NURSING
SCHOOL OF PHYSICAL EDUCATION
DIVISION OF GRADUATE STUDIES

## Division of Social Sciences

Economics
History
Political Science
Psychology
Sociology, Anthropology and Social Welfare

## DEGREES OFFERED

## BACHELORS

Bachelor ol Arts
Bachelor of Science
Bachelor of Business Adininistration
Bachelor of Arts in Education
Bachelor of Fine Arts
Bachelor of Music
Bachelor of Science in Nursing

MASTERS
Master of Arts in Education
Master of Arts in Humanities
Master of Arts in Sociial Sciences
Master of Business Administration
Master of Music,
Master of Natural Science


In a time of rapidly changing concepts and an almost daily emergence of new media, emphasis must be placed on a variety of experiences and creative flexibility.
Students with professional concerns must be prepared to meet the challenges of the modern world with both technical skills and capacity for innovation. The program therefore stresses individualized development rather than vocational tools which quickly become obsolete.

There is an explicit relationship between an art department's facilities and its quality of curriculum. The spacious studio areas of the University's Art Department afford an instructional capability which is unparalleled by any private institution in the Pacific Northwest. These facilities include: painting studio, drawing studio, printmaking studio, scu!pture stıdio, ceramics studio, glassblowing workshop, film making and photography workshop, design work. shop, wood shop, metal shop, kiln yard, darkroom, seminar rooms, slide library, the Wekell Gallery and student exhibition areas.

## art

Schwidder, Chairman; Elwell, K.eyes, Kittleson, Roskos, Ohanian and Tomsic. Visiting artists: Anderson and Cox.

HISTORY AND THEORY
110 The Visual Arts
280 Twentieth Century Art
294 Habitats
382 Ancient Art
383 Medieval Art
384 Renaissance Art
385 Baroque Art
440 Serninar in Art Education
487 Nineteenth Century Art
490 Seminar
497 Research in Art History
597 Fiesearch

STUDIO: Basic media courses may be repeated for credit for two or three semesters or as approved.

160 Drawing
230 Ceramics I
250 Sculpture I: Figure
260 Life Drawing
326 Film Arts: Photography/ Cinematography
330 Ceramics II
338 Glassblowing
341 Elementary Art Education
350 Sculpture II: Meta/sWood/Plastics
365 Painting
370 Printmaking: Seriography/ Lithography/Etching
394 Design Workshop
492 Studio Projects
494 Graphics Workshop
499 B.F.A. Candidacy Exhibition

## WORKSHOPS: Special courses offered on an occasional basis.

270 Sosaku Hanga: Japanese Wood Cut
332 Raku: Japanese Pottery
333 Kiln Building
336 Textile Design
358 Plastic Workshop
374 Metal Plate Lithography
401 Bronze Casting

## INTERIM COURSES OFFERED IN 1974

302 . France: Style and the Senses
303 The Printed I mage
305 Tool Use and Application
312 Furniture as Form
313 Imagery and Symolism
316 Film Animation


The Biology Department at Pacific Lutheran University is dedicated to a teach ing process, not just a delivery of facts. Facts form the foundation of science but approach infinity in number. Therefore, the biology faculty stresses the gathering, processing, retrieving and interpreting of these facts.

The biology faculty believes in the notion that one of the most profound requirements in science is learning to ask the right questions and to recognize the answers. The department is therefore dedicated to permitting students to learn science in the only way that it can be effectively made a part of their thinking; to independently question it, probe it, try it out, experiment with it, experience it.

# biology 

Jensen, Chairman; Alexander, Bohannon, Creso, Forster, Johnson, Knudsen, Leraas, Lerum, Main, McGinnis, Ostenson.

111 Biology and Miodern Man
153 Cell Biology
154 Oiganismal Biology
161 Human Anatomy
162 Human Physiology
201 Introductory Microbiology
253 Biology of the Steady State
275 Microbiology
299 Introductory Clinical Physiology
321 Ornithology
324 Natural History of Vertebrates
331 Genetics
340 Plant Diversity and Distribution
346 Cellular Physiology
347 Cellular Physiology Laboratory
361 Comparative Anatomy

372 General Entomology
375 Binlogy of Parasitism
380 Biology Teaching Resources
403 Growth and Differentiation
411 Histology
424 Ecology
425 Biological Oceanography
426 Ecology Laboratory
435 Plant Form and Function
441 Vertebrate Physiology
444 Plant Physiology
475 Evolution
490 Seminar
491, 492 Independent Study
597, 598 Graduate Research

INTERIM COURSES OFFEREOIN 1974
305 Life on Man
306 Winter Ecology of Washington
310 Zoos and Their Inhabitants
319 Coral Island Biology and Geology


In concert with general university requirements, the business curriculum prepares graduates for responsible positions in business, education and government.

Optional specializations are offered in the fields of accounting and informations systems, distribution and marketing, finance, industrial and personnel management, and the area of public management.

The Business Advisory Council is commosed of a small group of distinguished business leaders from the Puget Sound area. It seeks to improve communications between the Schogl of Business Administration and the business community.

Mernvers of the Business Advisory Council are: Richard E. Bangert, President, Pacific National Bank of Washington, Seattle: Donald J. Dittman, Executive Vice President, Robert Nelsen and Associates, Inc., William R. Gregory, CPA, Knight, Vale and Gregory: Dave McDonald, President, Nalley's Fine Foods; Joseph E. Nolan, President, the Weyerhaeuser Foundation; Robert L. Schuyler, Senior Vice President, Finance and Planning, the Weyerhaeuser Co.

## business administration

King, Dean; Bancrott, Bearse, Carvey,
Dobbie, Dirksen, Hutcheon, Kuhlman, Lauer, Leister, Martilla, Peterson, Stintıi, Walton and Zulauf. Assisted by Frietag, Harris, Kovanen, K.usche, Petrie, Platt, Sayles,
Utzinger, Wooley.

Business Cornmunications
243 Family Financial Planning
281 Financial Accounting
282 Accounting Information Systems
290 Law and Society
350 Management
364 Managerial Finance
365 Real Estate
366 Risk: and Insurance Management
370 Marketing Systems
381 Intermediate Accounting
383 Income Taxation
385 Cost Accounting
387 Data Processing Systems
450 Manufacturing Management
453 Personnel and Industrial Relations
455 Business Policy
456 Honors Seminar
461 Financial Analysis
464 Financial Management
470 Marketing Management

471 Marketing Research and Consumer Behavior
472 Advertising and Sales Management
473 Industrial Marketing and Purchasing
482 Advanced Accounting
484 Auditing
488 Systems Analysis and Design
490 Seminar
491 Directed Study
495 Business Law
550 Organizational Environment
551 Seminar in Management
555 Business Strategy and Policy
564 Seminar in Financial Management
570 Seminar in Marketing Management
581 Seminar in Financial Accounting Theory
582 Accounting Information and Control
590 Special Seminar
591 Independent Study
596 Research Colloquium

INTERIM COURSES OFFERED IN 1974
303 Puget Sound Hospitality
306 Judicial Process and Conflict Resolution
309 Computers and Society
312 Accounting for Non-Accountants
319 The Money Game
490 Management of Financial Institutions


The advance of man and civilization is inseparable from the development of chemistry. Chemistry influences our lives in many profound ways. Whether interested in chemistry as a profession, molecular biology, or study ing the influences of science and technology on the environment and society, students will find programs to meet their needs. The courses, curriculum, faculty and facilities are approved by the American Chemical Society.

Diversity in career planning is a keyword in the chemistry curriculum. Programs are available which are broadly applicable to the health-biological, physical, environmental and the fundamental chemical sciences. A staff knowledgeable in the many areas of chemistry using modern equipment for teaching and research highlight the opportunities available.

# chemistry 

Tobiason, Chairman; Anderson, Giddings, Huestis, Nesset, Olsen, Swank.

103 Chemistry of Life
104 Environmental Chemistry
108 Mankind and Molecules
115 General Chemistry
116 Systematic Inorganic Chemistry
321 Quantitative Analysis
331, 332 Organic Chemistry
333, 334 Organic Chemistry Laboratory
336 Honors Organic Chemistry Laboratory
341, 342 Physical Chemistry

343, 344 Physical Chemistry Laboratory
350 Instrumentation for the Life Sciences
404 Biochemistry
435 Instrumental Analysis
460 Seminar
490 Integrated Problems Approach
491 Independent Study
497 Research
597, 598 Graduate Research

INTERIMCOURSES OFFERED IN 1974
306 On Becoming Human
307 Instrumental Techniques for the Life and Earth Sciences


The communication arts program is concerned with improving interpersonal, group and public communication through a mastery of basic ihetorical processes and a comprehension of the nature of the mass media as well as offering cultural and artistic opportunities in the lield of theatre. The department offers a practical understanding of this human process to all students and prepares its majors for participation and teaching in the areas of theatre, communication and broadcast/fournalism.

## communication arts

Karl, Chairman; Becvar, G. Capp,
Doughty, Eman, Nordholm,
Parker. Assisted by C. Capp,
Christian, Crewdson, Knightlinger,
Miunn, Nordlund.

123 Fundamentals of Oral
Communication
128 Argumentation and Debate
161 introduction to the Theatre
225, 425 Communication Arts Practicum
235 Studies in Organizational Communication
236 Persuasion
241 Oal Interpretation of Literature
250 Fundamentals of Acting
251 Stage Technology
271 Man, Niedia and Society
272 The Eroadcaster and Sound
275 Radio Production
283 News Reporting
284 Advanced News Reporting
326 Group Discussion
333 Foundations of Communication Theory

344 Advanced Interpretation of Literature
352 Scenic: Design
354 Play Direction
356 Stage Lighting
358 Advanced Acting
363 History of the Theatre
374 Television Production
375 Directing for Broadcast Miedia
377 Broadcast Management
40\% Communication Arts in the Elementary Classroom
404 Communication Arts in the Secondary School
459 Summer Drama Workshop
474 Television and the Classroom Teacher
478 Summer Television Workshop
492, 493 Special Studies in
Cemmunication Arts
596-598 Research in Communica-
tion Arts


The study of earth sciences explores components of man's physical universe from the planets to the earth's crust. In addition to geology, oceanography, astronomy, meteorology, and geography, inter-departmental cooperation facilitates specialized studies in geophysics and geochemistry.

Environmental problems are approached through the earth sciences. Field trips give a realistic understanding of man's dependence on earth's physical resources: minerals, fossil fuels, water, soil, the oceans. This personal contact is fundamental for citizen understanding and for long term planning in environmental crises.

## earth sciences

Ostenson, Chairman; Lowes. Assisted by Batker, Fisk, Huestis.

101 World Geography
122 Introduction to Physical Science
131 Mian and the Planetary Environment
132 Historical Geology
136 Descriptive Astronomy
202 General Oceanography
222 Conservation of Natural Resources
323 Míineralogy
324 Petrology
325 Structural Geology
351 Natural History of the Pacific Northwest

360 Geology of Western Wash ington
365 Glacial Geology
425 Biological Oceanography
490 Seminar
491, 492 Independent Study
University of Puget Sound
Geology Courses
302 Paleontology
401 Stratigraphy and Sedimentation
402 Geomorphology

INTERIM COURSES OFFERED IN 1974

309 Use of Demonstrations in Science
Education

310 Resource Policy Issues
318 Coral Island Biology and Geology

"Want is a growing giant whom the coat of Have was never large enough to cover.'

Ralph Waldo Emerson
Economics is the study of the alternative ways society chooses to use limited resources to maximize social well-being.

The economic discipline embraces a body of techniques and conceptual tools with which one can understand, analyze, and to a degree foresee future developments within our complex social system. Career avenues for the graduate are numerous since his understanding of the economy and his problem-solving and critical and constructive thinking abilities are applicable to a wide range of activities in business and/or government.

## economics

Miller, Chairrnan; Brue, Jensen, Vinje, Wentworth.

150 Principles of Economics
290 Contemporary Econornic Problems
321 Human Resource E conomics
331 International Economics
351 Intermediate Macro Econornic Arialysis
352 Intermediate Micro Economic Analysis
361 Mioney and Banking

362 Public Finance
432 Development Economics
434 Governrnent and the Economy
486 Evolution of Economic Thought
490 Seminar
491, 492, 493 I ndependent Study
504 Managerial Economics
543 Quantitative Methods
591, 592, 593 Independent Study
599 Thesis

INTERIM COURSES OFFERED IN 1974

## 308 Econornic Concentration in the United States

490 Seminar in Economic Analysis


The School of Education offers programs of study leading to certification for elementary and secondary teachers, counselors, nurses, psychologists, and administrators. The curriculum is designed to provide graduates with a blending of the liberal arts and a variety of practical exposures to guided field experiences beginning early in the educational sequence. The farulty is committed to the development of educational personnel sensitive to the varied individual needs of learners.

## education

Johnston, Dean; Baughman, DeBower, Fletcher, Jorgenson, Mathers, Napjus, Pederson, Stein, Williamson. Assisted by Adachi, Beal, Breckenridge, Clarke, Dralle, Ehlers, Gray, Hanson, Holden, Johnson, Keblbek, Miinetti, Moe, Nokleberg, Smith, Warren, Wentworth.

201 Learner and Society: Growth and Developrinent
321 Human Development
322 General Niethods - Primary
323 General Methods - Upper Elementary
324 General Methods - Elementary Nethods Model
325 Reading in the Elementary School
326 Mathernatics in the Elementary School
401 Workshops
408 Language Arts in the Elementary School
410 Science in the Elementary School
412 Social Studies in the Elementary School
420 Problems of Reading in the Secondary School
423 General Methods - Secondary
430 Student Teaching - Primary
432 Student Teaching - Upper Elementary
434 Student Teaching - Secondary
435 Professional Seminar
440-448 Specific Methods in Teaching Secondary School Subjects
451 Administration of the School Library
452 Basic Reference Materials
453 Processing School Library Materials
454 Selection of Learning Resource Materials
455 Instructional Materials
456 Storytelling
457 Preparation and Utilization of Instructional Materials

467 Evaluation
473 Parent-Teacher Conference
474 Affective Education
479 Diagnosis and Remediation in Reading
482 Curriculum Enrichment in Early Childhood
483 Primary Reading
486 The Gifted Child
487 Theories of Early Childhood
488 Reading Center Workshop
489 Directed Teaching in Reading Centers
492 Learning Disabilities in the Classroom
493 Learning Disability: Diagnostic Procedures
494 L.earning Disabilities: Developing Educational Programs
495 Learning Disabilities: Developing Teacher Effectiveness
496 Laboratory Workshop
497 Soecial Project
501 Workshops
545 Methods and Tec:hniques
550 School Finance
552 Public, School Administration
554 High School Organization and Administration
555 Administration and Supervision Workshop
558 Administrative Internship
571 History and Philosophy of Higher Education
573 Student Personnel Work in Higher Education

575 Mental Health
580 Curriculum Development
583 Educational Issues and Problems
585 Comparative Education
587 History of Education
589 Philosophy of Education
590 Graduate Seminar
596, 597 Research Studies in Education
599 Thesis

## EDUCATIONAL PSYCHOLOGY

461 Group Process and the Individual
463 Guidance in the Elementary School
465 Guidance in the Sec.ondary School
466 Introduction to Student Personnel Services
468 Educational Psychology
469 Career Guidance
560A, B, C, D Continuing Practicum
561 Basic. Relations in Counseling
563 Practicum in Group Process and Leadership
565 Seminar: Non-Test Appraisal
570 Practicum and Field Work in Counseling and Guidance.
572 Practicum in Student Personnel Work
575 Mental Health
578 Behavior and Learning Problems of Students


The engineering department stresses education of sufficiently fundiamental nature to permit rapid adaptation of new technical problems and opportunities, and of sufficiently liberal scope to provide awareness of the broad social responsibilities implicit in engineering. The department is committed to the interaction between humian values and the tec:hnical works of man, and to the fundamental engineering sciences. Preparatory training in Electrical and Mechanical Engineering Sciences is offered in support of $3-2$ programs and degree work with the Physics
Department in Engineering Physics.
Forrnal 3-2 Engineering Programs are maintained with Columbia University (New York) and Stanford University (California). Students recommended to Columbia receive automatic admission with superior prospects for financial aid. Columbia and Stanford have Schools of Engineering arnong the highest calibre in the nation. 3-2 Transfer to the School of Engineering at the University of Washington and Washington State University is also a popular ontion. In each caase, the program leads to dual degrees, a PLU B.S. degree as well as B.S. degree in Engineering from Columbia, Stantord, or other accredited engineering schools.

# engineering 

Heeren, Program Director; assisted by Brink, Houk, Liebelt, Tang.

MATHEMATICAL SYSTEMS
144 Introduction to Cornputer

344 Systems Analysis and Simulation
346 Numerical Analysis

## ENGINEERING BASICS

151 Visual Thinking
182 Man and Materials
354 Engineering Analysis

ELECTRICAL ENGINEERING SCIENCE
*271 Electrical Circuits
*272 Solid State Electronic Devices
*352 Analog and Digital Electronic Circuits
441 Network Analysis
491 Independent Study
*Approved for inclusion in the catalog on a provisional basis.

MECHANICAL ENGINEERING SCIENCE

## 231 Statics

232 Mechanics of Solids
351 Thermodynamics
442 Transport: Momenturn, Energy and Mass
492 Independent Study


English is a discipline which assists students in ach ieving competence in writing, discernment in reading, appreciation of human experience and aesthetic values, and an understanding of the processes of critical and creative expression.

The English Department has offered these courses of Study Abroad: Literary Haunts of the British Isles, The London Theater, and European Backgrounds of Children's Literature. In addition, the department is the first one west of the Mississippi to have offered courses in Canadian (and Cominonwealth) literature.

## english

L. Johnson, Chairman; Benton,

Blomquist, Jones, Klopsch, Larson, Reigstad, Van Tassel. Assisted by Manning and Maduaka.

101 College English
217 Short Story
*22.1 Literary Forms and Analysis
230 Introduction to Contemporary Literature
231 Masterpieces of European Literature
241 Introduction to American Literature
251 Introduction to English Literature: Beginnings to 1750
252 Introduction to English Literature: After 1750
323 Children's Literature
327 Imaginative Writing
328 Advanced Composition
*336 Literature of Black Americ:ans
349 Modern Poetry
351 Modern Continental Drama
358 The British Novel

382 Chaucer and His Age
383 Shakespeare
388 Milton and His Age
389 English Satire and Sensibility
390 The English Romantic Movement
391 The Life and Letters of Victorian England
392 Twentieth Century British Literature
400 Linguistics
403 Modern English Grammar
441 American Romantic Literature 1820-1880
442 American Realism and Naturalism, 1880-1915
443 American Literature Since 1915
491, 492 Independent Reading and Research
597 Graduate Research

INTERIM COURSES OFFERED IN 1974

301 American Ego: An Autobiographical History of the U.S.
303 A Simpler Life: Studies in Thoreau and Wendell Berry
305 Man, Myth and Machine: Speculative Fic:tion as Ethical and Social Commentary
310 Literary Haunts of the British Isles
313 Kaleidoscope of English Fiction

## EXPERIMENTAL COURSES

280 Poetry as Meditation
*Approved for inclusion in the catalog on a provisional basis.


Foreign language learning provides an urgently needed element in our domestic and global community: the ability to communicate effectively with and with in other cultures. Through the medium of language, the student increases his knowledge of the contributions other peoples have made to civilization, history, literature, and the arts and sciences.

The Foreign Language Department in cooperation with several European Universities provides specific students with an opportunity to study abroad in France, Spain, Germany, Austria (Vienna) and Scandinavia.

Swenson, Chairman; Carleton, Faye,
Monroe, Robinson, Spangler, Sudermann, Toven, Webster, Wilhelm. Assisted by Payne.

LINGUISTICS
400 Structural Linguistics
FRENCH
101. 102 Elementary French

201, 202 Intermediate French
321 Givilization and Culture
351, 352 Composition and Conversation
421, 422 Masterpieces of French Literature
431, 432 Twentieth Century French Literature
442 History of Romance Languages
445 Methodology of Teaching Foreign Languages
491, 492 Indemendent Study
597,598 Graduate Research

## GERIMAN

101, 102 Elementary German
201, 202 Intermediate German
321 Civilisation and Culture
351,352 Composition and Conversation
421,422 Masterpieces of German Literature
431, 432 Twentieth Century German Literature
442 History of the German Language
445 Methodology of Teaching Foreign Languages
491, 492 Independent Study
597, 598 Graduate Research
*GREEK
101, 102 Elementary Greek 201, 202 Intermediate Greek
421, 422 Masterpieces of Greek Literature
491, 492 Independent Study
*JAPANESE
101, 102 Elementary Japanese
201, 202 Intermediate Japanese
*LATIN
101, 102 Elementary Latin 201, 202 Intermediate Latin 491, 492 Independent Study
*NORWEGIAN
101, 102 Elementary Norvvegian
201, 202 Intermediate Norwegian
321 Civilization and Culture
491, 492 independent Study
*RUSSIAN
101, 102 Elementary Russian
201, 202 Intermediate Russian

[^0]SPANISH
101, 102 Elementary Spanish
201, 220 Intermediate Spanish
321 Civilization and Culture
351, 352 Composition and Conversation
421, 422 Masterpieces of Hispanic: Literature
431, 432 Twentieth Century Hispanic Literature History of Romance Languages Methodology of Teaching Foreign Languages
491,492 Independent Study
597, 598 Graduate Research
INTERIM COURSES OFFERED IN 1974
302 France: Style and Senses
303 German Masterpieces in Translation: The Modern Exile
305 English Word Building from Latin and Greek
307 America in the Eyesot Her Explorers
313 Introduction to Spoken German


The department is interested in providing students with the tools of critical thought and appropriate methods for finding and testing historical evidence, for weighing values and for the discovery of truth wherever it may be found. Using the vast reservoir of the oast struggles and achievements of man in society, the courses relate to issues which will have meaning to students in the contemporary world. Ideas and materials will be used in working situations as well as the demands of the subject matter under consideration.

As an academic inquiry which emphasizes the development of analytical skills, the study of history depends upon the availability of a wide variety of primary and secondary source material. Historical holdings in the Robert A. L. Mortvedt Library are strong and diverse and are dominated by two particularly significant collections: the Pacific Northwest History Collection, housed in the Nisqually Plains Room, and extensive holdings in Reformation and Church History.

## history

D. Johnson, Chairman; Halseth, Martinson, Nordquist.

107, 108 History of Civilization
109, 110 World Civilizations
251 Colonial American History
252 Nineteenth Century American History
253 Twentieth Century American History
321, 322 Classical Civilization
323 Medieval History
324 Renaissance
325 The Reformation
326 Euro pean History from 1648 to 1789
327 The French Revolution and Napoleon
328 Nineteenth Century Europe
329 Tiwentieth Century Europe
331, 332 England
333 Russia

336 Colonial Latin America
337 Republican Latin America
340 Far Eastern History
356 History of American Foreign Policy
421 History of Ideas: European Civilization
451 American Constitutional History
461 History of the American Frontier
462 Pacific Northwest History
471 History of American Thought and Culture
492 Independent Study
494 Seminar: American History
4.95 Seminar: European History

496 Seminar: History and Historians
596 Graduate Research
599 Thesis

INTERIM COURSES OFFERED IN 1974
306 American Biography
308 Studies in the "Great Silent Beast of History" - The People
320 Mathematics and Civilization


Mathematics is an indispensable tool that is utilized in industry. education, computer piogramming, the astuarial field, and government. Mathematics is also a deep and interesting branch of knowledge in its own right. Knowledge of mathematics is vital in the disciplines of physics, engineering, chemistry, biology and economics.

Presently, Pacific Lutheran University has two 3-2 programs in existence whereby a student in the Engineering/Math/ Computer Science area could complete three years at Pacific Lutheran University, transfer to a cooperating university, and receive a bachelor's degree from PLU. Washington State University and PLU offer 3-1 and 3-2 programs in Cornputer Science Software and Applied Math areas. Columbia University is cooperating with PLU in a 3-2 program in the Engineering! Computer Science area.

## mathematics

Herzog, Chairman; Batker, Brink, Fisk, W. Johnson, Liebelt, C. Meyer, G. Peterson.

091 Intermediate Algebra
127 Finite Mathematics
133 College Algebra and Trigonometry
144 Introduction to Computer Science
151 Analytic Geometry and Calculus
152 Analytic Geometry and Calculus
199 Directed Reading
244 Data Structures and Assembly Language Programming
253 Multivariable Calculus and Differential Equations
321 Geometry
323 Modern Elementary Mathematics
324 Geometry for the Elementary School Teacher

331 Linear Algebra and Calculus
341 Mathematical Statistics
344 Systems Analysis and Simulation
346 Numerical Analysis
351 Applied Mathematics
433, 434 Miodern Algebra
446 Mathematics in the Secondary School
455, 456 Miathematical Analysis
460 Elementary Topology
490 Seminar
491, 492 Independent Study
597. 598 Graduate Research

INTERIM COURSES OFFERED IN 1974
111 Introduction to the Style and Substance of Modern Miathematics
308 Financial Mathernatics
314 Sets, Logic and Numbers
320 Mathematics and Civilization

The music department offers programs for students seeking intensive training in music history and literature, theory and composition, sacred music, and instrumental performance.

The curriculum is also designed for students planning careers in music education, as well as those students who wish to increase their general musical knowledge and appreciation.

The Pacific Lutheran University Department of Music is noted, both regionally and nationally, for its performing ensembles which include: Choir of the West, University Chorale, University Singers, Swing Choir, University Band, Stage Band, University Orchestra, and Contemporary Directions Ensemble.

## music

Skones, Chairman، Clark, Dahl, Gilbertson, Harınic, V. King, C. Knapp, Kracht,
L. Meyer, Robbins, Sare, Tremaine. Assisted by Abrahamson, Benshoof,
R. Bergerson, Burch, R. Crockett, Davis, Dryden, Glick, Hopp, Kent, S. Knapp, Lepley, K. Marra, Poulshock, Rasmussen, Sundquist, Thompson, Allman, S. Anderson, Dube, Harned, Housh, Koschmann, Lathrop, Northrop, Sheldon, Schrader.

120 Introduction to Music
123 Theory
124 Theory
211, 212 History of Music
223, 224 Theory
241, 242 String Instrumental Laboratory
243, 244 Woodwinds Instrumental Laboratory
245, 246 Brass Instrumental Laboratory
247 Percussion Laboratory
249 Electronic Music Laboratory
323 Contemporary Techniques, Analysis and Literature
324 Contrapuntal Writing, Form,
Analysis and Literature
325, 326 Orchestration
327 Composition
330 Choir of the West
331 University Chorale
332 Vocal Ensemble
333 University Band
334 University Orchestra
335 Chamber Ensemble
336 Two Piano Ensemble
337 Accompanying

338 Contemporary Directions Ensemble
339 Basic Conducting
340 Fundamentals of Music
341 Music in the Elementary School
PRIVATE INSTRUCTION
350 Piano
351 Organ
352 Voice
353 Violin, Viola
354 Cello
355 Woodwinds
356 Brass
357 Percussion
358 Guitar
359 Harp
360 Harpsichord
363 History of Piano Literature and Performance
364 History of Organ Building
365 Solo Vocal Literature
367 Hymnology and Sacred Music Literature
368 Worship and Liturgy
401 Opera Workshop
423 Advanced Form and Analysis

## 441 Keyboard Pedagogy

442 Vocal Pedagogy
443 Organ Repertoire and Improvisation
445 Advanced Conducting: Techniques and Miaterials
447 Music in the Secondary School
491, 492 Independent Study
590 Graduate Seminar

INTERIM COURSES OFFERED IN 1974
303 Introduction to the Piano
305 Classical Guitar, C. Romero Method
307 The History of Organ Building
309 Piano Improvisation
311 Beethoven's Head: The Nine Symphonies
317 Intensive Performance Study
318 Opera Workshop
330 Choir of the West
331 University Chorale
334 University Orchestra


A nursing career offers great opportunity for a rich and rewarding professional life. It affords virtually unlimited choice of location, environment, and type of service. Man's physical, mental, social, and spiritual health is of universal concern; and those prepared to maintain his good health are in constant demand.

The School of Nursirig is a professional school which combines professional and liberal arts studies in assisting students to evelop a serise of responsibility for acquiring the attitudes, knowledge and skill necessary for meeting nursing needs af the community. Gracłuates who successfully complete the State Board examinations (Registered Nurse) are prepared for beginning positions in professional nursing and for continuing their education at the graduate level.

Under the direct supervision of its faculty members, the school utilizes facilities of hospitals, health agencies, and schools in the community in providing optimal clinical learning experience for its students.

## nursing

Stucke, Director; Beaty, Bergerson, Burk, Carper, Cone, Coombes, Frohlich, Gough, Hetty, Hostetter, Jacobson, Lawrence. Mason, Mellqusit, Olson, W. Peterson, Thorson. Assisted by Crowl, Stiggel bout and Weirick.

210 Nursing I Socialization to Nursing
211 Nursing 1I. Health Assessment
321 Nursing Centrum I
322 Health Problems
350 Nursing Centrum II
351 Clinical Problems
352 Clinical Practicum

361, 362,363 Maternal-Child Nursing 1. 11,111 INTERIM COURSE OFFERED IN 1974
371, 372 Psychiatric Nursing
410 Trends in Nursing
446 Community Nursing
450 Sele ted Clinical Problems
451 Selected Clinical Problems II
452 Nursing Leadership
491, 492 Independent Study

311 Body Language


In this oldest and parent discipline of the arts and sciences, the student pursues a critical and systematic analysis of basic issues in all fields and a unified view of the totality of experience. The course of inquiry acquaints each student with rival world views and value systems, encourages him in analytic and systematic thought and enables hirn "to see life critically, appreciatively and whole."

The department offers a program of distinctive quality for those who intend to specialize in philosophy as well as for those who seek philosophical perspective to support their work in such other fields as law, theology or the sciences. A variety of courses serves to provide an essential liberal component in all undergraduate programs.

## philosophy

Arbaugh, Chairman; Huber, Menzel, Myrbo.

| 201 | Introduction to Philosophy |
| :--- | :--- |
| 221 | Ethics |
| 233 | Logic |
| 324 | Man in Society |
| 328 | Political and Legal Philosophy |
| 331 | Ancient Philosophy |
| 332 | Medieval Philosophy |
| 333 | Modern Philosophy |
| 335 | Contemporary Philosophy |
| 361 | Oriental Thought |

201 Introduction to Philoso phy
221 Ethics
233 Logic
324 Man in Society
328 Political and Legal Philosophy
331 Ancient Philosophy
332 Medieval Philosophy
333 Modern Philosophy
335 Contemporary Philosophy
361 Oriental Thought

365 Kierkegaard and Existentialism
371 Aesthetics
381 Theory of Value
393 Philosophy of Religion
395 Philosophy of Science
427 Books, Ideas and Mien: Seminar in Philosophy
435 Advanced Seminar in Philosophy
491, 492 Independent Reading and Research

INTERIM COURSES OFFERED IN 1974
307 Quests for Justice
311 How to Win an Argument


The university's physical education program seeks to ingrain in each student a fundamental respect for the role of physical activity in living. Professionally. it prepares prospective leaders for careers in physical education, health recreation, athletics, and corrective therapy.

Instruction is offered in approximately 30 different p̣ysical education activities. The activity program is uniquely characterized by a timely responise to student interests in recreational opportunities available in the Pacific Northwest.

## physical education

Oison, Director; Broeker, Carlson, Chase, Hoseth, Iversen, Kittilsby, Lundgaard, Officer, Westering. Assisted by Benson, Deetı, Harshman, Marcellu, Nicholson, Oyler, Thieman.

100 Orientation to Physical Education
200-299 Individual and Dual Activities
230-239 Aquatics
240-249 Rhythms
250-259 Athletic Games
275 Water Satety Instruction
277 Scientific Foundations of
Physical Education
281 Injury Prevention and Therapeutic Care
284 Professional Activities, Team Sports for Mien
285 Professional Activities, Individual and Dual Sports
286 Professional Act ivities, Gymnastics and Diance
288 Professional Activities, Team Sports for Women
292 First Aid
295 Schoul Health
322 Priysical Education in the Elernentary School

## 324 Personal Health

326 Community Health
328 Curriculum Development and Administration
330 Fiecreation Programming
331 The Woman as a Competitor
332 Officiating for Wornen
360, 301 Practicum in Teaching and Coaching
362 Rhythms and Dance
370-375 Cuaching Theory
391, 39 ? Corrective Therapy
478 Psychological Concepts of Physical Education and Athletics
481 Physiological Basis for Motor Performance
482 Biomechanics of Human Motion
483 Recreation Administration
484 Measurement and Evaluation in Physical Education
491 Independent Study
597 Graduate Research

INTERIM COURSES OFFERED IN 1974

## 204 Bowling

205 Beginning Badminton
208 Skiing
210 Slimnastics
222 Handball, Squash, and Padd leball
255 Co-ed Volleyball
281 Athletic Injury Prevention and
Therapeu tic Care
304 Choreography and Dance Production
305 Family-centered Childbirth
491 Independent Study
497 Intern Programs
A. Recreation Internship
B. Corrective Therapy Internship
C. Orientation to Therapy Programs


Physics is a basic science holding two prominent positions in contemporary society.
First, physics is an important cornerstone of other disciplines such as chemistry, geology and biology; and it is the foundation for our familiar technologies of communication, transportation and energy conversion. Secondly, through its inquiring principles and through the revolutionary basic concepts of nature it introduces, physics dramatically affects the human vision of nature and critical philosophical thought.

The physics major sequence offers a challenging program emphasizing a low student-teacher ratio with undergraduate research participation. Several student publications resulting from such research have appeared in professional journals of international reputation.

The engineering/physics degree prepares the students for a career in a variety of engineering disciplines. The graduates, upon approval of the department, may automatically be admitted to the graduate school of engineering at Columbia University in New York City or be admitted to other schools such as Stanford with which PLU has cooperative programs.

The department also offers a B.A. degree for science-oriented liberal arts students, requiring only six courses in physics. A specially designed course for non-science majors (Elernents of Physics) and one for music majors (Musical Acoustics) is also offered. .

# physics 

Tang, Chairman; Adams, Houk, Jacobs, Nornes. Assisted by Heeren and Yiu.

106 Elements of Physics
125, 126 College Physics
127, 128 Laboratory
153, 154 General Physics
155, 156 Laboratory
205 Musical Acoustics
223 Elementary Modern Physics
272 Electrical Circuits and Instrumentation

331 Electromagnetic Theory
332 Electromagnetic Waves and Physical Optics
336 Mechanics
351 Thermodynamics
354 Engineering Analysis
355 Teaching of Physics
356 Mathematical Physics

401 Introduction to Quantum Mechanics
406 Advanced Modern Physics
421, 422 Advanced Laboratory
491, 492 Independent Study
497.498 Research

597,598 Graduate Research


The study of political science trains the student for the exercise of his rights and duties as a citizen by giving him a better understanding of our democratic political processes and of alternative systems. The department provides pre-professional training leading to careers in teaching, law, government and related fields.

The student of political science planning a career in government or politics has the opportunity to combine his academic study of politics and government with practical experience by participation in one of the internship programs sponsored by the department. At present these are available in public administration, public affairs, and the legislative process.

## political science

Farmer, Chairman; Collinge, Crockett, Ulbricht. Assisted by Bricker, Mork.

101 An Invitation to Politics
201 The Political Imagination
251 American Politics
282 Politics Abroad
325 Political Thought
331 Politics Among Nations
336 Politics of International Cooperation
$35: 2$ Politics in American States
356 Urban Politics and Problems
357 Politics of the Bureaucracy
361 Political Parties
364 The Legislative Process
368 The Presidency
371 Politics and the Legal Process
411 Philosophical Foundations of Political Inquiry
412 Empirical Political Theories
426 Recent Political Thought
427 American Political Thought
431 Issues in International Relations

432 European Integration
456 The Administrative State
457 The Administrative Environment
458 Internship in Public Administration
459 The Administrative Purpose
464, 466 Internship in the Legislative Process
474 The Constitution
483 The Westminster Niodel
484 Soviet Political System
487 Political Stability and Revolution
489 Political Development and Modernization
491, 492 Independent Reading and Research
494 Social Science and Political Analysis
597,598 Graduate Research
599 Thesis

INTERIM COURSES OFFERED IN 1974
310 Resource Policy Issues
312 Dirty Tricks and Sneaky Stuff
318 Current Events on the International Scene


Psychology is a scientific study of the behavior of living organisms with an emphasis on understanding human behavior. The major provides a background preparation for a professional career or serves those students planning to pursue related vocations in which psychological insight is a valuable resource.

As a supplement to acalemic learning, the faculty seeks to provide opportunities for students to have experiences of a field-work nature in a wide variety of settings in the greater Tacoma area, such as. American Lake Veterans Hospital, Western State Hospital (including the Child Study and Treatment Center), Cascadia Diagnostic Center (juvenile delinquents), Rainier State School (mental retardates), Special Services Departments of local school districts, etc.

The laboratory classes offered by the department are small in size with maxinnum importance attached to individualized instruction.

# psychology 

Severtson, Chairman; Adachi, Bexton, Larsgaard, LeJeune, Nolph, Stoffer

101 Introduction to Psychology
110 Study Skills
221 The Psychology of Adjustment
243 Scientifir, Methods
330 Social Psychology
335 Development: Infanc:y to Maturity
340 Human Neuropsychology
403 The Psychology of Infancy and Childhood
405 Adolescent Psychology
410 Emotion and Motivation
420 Psychology of Personality
421 Abnormal Behavior
450 Psychological Testing

460 Learning: Research and Theory
490 History and Systems in Psychology
491, 492 Independent Study
493 Serninar
515 Psychological Assessment
540 Counseling Theory
570 Practicum in Counseling and/or Assessment
577 Supervised Field Work
590 Seminar: Psychology of Learning
596 Independent Research
597 Social Science Methods
599 Thesis and Thesis Seminar

INTERIM COURSE OFFERED IN 1974
319 Involvement in a Therapeutic Community


The religious heritage of mankind, particularly the Judaeo-Christian tradition, is critically exarnined for the purposes of preserving and applying its accumulating wisdom. The department's program examines religious dimensions encountered in other disciplines and serves students who elect religion as their academic or vocational speciality.

The PLU Religion Department shares academic courses and exchanges professors in THE PAX LEAGUE, a fellowship of Christian peace for modern man. A series of courses is offered and shared by three schools, Pacific. Lutheran University, St. Martin's College, and the University of Puget Sound, as a contribution to the thoughtful unity of human family.

Lutheran Institute for Theological Education (LITE): The Religion Departrnent also participates in a recently established program of continuing theologic:al education for clergy and laity in the Pacific Northwest. Dr. Walter Pilgrim of the Religion Department directs the LITE program. For further details contact Dr. Pilgrim.

# religion 

Govig, Chairman; Christopherson, Eklund, K nutson, Petersen, Pilgrirn, Stivers.
Assited by Anderson, Braswull, Fr. Feeney.

103 Judaeo-Christian Life and Thought
105 Religious Experience
203 Biblical Literature
325 Christian Education in a Secular Society
327 Ancient Church History
328 Modern Church History
331 World Religions

341 American Churches
421 Old Testament Studies
422 New Testament Studies
423 The Life of Jesus
430 Christian Thought and Modern Consciousness
432 Christian Classics
436 Christianity and the Arts

490 Senior Seminar in Religion (Open to Seniors and Graduate Students)
(a) Human Sexuality
(b) Religion and Psychology
(c) Religion and Politics
(d) Death and Dying

491, 492 Independent Study


Sociology and social welfare are concerned with the development, organization, and behavior of human groups; the processes and uniformities of social behavior; the nature and relationship of groups and institutions: and a specific sequence in criminal justice to stimulate critical and constructive attitudes toward social change and to train persons who will contribute to the resolution of social conflict. Anthropology explores the prehistoric development of culture, and patterns of cultural behavior in contemporary, native, ands folk societies.

Opportunities exist for moving through the classroom and out into the Tacoma community. Field experience (SW 475-6) insures this for Social Welfare rriajors, but similar possibilities surface during the Interim, in one-semester experimental courses, and, predominantly, in what is termed Block Placement. In consultation with Mr. Hanson, the student's "block" of three or four semester courses is coordinated so as to integrate classroom and community involvernents. For further information, see Mr. Vern Hanson, the c.oordinator for the department's opportunities in this area.

## sociology anthropology\& social welfare

Oberholtzer, Chairman; Clarke, Comte, Drake, Gilbertson, Hanson, Jobst, Nelson, Schiller, Walter, Willhite.
Assisted by guest lecturers.

## SOCIOLOGY

111 Introduction to Sociology
211 Group Behavior
325 Minorities
328 Deviant Behavior
422 Social Institutions
423 Sociological Thought
425 The Family
432 Community and Stratification
490 Serninar
491 Independent Study
494 Research Methods
590 Graduate Seminar
595 Graduate Readings
597 Graduate Research

## ANTHROPOLOGY

231 Cultural Anthropology
242 Physical Anthropology
341 Ethnology of American Indians
352 Ethnology of Africa
490 Seminar
491 Independent Study

SOCIAL WELFARE

## 271 Introduction to Social Work

365 Social Intervention
463 Sociology of Social ! Nelfare
472 Social Work Practice
473 Interviewing
475, 476 Field Experience
490 Seminar
491 Independent Study


## options

## FOREIGN STUDIES

In the recent past, students have pursued studies in various locations throughout the world in affiliation with a variety of programs. In order to facilitate the study abroad experience and ir order to make it more meaningful, Pacific Lutheran University has affiliated with the Central College and the Council for International Educational Exchange Programs. For a detailed listing of course offerings, please refer to the departmental section of Foreign Languages.

The student is cautioned against beginning a program without first securing University approval. The student rinay obtain a Leave of Absence form froin the Office of the Registrar which will facilitate return to the University at the conclusion of his progran abroad. Attendance at a foreign university DOES NOT waive graduation requirements of PLU.

The student should file a letter of intent with the chairman of his major department and the Provost prior to leaving PLU. The letter should outline in broad terms what the student proposes to study, where and at what length of time, and how the foreign exper ience relates to his acadernic prograrm. On the basis of th is information,
plus a record of lectures attended and examinations completed, academic credit will be allowed, but no grade point average will be computed. The University reserves the right to require examinations covering the material studied. It is recommended that a solid foundation in the language of the country be acquired before embarking.

Upon his return, the student will, with the assistance of the chairman of the Department of Foreign Languages, prepare a written request for acadernic credit. If he has pursued his studies in several areas, he will need the approval of each department concerned.

## RESERVE OFFICER TRAINING CORPS PROGRAM (AIR FORCE) AEROSPACE STUDIES

Students enrolled at PLU who have been selected for the Air Force ROTC Commission Program and transterees qualified for entry into the Air Force ROTC Professional Officers Course may enroll in Air Force ROTC Aerospace Studies courses at the University of Puget Sound. Applications are normally accepted during the tall semester preceding the expected date of entry into the Protessional Officers Course. Selection for the course is on a competitive, best qualitied basis.

Additional information about Air Force ROTC, its curriculum, admissions and procedures, may be obtained from the PLU Office of Admissions or by writing the Professor of Aerospace Studies, University of Puget Sound, Tacoma, Washington, 98416.

## LATE AFTERNOON AND EVENING CLASSES

To provide for the professional growth and cultural enrichment of persons unable to take a full-time college course, the University conducts lateafternoon and evening classes. In addition to a wide variety of offerings in the arts and sciences, there are specialized and graduate courses for teachers, administrators and persons in business and industry. A special bulletin is printed each semester outlining the otferings and is available from the Registrar of the University.

## SUMMER SESSION

An extensive summer school curriculum, of the same quality as that offered during the regular academic year, is available to all qualified persons. In addition, summer session is typically a time when the faculty offers innovative, experimental courses which cover a broad range of contemporary issues and perspectives in many
fields. The summer session consists of two four and one-half week terms and begins in the middle of June. Designed for undergraduates and graduate students alike, the program serves teachers and administrators seeking crederitials and special courses, freshmen desiring to initiate college study, and others desiring special studies offered by the schools and departments. Transient students who enroll for the summer session need only subrnit a letter of acadernic standing or give uther evidence of being prepared for college study.

A complete Summer Session Catalog, outlining the curriculum as well as special institutes, workshops and seminars, is printed each spring and is available from the Dean of the Sumrner Session at the University.

## KPLU-FM, UNIVERSITY RADIO

Since 1966, the University has owned and operated a non-commercial, frequency modulation radio station. Committed to serving both the University community and the Southern Puget Sound Region, the facility offers extensive instructional opportunities to students interested in broadcast media. Operating on a frequency of 88.5 megacycles under license from
the Federal Communication Commission, the station produces local programs as well as subscribing to such networks as National Public Radio, Deutsche Welle Radio of the Federal Republic of Germany, the Canadian and British Broadcasting Corporations and other prograrn sources.


## CHOICE

Since 1969, CHOICE, Center for Human Organization in Changing Environments, has functioned as the community service and action-research arm of Pacific Lutheran University. The acronym, CHOICE, cunveys its furiction and style: to initiate processes and programs which assist many segnents of the increasingly urbanized society to participate in making choices which may lead to improved quality of life in the regıon.

CHOICE provides linkages with many community service agencies, provides channels for social involvement by faculty and studerits, and furthers the University's role as an agent of social change.

CHOICE provides organizational development services to social service agencies, governmental and military organizations, school systems, businesses and churches through its network of skilled resource persons. It provides communications and planning workshops and training programs for groups involved in social change in such areas as alcohol and drug use, law enforcement and corrections, minorities, human relations and conflict resolution.

Since 1970, CHOICE has participated in a consortium of colleges and television stations, The Puget Sound Coalition, a region-wide educationaction project to develop increased public participation in the issues of the environment and the criminal justice system.

CHOICE is linked to similar resource centers at other ALC-related colleges: Augsburg, Augustana, Califurnia Lutheran, Capital, ConcordiaMoorhead, Luther, and Texas Lutheran.

## student life

The quality of life cultivated and fostered within the University is an essential component of the academic community. The environment produced is conducive to a life of vigorous and creative scholarship. It also recognizes that liberal education is for the total person and a complementary relationship exists between the students' intellectual development and satisfaction of their -ther individual needs. Interaction with persons of differing life styles, application of classroom knowiedge to personal goals and aspirations, and non-academic experiences are all invaluable and vital components of education at PLU. In a time when there is a need for meaningful community, the residential campus facilitates genuine relationships among members of the University, from diverse religious, racial, and cultural backgrounds. All of the services and facilities provided are intended to complement the academic program. At PLU, students have assumed increasing responsibility for their personal and social behavior. The Student Life Office is intended to facilitate the development of the student in whatever direction he or she may wish to go. The services provided reflect changing student needs, and the opportunities for student participation include virtually all aspects of the

University. The Vice President for Student Life and his staff are responsible for organizing and programming residence halls, orienting new students, assisting foreign students, acting as liaison to the Associated Students of PLU (student government), and coordinating other student activities. Individual attention is given to every student concern including a variety of specific services outlined below.

## Responsibilities of Community Life

Residential living is an integral part of the educational process at PLU and the residence halls were constructed with that in mind. The policy reflects the commitment to the residential concept. All students not living at home with parents, guardian, or spouse are required to live in a residence hall until the age of 22 years. The halls vary in size, but each is organized as a separate entity with student government, staff, and programs. Sorne of the halls are co-ed, while others are reserved tor all men or all women.

In the close living situation in the residence halls as well as in the campus community at large, certain regulations are necessary and the University admits students

with the understanding that they will comply with them. All students are expected to respect the rights and integrity of others. Conduct which is detrimental to the student, his colleagues, or the University or such conduct which violates civil law may be grounds for dismissal from the University. Specific regulations and guidelines for residence hall living are outlined in the Student Handbook which is available at the Student Life Office and is sent to accepted students during the summer preceding their freshman year.

## ACTIVITIES

The PLU Student Handbook enumerates over 50 academic and nonacademic organizations, clubs, societies and interest groups, which testifies to the diversity of campus extra-curricula life. Social action, religious and political organizations; interest and sporting clubs; and service, professional and academic societies are among the options from which to choose.

The arts are flourishing at Pacific Lutheran University. The Choir of the West, Concert Band, the University Symphony Orchestra, a renowned collegiate stage, two art galleries, Liturgical Dance ensemble and faculty and student lectures provide generous opportunities for the performing student. Personal expression is emphasized in debate, student government, campus radio KPLU-FM, the University yearbook and the weekly student newspaper.

Organized and individual physical activities are for everyone.Recreational and competitive programs include football, cross country, basketball, swimming, hiking, climbing, volleyball, tennis, golf, wrestling, paddleball, bowling, squash, handball, ping pong, baseball, softball, badminton, field hockey, track and field, water polo,
skiing and rowing. Athletics emphasize develoument of the individual rather than the search for athletic glory, yet the University is proud of of its varsity championships in many sports.


## RELIGIOUS LIFE

Pacific Lutheran University by its very nature is a place for the interaction between studies and the Christian faith. Opportunities for the mutual celebration of that faith on campus are rich and diverse.

Chapel worship is held Monday, Wednesday, and Friday mornings during the semester for all who wish to participate. The University Student Congregation celebrates the Lord's Supper each Sunday. Pastoral services of the University Ministers are avaitable to all students who desire them.

Several denominations and religious groups have interest organizations on campus, and there are numerous student-initiated Bible Study and fellowship groups. The Religious Life Council, an elected student and faculty committee, coordinates these activities in a spirit of openness and mutual respect.

## STUDENT SER VICES

*THE STUDENT HEALTH CENTER retains the services of physicians and nurses to aid in maintaining the physical welfare of students. All fulltime students (registered for ten hours or more) are entitled to treatment at
the Center for minor disorders and common ailments.

## *HEALTH AND ACCIDENT INSUR.

 ANCE is offered by the University on a voluntary basis. The group Accident and Sickness Medical Expense Plan provides coverage 24 hours a day, 12 months a year, anywhere in the world. This plan is available at fall or spring registration only. A brochure outlining the prograrn is available from the General Services Office.*THE COUNSELING AND TESTING CENTER assists students in coping with normal developmental problems. Trained and experienced personnel, including a staff psychiatrist, offer group and individual counseling. A variety of psychological tests are available to assist students with career planning, educational adjustment and personal problems.

## *Details available in the Student Hand-

 book.LEARNING SKILLS SERVICE, instituted in 1972, is a facility which provides students with immediate practical support for academic problems.

Functioning as a part of the Counseling and Testing Center, LSS provides means by which students may
further develop academic skills as well as receive assistance with short-term academic concerns.

Programs of the Learning Skills Service are centered in six areas: Study Skills, Basic English Skills, Basic Math Skills, Tutorial Service, Reading Improvement, and Individual Need.

These six areas provide the working structure of the center. However, LSS programs remain flexible so as to respond to student need.

MINORITY AFFAIRS OFFICE coordinates a special program which seeks to continually provide for the academic and social needs of minority students. Supportive services include admissions assistance, scholarship and financial aid assistance, counseling, book fund, and convocation programs.

THE CAREER PLANNING AND PLACEMENT OFFICE functions as a resource center for developing career objectives. The director of the CP \& P Office assists students with interviewing skills, resume writing and a variety of job search techniques suited to a student's particular need.

The Career Planning and Placement Office also maintains tentative projections on career opportunities.

Students are encouraged to utilize these services while formulating career objectives, as well as when eventually interested in placement.

FOOD SERVICES are available for all students. Resident students are required to take their meals in one of the campus dining halls. No deductions are made for students eating fewer than three meals per day as food service fees are based on the estimated total number of meals for all students over the whole year. Off-campus students may board on campus on a semester basis. Guests are invited to eat in either of the dining halls at standard guest meal cost.

SCHEDULING SERVICES are maintained in the University Center. All university activities must be scheduled through th is office. Scheduling student activities is a joint responsibility of the University Center Director and the Social Activities Board.

PLU BOOKSTORE is owned and operated by Pacific Lutheran University for the benefit of students, faculty, staff, and their guests. The bookstore sells the textbooks and supplies that are required or recommended by faculty members for their courses. Additional reading matter, supplies, gift items, greeting
cards, clothing, film processing, toiletries, and other convenient items are also available.

## RESIDENTIAL LIFE

As a residential campus, Pacific Lutheran University offers students a unique experience in group living. The University recognizes the importance of non-classroom activities in providing an education for the whole person. The aim of residential living is to help students grow as hurnan beings.


Campus residence halls are sinall. They are organized into communities in which each individual counts as a person. New knowledge shared with friends in the residence halls takes on a very personal meaning. Mien and women of many backgrounds and
cultures live on campus; therefore, students in residence have a unique opportunity to breaden their cultural horizons.

The University cares about the quality of life on campus. It is believed that attractive and comfortable residence halls enrich the quality of life and enhance the learning process. For this reason the University takes a great deal of pride in offering students highquality housing opportunities. In addition, PLU is very open to ideas from its students about how the residence halls can be improved. Innovation has become a tradition.

A selection of modern, attractive halls, each with its own traditions and unique advantages, offer students the opportunity to establ ish a comfortable living pattern. All halls include informal lounges, study rooms, recreation areas, and corrmon kitchen and laundry facilities.

Harstad Hall, a six-story, ivy-covered building which at one time housed the entire college, is a unique residence hall. Its irregularly shaped rooms, high ceilings and paneled walls are reminiscent of late 19 th-century collegiate life. Completely refurnished in recent years, Harstad accommodates women in single, double, or triple rooms.

Pflueger and Kreidler Halls both house all women. Both are tastefully furnished and include attractive lounge facilities. Pflueger is the only women's residence on lower campus.

Tingelstad Hall is a nine-story residence. In keeping with the University's commitment to small living units, it is divided into four distinct houses of two floors each. The following houses are located in Tingelstad: Cascade, Ivy, Evergreen and Alpine.

Ivy House and Hinderlie Hall are both men's housing units.

Cascade, Evergreen, Alpine, Hong, Foss, Stuen and Ordal are co-educational residence halls. Although they are housed in separate wings, men and wormen in co-ed halis share lounge and recreation facilities, and common residence government, and participate jointly in all hall activities.

Further information regarding residence halls can be obtained from the Office for Residential Life.

In addition to housing for single students, the University maintains 26 apartments on campus for married students. Two- and three-bedroom units are available. Application for these apartments can be made through the Office of General Services.

## ENVIRONS

The University's geographical setting affords the student a wide variety of both recreational and cultural entertainment options.

Recreationally, the grandeur of the Pacific Northwest country encourages participation in hiking, camping, climbing, skiing, boating and swimming.


The most conspicuous natural monument in the area is MIt. Rainier. In addition to Rainier, the distinctive realms of the Cascade and Olympic mountain ranges, and forests of Douglas fir complete one of the most naturally tranuil environments in the United States.


Students can also enjoy the aesthetic offerings of nearby Seattle and Tacoma. These city centers host a variety of performing and recording artists, dozens of galleries and museums as well as unique shopping and dining experiences.


## ACADEMIC AND SERVICE FACILITIES

Tacoma-Pierce Administration Building (1960) houses university administrative offices, classrooms, closed circuit TV studio, and faculty offices for the departnents of English, Philosophy, Religion, Foreign Languages, and the Schools of Education and Business Administration.

The Robert A. L. Mortvedt Library ( 1966), a multi-media learning center, contains over 195,000 published and recorded items and provides an optirnal learning environment of comfort and privacy. It also houses University Photo Services and the Computer Center.

Xavier Hall (1937, remodeled 1966) houses Central Services, classrooms, and faculty offices for the departments of Economics, History, Political Science, Psychology, and Sociology.

Ramstad Hall (1947, remodeled 1959) contains laboratories, classrooms, library, museum, research and office facilities for the departments of Biology, Chemistry, Engineering, and Physics.

Memorial Gymnasium (1947) provides classroorris and women's physical ed-
ucation activity areas and accommodates intramural and intercollegiate athletics.

Eastvold Auditorium (1952) houses the University's performing stage for concerts, special events and plays. Also contained are faculty offices for the departments of Communication Arts and Music, as well as KPLU-FM radio station, classrooms, ensemble and individual practice rooms for the Music Department and a devotional chapel for student worship.

The Swimming Pool (1965) encloses a swimming area 42 by 75 and a diving area 30 by 35 feet as well as dressing room facilities.

Olson Physical Education Auditorium (1969) facilitates campus recreational activities including lectures, the performing Artist Series, popular entertainment and athletic events. Attractions include a Uni-Turfed auditorium and an Astro-Turfed fieldhouse; handball, squash, paddleball and sauna facilities; shower, locker and dressing rooms. Additional physical education facilities include lighted tennis courts, a ninehole golf course and numerous athletic fields.

Aida Ingram Hall (1955, remodeled 1971, lecture hall constructed 1973) houses studios, offices and class-
rooms as well as special facilities for the Department of Art and the School of Nursing.

The University Center (1970) integrates upper with lower campus. Its services include food service facilities, lounges, meeting roons, bookstore, bowling alleys, music listening room, games room, private dining rooms, Chris Knutzen Fellowship Hall, student government offices, student publication offices, coffee shop and "The Cave", a student-operated coffeehouse.

Columbia Center (1962) contains a cafeteria, coffee shop, bakery and golf pro-shop.

Student Health Center is a modern facility equipped with examination rooms, hydro-therapy equipment, laboratory space and day wards for both men and women.

The Schoenfeld Greenhouse (acquired 1971) includes both cold and warm rooms and a potting area.

Ivy Hall includes faculty offices for the department of Biology, laboratory, lecture areas and museum.

Music Annex contains practice rooms for students enrolled in private lessons.

## admission

Each student who applies for admission is considered on his merits, his individual talents and achievements regardless of race or faith. Although there are no arbitrary entrance requirements, admission is selective. Applicants should present the academic and personal traits which our experience indicates will enable them to succeed at the University and benefit from its environment. The criteria generally considered are grade point average, class rank, transcript pattern, test scores and references.

Applicants are admitted for either fall or spring semester. Admission to the fall term carries permission to attend the previous summer sessions. Spring acceptance approves enrollment in the January Interim. We suggest the following application deadlines: fall semester - June 1; spring semester January 1.

## Procedures: Entering Freshmen

Stuidents attending high school who wish to enter as freshmen, may apply anytime after completion of their junior year. Admissions decisions are made beginning December 1 of the senior year unless a request for Early Decision is received. Candidates are usually notified within 10 days of their completed application. The following credentials are required:

1. Formal Application: Submit the Uniform Application for Admission to Four-Year Colleges and Universities in the State of Washington. Available from high school counselors or the PLU Admissions O ffice.
2. \$15.00 Application/Records Fee: A \$15 fee must accompany your application or be mailed separately. This non-refundable service fee does not apply to your account. Make checks/ money orders payable to Pacific Lutheran University and mail to Director of Admissions.
3. Transcript: The transcript you submit must include all credits completed through your junior year of high school. If admission is offered, an acceptable final transcript which includes satisfactory completion of the senior year and attainment of a diploma must also be presented.
4. References: Two character/ academic evaluations must be prepare by principals, counselors, pastors or other qualified persons. The PLU Admissions Office will supply the forms.
5. Test Requirement: All entering freshmen must submit scores from either the College Entrance Examination Board, Scholastic Aptitude Test (SAT) or the


#### Abstract

American College Test Assessment (ACT) or for Washington State residents, the Wash ington Pre-College Test (WPCT). Registration procedures and forms are available at high school counseling offices.


## EARLY DECISION

If a high school student has decided upon PLU as his first choice, he may be offered admission as early as October 1 of his senior year. Early Decision Application must be made by November 15 of your senior year. SAT, ACT or WPCT scores from the previous May or July are acceptable. Early Decision students are given preferential treatment in campus housing and financial aid. An Early Decision form is available from the Admissions Office. If an Early Decision is unfavorable, a student may still be considered for regular admission.



EARLY ADMISSION
Qualified students interested in accelerating their formal education may begin work toward a degiee after completion of the funior year or first semester of the semior year of high school. Exceptional students who wish to enroll before completing atl required units in high school must have a letter submitted by a recognized sctoool official which approves early college admission and gives assurance that a high school diploma will be issued after completion of specitied college work. Only students highly recommended for Earty Admission will be considered. Generally these: studerits rank among the top students in their class and present high aptitude test scores.

## HONORS AT ENTRANCE

PLU confers Honors at Entrance in accordance with criteria established by those institutions which are members of the CEEB. Honors at Entrance recognizes outstanding high school achievement and anticipates superior performance at the university level. These awards have no monetary value. (See Honor Programs page 75)

## ADVANCE PLACEMENT OPPORTUNITIES

1. Via the Advanced Placement Program of the CEEB: Students receiving scores of 3,4 , or 5 on College Entrance Examination Board Advanced Placement Examinations may be given both advanced placement and credit toward graduation Exact provisions are dependent upon the subject matter field. Inquiries are welcomed by the Admissions Office.
2. Via Local Advanced Placement Examinations: A number of departments and schools offer students the opportunity to take placement examinations so they may be accurately advised as to the level at which they can most advantageously begin their studies. When a student receives
a superior score on such an examination, and when his study of the subject matter was not a necessary part of the course work which won him his high school diploma, credit may be granted toward graduation. Inquiries are welcomed by the Academic Deans and the Pruvost.

Procedures: Transfer Students

Students who began their education at other accredited colleges or universities are welcome to aply for admission with advanced standing. Candidates must have good academic and personal standing at the institution last attended full-time. Although it does not guarantee admission, a C grade point average (2.00) in all college work attempted is reuired for regular admission. Test scores may be required for applicants who have limited college experience.

## HOW TO APPLY

1. Formal Application: Submit a formal application for advanced standing (form provided by PLU Admissions Office).
2. \$15.00 Application/Records Fee: Submit a $\$ 15.00$ fee usuaily with the formal application.
3. Transcripts: Official transcripts from all previous institutions must be sent by those institutions directly to the PLU Admissions Office. Official high school transcripts of credits are necessary if they are not listed on college transcripts.
4. Clearance Form: The Office of the Dean of Students at your most recently attended (fulltime) institution must complete a clearance form (provided by PLU Admissions Office).
5. References: Two character/ academic evaluations must be prepared by instructors, counselors, pastors or other qualified persons. PLU Admissions Office provides the forms.


## Evaluation of Credits

1 The Registrar evaluates all transfer records and creates an advising booklet (Gold Book) indicating completion of any core requirements and total hours accepted. Individual schools and departments determine which courses satisfy major requirements.
2. Generally, college-level courses carrying grade "C" or above apply toward graduation. "D" graded courses will be withheld until a student has successfully completed one semester's work at the University.
3. A community college student may transfer a maximum of 64 semester ( 96 quarter) hours of credit from the two-year institution.
4. To qualify as a degree candidate, a student must take the final seven courses (28 semester hours) in residence.

## Unaccredited Educational Experiences

1. Credits earned in unaccredited schools are not transferable at the time of admission. Evaluation and decision on such courses will be made after the student has been in attendance at the University one semester.


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2. The University allows up to 5 courses (20 semester hours) of USAFI credit and up to 5 courses (20 semester hours) for military credit, providing the total of the two does not exceed $7 \frac{1}{2}$ courses ( 30 semester hours).
3. The University does not grant credit for college level GED tests.

## Procedures: Former Students

Full-time students who have not been in attendance for one semester or more may seek readmission by obtaining an application for re-entrance from the Admissions Office unless they have been approved, at the time of last enrollment, for a Leave of Absence. Students who have been dropped for academic or disciplinary reasons must identify a faculty member willing to act as a sponsor and adviser if readmitted. Re-entering students who have attended another college in the interim must request that a transcript be sent from that institution directly to the Director of Admissions.


## Procedures: Foreign Students

Foreign students who are qualified academically and financially are encouraged to join the University community. Information and application procedures may be obtained from the Director of Admissions or Foreign Student Adviser.


## Finalizing an

Offer of Admission

1. Medical Requirement: Before final matriculation, each new full-time student (ten semester hours or morel must submit a

Medical History and Corisent Form accentable to the PLU Health Service. Students are not finally admitted until this form is approved.
2. Advance Tuition Payment: A $\$ 75.00$ Advance Tuition Pay. ment is necessary following an offer of admission. This payment is the student's acknowledgement of acceptance and guarantees him a place in the student body and reserves housing on campus if reauested. It is credited to the student's account and is applied toward expenses of the first semester. Fall applicants offered admission b fore May 1 must submit the payment by May 1. If circumstances necessitate cancellation of enrollment and the Director of Admissions is notified in writing before May 1, the $\$ 75.00$ will be refunded. The date for interim is December 15, and for spring semester, January 15.
3. Two Forms: A Student Persornel Form and a Directory Information/Housing Application Form must be completed by all students and returned with the advance tuition vayment.

## financial aid

The University provides financial aid to students who would be unable to attend without assistance. Eligibility for aid is based primarily on financial need (with the exception of sume Merit Awards and President's Scholarships) as determined from information supplied on the College Scholarship Service (CSS), Parents' Confidential Statement (PCS) or Student Financial Statement (SFS). Need is the difference between total student expenses and the amount the student and his family can pr vide for education. Taken into consideration are income, assets, age of the parents, number of children in the farrily, number in college, and other pertinent factors.

Aid is usually awarded in the form of a "package" consisting of scholarships, grants, talent awards, loans and opportunities for part-time employment. All gift aid for which a student qualifies is awarded first, with any unmet need being met with loans and/or work.


## HOW TO APPLY

1. Submit a Parent's Confidential Statement (or Student Firancial Statement) to the College Scholarship Service no later than February 1 for maximum consideration. (Available from High School Counseling or College Counseling Offices, The College Scholarship Service, or PLU Financial Aid Office.)
2. Apply and be offered admission to the University.
3. Submit a PLU Financial Aid application (not required of Freshmen).
4. Transter Students - submit a Financial Aid Transcript available from the PLU Financial Aid -ffice.

## TYPES OF AID

## GIFT AID

## President's Scholarships

Each year the University will award 40 President's Scholarships of \$500 each to students in recognition of outstanding academic achievement in high school and in anticipation of superior performance at the college level. These scholarships are made without regard to tinancial need making all qualified students eligible. To be considered for a President's Scholarship, a student must have a 3.75 high school G.P.A.
and be offered admission to the University. These awards, made early in March, are renewable if the student qualifies for the Dean's List (3.3) each year.

## Merit Awards

Several awards are given each year to outstanding students who have excelled academically and in certain talent areas.

## Scholarships and Grants

A number of scholarships, talent awards, Liniversity Grants, minerity grants, foreign student grants, Educational Opportunity Grants (Federal), and nursing grants are available to qualified students.


In addition to its own scholarship funds, the University has at its disposal the following restricted funds, generally awarded to those students who have completed their freshman year:
Aid Association for Lutherans Scholarships
Altrusa Club, Tacoma Chapter Scholarship
Alumni Scholarship Fund
American Association of University Wornen Scholarship
American Lutheran Church - North Pacific District Scholarship
Florence Spinner Anderson Memorial Scholarship
Ada Kilan Annis Scholarship
Frank S. Baker Scholarship
Helen Clift Bell Scholarship Jorunn Breiland Scholarship Fund
O. A. Brown Fund

Dr. and Mrs. W. B. Burns Fund
Burzlaff Memorial Scholarship
California Scholarship Federation -
Scholarship for Sealbearers
Carl Dalk Memorial Scholarship
Chao-Liang Chow Scholarship
Ida A. Davis Fund
R. Parcher Ellingson Scholarship

Leif Erickson Scholarship
Faculty Memorial Scholarship Fund
Faith Lutheran Church of Portland
Scholarship Fund
Helen Frost Scholarship
Rebecc:a Schoenfeld Gardner and
Joseph Gardner Scholarship

Greater Puyallup Valley Chamber of Commerce Scholarship
Olaf Halvorsen Scholarship
W. H. Hardtke Seminary Student Scholarship Fund
Terry Irwin Scholarship
Rev. Karl Kilian Memorial Fund
Kinsman Award
Melvin Kleweno Memorial Scholarship
Ladies of Kiwvanis Award
Drs. Larson, Wicks, Reberger and Elder Scholarship in Medical Technology
Ludvig and Clara Larson Scholarship
Mr. and Mrs. W. Hilding Lindberg
Endowed Scholarship
Lute Club Scholarship
Lutheran Brotherhood Legal Reserve
Life Insurance Co. Scholarship
Shirley McKay Scholarship
Mu Phi Epsilon, Tacoma Professional Chapter, Scholarship
Fred O. Muenscher and Associates Shakey's Pizza Parlors Scholarship
Mr . and Mrs. Gus H. Nieman
Memorial Scholarship
Margaret Nistad Memorial Scholarship
Selma and Magnus Nodtvedt Scholarship
PLU Faculty Wives Scholarship
PLU Journalism Scholarship
Women of Rotary Scholarship
Drs. Richard and Walter Schwindt Scholarship
Siqueland Youth Scholarship (North
Pacific District Luther League)
Skinner Foundation Scholarship

Dr. and Mrs. L. E. Skinner Scholarship Tacoma Lumbermen's Scholarship
Rev. and Mrs. Halvor Thormodsgard Scholarship
Tuberculosis Association of Pierce County Scholarship

## Minister's Dependent and

## Special Grants

An annual grant of $\$ 200$ "minimum" will be available upon application to all unmarried dependent children of a regularly ordained, active minister or missionary of a Christian church.

If a financial need is demonstrated through the College Scholarship Service, Parents' Confidential Statement, the grant may be increased to a maximum of $\$ 700$. A student must be enrolled full-time to be eligible.

Recognized dependents (not including married children) of faculty/staff members may receive special grants, the amount to be announced at the time of registration.

Grants in the amount of $\$ 50$ per semester shall be given to each of two or more students from the same family attending school at the same time, provided that the main support for both is given by their parents and provided they have not received any other University grant or avard. Married students are also eligible to
receive this grant when both are enrolled as full-time students.

These grants must be applied for in the Business Office at/or following registration and will be credited after eligibility has been established.


## LOANS

Loans include National Direct Student Loan (NOSL), Nursing Student Loan, Federally Insured Student Loan and various restricted university loan funds which include:
Alumni Association Loan Fund
American Lutheran Church Women
Loan Fund

Anton Anderson Loan Fund John S. Baker Loan Fund J. P. Carlstrom Memorial Loan Fund

Delta Kappa Gamma Student Loan Fund
Lily C. Ekern Fund
Marie Huth Loan Fund
Gerhard Kirkebo Memorial Loan Fund
Jeanette OIson-Diana Paul-Miriam Stoa
Memorial Student Loan Fund
J. P. Pflueger Student Loan Fund
O. J. Stuen Alumni Loan Fund
O. A. Tingelstad Loan Fund

Women's Club of Tacoma Revolving Loan Fund

## STUDENT EMPLOYMENT

Off-campus and university employment including the work/study program is, available to students.

## LAW ENFORCEMENT EDUCATION PROGRAM

Loans and grants for those involved in or planning to pursue careers in law enforcement are available to students.

Complete details on procedures and particulars of the financial aid program are available from the Financial Aid Office at the University.

## VETERANS AFFAIRS

The University is approved by the

Veterans Administration as an institution of higher education for veterans and invites veterans to use its facilities in acquiring and rompleting their education. Forms are available in the Registrar's Office.

Studengts, including any new transfer students, who will come under Public Law 6.34 (Orphans Eill) or the Veterans Readjustment Beriefit Act of 1966 (New GI Bill), must contact the Veterans Administration Regional Office first for a certiticate of eligibility and be guided by them thereafter. This should be done as soon as possible after acceptance by the University and before arrival on campus. During registration all recipients of aid through the Veterans Administration should fill out the questionnaire provided by the Registrar.

In order to obtain full subsistence, undergraduate veterans and eligible orphans of veterans must carry three courses. Graduate veterans should consult the Registrar concerning load for full subsistence, as this may vary. Orphans must carry at least $1 \frac{1}{2}$ courses ( 6 semester hours) to claim subsistence.

For intormation regarding evaluation of credits, see Unaccrestited Educational Experiences in the Admissions area of this catalog.

## costs



The University maintains its high educational standards at the lowest possible cost. Cuntributing friends of the University, both individual and corporate, and the support of cooperating Lutheran churches are instrumental in maintaining a moderate level of tuition consistant with high quality education, In reality, the individual student pays less than the actual cost of his education. An extensive financial aid program, outlined in this catalog, assists students in meeting University crosts.

## Tuition

A student at Pacific Lutheranı pays only for those courses in which he enrolls. Tuition charges are determined by the number of credit hours for which a student registers. Depending upon his finarrcial situation, his career goals and his aptitude, a student may arrange his program in a variety of ways.

The charge for one full course is $\$ 266.00$ ( $\$ 66.50$ per semester credit hour).

The schedule of tuition rates is as follows:

| Courses <br> $1 / 4-23 / 4$ | Sem. Hrs. <br> 1.11 | Costs <br> $\$$ <br> (per hour) |
| :--- | :---: | ---: |
| 3 | 12 | 798.50 |
| $31 / 4$ | 13 | 864.50 |
| $31 / 2$ | 14 | 931.00 |
| $33 / 4$ | 15 | 997.50 |
| 4 | 16 | $1,064.00$ |
| $41 / 4$ | 17 | $1,130.50$ |
| $41 / 2$ | 18 | $1,197.00$ |

Interim Tuition: The charge for one full interim course (4 semester hours) is $\$ 266.00$ at $\$ 66.50$ per semester hour.

## Private Music Fees*

Music Majors
Private instruction fee including use of practice rooms, per semester $\$ 60.00$

Non-Music Majors
Private instruction, including use of practice room, per semester

One thirty-minute period per week . . . . . . . . \$ 75.00
One sixty-minute period per
week . . . . . . . . . 125.00
*L.esson fees are in addition to tuition.

## Special Fees

L.ate Registration Clearance (Applicable after the fifth day of the semester) . . . . . . \$25.00
Audit (per 4 hour course) . 50.00 Credit by examination:

Departmental examination (per credit hour sought) . . 25.00
CLEP . . . . . . . 15.00
Change of Registration . . . 5.00
Master's thesis microfilning and
binding . . . . . . . . 21.00
Binding only (per copy) . 6.00
Education Placement Fee . 10.00
L.ocker and towel fee (\$1.00 fee plus
$\$ 1.00$ deposit) . . . . . . 2.00
Bowling . . . . . . . 15.00
Skiing . . . . . . . . 45.00
Student Parking
Full-time, year permit . 10.00
Part-time, year permit . . 3.00
Student health and accident insurance (24 hour, 12 month coverage, optional, [fee subject to change by underwriter ])
39.00

## Board and Room

Room with telephone and board is furnished to a resident student, per semester, as follows:

Fall Semester Room and Board*
Double Occupancy Room . . \$565.00
Interim
Interinา room is provided at no extra charge for students residing on-cainpus during the fall sernester. However, all students living on-campus during Interim must pay $\$ 75.00$ board. A room fee of $\$ 50.00$ is charged Interim residents who did not reside on campus during the fall semester.

## Spring Semester Room and Board

Double Occupancy Room . . \$470.00
*An appropriate fee will be assessed for rooms occupied during Christmas recess.

The above room and board rates include three meals per day, Monday through Saturday, and brunch and dinner on Sunday. Meals are not provided during Thanksgiving, Christmas and Easter vacations, nor any other day when the residence halls are closed.

Students roorning off-campus are encouraged to eat their meals in University dining halls. Information
regarding board rates and meal plans for off-campus students can be

obtained from the Director of Food Service.

## Family Apartments

Two-bedroom (10 units), including water, per month . . . . \$45.00 Three-bedroom (4 units), including water, per month . . . . 60.00 Evergreen Court (12 units), two bedroom, including all utilities, per month
95.00

A deposit of $\$ 50.00$ rnust accompany a reservation for family apartments. This deposit will be held by the University until the occupant vacates the apartment, or cancels his reservation. One morith's advance rent for apartments is required.

## PAYMENTS

Semester bills are due and payable at the time of registration unless the optional PLU BUDGET PLAN (described below) is selected. A late charge of one per cent of the balance due will be made. Students receiving scholarships, grants or loans must complete all necessary arrangements well in advance of registration. Students who are applying for a federally insured student lean which still is pending at the time of registration, must have a letter of commitment from the lender acceptable to the University.

## Advance Payment

New students are required to pay a $\$ 75.00$ deposit after acceptance and before May 1. This is not refundable after May 1 for fall, December 15 for interim, and January 15 for spring semester applications.

Fieturning students are also required to pay a $\$ 75.00$ deposit on tuition which is not refundable after May 1.

## PLU Budget Plan

72 An alternative method of meeting total educational costs is the PLU

BUDGET PLAN which consists of equal monthly payments. Operating details of the budget plan should be requested from the PLU Business Office.

## Restrictions

The University reserves the right to withhold statements of honorable dismissal, grade reports, transcript of records, or diplomas, until all University bills have been paid. Students will not be permitted to finalize registration until all University bills are paid.


Credit for future services to the University by the student cannot be used to meet payments. Monies due for work performed will be released only if the student's account is not in arrears.

## Refunds

Partial tuition refund may be made when withdrawal from the University results from sickness or causes occuring beyond the control of the students. In no cases will special fees be refunded. WVhen approved, tuition refunds will be made in the following proportions:

One week or less . . . . $90 \%$
Between one and two weeks 80\% No refund after two weeks

Refunds on board will not be made for continuous absence of less than one week and no refund will be made for the first week's absence. A pro-rata refund will be made for necessary withdrawal from the University. No refund will be made for any University trips, such as choir, chorus, band, orchestra, athletics, and so forth. Refunds on room will not be made.

## Depository for Students

Numerous local banks are available for providing depository services for students.

## section 2 specifics

## II



# academic procedures 

## Registration

The normal course load for full-time students is $3 \frac{1}{2}$ to $4 \frac{1}{4}$ courses (14 to 17 hours) per semester including physical education. A normal student load during the Interim is four hours with a maximum of five hours. The minimum semester load for a full-time student is ten hours.

Only a student with a B (3.00) average or better may register for more than $4 \frac{1}{4}$ courses ( 17 hours) per semester without the consent of the Office of the Provost. A student engaged in much outside work for self-support may be restricted to a reduced academic load.

New students, who have received notice of acceptance from the Office of Admissions, may register by mail. Other students must register on designated days; those failing to do so wiil be charged a late registration fee.

In the spring semester, students who plan to return in the fall may preregister by making a $\$ 75.00$ deposit on next year's tuition. A student must register for each new semester on the designated days and is not officially enrolled until his registration has been cleared by the Business Office and his Place of Residence form has been processed.

## Changes in Registration

A $\$ 5.00$ fee may be charged for any change that results in a class being dropped. Necessary forms are obtainable from the Office of the Registrar. Students should note that there are 2 -week and 4 -week limits respectively for adding or dropping courses.

Students officially withdrawing from a class after the fourth week will receive a WP (withdrawal/passing), a WF (withdrawal/ failing) or a WM (withdrawal/medical). These grades are not used in calculating grade point average, but will appear on the student's semester grade report and be included in review of academic status. The grade of $W$ replaces WP, WF and WM on the transcript. An unofficial withdrawal from a course will be recorded as E. No student may withdraw during final examination week.

## Withdrawal from the University

Students wishing to withdraw from the University must obtain a withdrawal form from the Office of the Registrar. It is always to the student's advantage to make his withdrawal official. If he is withdrawing for a specified period of time (e.g. one semester to one yearl, he may wish to obtain a Leave of Absence form. A student is entitled to honorable dismissal from the University if his record of concuct is satisfactory and if he has satisfied financial obligations.

## The Grading System

Students are graded according to the following designations:
A -4.0 grade points per hour, credit given
B - 3.0 grade points per hour, credit given
C - 2.0 grade points per hour, credit given
$D-1.0$ grade point per hour, credit given
$E-0$ grade points per hour, no credit given
The grades listed below are not used in calculating grade point average. No grade points are earned under these designations.

H - credit given (Honors) [used only for courses unique to Interim]
$P$ - credit given (Passing)
F - no credit given (F ailure)
I - no credit given (Incomplete)
IP - no credit given (In Progress; applicable only to certain courses whose work extends beyond a regular term)
AU - no credit given (Audit)
*WF - no credit given (Withdrawal/Failing)
*WP - no credit given (Withdrawal/Passing)
*WM - no credit given (Withdrawal/Medical)

* will appear as W on permanent record

Incomplete (1) grades indicate that a student has been unable to complete his work because of circumstances beyond his control. To receive credit the incomplete must be converted to a passing grade within the first six weeks of the following semester. Incomplete grades which are not converted by removal become part of the permanent record but are not computed into the grade point average.

Medical Withdrawal (WM) is given when a course is not completed due to medical cause. The WM does not affect the grade point average.

In Progress (IP) signifies progress in a course which normally runs more than one semester to completion. In Progress carries no credit until replaced by a permanent grade.

Any course may be repeated by an undergraduate student. The higher of the two grades earned is used in computing the cumulative grade point average, but credit toward graduation is allowed only once.

## Pass-Fail Option for Undergraduate Students

The pass-fail option permits students to explore subject areas outside their known abilities and to add a broader range of courses without being forced to compete with majors who are specializing in those areas of study.

1. The pass-fail option is limited to a total of four courses (16 hours) and to no more than two courses ( 8 hours) per academic year.
2. Courses required for graduation in a degree program may not be taken under this option except when a first course has been taken prior to a declaration of a major.
3. Pass-fail grades do not alter the grade point average, but credits earned count toward graduation.
4. The pass-fail option agreement must be filed with the instructor no later than four weeks after the beginning of the semester.
5. Pass-fail students are responsible for all course work and examinations.
6. An entire course will not be converted to the pass-fail option by student vote.

## Exclusive Pass-Fail Courses

Departments or schouls may offer courses in which only pass-fail grades are given. These courses should pursue goals primarily concerned with appreciations, value commitments, creative achievements, or the like. Decisions to offer exclusive pass-fail courses are reported to the Provost and this fact is made known to students before they register for these courses.

Exclusive pass-fail courses may not be used to meet major or University requirements unless they have been approved as such by the faculty. Taking exclusive pass-fail courses in no way affects the student's personal pass-fail option.

Interim: Successful completion of a course unique to the Interim (courses numbered $300-320$ ) will be indicated by grades of either H (honors: to be given for truly exceptional work) or $P$ (passing: equivalent to A to D ). A student who fails to receive an H or P will not have his Interim registration recorded. Other courses offered in the Interim (not numbered $300-320$ ) will be graded by the regular A to E grading system.

## Academic Probation

Warning slips are given to any student who is doing " $D$ " or " $E$ " work at the end of the sixth week.

A student is placed on academic probation if he fails to keep his grade point average (cumulatively and for the immediately preceding semester) at or above 2.00. The student receives official notice of such action. The probationary student may be advised to reduce his academic or extra-curricular activities or both.

The enrollment of a student on probation who fails to earn a cumblative average of 2.00 by the end of his probationary semester is terminated. A terminated student may apply for reinstaternent by submitting a letter of petition to the Registrar's Office and securing a faculty sponsor. The petition and sponsorship letters are submitted to the Faculty Committee on Student Academic Status for action.

A student whose petition for reinstatement has been denied may apply for readmission after the expiration of one semester unless informed ot herwise.

## Eligibility for Student Activities

Any regularly enrolled, full-time student (ten hours) is eligible for participation in university activities. Limitations of a student's activities based upon academic performance may be set by individual schools, departments or organizations. A student on academic probation is not eligible for interscholastic competition; he may also be advised to curtail participation in extra-curricular activities.

## Classification of Students

Freshmen: students who have met entrance requirements.
Sophomores: students who have completed 30 hours and have earned 60 grade points.
Juniors: regular students who have fulfilled lower division requirements and have completed 60 hours and have earned 120 grade points.
Seniors: regular students who have completed 90 hours and have earned 180 grade points.

## Honors Programs

Honors courses are offered by certain departments for students of superior academic ability. Registration is by invitation only.

The GENERAL HONORS PROGRAM is particularly directed toward freshmen and sophomores. Some departments and schools offer special honors sections that allow students to pursue their academic interests with more depth and greater flexibility. Honors students will also have the opportunity to participate in special activities, e.g. discussons and informal meetings within their regular courses. Freshmen in the upper ten percent of their high school class and with acceptable college test scores are eligible for consideration.

The SPECIAL HONORS PROGRAM for juniors and seniors offers students an opportunity to develop a total academic program to reflect their special interests and capabilities. The student will propose a total plan of study for the time remaining until the granting of the degree; it may include any amount of the standard degree program. With the approval of a faculty spon or and the Honors Council lin that order), the plan itself shall become the degree requirement of the University in the case of this honor student. The essentials of any plan of study are a clear topical rationale and significant work beyond regular courses - comprehensive exams, independent study projects, interdisciplinary papers, bachelor's degree thesis, etc. Interested students should inquire at the Provost's Office for further information.

## Graduation Honors

Degrees with honors of Cum Laude, Magna Cum Laude and Summa Cum Laude are granted. A student must earn an average of 3.30 for Cum Laude, 3.60 for Magna Cum Laude and 3.90 for Summa Cum Laude. Physical education activities are not included in the determining of honors.

## Credit by Examination

Students are permitted, within limits, to obtain credit by examination in lieu of regular enrollment and class artendance. No more than $71 / 2$ courses ( 30 semester hours) may be counted toward graduation, whether it be College Level Examination Prograrn or any other examination. Exceptions to this rule for certain groups of students or programs may be made, subject 10 recommendation by the Educational Policies Committee and approval by the faculty.

Arrangements for departmental credit examinations must be made by the student with departmental chairman, dean, or director. Evidenc of this approval and of payment of the fee should be presented by the student to the professor who will administer the examination.

A student may, with the approval of the instructor or the department, gain credit for an audited course which he has not previously taken for credit by passing an examination set by the instructor or department. The fee for such examination is the difference between the auditing fee and the tuition the student would normally pay for the course.

The various schools, divisions and departments shall determine the specific CLEP examinations which may fulfill requirements for majors, programs, or General University Requirements in their respective academic areas. These examinations are subject to recommendation by the Educational Policies Committee and approval by the Faculty.

The minimum passing level for CLEP examinations taken at Pacific Lutheran University shall be the fiftieth percentile. Tests requiring higher passing levels shall be explicitly designated in our Credit by Examination brochure.

CLEP credits granted by other universities, colleges, and community colleges, which are earned before entrance, shall be honored by Pacific Lutheran. The application of those credits toward majors, programs, and Generai University Requirements shall be consistent with school, divisional, and departmental policies and standerds.

The University does not grant credit for college level GED tests.

## Informal Study

To encourage liberal learning of all kinds, over and beyond enrollment in courses leading toward formal degrees, the University offers a variety of opportunities for informal study:

Guest of University Status: Teachers and officials of other institutions, visiting scholars and artists, and other professional persons who wish to use university facilities for independent study may apply to the Provost for cards designating them as Guests of the University. Such persons, in their use of facilities, wil! defer to the needs of students and faculty members.

Auditing Courses: To audit a course is to enroll, with the permission of the instructor, on a non-credit basis. An auditor is encouraged to participate fully in class activities but is not held accountable for examinations or other written work nor does he receive a grade. If the instructor approves, the course may be entered upon the transcript as "Audit". With the approval of the instructor or the department, a student may gain credit for an audited course by passing an examination set by the instructor or the department. The fee for such examination is the difference between the auditing fee and the tuition the student would pay for the course.

Visiting Classes: Members of the academic community are encouraged to visit classes which interest them. No fee is charged for the privilege. Because regularly enroiled students must be given first consideration, persons desiring to visit classes are required to ask permission of the instructor. Visitors are guests of the classes and must conduct themselves accordingly.

## Academic Advisement

The advising system at Pacific Lutheran University is based on the premise that students should be responsible for maintaining and recording their own progress. Students are issued an advisement booklet (Gold Book) after they are admitted and when they arrive on campus. It is to be accurately maintained as long as the student is enrolled.

New freshmen are assigned to faculty members for advisement. They may continue to seek advisement from the freshman adviser for the entire freshman year. After the first year students may declare a major and receive academic advising from the school or department in which a major is declared. Students who do not declare a major may be assigned an adviser at the Provost's office.

Transfer students receive advisement from the school or department in which a major is declared. If undeclared, they may be assigned to an adviser at the Provost's office.

## Freshman Course Schedule

Students snould study the departmental or interdepartmental programs in which they intend to major. If they do not find specific schedule suggestions, or if they have no tentative major preference, they should select courses on the basis of the general guide below. Freshmen will receive help in course selection from
their advisers, generally choosing between 3 to 4 courses each semester.

Health and Physical Education (1 hour each semester): PE 100 should be completed during the freshman year but may be preceded by a 200 -level activities course - any of those numbered through 254.

Foreign Language ( 4 hours each semester): Either first or second year courses, depending upon the student's preparation and whether or not he wishes to meet Option I or II of the College of Arts and Sciences. (Applies only to students seeking a degree in the College of Arts and Sciences.)

English Composition or Proficiency Examination (4 hours)
Religion ( 4 hours): Whenever possible, a religion course should be included in a student's freshman year program.

The remainder of courses should be selected from lower division offerings in the fine arts, history, literature, social or natural sciences or mathematics.

## DEGREE REQUIREMENTS

## Baccalaureate Degrees

Baccalaureate degrees are conferred on students who have completed a minimum of 32 courses ( 128 semester hours) with a grade point average of 2.00 (School of Education -2.25) and who have met the following requirements for graduation:

1. The completion of a major as detailed by each school or department, consisting of a minimum of 6 courses ( 24 semester hours) with a minimum of 2 courses ( 8 semester hours) in residence.
2. The completion of a minimum of 10 courses ( 40 semester hours) numbered 321 or above.
3. The completion of two Interim courses ( 8 semester hours) numbered $300-320$. Of these two, one must be taken outside the major field of study. (Junior and senior transfer students must complete only one Interim course which may be taken in the student's major field.)
4. The completion of seven courses ( 28 semester hours) in residence during the senior year. (Special programs such as 3-1, 3-2, and Medical Technology excluded.)

## Basic Core Requirements - All Baccalaureate Degrees

1. English Proficiency

A student may meet the English proficiency requirement in one of three ways: (1) by earning a score of 3 or better on the CEEB Advanced Placement Examination in Composition; (2) by earning a passing grade in English 101 or its equivalent; or (3) by passing the proficiency examination administered each semester by the University English Department. This examination tests the student's knowledge of grammar and usage as well as his ability to communicate effectively in a brief essay.

Students who need help with the basic skills of English are encouraged to check with the Coordinator of the Learning Skills Center to receive necessary help. All students should fulfill the proficiency requirement as early as possible, preferably during the freshman year, and usually no later than the second semester of the sophomore year. A junior student who has not demonstrated proficiency will be granted only provisional status until he has successfully done so. Students will not be permitted to enroll for the senior year if the proficiency requirement has not been met.

A student who fails the English proficiency examination a second time must enroll in English 101.
2. Fine Arts - $\mathbf{1}$ course ( $\mathbf{4}$ hours)

Met by a course in art, music or communication arts with the exception of the following courses: Fine Arts teaching methods courses, CA 123, and journalism courses.
3. History and Literature -1 course ( 4 hours)

Met by any history course (except history 462), any English course (except 101, 328, 400 and 403) and any literature course in the Foreign Language department.
4. Philosophy $=1$ course ( 4 hours)

Met by any philosophy course except logic.
5. Religion -2 courses ( 8 hours)

A lower division course should be taken before the end of the sophomore year. The second course may be chosen from lower or upper division offerings or the Senior Seminar, an interdisciplinary offering that will help the student see the relevance of religious issues and thought to his major field. Transier students entering as juniors or seniors meet this requirement with one course chosen from all offerings in the department.
6. Natural Sciences and Mathematics - 1 course ( 4 hours)

Met by any course from biology, earth science (except 101), chemistry, engineering, physics or mathematics.
7. Social Sciences - $\mathbf{1}$ course ( 4 hours)

Met by any course from economics, geography, political science, psychology or sociology with the exception of Psychology 110.
8. Physical Education - 1 course (4 hours)

Met by four one-hour activities including PE 100; should be met by the end of the sophomore year; all activities are graded on A, Pass or Fail basis.
9. Candidates in the College of Arts and Sciences must meet a foreign language requirement under Option I, II or III as described by that College.

## Limitations - All Baccalaureate Degrees

1. Not more than 10 courses ( 40 hours) earned in one department may be applied toward the bachelor's degree in the College of Arts and Sciences.
2. Non-music majors may count toward graduation no more than 2 courses ( 8 hours) in music ensembles.
3. A maximum of 6 courses ( 24 hours) correspondence and/or extension work may be counted toward the degree. Any such course must be approved by the Registrar.
4. A maximum of 16 courses ( 64 semester hours) of credit will be accepted from a community college any time during the fouryear baccalaureate program.

## Graduation

Students expecting to fulfill degree requirements within the academic year are required to file application for graduation with the Registrar.

There are four degree-completion dates (end of fall semester, interim, spring semester, and second summer session). Degrees are formally conferred at May and August Commencements. Statements of completion are issued upon request to students who qualify for graduation at the end of fall semester and interim. The actual date of graduation will be recorded on the per manent records.

A student may be awarded more than one bachelor's degree simultaneously, provided that at least 28 additional hours are earned for the second degree. A total of 156 acceptable hours are required for two simultaneous baccalaureate degrees.

A student who is within 4 hours of meeting all requirements may participate in May Commencement provided a specific plan for earning remaining credit within ten weeks has been approved by the Provost. His status will be designated on the commencement program and his diploma will be dated in August.

Students who plan to transfer back to Pacific Lutheran University for a degree (math, physics, engineering programs) must apply for graduation prior to or during the first semester of their junior year so that deficiencies may be met before the student leaves campus.

Attendance at commencement exercises is required unless the candidate is excused by the Provost.

## SPECIAL PROGRAMS

## American Economy Program

The American Economy Program is designed to raise the level of understanding concerning economic principles and procedures among teachers and students in the Pacific Northwest. The program involves a Center for Economic Education recognized nationally by the Joint Council on Economic Education and by the Washington State Council on Economic Education. Its functions are:

1) To offer special courses to non-economics majors at PLU, especially to future teachers and to current members of the teaching profession. These courses emphasize the role of economics among the social sciences and its importance in all areas of life.
2) To develop, in cooperation with the school systems of this region, teaching plans and aids that facilitate incorporation of economics into existing curricula.
3) To provide speaking and consulting services for community organizations interested in promoting public understanding of economic principles and issues.
4) To establish, in cooperation with the PLU Mortvedt Library, a special collection devoted to the teaching of economics.

Further information is available from the Program Director in the Department of Economics.

## Classics

The Departments of Art, Foreign Languages, History, Philosophy and Religion cooperate in offering a Classics area major. This inter-departmental major requires completion of twelve courses selected from the list below in consultation with the program coordinator, Mr. Carleton. For administrative purposes, the Classics area major is a program of the Department of Foreign Languages.

The foundation of all majors is a language program in Latin and/or Greek:

Latin 101, 102, Elementary
Latin 201, 202, Intermediate
Greek 101, 102, Elementary
Greek 201, 202, Intermediate

| The balance of a major is derived from these courses |  |  |
| :---: | :---: | :---: |
| Art | 280 | Twentieth Century Art |
|  | 382 | Ancient Art |
|  | 383 | Medieval Art |
|  | 384 | Renaissance Art |
|  | 385 | Baroque and Rococco Art |
|  | 487 | Nineteenth Century Art |
|  | 490 | Seminar |
| History | 321, 322 | Classical Civilization |
| Philosophy | 331 | Ancient Philosophy |


| 203 | Biblical Literature |
| :--- | :--- |
| 421 | Old Testament Studies |
| 422 | New Testament Studies |
| Independent Study Courses |  |
| Selected Interim Courses |  |

The student interested in Classic Literature in translation will want to consider English 231, Masterpieces of European Literature. Further description of the above courses may be found in the parts of the catalog devoted to each department.

## Environmental Studies Program

Students concerned about or wishing to enter graduate study and career programs in such fields as environmental science, environmental law or resource management, may enroll in the Environmental Studies Program. A certificate will be awarded students completing requirements listed below, together with a departmental or school major program. A committee consisting of representatives from each of the three major subject matter groupings will approve each student's course program and integrative experiences.

Natural Sciences and Mathematics - 20 semester hours: Earth Sciences 222, Statistics 331 or Math 144; three additional approved courses, such as: Biology 111, Chemistry 103, 104, Earth Sciences 101, 131, 202.

Social Sciences - 16 semester hours: Economics 150; Political Science 101 or Sociology 111 or 211; Business Administration 290; and one approved upper division course, such as: Economics 362 History 461; Physical Education 326; Political Science 352 or 356; Psychology 330; or Sociology 365, 422, or 463.

Humanities - 20 semester hours: Art 294; English 101; Philosophy: two approved courses, such as: $221,233,324,381$; Religion: one approved course such as 331 or 430.

Integrative Experience - 8 semester hours: During the Interim and final semester of the senior year, each student would participate in a study-research-action program designed to draw upon the broad background of the above courses and the expertise of his own major field. Appropriate courses will be identified in the Interim Catalog. Semester courses may include, out are not limited to, appropriate departmental seminars; independent study or research courses; field experience and internship programs; employment or volunteer service within community action agencies.

## Social Welfare

Students planning graduate social work programs or post-graduation employment in social work, social weifare or other related human services should plan their program in consultation with social welfare faculty in the Department of Sociology, Anthropology and Social Welfare.

The social welfare major is open to any qualified student and consists of Social Welfare courses 271, 365, 463,472,475, and 476. The major should be preceded by foundation courses in the humanities, natural sciences, and social sciences. This should be followed by an appropriate sequence of supporting courses in economics, political science, psychology, and sociology, chosen in consultation with social welfare facuity. Choice of foundation and supporting courses is based on the guidelines provided by the Council on Social Work Education in which the department holds constituent membership.

## Engineering

The University offers two programs leading to careers in engineering. One, a four-year program, leads to a Bachelor of Science in Engineering Physics; the other is a pre-engineering program for students who will transfer to an accredited engineering school.

The engineering-physics program prepares students for employment in many diverse industries or for graduate studies in one of many areas of engineering. Optional courses at the juniorsenior level have been selected to fill the needs of students with special interest in civil engineering, electrical engineering, mechanical engineering and others. A more complete description of the Engineering Physics program is given in the Physics section of the catalog.

The department's primary program for transfer students is referred to as the $3-2$ program. Students spend three years on this campus studying subject matters basic to all engineering fields and basic university core courses in humanities and social sciences. Two additional years of full-time study in a specific engineering discipline at an accredited engineering school will be required to become eligible for an engineer ing degree. After successful completion of the equivalent of 128 hours, including the general University core requirements, (normally after one year at the other engıneering school), students may apply for the B.S. degree from Pacific Lutheran University.

Under some circumstances, qualified students may be accepted into the 2-2 plari by which they may transfer to an engineering school after spending two years at Pacific Lutheran University. Two more years at the engineering school lead to the B.S. degree from that engineering school.

To facilitate transfer of engineering students, PLU currently maintains $3-2$ cooperative plans with a number of major state and private engineering schools both within and outside of the state of Washington (Columbia, Stanford, University of Washington, Washington State University, and University of Idaho).

All pre-engineering students should apply for admission into the program as early as possible and not later than their sophomore year. They should consult the pre-engineering adviser to fermulate their plans both with respect to the type of engineering they wish to study and the engineering school to which they plan to transfer.

## Law

Most law schools require at least three years of liberal arts studies; however, they regard four years of liberal arts studies and a Bachelor of Arts degree as better preparation for the study of law. In addition to meeting degree requirements, the prospective law student is advised to complete four semester hours each of economics, history, philosophy, political science, psychology, sociology and speech. The pre-law student is advised to complete substantial work in accounting. The student should plan his course sequence according to requirements of the law school in which he is interested.

Students interested in law are urged to register at the Pre-law Center in the Department of Political Science. Information on the Law School Admission Test (LSAT), a circulating library of law schoo! bulletins, and a newsletter, The Pre-/aw Advocate, and other resource materials are available. In addition, the student may wish to discuss his program with the pre-law adviser of the Political Science department.

## Urban Affairs

(Career possibilities in state and local government service.)
For certification, successful completion of the following courses is required: Political Science 201, 251, 325, 426, 352 or 357 , and 458; Economics 150 and 362; and Sociology 111 and 325.

## Public Affairs

(Administration and policy-planning careers in public agencies.)
Required: 32 semester hours of Political Science; 20 semester hours of Economics; plus 12 semester hours of electives on advisement.

## Theological Studies

Pre-theological students should complete the requirements for the Bachelor of Arts degree. Besides the general degree requirements, the American Association of Theological Schools recommends the following:

English - literature, composition, speech and related studies. At least six semesters.

History - ancient, modern European and American. At least three semesters.

Philosophy - orientation in history, content and methods. At least three semesters.

Natural Sciences - preferably physics, chemistry and biology. At least two semesters.

Social Sciences - psychology, sociology, economics, political science and education. At least six semesters, including at least one semester of psychology.

Foreign Languages - one or more of the following: Latin, Greek, Hebrew, German, French. Students who anticipate post-graduate studies are urged to undertake these disciplines as early as possible. (At least four semesters.)

Religion - a thorough knowledge of Biblical content together with an introduction to major religious traditions and theological problems in the context of the principal aspects of human culture as outlined above. At least three semesters. The student may well seek counsel from the seminary of his choice.

Of the possible majors, English, philosophy, religion and the social sciences are regarded as the most desirable. Other areas are, however, acc pted.

A faculty adviser will assist the student in the selection of courses necessary to meet the requirements of the theological school of his choice. At the present time, increasing numbers of women are enrolling at selected Protestant seminaries in pursuit of the Master of Divinity degree. Please consult the chairman of the Department of Religion for further information.

## Parish Work

Students desiring to enter parish work are encouraged to obtain a Bachelor of Arts degree. A parish worker is requested to perform duties in more than one field. Responsibilities may be centered in one or more of these areas: congregational educational work, guidance of youth activities, home visitation, office and secretarial work, or conducting musical organizations. Students considering church vocations are invited to confer with the chairman of the Department of Religion.

## Medicine and Dentistry

Students desiring to enter the medical or dental professions should plan to devote not less than three and preferably four years of study to securing the broad educational background required. Professional schools in these fields require a thorough preparation in science. They also recommend extensive study in other areas including the social sciences and humanities. Early in the first semester of attendance at PLU the student should consult with the pre-medical/pre-denta! advisers in the Natural Sciences Division.

The pre-medical and pre-dental curricula are not majors in themselves. The student should select whatever major is of interest to him and should follow the requirements for that major. In addition to whatever other major requirements the student may have, he should complete the following courses:

Biology 153, 154, 253; Chemistry 115, 116, 321, 332, 333, 334; Math 133 (or equivalent), 151 (and preferably 152); Physics 125, 126, 127, 128; English 101 \{a course must be taken; the proficiency examination is not sufficient); Foreign Language, this requirement must be satisfied by Option I or II (see College of Arts and Sciences requirements).

## Medical Technology

Students planning careers as medical technologists in hospitals, physician's offices, or public health bureaus should consider earning a bachelor's degree in chemistry or biology. A student must then complete a twelve-month internship in an Arnerican Medical Association accredited hospital laboratory. Upon complesion of this internship, the student is eligible to take the exarnination given by the Board of Registry of Medical Technologists of the American Society of Clinical Pathologists for certification as an MT (ASCP) and to receive a second degree, the B.S. in Medical Technology.

Early in the first semester of attendance at PLU, students should confer with the medical technology adviser in the Biology Department.

The following courses are required: Chemistry 115, 116, 321, 331, 332, 333, 334; Biology 153, 154, 275; Mathematics 133. Very strongly recommended: Physics 125, 126, 127, 128. Also recommended: Biology 253, 331, 346, 441; Chemistry 404. Students must refer to their major department for the remainder of major requirements.

## Pharmacy

A student may take a sequence of courses at PLU in preparation for further work in pharmacy. The following schedule has been approved by the School of Pharmacy at the University of Washington as being equivalent to the first two years of their 5 -year course leading to the Bachelor of Science Degree in Pharmacy.

Freshman year: (first semester) Chemistry 115, Mathematics 133 (may be omitted if trigonometry was taken in high school), English 101, P.E.; (second semester) Chemistry 116, Mathematics 151, Communicat ion Arts 123, Religion 103 (will transfer as an elective).

Sophomore year: (first semester) Chemistry 331, 333, Biology 153, Physics 125, 127, elective, PE; (second semester) Chemistry 332, 334, Biology 154, Physics 126, 128, P.E.

## SPECIFIC DEGREE REQUIREMENTS AND COURSE OFFERINGS

Listed in this section are course descriptions and summaries of degree requirements for majors and programs in the College of Arts and Sciences, and the Schools of Business Administration, Education, Fine Arts, Physical Education, and Nursing. Detailed degree requirements, often including supplementary sample programs, are available in the offices of the individual schools and departments.

## Course Numberings

101-299 Lower Division Courses: Open to freshmen and sophomores* unless otherwise restricted.

## 300-320 Interim Courses

321-499 Upper Division Courses: Generally open to juniors and seniors unless otherwise specified. Also open to graduate students, and may be considered part of a graduate program provided they are not specific requirements in preparation for graduate study.

600-599 Graduate Courses: Normally open to graduate students only. Upper division students may be permitted to enroll with the permission of the chairman, director or dean of the academic unit offering the course if all prerequisites have been met and the student has an above-average academic record.
*Upon the approval of his adviser and the course instructor, a lower division student may be assigned to an upper division course if prerequisites have been met.

## Course Offerings

Most listed courses are offered every year. A system of alternating upper division courses is practiced in some departments, thereby assuring a broader curriculum. The University reserves the right to modify specific course requirements, to discontinue classes in which the registration is regarded as insufficient, and to withdraw courses.

## Explanation of Symbols

Most courses have the value of 4 semester hours. Exceptions have a parenthetical number immediately after the course title indicating the semester hour credit given. Other symbols are explained as follows:

I Course offered first semester
II Course offered second semester
I, II Course offered first and second semester in sequence
I II Course offered either semester
S Course offered in the summer
aly Course offered in alternate years
a/s Course offered in alternate summers
G Course may be used on graduate programs as a major

## college of arts\&sciences

Division of Humanities
English
Foreign Languages
Philosophy
Religion
Division of Natural Sciences
Biology
Chemistry
Earth Sciences
Engineering
Mathematics
Physics
Division of Social Sciences
Economics
History
Political Science
Psychology
Sociology, Anthropology and Social Welfare
Degrees Offered: Bachelor of Arts
Bachelor of Science

## Major Requirement

A major is a sequence of courses in one area, usually in one department. A major should be selected by the end of the sophomore year. The choice must be approved by the department chairman for in the case of special academic programs, the program coordinator). Major requirements are specified in this catalog. The quality of work must be 2.00 or better. "D" work may be counted toward graduation but not toward the major.

Recognized majors are:

| art | English | physical education |
| :--- | :--- | :--- |
| biology | French | physics |
| chemistry | German | political science |
| classics | history | psychology |
| communication arts | mathematics | religion |
| earth science | music | sociology |
| economics | philosophy | social welfare |
| engineering |  | Spanish |

Not more than 40 semester hours earned in one department may be applied toward the bachelor's degree in the College.

## Foreign Language/Alternative Requirements:

In addition to meeting University Requirements, candidates in the College must meet the requirements of Option I, II, or III:
I. 16 semester hours in one foreign language*
II. 8 semester hours in one foreign language* 4 semester hours in logic, math or statistics 4 semester hours in history, or English or language
III. 4 semester hours in history, or English or fanguage 4 semester hours in social science, including geography 4 semester hours in natural science 4 semester hours in logic, math or statistics
*Option I may be satisfied by four years of high school study in one foreign language. If the student has less than four years, placement and credit should be determined by examination. Freshmen planning to continue in a foreign language begun in high chool should take the College Board Placement Test offered during orientation. (This test is required of those freshmen who plan to study Ger an, French or Spanish.) Continuation of a foreign language should not be deferred.

Students with $2-3$ years of high school language and wishing to continue should register for the second year course. A student may receive credit for any language course in which he is placed without regard to high school credit. Final decision of placement is made by the Department of Foreign Languages. A student may rot receive credit if he voluntarily selects a course level lower than that in which; the department places him.

The foreign language requirement in Option II may be met by satisfactory scores on a proficiency examination or by more than two years of high school work in a single language. Two years are sufficient if the grade point average for the total units in that language is 3.00 .

Candidates for the B.A. in English, or for the B.A. in Education with concentration in English. must meet Option I.

No course will be allowed to meet both University Requirements and College Requirements. Where possible, courses taken to fulfill requirements shäll be in different areas. For example, a student fulfilling his University history or literature requirement with a course in history, if he elects Option II, should choose a course in English or language to meet the requirement of the College.

## biology

All potential biology majors are urged to consult an adviser in the department as early as possible in their college career. Not to do this could lead to costly delays in meeting major requirements.

A student wishing to major in biology is required to apply in writing to the department. This may follow satisfactory completion of Biology 153, 154 or approved equivalent. Transfers may apply for major status only aiter completion of four semester hours of biology at PLU. Each student must submit a proposed course of study and should secure assistance of a faculty adviser for this purpose. Students accepted for major status will be notified.

BACHELOR OF ARTS: 28 semester hours in biology: 153, 154, 253; 4 semester hours from each of three core groups listed below; and one spproved elective chosen in consultation with adviser. Required supporting: English 101 (English Proficiency Exam may not be substituted); foreign language (Option I or II), two years of chemistry (Chem. $115,116,331,332,333,334$ ) and Math 133 or equivalent. Strongly recommended: Physics $125,126,127,128$, and Math 151. A maximum of 40 semester hours of biology courses may be counted toward graduation.

CORE GROUPS for both BA and BS candidates (elect at leas! 4 semester hours from each):

Group I (This should be taken immediately following 253 and prior to taking group II or III courses): Biology 275, 331, 340

Group II: Biology 346, 403,444, Chem 404*
Group III: Biology 424, 475, Anthro 242*
-Not given biology credit but satisfies group requirements. Student would elect a biology replacement to fulfill major requirements.

BACHELOR OF SCIENCE DEGREE: 40 semester hours in biology: 153, 154, 253; 4 semester hours from each of three core groups listed above and 12 semester hours of approved electives. Required supporting: English 101 (the English Proficiency Exam may not be substituted), foreign language (Option I or 11): two years of chemistry (required: $115,116,331,332,333,334$ ); one year of physics $(125,126,127,128)$ and Math through 151. A maximum of 40 semester hours of biolagy courses may be counted for graduation.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

## 111 BIOLOGY AND MODERN MAN

A liberal arts course for non-biology majors; selected topics which relate to man's history and future, his art and well-being; the environment, reproduction and birth control, population, heredity, evolution and biological controls. Lectures, laboratories and discussions.

153 CELL BIOLOGY
An introduction to celiular and molecular levels of biological organization; cell ultra-structure and physiology, energy transduction, molecular genetics and biochemical development. Required of all biology majors. Includes laboratory. Co-registration in Chemistry strongly recommended. (Formerly listed as 152.)

154 ORGANISMAL BIOLOGY
An introduction to higher levels of biological organizations; organisms discussed in relation to their interacting organ systems, classification, evolution and ecology. Required of al biology majors. Includes laboratory. Prerequisite: 153. Co-registration in Chemitry strongly recommended. (Formerly listed as 151.)

161 HUMAN ANATOMY
Gross anatomy of the human body; laboratory dissection of the cat and other mammalian organs. Not open to majors except by special permissiori from department chairman. Includes laboratory. Prerequisite: one biology course.

162 HUMAN PHYSIOLOGY
Functions of major human organ systems; emphasis on control and regulatory mechanisms. Designed for physical education and corrective therapy majors. Not open to biology majors except by permission of department chairman. Includes taboratory. Prerequisite: 161.

201 INTRODUCTORY MICROBIOLOGY
The growth, control, physiology, isolation and identification of micro-organisms, especially those which affect man. Includes laboratory. Prerequisites: 111 and Chemistry 103 or consent. This course is suitable for nurses and other non-science majors; not open to biology majors.

253 BIOLOGY OF THE STEADY STATE
The basic problems faced by plants and animals in maintaining themselves; structural adaptations, homeostasis, internal regulation, water and temperature control, gas exchange, vascular systems, orientation and navigation, and interaction between organisms. Includes laboratory. Prerequisite: 154; first year chemistry recommended.

## 275 MICROBIOLOGY

The structure, physiology, genetics, metabolism and ecology of micro-organisms. Includes laboratory. Prerequisite: 253 or consent; one semester organic chemistry recommended.

299 INTRODUCTORY CLINICAL PHYSIOLOGY
Functions and control mechanisms of the major human organ systems, with emphasis on clinical application and including some pharmacology. Suitable for nursing majors. Includes laboratory. Prerequisite: 111, 161, and Chemistry 103.

321 ORNITHOLOGY (2)
The study of birds with emphasis on local species; designed for students with hobby interests as well as for advanced biology students. Field trips. Includes laboratory. Prerequisite: 253 or consent.

324 NATURAL HISTORY OF VERTEBRATES
Classification, natural history and economic importance of vertebrates with the exception of birds. Field trips and laboratory. Prerequisite: 253. a/y 1975/76
331 GENETICS
The chemical nature of the gene, mechanisms and regulation of genetic expression, variations in chromosomal structure and number, and population genetics. Includes laboratory. Prerequisite: 253 and Chemistry 331.

340 PLANT DIVERSITY AND DISTRIBUTION
A systematic introduction to plant diversity. Interaction between plants, theories of vegetational distribution, higher plant taxonomy. Includes laboratory. Prerequisite: 253.

346 CELLULAR PHYSIOLOGY
Deals with how cells are organized to stay alive; enzyme kinetics and regulatory mechanisms; structure and synthesis of proteins and nucleic acids; energy metabolism; membrane structure, permeability and transport phenomena; functional ultrastructure. Prerequisite: 253 and Organic Chemistry.

347 CELLULAR PHYSIOLOGY LABORATORY (1)
Accompanies Cellular Physiology; experience in techniques and types of instrumentation including cell fractionation, determination of metabolic sequences, use of radio tracers, protein assay, membrane phenomena, ultracentrifugation, spectrophotometry, Warburg respirometry. May be elected only by students with a serious interest and need for this type of training. Corequisite: 346 and consent.

361 COMPARATIVE ANATOMY
A comparative study of vertebrates with laboratory dissection of representative forms. Prerequisite: 253

372 GENERAL ENTOMOLOGY
Classification and natural history of insects with emphasis on laboratories, field studies and collections. Includes laboratory. Prerequisite: 253. a/y 1975/76

375 BIOLOGY OF PARASITISM
Parasitism as a mode of life; the nature of the parasite and of the host-parasite association; studies within the gamut of parasitic form including viruses, other micro-organisms and plant and animal parasitism. Includes laboratory. Prerequisite: 153 or consent. a/y 1974/75

380 BIOLOGY TEACHING RESOURCES
Methods, materials and resources for preparing lecture, laboratory and field work in major areas of biology; designed for all teaching levels. Special preparations required. Prerequisite: 153 or consent.

403 GROWTH AND DIFFERENTIATION
Consideration of the molecular nature of multicellular growth and differentiation including gametogenesis, hormonal and embryonic induction, development movements, and cell recognition. Includes laboratory. Prerequisite: 253; Chemistry 332, 346 recommended.

411 HISTOLOGY
Microscopic study of normal tissues and organs of vertebrates. Includes laboratory. Prerequisite: 253.

ECOLOGY
Living organisms in relation to their environment. Prerequisite: 253. a/y 1974/75

BIOLOGICAL OCEANOGRAPHY
The ocean as environment for plant and animal life; waves, currents, tides and other physical factors; natural life zones of the ocean, their characteristics including fauna and flora, and adaptations of the biota to the zone. Field trips and laboratory. Prerequisite: 253. a/y 1974/75.

426 ECOLOGY LABORATORY (2)
Field study of local ecosystems. Prerequisite: 253; 424 recommended. a/y 1975/76.

435 PLANT FORM AND FUNCTION
Plant structure, function and reproduction; emphasis on seedproducing groups. Includes laboratory. Prerequisites: 153; Chemistry 116. Chemistry 332 recommended.

441 VERTEBRATE PHYSIOLOGY
Principal vertebrate organ systems and functions emphasizing homeostatic relationships; laboratory includes experiments in circulation, electrocardiology, endocrine function, respiration, sensory mechanisms, body fluid chemistry, temperature regulation and an introduction to animal surgery. Prerequisites: 153 and Chemistry 332. Cellular physiology recommended.

444 PLANT PHYSIOLOGY
Plant growth from seed to flower; seed germination, water relations, respiration, mineral nutrition, growth regulators, Photosyntheses and other light effects on plant life cycles Includes laboratory. Prerequisites: 253 and Chemistry 332; Celluiar Physiology strongly recommended.

475 EVOLUTION
How living organisms change in relation to their environment; mechanisms of population adaptation and speciation which led to the present diversity of life. Prerequisite: 253. a/y 1974/75

490 SEMINAR (1)
Selected topics in biology based on literature and/or original research. Open to junior and senior biology majors.

## 491, 492 INDEPENDENT STUDY (1-2)

Investigations or research in areas of special interest not covered by regular courses; open to qualified junior or senior majors; a student shouid not elect independent study unless he knows in advance the specific area he wishes to invest igate and can demonstrate a serious interest in pursuing it. It is suggested that the student spend one semester researching the !iterature and writing a proposal (for 1 sem . hr. of credit) and the next semester actually carrying out the project (for another 1 semester hour of credit). The student will not be permitted to use 491-492 for filling in a deficiency in his program. Prerequisite: written proposal for the project approved by a faculty sponsor and the department chairman.

597, 598 GRADUATE RESEARCH (2-4)
Prerequisite: Graduate standing and prior approval of the student's graduate adviser.

## chemistry

Aryy student contemplating a major in chemistry is invited to discuss his interests and plans with members of the Chemistry faculty.

Students deciding to major in chemistry should officially declare their intent after having completed Chemistry 331 and after consultation with a faculty adviser in the Chemistry Department. Transfer students desiring to major in chemistry should contact a departmental adviser no later than the beginning of the junior year.

The courses, curriculum, faculty and facilities of the Department of Chemistry are approved by the American Chemical Society. Graduates completing the regular Bachelor of Science program will be certified as having met requirements of the American Chemical Society.

BACHELOR OF ARTS: Chemistry 115, 116, 321, 331, 332. 333, 334, 341, 342, 343, and 460. Required supporting: Physics 153-156; mathematics through 152; German, Russian, or French (Option I or II).

BACHELOR OF SCIENCE (3 alternatives)

1) Regular chemistry emphasis (leads to ACS certification): As above plus Chemistry 344, 435, 490, and 497.
2) Biochemistry emphasis: Chemistry 115, 116, 321, 331-334, $341,343,404,435$, and 460; Biology 153, 154, 253, 331, 346, and 347; Physics 153-156; mathematics through 152; foreign language (Option I or II).
3) Chemical Physics emphasis: Chemistry 115, 116, 331-334, 341-344, and 460; Physics 153-156, 331, 332, 336, and 356; Mathematics 151, 152, and 144; foreign language (Option I or II).

In order that curricular and scheduling conflicts may be avoided, specific courses for the Bachelor of Science degree should be taken in the following sequence:

Freshman: Chemistry 115, 116; Mathematics 151, 152; foreign language

Sophomore: Chemistry 331-334; Physics 153-156
Junior: Chemistry 321, 341-344
Senior: Chemistry 435, 460, 490, 497
Although no more than 40 semester hours in chemistry may be applied toward the 128 semester hour graduation requirement, the research requirement may be met by 1 hour credit during the
academic year or by a summer research experience with or without academic credit.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

## 103 CHEMISTRY OF LIFE

General, organic, and biochemistry pertinent to chemical processes in the human organism; suitable for liberal arts students, nursing students, and prospective teachers. I II

104 ENVIRONMENTAL CHEMISTRY
Basic principles of chemical structure as applied to man's activities on earth; chemical aspects of environmental pollution. May follow 103 or 115 for students desiring a second chemistry course. II

108 MANKIND AND MOLECULES
Liberal arts course for non-physical science majors. Topics to relate the present and past impact of the chemical sciences on the economic, physical, and social nature of society. Will meet University Requirements and Option III. II

115 GENERAL CHEMISTRY
The structure of matter, atomic and molecular theory, quantitative relationships; suitable for science majors and others. Prerequisite or corequisite: Mathematics 133. I

116 SYSTEMATIC INORGANIC CHEMISTRY
Study of the elements grouped according to the periodic table, chemical equilibrium, radiochemistry, and inorganic qualitative analysis. Prerequisite: 103 and 104, or 115 . II

321 QUANTITATIVE ANALYSIS
Chemical methods of quantitative analysis, including volumetric, gravimetric, and selected instrumental methods. Prerequisite: 116; Mathematics 133. I

## 331, 332 ORGANIC CHEMISTRY

An interpretation of properties and reactions of aliphatic and aromatic compounds on the basis of current chemical theory. Prerequisite: 103 and 104 or 115. Corequisite: 333,334 . I II

333, 334 ORGANIC CHEMISTRY LABORATORY $(1,1)$
Reactions and conventional and modern techniques of synthesis, separation, and analysis of organic compounds. Must accompany 331, 332. I II

336 HONORS ORGANIC CHEMISTRY LABORATORY (1)
Advanced methods of synthesis and property determination applied to organic compounds. Techniques and applications from the literature to be emphasized. May be taken by departmental invitation in place of 334. II

341, 342 PHYSICAL CHEMISTRY
The relationship between structure, energy content, and physical and chemical properties of chemical systems. Topics in thermodynamics, statistical thermodynamics, quantum mechanics, atomic and molecular structure, spectroscopy and kinetics are covered. Many examples are related to biological systems. Prerequisite: 115; Math 152; Physics 154.

343, 344 PHYSICAL CHEMISTRY LABORATORY (1,1)
Experiments in thermodynamics, solution behavior and
(Chemistry cont.)
molecular structure designed to acquaint students with instrumentation, data handling, correlations with theory and data reliability. Computer usage is encouraged. Corequisite or prerequisite: 341,342 . I II

350 INSTRUMENTATION FOR THE LIFE SCIENCES
Course designed to examine instruments from standpoint of how and why they work, applications, and limitations. Some of the instrumental techniques to be covered are atomic absorption, gas chromatography, ultraviolet, visible and infrared spectrophotometry, and flame photometry. Prerequisites: 116 and Biology 154.

404 BIOCHEMISTRY
An overview of the field including mineral and general metabolism, biochemical structure, and discussion of drugs and pharmacology. Laboratory is designed to stimulate problem-solving techniques. Prerequisite: 332 and 334 . II

435 INSTRUMENTAL ANALYSIS
Theory and practice of instrumental methods along with basic electronics. Special emphasis will be placed on radiochemical, mass spectrometic, chromatographic, and electrometric methods. Prerequisites: 341 and 343 . I

460 SEMINAR (1)
Presentation by students of knowledge gained by personal library or laboratory research, supplemented with seminars by practicing scientists. Participation of all senior chemistry majors is required and all other chemistry-oriented students are encouraged to participate. Seminar program will be held during the entire year but formal registration will be in the spring semester. I II

490 INTEGRATED PROBLEMS APPROACH (2)
Involvement with theoretical and applied problems from the literature emphasizing research and instrumental techniques. Course designed to unify and extend the student's previous educational background. I II

491 INDEPENDENT STUDY (1, 2, or 4)
Library and/or laboratory study of topics not included in regularly offered courses. Proposed project must be approved by depertment chairman and supervisory responsibility accepted by an instructor. May be taken more than once. I II
$497 \operatorname{RESEARCH}(1,2$, or 4)
Experimental or theoretical investigation open to upper division students with consent of department chairman. May be taken more than once. I II
597. 598 GRADUATE RESEARCH (2-4)

Open to master's degree candidates only. Prerequisite: consent of department chairman. I II

> earth sciences

BACHELOR OF SCIENCE (GEOLOGY SPECIALTY): At least 40 semester hours in geology, including 131, 132, 323, 324, 325
and one from $360,365,491$. In addition, Stratigraphy/sedimentation (401) and either Paleontology (302) or Geomorphology (402) - to be taken at the University of Puget Sound, or elsewhere, also an approved summer experience in field study techniques. Required supporting: Chemistry 115, 116; recommended 341, 342; Physics: 125, 126 (127, 128 labs) or 153, 154 (and labs); recommended: 223; Mathematics 151; recommended 152; Biology courses recommended where Paleontology is elected.

BACHELOR OF ARTS: Minimum of 32 semester hours in Earth Sciences, including 131, 132, 136, 202, 324, 325, plus at least two upper division Earth Science courses. A field course such as 351 , 360 , or 365 is recommended. (Additional courses available in the Department of Geology, University of Puget Sound.) Required supporting: Chemistry 103, 104 or 115, 116; Physics 125, 126 (and labs) or 153, 154 (and labs); Mathematics 151, with 152 recommended; appropriate Biology courses also recommended. Options reflect a student's Earth Science interests and are discussed with his adviser.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

## 101 WORLD GEOGRAPHY

Patterns of physical, climatic and ecological features and their relation to man. 101 does not meet the natural science requirement. I

122 INTRODUCTION TO PHYSICAL SCIENCE
An integration of the sciences of chemistry, geology, meteorology and physics which considers the physical nature of the earth: its materials, processes, history and environment; intended for students with no previous background in chemistry, geology or physics. I

131 MAN AND THE PLANETARY ENVIRONMENT
An introductory course dealing with man and his geologic habitat, both at present and as it has developed through time; materials of earth (and lunar) crusts, their derivation through major earth processes and formation of surface features with emphasis on their significance to human development and civilization; laboratory study of rocks, minerals, and geologic mapping; field trips are arranged. I

132 HISTORICAL GEOLOGY
A sequel to 131 which concentrates on earth history, particularly the formation of the North American continent: sedimentary rocks, fossils and stratigraphic record are related to tectonic upheaval and growth; field trips are arranged. II

DESCRIPTIVE ASTRONOMY
The moon, the solar system, the coordinate systems for locating stellar objects and character istics of stars.

202 GENERAL OCEANOGRAPHY
Oceanography and its relationship to other fields; physical, chemical, biological, climatic and geological aspects of the sea; field trips. II

222 CONSERVATION OF NATURAL RESOURCES (2)
Principles and problems of public and private stewardship of our resources with special reference to the Pacific Northwest.

## 323 MiNERALOGY

Crystallography and mineralogy, both ore- and rock-forming minerals. Prerequisites: 131 and high school chemistry or consent. II

## 324 PETROLOGY

The occurrence and classification of common rock types; processes by which they were formed with reference to theoretical principles. Prerequisites: 131 or consent. II a/y 1974/75

## 325 STRUCTURAL GEOLOGY

The form and spatial relationships of various rock masses and an introduction to rock deformation; consideration of basic processes to understand mountain building and continental formation; laboratory emphasizes practical techniques which enable students to analyze regional structural patterns. Prerequisite: 131 or consent. II a/y 1975/76

351 NATURAL HISTORY OF THE PACIFIC NORTHWEST (6) A field and laboratory course examining regional natural history; an outdoor workshop designed for science teachers at elementary and junior high levels. Not to be counted toward a major or graduate credit in biology. Prerequisite: consent. S

360 GEOLOGY OF WESTERN WASHINGTON
The minerals, rocks and geological history of the region extending from the Columbia Plateau to the Pacific Ocean. Includes field trips. Prerequisite: One year of college laboratory science or consent. S

365 GLACIAL GEOLOGY
Glacial ice, deposits and land forms resulting from the Pleistocene glaciation in North America. Field trips included. Prerequisite: One year of college laboratory science or consent. S

425 BIOLOGICAL OCEANOGRAPHY See Biology 425

490 SEMINAR (1-2 semester hours of credit)
491. 492 INDEPENDENT STUDY (1-4 semester hours)

## economics

BACHELOR OF ARTS: Minimum of 32 semester hours including 150, 351, 352, 486, two upper division economics electives, Statistics 331 or 341, and Business Administration 281.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

PRINCIPLES OF ECONOMICS
Introduction to the scope of economics, including Macro and Micro Economics; analysis of U.S. economic system; emphasis on current economic policy.

CONTEMPORARY ECONOMIC PROBLEMS
Current economic issues: unemployment, inflation, poverty,
and pollution; interests of the class determine specific topics. Prerequisite: 150 or consent.

RESOURCE ECONOMICS
The nature and treatment of human resource problems in the United States; wage determination, unionism, collective bargaining, unemployment, poverty and discrimination, investment in human capital and manpower policies. Prerequisite: 150 or consent.

331 INTERNATIONAL ECONOMICS
Regional and international specialization, comparative costs, international payments and exchange rates; national policies which promote or restrict trade. Prerequisite: 150.

351 INTERMEDIATE MACRO ECONOMIC ANALYSIS
National income determination including policy implications within the institutional framework of the U.S. economy. Prerequisite: 150.

352 INTERMEDIATE MICRO ECONOMIC ANALYSIS
Theory of consumer behavior; product and factor prices under conditions of monopoly, competition and intermediate markets; welfare economics. Prerequisite: 150.

361 MONEY AND BANKING
The nature and function of money and credit institutions; relationship of money and bank deposits to the national economy. Prerequisite: 150.

## 362 PUBLIC FINANCE

Public taxation and expenditure at all governmental levels; the incidence of taxes, the public debt and the provision of public goods such as national defense, education, pure air and water. Prerequisite: 150.

DEVELOPMENT ECONOMICS
Economic growth process in developing regions of the U.S. and abroad; the interrelationship of political, economic, cultural and institutional factors in the growth process. Prerequisite: 150.

GOVERNMENT AND THE ECONOMY
The relationship between public and private sectors in the U.S. economy.

## EVOLUTION OF ECONOMIC THOUGHT

Economic thought from ancient to modern times; emphasis on the period from Adam Smith to J. M. Keynes: the classical economists, the socialists, the marginalists, the neo-classical economists, and the Keynesians.

## 490 SEMINAR

Seminar in economic problems and policies with emphasis on encouraging the student to integrate problem-solving methodology with tools of economic analysis. Topic(s) selected by class participants and instructor. Prerequisite: consent.

491, 492, 493 INDEPENDENT STUDY (1-4 semester hours) Prerequisite: consent.

504 MANAGERIAL ECONOMICS
Basic economic concepts applied to policy formation and
operating decisions; reference to such problems as cost., demand, pricing and investment. Prerequisite: 150.

543 QUANTITATIVE METHODS
The concepts of probability, sampling, statistical decision theory, linear programming and other deterministic models applied to managerial problems. Prerequisite: Statistics 331 or 341.
591. 592, 593 INDEPENDENT STUDY

599 THESIS (1-4 semester hours)

## engineering

The department offers degree work in Engineering Physics jointly with the Physics Department; and a 3-2 Engineering Transfer dual-degree program jointly with Columbia University, Stanford University, and regional state universities. Concentrations in Electrical Engineering Science and Mechanical Engineering Science are available within each program. Further descriptions are contained in the sections "Physics" and "Special Programs for Careers" respectively.

BACHELOR OF SCIENCE (Engineering Physics): 44 semester hours - see "Physics" section.

BACHELOR OF SCIENCE (dual degrees with PLU and Columbia, Stanford, or other accredited engineering schouls): 34 semester hours: Physics: 153, 154, 155, 156, 223, 331 (optional); Engineering Basics: 151, 1B2, 354; Three-selection concentration (Electrical, Mechanical, or Combination): 271*, 272*, 352*, 441, 231, 232 (or Physics 336), 351, 442. Required supporting courses: Mathematics 144, 151, 152, 253; Chemistry 115.

## MATHEMATICAL SYSTEMS

## 144 INTRODUCTION TO COMPUTER SCIENCE

 See Mathematics 144
## 344 SYSTEMS ANALYSIS AND SIMULATION

 See Mathematics 344346 NUMERICAL ANALYSIS
See Mathematics 346

## ENGINEERING BASICS

151 VISUAL THINKING (2)
Three dimensional visualization, orthographic and isometric perspectives, relationship of visual graphic thinking to the creative process, preliminary design; of value to not only engineers but also the science student who must be able to think three dimensionally as demanded in mechanics or structural chemistry. Emphasis upon fluent and flexible idea production.

## 182* MAN AND MATERIALS

Fundamentals of man-made materials (insulators, semiconductors, metals, dielectrics, and optical materials),
their relationship to chemistry and physics, and implications for modern technological man. A particularly useful starting point for Electrical and Mechanical Engineering study. Physics and Chemistry majors may find it advantageous to see this subject of materials science from this viewpoint. Prerequisite: One course in Chemistry.

ENGINEERING ANALYSIS
Introduction to vector and tensor analysis, functions of a complex variable, Laplace and Fourier transforms and undetermined multipliers. Illustrative examples from fields of electromagnetism, waves, transport, vibrations, and mechanics. Prerequisite: Math 253.

## ELECTRICAL ENGINEERING SCIENCE

## 271* ELECTRICAL CIRCUITS (2)

Fundamental concepts of electrical science and its utilization in circuits, components, and devices. Prerequisite: Physics 153. Corequisite: Physics 154.

272* SOLID STATE ELECTRONIC DEVICES
Useful properties of semiconductors as related to electronic devices; pn-junction diodes, transistors; field effect transistors, and solid state lasers. Prerequisite: Physics 153. Corequisite: Physics 154.

## 352* ANALOG AND DIGITAL ELECTRONIC CIRCUITS

Active solid state circuits. Analog-AC-DC converters, amplifiers, oscillators. Digital - Boolean algebra, sequential logic circuits, switching networks. Prerequisite: Physics 154, Engineering 271.

441 NETWORK ANALYSIS
An analysis of electrical circuits containing active and passive elements for transients and steady state conditions; formulation of network equations, network theorems, impedance matching and fundamentals of network topology. Prerequisite: Physics 154, 272, or Engineering 271. a/y 1974/75

## 491 INDEPENDENT STUDY

*Approved for inclusion in the catalog on a provisional basis.

## MECHANICAL ENGINEERING SCIENCE

231 STATICS (2)
Fundamental engineering statics using vector algebra; conditions for equilibrium, resultant force systems, centroid and center of gravity, methods of virtual work, friction. Prerequisite: Physics 153.

232 MECHANICS OF SOLIDS
Mechanics of deformable solid bodies; deformation, stress, constitutive equations for elastic materials, thermoelasticity, tension, flexure, torsion, stability of equilibrium. Prerequisite: Engineering 231.

## 351 THERMODYNAMICS

Concepts and equations of classical, macroscopic thermodynamics; thermodynamic cycles, flow and non-flow systems, properties and mathematical relations of pure substances, mixtures and solutions, phase transition and

## (Engineering cont.)

chemical reactions; and elementary treatment of statistical thermodynamics. Prerequisite: Physics 153, 154.

TRANSPORT, MOMENTUM, ENERGY AND MASS
The unifying concept of the transport of mass, heat and momentum; general aspects of fluid mechanics and transport coefficients. Prerequisite: $351 \mathrm{a} / \mathrm{y}$

INDEPENDENT STUDY

## english

BACHELOR OF ARTS: 28 to 40 semester hours of English beyond English 101, including: 4 semester hours in American literature; 4 semester hours in British literature before 1700; and 4 semester hours in British literature after 1700. At least 16 semester hours should be upper division.

English 101 is recommended since even good writers benefit from intensive practice and careful criticism. Certain advanced courses in writing and grammar may be required, especially if the student intends to teach English. In addition, at least two years of a foreign language at the college level, or the equivalent, are required.

BACHELOR OF ARTS IN EDUCATION: See School of Education.
101 COLLEGE ENGLISH
Develops a student's powers to read, think, and write critically and well. (Students whose English skills are weak, as demonstrated by entrance examinations, are encouraged to work in the Learning Skills Center before registering for English 101. 1 II

## 217 SHORT STORY

Themes and techniques in short fiction. II
221* LITERARY FORMS AND ANALYSIS
Designed to familiarize students with forms of literature (poetry, fiction, drama) with basic literary terms, and with major critical approaches.

230 INTRODUCTION TO CONTEMPORARY LITERATURE
Selected contemporary works-chiefly American, English or Continental-since World War II. I II

231 MASTERPIECES OF EUROPEAN LITERATURE
Representative works of the literature of Western Euorpe, especially classical, medieval and Renaissance. I

241 INTRODUCTION TO AMERICAN LITERATURE
The continuity of themes and forms in American prose, poetry and fiction from Franklin to Frost. Emphasis on major works of the ni neteenth century.

251 INTRODUCTION TO ENGLISH LITERATURE: BEGINNINGS TO 1750
Emphasis on the continuity and variety of English literature from Beowulf through neoclassicism. I

252 INTRODUCTION TO ENGLISH LITERATURE: AFTER 1750
English literature, especially poetry, from the emergence of
romanticism to the twentieth century. II

323 CHILDREN'S LITERATURE
Children's literature as a rich collection in itself and as a guide to book selection in the public schools. II

327 IMAGINATIVE WRITING
A workshop course in the writing of poetry and short fiction with practical study of techniques and forms to develop critical standards and an understanding of the process of composition.

328 ADVANCED COMPOSITION
A study of rhetorical principles. (Required of English majors enrolled in the School of Education unless exempted by the English Department.) II

336* LITERATURE OF BLACK AMERICANS
A study of poetry, short stories and novels by black Americans, including their history, biographies and cultural effects in the United States.

MODERN POETRY
Poetry, especially American and British, since World War I. II
351 MODERN CONTINENTAL DRAMA
A study of classics of modern drama from Ibsen to lonesco; Scandinavian, German, French, Italian, Spanish, Russian, English and Irish.

358 THE BRITISH NOVEL
A study of the form through readings: Defoe and Fielding to Lawrence, Joyce and the moderns.

382 CHAUCER AND HIS AGE
A study of major works by Chaucer, especially the Canterbury Tales, in which the young and lively 14 th century compares to the 20th. Includes development of the English language. I

383 SHAKESPEARE
Ten to twelve representative plays. Recommended as background: 251. I

388 MILTON AND HIS AGE
Milton, a literary magnet of the 17 th century, which was a watershed of Modern History with its new science and creativity. II

389 ENGLISH SATIRE AND SENSIBI LITY, 1660-1800
A study of neo-classic writings and the developing social awareness of the pre-romantic age: Dryden and Pope to Johnson and Blake. II

390 THE ENGLISH ROMANTIC MOVEMENT
A study of the romantic awakening in England: Blake, Wordsworth, Coleridge, Shelley, Keats, Byron and others.

391 LIFE AND LETTERS IN VICTORIAN ENGLAND
(in Spring, 1974: "The World of Dickens")
Selected authors and topics from a period of rapid and momentous social change brought about by a burgeoning industry, population, scient ism and democratic reform. II

## (English cont.)

392 TWENTIETH CENTURY BRITISH LITERATURE
Selected playwrights from Shaw to Beckett; poetry of Thomas and Auden; and fiction of Joyce, Lawrence, Greene and others.

## 400 LINGUISTICS

See foreign languages.
403 MODERN ENGLISH GRAMMAR
Modern English grammar utilizing the approaches of the three major theories: traditional, structural and transformational. I

441 AMERICAN ROMANTIC LITERATURE, 1820-1880
Poetry and prose from Bryant and Cooper to early James. Emphasis on socio-political, philosophical-religious themes in essays by Emerson and Thoreau; in poems by Whitman, Dickinson and the Schoolroom Poets; and in fiction by Cooper, Poe, Hawthorne, Melville, James and Stowe.

442 AMERICAN REALISM AND NATURALISM, 1880-1915 Influence of European realism in the criticism of Howells, James and Norris. I mpact of machines, money and cities in the fiction of Twain, James, Crane, Norris, London, Dreiser, Sinclair and Wharton.

## 443 AMERICAN LITERATURE SINCE 1915

Introduction to modern fiction, poetry and criticism for upper-division students. Fiction of Anderson, Fitzgerald, Hemingway, Faulkner, Agee, Ellison and O'Connor. Poetry and criticism of Frost, Williams, Pound, Eliot and Stevens. Essays of Brooks, Trilling, Warren, Blackmur and Fiedler.

## 450 SEMINAR IN AMERICAN LITERATURE

491, 492 INDEPENDENT READING AND RESEARCH (2-4)
For senior majors who plan graduate work in English; an intensive, planned course of readings. I II

597 GRADUATE RESEARCH (2-4)

> foreign languages

There are no departmental prerequisites for the study of foreign languages. Potential majors are, however, encouraged to obtain as much high school preparation as possible. Placement of students with previous experience is determined by a test which is given during orientation days at the beginning of the school year. Major programs are available in Classics, German, French and Spanish. For further information in Classics, consult the Special Academic Programs section of this catalog.

BACHELOR OF ARTS: Minimum of 32 semester hours beyond 101-102, including 201, 202, 321, 351, 352, plus upper-division electives, including at least four semester hours of literature.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

LINGUISTICS
400 STRUCTURAL LINGUISTICS
The study of the nature of language; principles and techniques of descriptive language analysis; etementary application of linguistic analysis to selected materials. No prerequisites. II

## FRENCH

101, 102 ELEMENTARY FRENCH
Essentials of pronunciation, intonation and structure; basic skills in listening, speaking, reading and writing. Laboratory attendance required. I II

201, 202 INTERMEDIATE FRENCH
A continuation of elementary French; reading selections which reflect the French cultural heritage as well as contemporary materials. Laboratory attendance required. I II

321 CIVILIZATION AND CULTURE
Present-day France as reflected in current literature, periodicals, television and films; written compositions and oral reports; conducted in French. Prerequisite: French 202. 1

## 351, 352 COMPOSITION AND CONVERSATION

Advanced grammar, stylistics, composition and conversation; written compositions on culture and civilization: conversations on current topics; conducted in French. Prerequisite: 202. 1 II

421, 422 MASTERPIECES OF FRENCH LITERATURE
Authors representative of major periods from the Middle Ages through the nineteenth century; the style and structure and the moral and artistic intentions of such authors as Rabelais, Montaigne, Moliere, Corneille, Pascal, Voltaire, Rousseau, Hugo and Baudelaire; conducted in French. Prerequisite: 202. I II a/y

431, 432 TWENTIETH CENTURY FRENCH LITERATURE
Major twentieth century writers; emphasis on the period since World War II; conducted in French. Prerequisite: 202. I $11 \mathrm{a} / \mathrm{y}$
442 HISTORY OF ROMANCE LANGUAGES
The historical development of Romance Languages with reference to current languages; same as Spanish 442 . II a/y

445 METHODOLOGY OF TEACHING FOREIGN LANGUAGES (2)

Theory and techniques of foreign language teaching; special problems in the student's major language; emphasis on audio-lingual techniques.

491, 492 INDEPENDENT STUDY (2-4)
597, 598 GRADUATE RESEARCH (2-4)

The courses that are available on the Foreign Study Program in France will vary slightly from year to year. A current listing is obtainable from the Department of Foreign Languages.

## GERMAN

101, 102 ELEMENTARY GERMAN
Essentials of pronunciation, intonation and structure; basic skills in listening, speaking, reading and writing. Laboratory attendance required. I II

201, 202 INTERMEDIATE GERMAN
A continuation of elementary German; reading selections which reflect the German cultural heritage as well as contemporary materials. Laboratory attendance required. i il

321 CIVILIZATION AND CULTURE
Historical and artistic elements which have shaped German culture from the beginnings to the present; emphasis on forces which have influenced American culture and life; conducted in German. Prerequisite: 202.

351, 352 COMPOSITION AND CONVERSATION
Refinement of basic language skills; emphasis on finer points of structure, style and good taste; compositions and conversations on current tepics; conducted in German. Prerequisite: 202. I II

## 421, 422 MASTERPIECES OF GERMAN LITERATURE

Major literary works, in all the genres, from the early period to 1900; examination of those forces which produced literature; literature as a work of art; conducted in German. Prerequisite: 202. I II a/y

431, 432 TWENTIETH CENTURY GERMAN LITERATURE
Major contemporary literary works with emphasis on the last decade; all literary forms considered; conducted in German. Prerequisite: 202. I II a/y

442 HISTORY OF THE GERMAN LANGUAGE
Historical development of German with reference to contemporary language; conducted in German. Prerequisite: 202. II a/y

445 METHODOLOGY OF TEACHING FOREIGN LANGUAGES (2)

Theory and techniques of foreign language teaching; special problems in the student's major language; emphasis on audio-lingual techniques.

491, 492 INDEPENDENT STUDY (2-4)

## 597, 598 GRADUATE STUDY (2-4)

The courses that are available on the Foreign Study Program in Germany/Austria will vary slightly from year to year. A current listing is obtainable from the Department of Foreign Languages.

## GREEK

Currently offered cooperatively with the University of Puget Sound on our campus.

## 101, 102 ELEMENTARY GREEK

Basic skills in reading Classical, Koine and Patristic Greek. I II

## 201, 202 INTERMEDIATE GREEK

Selected koine readings from Hellenistic Greek literature with major emphasis on the New Testament. I II

## 421, 422 MASTERPIECES OF GREEK LITERATURE

 Available through consultation with the department. Prerequisite: 101, 102. I II
## 491, 492 INDEPENDENT STUDY (2-4)

## JAPANESE

Currently offered cooperatively with the University of Puget Sound on their campus.

101, 102 ELEMENTARY JAPANESE
Introduction to spoken Japanese; construction patterns, grammar and kana syllabaries. I II

201, 202 INTERMEDIATE JAPANESE
Introduction to character writing; reading and translation of Japanese. I II

## LATIN

Currently offered cooperatively with the University of Puget Sound on our campus.

101, 102 ELEMENTARY LATIN
Basic skills in reading Latin; excursions into Roman history and mythology and English derivatives from Latin. I II

201, 202 INTERMEDIATE LATIN
Lyric and Epic Poetry, its translation and adaptation by English and American poets; the second semester includes the reading of an Italian author.

491, 492 INDEPENDENT STUDY (2-4)

## NORWEGIAN

Currently offered cooperatively with the University of Puget Sound on our campus.

101, 102 ELEMENTARY NORWEGIAN
Essentials of pronunciation, intonation and structure; basic skills in listening, speaking, reading and writing. Laboratory attendance required. I II

201, 202 INTERMEDIATE NORWEGIAN
A continuation of elementary Norwegian; reading selections which reflect the Norwegian cultural heritage as well as contemporary materials. Laboratory attendence required. I II

321 CIVILIZATION AND CULTURE
Historic and artistic elements which have shaped Scandinavian culture from the beginnings to the present; emphasis on those forces which have influenced American life and culture. No prerequisites. I

491, 492 INDEPENDENT STUDY (2-4)

## RUSSIAN

Currently offered cooperatively with the University of Puget Sound on their campus.
(Foreign Languages cont.)

101, 102 ELEMENTARY RUSSIAN<br>Essentials of Russian grammar and reading of graded texts. | II

201, 202 INTERMEDIATE RUSSIAN
A continuation of elementary Russian; reading of suitable texts, review of grammar, composition. I II

## SPANISH

101, 102 ELEMENTARY SPANISH
Essentials of pronunciation, intonation and structure; basic skills in listening, speaking, reading and writing. Laboratory attendance required. I II

## 201, 202 INTERMEDIATE SPANISH

A continuation of elementary Spanish; reading selections which reflect the Hispanic cultural heritage as well as contemporary materials. Laboratory attendance required. I II

321 CIVILIZATION AND CULTURE
Historic and artistic elements which have shaped Spanish thought and behavior from the beginnings to the present; conducted in Spanish. Prerequisite: 202.1

351, 352 COMPOSITION AND CONVERSATION
Topics of current interest as a basis for improved oral and written expression; conducted in Spanish. Prerequisite: 202. I 11

421, 422 MASTERPIECES OF HISPANIC LITERATURE
All genres of major literary works from the Poema del Cid, to 1898; forces which produced the literature; appreciation of literature as a work of art; conducted in Spanish. Prere uisite: 202. I $11 \mathrm{a} / \mathrm{y}$

## 431, 432 TWENTIETH CENTURY HISPANIC LITERATURE

The first semester deals with the literature of Spain from the
"Generacion de ' 98 " to the present. The second semester deals with the literature of Spanish America from the modernista movement (1888) to the present. Emphasis on period will vary; conducted in Spanish.

442 HISTORY OF ROMANCE LANGUAGES
Historical deve!opment of Romance languages with reference to current language; same as French 442. II a/y

445 METHODOLOGY OF TEACHING FOREIGN LANGUAGES (2)

Theory and techniques of foreign language teaching; special problems in the student's major language; emphasis on audio-lingual techniques.

491, 492 INDEPENDENT STUDY (2-4)

The courses that are available on the Foreign Study Program in Spain will vary slightly from year to year. A current listing is obtainable from the Department of Foreign Languages.

## history

Lower division courses, History 321, 322 and interim courses may be taken by all students in good standing. Sophomores who have the instructor's permission and all other students who have at least junior standing may enroll in courses numbered 323 and above.

Majors are urged to meet the foreign language requirements of the College of Arts and Sciences under either Option I or Option II. Those majors who are preparing for public school teaching are required to enroll in History 462.

Because work in the senior seminar will extend through the academic year, senior majors are asked to enroll in the required seminar in September. Consultations with adviser and instructor are essential in this matter.

BACHELOR OF ARTS: A minimum of 32 semester hours including 4 semester hours from Group A (107, 108, 109, 110); 4 semester hours from Group B $(251,252,253)$; senior seminar: electives by advisement.

BACHELOR OF ARTS IN EDUCATION: See School bf Education.

## 107, 108 HISTORY OF CIVILIZATION

Analysis of institutions and ideas of selected civilizations: Mesopotamia, Egypt, the Hebrews, Greece, Rome, the rise of Christianity, and Europe in the Middle Ages are dealt with in the first semester; Europe from the Renaissance to the present in the second semester. I II

109, 110 WORLD CIVILIZATIONS
A broad survey of Oriental and Western civilizations from ancient times to the present. I II

251 COLONIAL AMERICAN HISTORY
American institutions from colonial times to the 1790's; the growth of the colonies and their relationship to the British imperial system.

252 NINETEENTH CENTURY AMERICAN HISTORY
The early national period to the 1890's; the interplay between changing historical conditions and various groups in society, including minorities.

253 TWENTIETH CENTURY AMERICAN HISTORY
Trends and events in domestic and foreign affairs since 1900; affluence, urban growth and social contrasts.

## 321, 322 CLASSICAL CIVILIZATION

The ancient Mediterranean world with emphasis upon Greek and Roman civilizations; may be repeated when subjects vary. Open to freshmen and sophomores. I II

323 MEDIEVAL HISTORY
Europe from the disintegration of the Roman Empire to 1300; reading and research in medieval materials.

324 RENAISSANCE
Europe in an age of transition - 1300 to 1500.
THE REFORMATION

Political and religious crisis in the sixteenth century:
(History cont.)
Lutheranism, Zwinglianism, Anglicanism, Anabaptism, Calvinism, Roman Catholic reform; Weber thesis, the beginning of Baroque art.

326 EUROPEAN HISTORY FROM 1648 to 1789
Developments during the early modern and scientific age; the enlightenment, the Old Regime.

327 THE FRENCH REVOLUTION AND NAPOLEON
Revolutionary Europe from 1789 to the Congress of Vienna
328 NINETEENTH CENTURY EUROPE
The expansion of European civilization from 1815 to 1914.
329 TWENTIETH CENTURY EUROPE
Events and trends since 1914.
331, 332 ENGLAND
Political, social, economic, legal and cultural developments in the British Isles. I II

333 RUSSIA
Russia fromearliest times; the collapse of Czarism, the rise of communism, present world relations.

336 COLONIAL LATIN AMERICA
The conquest, settlement and development of Latin America; Spanish and Portuguese political, economic and religious institutions.

337 REPUBLICAN LATIN AMERICA
From independence to the present; emphasis upon Mexico, Argent ina, Brazil and Cuba.

340 FAR EASTERN HISTORY
Life and thought from ancient times; concentration on China, Japan and India.

356 HISTORY OF AMERICAN FOREIGN POLICY
The practice, function and structure of American foreign policy with particular emphasis on the twentieth century.

421 HISTORY OF IDEAS: EUROPEAN CIVILIZATION
Leading ideas in Western civilization since the disintegration of Rome.

451 AMERICAN CONSTITUTIONAL HISTORY
The development of the constitution from colonial times.
461 HISTORY OF THE AMERICAN FRONTIER
Principal "frontiers" which characterized the westward movement, especially in the nineteenth century.

462 PACIFIC NORTHWEST HISTORY
An interpretative history within the context of the American West; social, economic and political developments which reflect regional and national characteristics.

471 HISTORY OF AMERICAN THOUGHT AND CULTURE Dimensions of American social and intellectual history; ideas as they relate to historical periods and ethnic groups.

INDEPENDENT STUDY

## SEMINAR: AMERICAN HISTORY

## SEMINAR: EUROPEAN HISTORY

## SEMINAR: HISTORY AND HISTORIANS

## GRADUATE RESEARCH

## THESIS

## mathematics

During the sophomore year, a student intending to major in mathematics should complete an application form available from the departmental secretary. If accepted, the student will be assigned to an adviser on the mathematics faculty.

BACHELOR OF ARTS: Minimum of 28 semester hours numbered above 150 including: 331, 433, 455 , and either 434 or 456. The 434 or 456 choice may be replaced by taking two of 321 , $341,344,346,351$, and 460 . Eight semester hours in physics are strongly recommended. Students planning to do graduate work in mathematics should complete both 434 and 456.

BACHELOR OF SCIENCE: 40 semester hours including 331 and at least 20 semester hours of upper division courses. 12 hours of the upper division requirement must come from $433,434,455$, and 456. Required supporting: 8 semester hours in physics. Physics 356 may be substituted for one course of upper division mathematics.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

091 INTERMEDIATE ALGEBRA (no credit)
A thorough review of first year high school algebra and continuation beyond quadratics. I

## 127 FINITE MATHEMATICS

Truth tables, sets, elementary probability, matrices, linear programming, markov chains, mathematics of finance. Prerequisites: high school algebra and geometry. I II S

133 COLLEGE ALGEBRA AND TRIGONOMETRY
Sets, progressions, binomial theorem, complex numbers, logarithms, radian measure, solution of triangles, inverse functions, graphing, identities. Prerequisite: 2 years of high school algebra or consent. I II

## INTRODUCTION TO COMPUTER SCIENCE

Computer science and a working knowledge of FORTRAN as applied to scientific problems: computer classification, organization, data structure, logarithms, flow charts and FORTRAN IV. Prer equisite: 127 or 133 or consent. I II

151 ANALYTIC GEOMETRY AND CALCULUS
Analytic geometry, functions, limits, derivatives and integrals with applications. Prerequisite: Two years of high school algebra, trigonometry or 133 or equivalent. I II

152 ANALYTIC GEOMETRY AND CALCULUS Integration, applications and techniques of integration,
transcendentał functions, polar coordinates, improper integrals, L'Hospital's Rule, infinite series. Prerequisite: 151. 111

## 199 DIRECTED READING

Supervised study of topics selected to meet the individual's needs or interests; primarily for students awarded advanced placement. Admission only by departmental invitation.

244 DATA STRUCTURES AND ASSEMBLY LANGUAGE PROGRAMMING (2)
Computer structure, COMPASS assembly language, instruction execution, addressing techniques, representation of data, macro definition, program segmentation and linkage. Prerequisite: 144 or consent. !! a/y 1974/75

253 MULTIVARIABLE CALCULUS AND DIFFERENTIAL EQUATIONS
An introduction to vectors, multidimensional calculus, and differential equations. Emphasis will be on using these topics as tools for solving physical problems. Prerequisite: 152 ! 11

321 GEOMETRY
Foundations of geometry and basic theory in Euclidean, projective and non-Euclidean geometry. Prerequisite: 152 or consent. I a/y 1974/75

323 MODERN ELEMENTARY MATHEMATICS
Concepts underlying traditional computational techniques; a systematic analysis of arithmetic; an intuitive approach to algebra and geometry. Intended for elementary teaching majors. Prerequisite to Ed. 326. Prerequisite: consent. i II S

324 GEOMETRY FOR THE ELEMENTARY SCHOOL TEACHER (2)
A review of elementary geometry from a mature point of view using modern vocabulary and notation; the importance of measurement, observation, intuitive and inductive reasoning as useful learning techniques. Intended for elementary teaching majors. Prerequisite: 323 . II

331 LINEAR ALGEBRA AND CALCULUS
Vectors and vector spaces, matrices, quadratic forms, linear transformations, multivariable calculus. Prerequisite: 152. II

341 MATHEMATICAL STATISTICS
Elementary probability theory, discrete and continuous distribution functions, introduction to sampling theory and hypothesis testing. Prerequisite: 152. $11 \mathrm{a} / \mathrm{y}$ 1974/75

344 SYSTEMS ANALYSIS AND SIMULATION
Application of topics from matrix algebra, probability theory, statistics, optimization theory and computer science to problems of science, industry and society; mathematical modeling, Monte Carlo techniques, error analysis, stochastic processes and computer simulation. Prerequisite: 144 and 152. I a/y 1975/76

## 346 NUMERICAL ANALYSIS

Numerical theory and applications in the areas of solution of equations and linear systems, differentiation, integration, approximation, matrix theory and solution of differential
equations. Prerequisite or corequisite: 253 and limited knowledge of computer programming or consent. II

351 APPLIED MATHEMATICS
Ordinary differential equations including series solutions, the Laplace transform, partial differential equations, orthogonal functions. Prerequisite: 253. I

433, 434 MODERN ALGEBRA
Linear algebra, groups, rings, modules, fields, field extensions. Prerequisite: 331.433 offered I each year; 434 offered II a/y 1975/76

446 MATHEMATICS IN THE SECONDARY SCHOOL (2)
Basic mathematical concepts; principles of riumber operation, relation and prooí, postulational systems of Euclidean geometry and materials in secondary school teaching. Prerequisite: $\mathbf{2 5 3}$ or 331 equivalent. I

455, 456 MATHEMATICAL ANALYSIS
Extended treatment of topics introduced in elementary calculus. Prerequisite: 253. 455 offered I each year; 456 offered II aly 1974/75

460 ELEMIENTARY TOPOLOGY
An introduction to point-set topology. Prerequisite: consent. II a/y 1975/76

490 SEMINAR (1-4)
Prerequisite:consent of dep riment chairman.

## 491, 492 INDEPENDENT STUDY (1-4)

Prerequisite: consent of department chairman. 1 if
597, 598 GRADUATE RESEARCH (1-4)
Open to Miaster's degree candidates only. Prerequisites: consent of department chairmari. I II

## philosophy

The University requirement of one course in philosophy may be satisfied by any course offered by the department except Philosophy 233. The initial course in the subject is customarily Philosophy 201 or 221, though neither of these courses is a prerequisite for any other course. 300 -level courses are especially suited for students with particular interests or preparation. 400 -level courses have the specific prerequisites listed in their descriptions.

BACHELOR OF ARTS: A minimum of 24 semester hours including Philosophy 233, and 8 semester hours from: 331, 332 333, 335. In addition to course requirements, all majors must (1) complete a prescribed reading and research program (described in a spe ial brochure available from the department), and (2) take a departmental examination before beginning their final semester in residence. Consultation with departmental faculty is important in planning a meaningful major program and should be sought as early as possible.

Courses in the department are designed to meet the needs of a variety of students: (1) those who desire some knowledge of philosophy as a basic element in liberal education; (2) those who wish to pursue some special interest in, for example, ethics, science,
religion, or the history of thought; (3) those who wish an understanding of philosophy to support their work in other fields, e.g., literature, history, or the sciences; (4) those who plan to use a major in philosophy as a preparation for graduate study in another field, e.g. theology or law; and (5) those who plan to do graduate work in philosophy itself, usually with the intention of teaching in the field.

## 201 INTRODUCTION TO PHILOSOPHY

Perennial philosophical issues, systems and thinkers; the nature of knowledge, the function of science, values, human nature and its social implications, religion and knowledge of God. Development of critical and systematic philosophical thinking about all issues. I II

## ETHICS

Major moral systems of Western civilization; intensive examination of some contemporary moral theories; the principles of Christian ethics. I II

233 LOGIC
Principles of argument and proof; deductive, inductive and symbolic logic; the nature and functions of language, problems of semantics, the philosophy of logic.

## 324 MAN IN SOCIETY

Philosophical bases of social institutions; the nature of man, values, and problems of social existence. I a/y

328 POLITICAL AND LEGAL PHILOSOPHY
Moral justification of the democratic state, the role of human rights in justifying and limiting the obligation to such a state, the relationship of the concept of moral justice to the rule of law, the authority of judicial decisions and specific arguments about the justification of disobedience of law. I a/y

331 ANCIENT PHILOSOPHY
A study of the nature and development of philosophic thought and method from the Presocratic period to the end of the third century A.D. Special emphasis is given to the philosophies of Plato and Aristotle. I a/y

MEDIEVAL PHILOSOPHY
A survey of the development of philosophy from Augustine to Ockham. Scrutiny of the sources and nature of the Thomistic synthesis, and the reaction to it in the work of Duns Scotus and William Ockham. I a/y

333 MODERN PHILOSOPHY
Philosophy from the seventeenth through the early nineteenth centuries; continental rationalism, British empiricism and German idealism; Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Kant, Fichte, Schopenhauer and Hegel. II a/y

335 CONTEMPORARY PHILOSOPHY
Issues and methods from the late nineteenth century to the present; may include pragmatism, empiricism, process philosophy, existentialism and analysis as developed by Mill, James, Dewey, Whitehead, Sartre, Russell, Ayer and Wittgenstein. It a/y

361 ORIENTAL THOUGHT
Major philosophic systems of India, China and Japan; related literature, art, religion and general culture of the Orient.

## 365 KIERKEGAARD AND EXISTENTIALISM

Modern existentialism, its main themes and their relation to other philosophical traditions; its impact on such fields as literature and psychology; life and thought of two key figures: Soren Kierkegaard and Jean-Paul Sartre; related thinkers including Nietzsche, Heidegger, Jasp rs, Berdyaev, Unamuno and Marcel. I a/y

371 AESTHETICS
Analysis of the aesthetic experience and its relationship to the fine arts, literature, science and morality; the criteria and concepts employed in artistic expression and aesthetic evaluation. II a/y

381 THEORY OF VALUE
The nature of human values; contemporary discussions concerning the subjective or objective, absolute or relative character of such values as the good and the right, the beautiful and the holy; the origin of values, their place in a world of fact, man's knowledge of them, the character and use of the language of evaluation. II a/y

393 PHILOSOPHY OF RELIGION
Classical and contemporary views of traditional religious problems: the existence of God, the religious experience, revelation, immorality and others; an acquaintance with the principal tenets and the world view of the Christian religion is assumed. II

395 PHILOSOPHY OF SCIENCE
The general character, fundamental concepts, methods and significance of modern science; some attention to specific areas of science: physical, biological, s cial; the implications of science and scientific methodology for ethical, aesthetic and religious values. I a/y

427 BOOKS, IDEAS AND MEN: SEMINAR IN PHILOSOPHY
A reading and discussion course conducted by one or more faculty members; the student reads sel cted works in philosophy, hears and reflects on different interpretations of the ideas involved, and participates actively in analysis and argument. Works studied may be on any number of announced topics such as ethics, aesthetics, religion, knowledge, science, history of ideas, etc. I a/y

435 ADVANCED SEMINAR IN PHILOSOPHY
Topic to be announced at the time the course is offered, normally some aspect of contemporary philosophy. Prerequisite: consent. I a/y

491, 492 INDEPENDENT READING AND RESEARCH (1-2)
Prerequisite: Departmental consent. I II

physics

The department offers two courses designed for the non-science major: ELEMENTS OF PHYSICS and MUSICAL ACOUSTICS. For the science major, two introductory sequences are offered: COLLEGE PHYSICS and GENERAL PHYSICS. These se uences differ in the level of mathematics used as stated in the course description. They also differ somewhat in emphasis, with GENERAL PHYSICS involving more comprehensive analyses.

A student wishing to major in physics or engineering physics is encouraged to contact the department early in his college career, preferably prior to his entering as a Freshmari. Early consultation will provide greater flexibility in one's program.

BACHELOR OF SCIENCE: 32 semester hours: 153, 154, 155 156, 223, 331, 332, 336, 356, 421t, 422t. Eight additional semester hours may be desirable, depending on the student's professional objectives. For example, it is recommended that pre-Ph.D. students take Physics 401 and 406. Consult the department for specific recommendations.

Required supporting courses: Math 151, 152, 253; Engineering 354; Chemistry 115; plus either Chemistry 341 or Engineering 351.

BACHELOR OF ARTS: 24 semester hours: $153+, 154+, 155+$, 233, plus 10 semester hours from the following: 331, 336, 351, 354, 355, 356, 421, 422.

Required supporting courses: Math 15?, 152, (253 strongly recommended); Chemistry 115.

BACHELOR OF SCIENCE (ENGINEERING PHYSICS): 44 semester hours: $153,154,155,156,223,331,336,356$ (optional), 421, 422. Engineering Basics: 151, 182. 354.

Engineering Concentration * : 12 semester hours selected from $271^{*}, 272^{*}, 352^{*}, 441,231,232,351,442$.

Additional courses may be desirable in order to strengthen the student's professional objectives. Continuing consultation with the Physics and Engineering Departments for specific recommendations concerning advanced technical electives is desirable and encouraged.

Required supporting courses: Math 144, 151, 152, 253; Chemistry 115.
$\dagger 497,498$ may be substituted for 421,422 with consent of the department.
+Under special circumstances 125, 126, 127, 128 may be substituted for the 153 sequence. This requires the consent of the department. Additional courses may be desirable, depending on the student's professional objectives. Consult the department for specific recommendations.
*Proposed new additions.

* $C$ Courses are selected on the basis of the student's career objectives: Electrical, Mechanical or Combination. See Engineering section.


## OUTLINE: BACHELOR OF SCIENCE IN PHYSICS

## FRESHMAN

Fall: 153 General Physics 155 Lab
Math 151 Analytic Geometry and Calculus
Spring: 154 General Physics
156 Lab
Math 152 Analytic Geometry and Calculus

## SOPHOMORE

Fall: $\quad 223$ Elementary Modern Physics
Math 253 Multivariable Calculus and Differential Equations
Engineering 231 Statics
Spring: 336 Mechanics
354 Engineering Analysis

## JUNIOR

Fall: $\quad 331$ Electromagnetic Theory
356 Mathematical Physics
*351 Thermodynamics
Chem 341 Physical Chemistry
Spring: 332 Electromagnetic Waves and Physical Optics
*272 Electrical Circuits and Instrumentation
SENIOR
Fall: **401 Quantum Mechanics
421 Advanced Laboratory
Spring: * 406 Advanced Modern Physics
422 Advanced Laboratory

Optional

* Optional, recommerided for graduate school candidates


## OUTLINE: BACHELOR OF ARTS IN PHソSICS

Fall: $\quad 153$ General Physics
155 Lab
Math 151 Analytic Geometry and Calculus
Spring:
154 General Physics
156 Lab
Math 152 Analytic Geometry and Calculus
Fall: 223 Elementary Modern Physics
PLUS 10 additional semester hours from the following:
Physics 331 Electromagnetic Theory
336 Mechanics
351 Thermodynamics
354 Engineering Analysis
355 Teaching of Physics
356 Mathematical Physics
421, 422 Advanced Laboratory

## 106 ELEMENTS OF PHYSICS

An introduction to the meaning and structure of physics primarily for liberal arts students. A non-mathematical description of the Newtonian world and the atomic picture of nature; the significance and role of physics in other fields.

## 125, 126 COLLEGE PHYSICS

This course provides an introduction to the fundamental topics of physics. It is a non-calculus sequence, involving only the use of trigonometry and college algebra. Concurrent registration in 127,128 is required.

127, 128 LABORATORY $(1,1)$
Basic laboratory experiments are performed in conjunction with 125, 126. Concurrent registration in 125,126 is required.

## (Physics cont.)

## 153, 154 GENERAL PHYSICS

A calculus-level survey of the general fields of physics, including classical mechanics, thermodynamics, electricity and magnetism and optics. Concurrent registration in 155, 156 and Math 151, 152 is required

## 155, 156 LABORATORY (1,1)

Various physical phenomena are investigated in the laboratory in conjunction with the theories discussed in 153 154. Basic laboratory procedures are emphasized, including graphical analysis of data and error analysis. Concurrent registration in 153,154 is required.

205 MUSICAL ACOUSTICS
A study of musical sound using physics methods: vibrating systems; simple harmonic motion; wave motion; complex waves; wave generation in musical instruments; physiology of hearing; architectural acoustics; electronic recording and reproduction. Laboratory and group tours. No prerequisite courses in either mathematics or physics are assumed.

## 223 ELEMENTARY MODERN PHYSICS

This course covers the various phenomena where classical methods of physics fail. Contemporary interpretations of these phenomena are developed at an elementary level. Prerequisite: 154 or 126 or consent of instructor

272 ELECTRICAL CIRCUITS AND INSTRUMENTATION
Electronic devices and their application; A-C and D-C circuit analysis; physics of transistors and vacuum tubes and their circuits; A-C and D-C amplifiers, power supplies, analog and digital computers. Includes Iaboratory. Prerequisite: 153, 154 or consent.

331 ELECTROMAGNETIC THEORY
Electrostatics, dipole fields, fields in dielectric materials, ele tromagnetic induction, magnetic properties of matter, generation and propagation of electromagnetic waves with an emphasis on the relationship with physical optics. Prerequisite: 153, 154; corequisite: 356 or consent.

332 ELECTROMAGNETIC WAVES AND PHYSICAL OPTICS A study of the generation and propagation of electromagnetic waves. The mathematical description and the physical understanding of electromagnetic radiation are discussed with an emphasis on its relationship with physical optics. Prerequisite: 331.

Fundamental mechanics; mathematical formulation of physical problems; motion of particles in one, two or three dimensions; motions of systems of particles; dynamics and statics of rigid bodies; moving coordinate systems; Lagrange's equations and Hamiltonian formulation of mechanics Corequisite: 354 or consent.
351 THERMODYNAMICS
See Engineering 351
354 ENGINEERING ANALYSIS
See Engineering 354
355 TEACHING OF PHYSICS
New developments in secondary curriculum, teaching
techniques and teaching media in the physical sciences; counted toward a degree for only those students receiving certification.

## 356 MATHEMATICAL PHYSICS

Boundary value problems, special functions, matrices and tensors, probability theory, eigenvalue problems, complex variables, contour integration and their applications to physics.

401 INTRODUCTION TO QUANTUM MECHANICS
The ideas and techniques of quantum mechanics are developed. Various quantum mechanical systems and phenomena are studied in order to demonstrate these ideas and techniques.

406 ADVANCED MODERN PHYSICS
Modern theories are used to describe topics of contemporary importance such as atomic and sub-atomic phenomena, plasmas, solids, and astrophysical events. The application of quantum mechnical techniques are emphasized when appropriate. Prerequisite: 401.

421, 422 ADVANCED LABORATORY (1-2)
491, 492 INDEPENDENT STUDY (1-2)
497, 498 R.ESEARCH (1-2)
597,598 GRADUATE RESEARCH (1-2)
Open to Master's degree candidates only.

## political science

There are no prerequisites for political science courses, except as noted.

Courses in political science above the "introductory" level are arranged in five fields with one "survey" and several "seminars" in mach field.

Prior consultation with the instructor of any advanced course is desirable.

BACHELOR OF ARTS: A student with a major in political science will meet the following requirements: (1) a minimum of 32 semester hours in political science; (2) Political Science 201 or equivalent; (3) three survey courses including 325 Political Thought; and (4) two seminars in one field for which he has completed the survey course.

For students wishing to prepare themselves specifically for career possibilities in public affairs and political life, the department designates three special programs: Urban Affairs, Public Affairs and Pre-Law. For further information see Career Programs, page 79.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

## INTRODUCTORY COURSES

101 ANINVITATION TO POLITICS
Politica! Life
An exploration of political conflict, power, crisis and
decision, stability and change, statesmartship, structure and freedom. (Will meet the social science core requirement.)

## 201 THE POLITICAL IMAGINATION

Political Analysis
Introduction to theories and styles of political explanation Selected readings and exercises in the analysis of political phenomena. (Required of political science majors; helpful to those planning related careers; i.e., politics, law, journalism or education.)

## SURVEY COURSES

All "survey" courses will meet the social science core requirement.

## 251 AMERICAN POLITICS

The National Political Process
Gives attention to political campaigns, behavior and institutions, the distribution of power, and congressional, executive and judicial decision-making.

282 POLITICS ABROAD
Examination of Political Systems from a Comparative Perspective
Principal focus is on contemporary issues, the societal setting and policy formation in selected European and non-European systems.

325 POLITICAL THOUGHT
A Survey of Political Thought from Plato to Marx
Origin and evolution of major political oncepts from their classical foundations in ancient, medieval and early modern times. Such ideas as the state, obligation, authority, community, law and freedom will be studied developmentally. (Required of political science majors.)

331 POLITICS AMONG NATIONS
Analysis of International Relations and Foreign Policy
Concepts and vocabulary of international relations; fereign policy of the major world powers and contemparary international problems.

357 POLITICS OF THE BUREAUCRACY
Principles of Public Administration and Public Policy
Management as occurs in the affairs of state; the nature of human behavior in orgainzations; administrative law and quasi-judicial practices; civil service, budget and fiscal control, centralization, coordination, integration in administrative areas. (Requirement in PUBLIC AFFAIRS curriculum; recommended for PRE-LAW program.)

## SENIINARS

American Politics

## 352 POLITICS IN AMERICAN STATES <br> Problems of Political Community at the State Level

General problems of planning, political ecology, education, taxation, federal power and governmental coherence will be considered in lectures and discussion; specific topics will be treated as appropriate; field study may be arranged. Concentration on the State of Washington.

URBAN POLITICS AND PROBLEMS
Problems of American Political Community at the Local and Metropolitan Level.
General problems of planning, economic development and investment, poverty, crime and environment will be considered in lectures and discussion; specific topics will be treated as appropriate; field study may be arranged. (Recommended for PRE-LAW program.)

361 POLITICAL PARTIES
An Examination of American Political Parties in Theory and Practice.
Campaigns and voting behavior; party leadership and recruitment; public opinion, political socialization and participation.

364 THE LEGISLATIVE PROCESS
Conflict, Struggle and Compromise in the Legislative Arena Congressional organization and procedure; state legislative politics; lobbying and legislative behavior. Includes an examination of theories of legislative analysis. (Recommended for PRE-LAW program.)

368 THE PRESIDENCY
The World's Most Powerful Politician
Examined in terms of the roles and mystique of the office, styles of leadership, and the divergent requirements of image and substance.

371 POLITICS AND THE LEGAL PROCESS
The Judicial Process From a Political Science Perspective
Deals with concepts of law, professional recruitment, and judicial behavior. The impact of law upon the political system. (Recommended in PRE-LAW curriculum.)

474 THE CONSTITUTION
The American Constitution From the Perspectives of Politicai Science and Law
Discussions will consider concepts of federalism, separation of powers, due process and civil liberties. The logic and development of constitutional principles will be developed through analysis of selected case lines. (Recommended for PRE-LAW and required in PUBLIC AFFAIRS curriculum.)

## Comparative Politics

483 THE WESTMINSTER MODEL
Political Systems of the British Commonwealth
Contemporary governmental and political institutions of England and the British Commonwealth states including Canada, Australia and New Zealand.

484 SOVIET POLITICAL SYSTEM
An Appraisal of Soviet Politics and Government
Examination of the political system in the USSR, ideology, role of the Communist Party, the nature of the constitution, administrative agencies and nationality policy.

487 POLITICAL STABILITY AND REVOLUTION
An Examination of Styles of Political Change
Conditions, dynamics and consequences of change; ontrasting problems of stability, evolution and revolution, and their implications for the social order.

489 POLITICAL DEVELOPMENT AND MODERNIZATION Political Theory and Political Change
Study of problems of national integration, "structural differentiation" and "cultural secularization" in political change; both contemporary and historical developing societies; selected readings in the theories of political development.

Political Theory
411 PHILOSOPHICAL FOUNDATIONS OF POLITICAL iNQUIRY
Contemporary Philosophy and Political Analysis
Drawing upon contemporary philosophy, and philosophy of science in particular; deals with conceptual foundations and problems of model-making, mathematical analysis of political phenomena, problems of representational schema generally.

412 EMPIRICAL POLITICAL THEORIES
Attempts at Explanation in Political Science
An examination of a variety of empirical political theories including systems theory, group theory, conflict theory, decision-making theory, functional analysis, and development theory. (Recommended for students considering graduate study in political science.)

426 RECENT POLITICAL THOUGHT
Political Thought and Ideology in the Modern World
An examination on democracy, conservatism, capitalism, socialism, anarcho-syndicalism, communism, racial and political elitism, nationalism, liberalism. Christian political thought and contemporary problems.

427 AMERICAN POLITICAL THOUGHT
Science, Philosophy and American Political Ideas
An examination of the sources, development and contemporary trends in American political thought. Special emphasis given to the influences of philosophy and science on American liberalism and democracy, conservatism and capitalism and the more recent interaction of social science theories and political thought.

494 SOCIAL SCIENCE AND POLITICAL ANALYSIS
Interdisciplinary Contributions to Political Science
Contributions of other social sciences to political analysis, particularly conflict perspectives from Sociology; language and community theory from Anthropology; exchange schemes from Economics. Special attention to transdisciplinary movements in communication and general systems theory.

## Public Administration and Policy

456 THE ADMINISTRATIVE STATE
Theory in the Study of Public Administration and Policy Readings and discussions in the two worlds of "organization theory". Explanations of administration, bureaucratic behavior and policy-making, and explanatory schemes for social process and social organization based on bureaucratic and policy models. (Requirement in PUBLIC AFFAIRS curriculum.)

457 THE ADMINISTRATIVE ENVIRONMENT

## Problems of Public Administration

Intensive case analysis of such administrative problems as public personnel management; interagency rivalry; public budgeting; executive/legislative and public relations. Field research and/or special projects may be arranged. (Requirement in PUBLIC AFFAIRS curriculum.)

459 THE ADMINISTRATIVE PURPOSE
Problems in Public Policy Formation
Readings and discussions of major technical problem areas of policy formulation: planning, budgeting, information development and control, interagency cooperation; and in-depth case analysis of specimen policy decisions at local, state, and national levels. (Requirement in PUBLIC AFFAIRS curriculum.)

## International Relations

336 THE POLITICS OF INTERNATIONAL COOPERATION International Organization and Law
The web of interdependence and its institutionalization. Issues before the United Nations and the Common Market. Cooperation and the principle of national self-determination. International rule-making. (Recommended for PRE-LAW curriculum.)

431 ISSUES IN INTERNATIONAL RELATIONS
A View of Problems Arising in Politics Among Nations
Major factors in formulation and execution of policy; contemporary developments in world politics; selected problems of conflict resolution, development, trade politics and modernization.

432 EUROPEAN INTEGRATION
The Movement Toward a Political Union of European States National, international, and supranational elements in the law and politics of the European Community.

## INTERNSHIPS

458 INTERNSHIP IN PUBLIC ADMINISTRATION
Practical Experience in an Administrative Agency
An internship with a department of local or state government; planned and supervised jointly by a supervising government official and a member of the political science faculty. (By consent of the Political Science department; requirement in PUBLIC AFFAIRS curriculum.)

464-466 INTERNSHIP IN THE LEGISLATIVE PROCESS Practical Experience with the Washington State Legislature Internship with a member of the Washington State Legislature; planned and supervised jointly by the legislator and a member of the Political Science faculty. (By permission of the department only.)

## RESEARCH

491-492 INDEPENDENT READING AND RESEARC.H By consent of Department Chairman.

597-598 GRADUATE RESEARCH
Open to master's degree candidates only.
599 THESIS

# psychology 

BACHELOR OF ARTS: 32 semester hours including 101, 243 , 340, 460, 490. In addition, Statistics 331 is required.

101 INTRODUCTION TO PSYCHOLOGY
An introduction to the scientific study of behavior; scientific methods for studying the behavior of living organisms; topics such as motivation, learning, emotion, intelligence, personality and adjusiment. I II

110 STUDY SKILLS (2)
To assist in the improvement of reading skills and other techniques for effective study; class work supplemented by individual counseling. (May not be counted in the major.) I II

221 THE PSYCHOLOGY OF ADJUSTMENT (2)
Problems in personal adjustment in everyday living. Prerequisite: 101 (May not be counted in the major.) I II

243 SCIENTIFIC METHODS (2 or 4)
Basic experimental and research design with specific applications to sensory and perceptual processes. Lecture and laboratory. Majors must take the four-credit-hour option. Prerequisite: 101. II

330 SOCIAL PSYCHOLOGY
Research and theory concerning the interaction between groups and the individual; attitudes, values, role behavior and related topics examined in the light of interpersonal relations and group processes. Prerequisite: 101. I II

335 DEVELOPMENT: INFANCY TO MATURITY
Physical, intellectual, social, and emotional growth from infancy through adolescence to maturity. Prerequisite: 101. I II

## 340 HUMAN NEUROPS YCHOLOGY

The study of brain-behavior relationships. Topics include neuroanatomical and neurophysiological mechanisms underlying human behavior; psychological effects of brain damage; physiological correlates of language, sensory and motor functions, and emotion; electrical stimulation of the brain, Prerequisite: 243. I

403 THE PSYCHOLOGY OF INFANCY AND CHILDHOOD (2) Physical, intellectual, emotional and social development of the individual from the pre-natal period to adolescence; problems of behavior and adjustment. Prerequisite: 335 .

405 ADOLESCENT PSYCHOLOGY 2 1
Physical development, mental traits, social characteristics and interests of adolescents; adjustments in home, school and community. Prerequisite: 335 . II

410 EMOTION AND MOTIVATION
Characteristics of emotion and motivation; their role in determining behavior. Lecture and laboratory. Pr requisite: 243. II
personality; research on the causes of individual differences; personality change and techniques of measuring personality. Prerequisite: 101. I II

421 ABNORMAL BEHAVIOR
Etiology and treatment of behavioral disorders. Prerequisite: 101.1 II

450 PSYCHOLOGICAL TESTING
Survey of standardized tests; methods of development, standardization; limitations and interpretations of tests. Prerequisite: 243 or a course in statistics. I

460 LEARNING: RESEARCH AND THEORY
Experimental studies and theories of learning. Lecture and laboratory. Prerequisite: a minimum of 12 hours in psychology including 243. I

490 HISTORY AND SYSTEMS IN PSYCHOLOGY
A seminar in historical development with consideration of current trends. For junior or senior majors and graduate students; others by departmental consent. I

491, 492 INDEPENDENT STUDY (1-4)
A supervised reading or research project of special interest for senior or graduate students. Prerequisite: departmental consent. I II

493 SEMINAR
Selected :opics in Psychology to be announced. Prerequisite: departmental consent.

515 PSYCHOLOGICAL ASSESSMENT
Intellectual and personality assessment; for the former part, the study of such tests as the Standard-Binet, the Wechsler Preschool and Primary Scale of Intelligence, the Wechsler Intelligence Scale for Children, and the Wechsler Adult Intelligence Scale; for the latter, interview techniques, selfreport tests such as the MMPI and projective methods. Prerequisite: 450. II
540 COUNSELING THEORY
Counseling theories and techniques. II
570 PRACTICUM IN COUNSELING AND/OR ASSESSMENT
An opportunity to develop counseling and/or assessment skills in a setting in which these professional services are offered such as the University Counselling Center. Prerequisites: 515 and/or 540. I II

577 SUPERVISED FIELD WORK
Ari opportunity for the student to work in the areas of counseling and/or assessment in a setting apart from the University campus under the supervision of a psychologist and/or counselor. Prerequisite: 570. I II
590 SEMINAR: PSYCHOLOGY OF LEARNING
Principles of learning and their application to problems such as pathological learning conditions. Prerequisites: a minimum of 12 hours in psychology above the 200-level including 460 or departmental consent. II

596 IN DEPENDENT RESEARCH (1-4)
Supervised independent study chosen in an area by the graduate student. Departmental consent required. I II

## (Psychology cont.)

## 597 SOCIAL SCIENCE METHODS

Basic research concepts applied to laboratory, field, and bibliographical studies. Topics include formulating research questions, research designs, data-gathering techniques, analysis of data and theory construction. Emphasis is placed on understanding and evaluating rather than conducting res arch. Admission by consent of the student's graduate committee.

## 599 THESIS AND THESIS SEMINAR

Development of a the sis problem chosen from the candidate's major area of concentration. The thesis design may encompass original laboratory, field or bibliographic research with the specific format to be approved by the candidate's graduate committee. The thesis will be defended in a final oral examination conducted by the committee.

## religion

UNIVERSITY REQUIREMENTS: 8 semester hours for students entering as freshmen or sophomores. 4 lower division hours shall be taken before the end of the sophomore year. The second 4 hours may be selected from any of the other offerings in the religion curriculum. Transfer students entering as juniors or seniors are required to take 4 semester hours of religion. The assumed preparation for all upper division courses in religion is 4 semester hours of a lower division religion course (or equivalent for transfer students).

BACHELOR OF ARTS: 24 semester hours. Majors should plan their program early in consultation with departmental faculty. Closely related courses taught in other departments may be considered to apply toward the major in consultation with the staff.

## 103 JUDAEO-CHRISTIAN LIFE AND THOUGHT

Biblical, historical and theological foundations with reference to contemporary issues.

105 RELIGIOUS EXPERIENCE
A description of religion as a pervasive aspect of human history and experience; forms of ritual and mysticism in Christian and selected traditions other than Christian; symbols of faith in art, music and literature.

203 BIBLICAL LITERATURE
Literary, historical and theological dimensions of the Bible including perspective on contemporary problems.

325 CHRISTIAN EDUCATION IN A SECULAR SOCIETY
Toward a functional Christian viewpoint for the educational ministry of the Church in confrontation with secular man.

327 ANCIENT CHURCH HISTORY
The origins, thought and expansion of the Christian Church; rise of the Papacy, expansion in Europe and the growth of Christian involvement in culture; to the end of the Papacy of Gregory I (604). I a/y

328 MODERN CHURCH HISTORY
Beginning with the Peace of Westphalia (1648), interaction of the Christian faith with modern politics, science and philosophy; expansion in the world, modern movements.

331 WORLD RELIGIONS
History, beliefs and practices of living religions of the world: Pre-literate, Hindu, Buddhist, Chinese and Japanese religions, Judiasm, Islam, with references to Christianity. I II

## 341 AMERICAN CHURCHES

The development and trends of Christianity in the United States. I

421 OLD TESTAMENT STUDIES
Major areas of inquiry: archaeclogy and the Bible, the Prophets, or the Wisdom Literature. Prerequisite: 203 or equivalent.

## 422 NEW TESTAMENT STUDIES

Major areas of inquiry: such as Intertestamental, Synoptic, Johannine or Pauline literature. Prerequisite: 203 or equivalent.

The Life Of Jesus
Gospel traditions concerning the life and teachings of Jesus; a historical survey of "Life of Jesus" research, form and reaction criticism of the Gospel tradition; the religious dimensions of Jesus' life and thought.

430 CHRISTIAN THOUGHT AND MODERN CONSCIOUSNESS Contemporary issues and problems in theology with reference to Biblical and historical resolurces and recent understandings of man and his world. Readings selected from Barth, Bonhoeffer, Buber, Bultmann, Cox, Moltmann, the Niebuhrs, Robinson, Teilhard de Chardin and Tillich. Prerequisite: One lower division course or equivalent.

432 CHRISTIAN CLASSICS
Christian literature: devotion, biography, theology, poetry: Augu tine, Thomas a Kempis, Dante, Luther, Calvin, Pascal, Wesley, Kierkegaard and others; group core plus seminar reports. II a/y

ISIANITY AND THE ARTS
Relationships of Christian thought to the forms and contents of various media of artistic creativity.

490 SENIOR SEMINAR IN RELIGION (Open only to seniors and graduate students.)
(a) Human Sexuality

The psychological, sociological, ethical and theological dimensions of sexuality.

## (b) Religion and Psychology

An investigation of psychological studies which converge on an understanding of human personality from the viewpoint of religion and the Christian view of man; the influence of psychology in the self-underspanding of man.
(c) Religion and Politics

An inquiry into how these disciplines relate to each other within the life of the church, the life of the state, and in church-state relationships.
(d) Death and Dying

Human death examined from a variety of perspectives with special emphasis on theological dimensions.

491, 492 INDEPENDENT STUDY
Intended for religion majors, advanced and graduate students; consent of the department is required.

## sociology anthropology\& social welfare

BACHELOR OF ARTS IN SOCIOLOGY: Minimum of 28 semester hours including 111, 423 and 494. The remaining 16 hours should be chosen in consultation with sociology faculty. Courses in anthropology and social welfare do not count toward a major in sociology unless otherwise stated in the individual course descriptions.

Unless otherwise stated, 111 or consent is a prerequisite for all courses in sociology. Courses are open to challenge by examination.

BACHELOR OF ARTS IN SOCIAL WELFARE: Minimum of 24 semester hours including $271,365,463,472,475$, and 476 , in addition to electives from supporting fields chosen in consultation with social welfare faculty. The department holds constituent membership in the Council of Social Work Education, which indicates the Council's approval of the department's program.

Unless otherwise stated, 271 or consent is a prerequisite for all courses in social welfare.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

ANTHROPOLOGY COURSES: Although no major is currently available, individual courses are offered. 231 may count toward a sociology major, and all but 242 count toward the Social Science General University Requirement. Unless otherwise stated, 231 or consent is a prerequisite for all courses in anthropology.

CRIMINAL JUSTICE COURSES: The department also offers graduate courses related specifically to the field of corrections and law enforcement. The courses in Criminal Justice include: Semin r in the Criminal Justice System (590a), Seminar in Corrections (590b), Seminar in Probation and Parole (590c), Group Process (590d), and Seminar in Sociological Theory and the Criminal Justice System (590e). Independent studies are also available. Supportive courses in sociology and other fields should be chosen in consultation with departmental faculty.

STATISTICS: See Statistics 331, 341 listing under Slatistics (Interdepartmental listing). Either one may be counted toward the 28-hour major in Sociology. Statistics is especially appropriate for those considering graduate work in Sociology.

## 111 INTRODUCTION TO SOCIOLOGY

Basic principles in understanding social relationships: processes and structures existing in human relationships. I II

211 GROUP BEHAVIOR
The effects of social interaction upon individual behavior; collective attitudes and behavior as products of group experience; analysis of fashion, fads, crowds, mobs, publics, social movements; the significance of social control in society and the methods used by individuals and groups to control others. No prerequisite. I

MINORITIES
The history and culture af minority groups in American
society, examined within the context of the interaction between minority-majority groups and population composition and movement of these groups. II

328 DEVIANT BEHAVIOR
The process of deviance and social controi, examined with attention to specific forms of youth and adult behavior: juvenile delinquency, white-collar crime, drug use, homosexuality, mental illness and abortion. II

422 SOCIAL INSTITUTIONS
The origins and development of major institutions: economic, educational, familial, political and religious; institutional change, both evolutionary and revolutionary. II

423 SOCIOLOGICAL THOUGHT
Sociological thought from Comte to the present. I
425 THE FAMILY
The family as an institution; cross-cultural examination of family life, historical treatment of the Western family and a contemporary analysis of the American family in its developmental stages and in its relationship to other institutions. I

432 COMMUNITY AND STRATIFICATION
Rural-urban interpenetration; systems of social ranking; theories of stratification, power, prestige, culture and styles of life of various social classes; social mobility and its consequences for social structures. II

490 SEMINAR (1-4)
Prerequisite: departmental consent.
491 INDEPENDENT STUDY (1-4)
Prerequisite: departmental consent.
494 RESEARCH METHODS
Types of research and their basic methodology. II
590 GRADUATE SEMINAR (1-4)
590a - Seminar in Criminal Justice System; 590b - Seminar in Corrections; 590c - Seminar in Probation and Parole; 590d - Group Process; 590e - Seminar in Sociological Theory and the Criminal Justice System. Prerequisite: departmental consent.

GRADUATE READINGS
Prerequisite: departmental conserit.
GRADUATE RESEARCH
Research chosen with the approval of the student's graduate committee. Prerequisite: departmental consent.

## ANTHROPOLOGY

231 CULTURAL ANTHROPOLOGY
The prehistoric development of culture; a comparative study of contemporary small-scale societies; describing, interpreting and explaining human behavior with reference to environmental settings, cultural traditions and outside (non-traditional) influences. May be applied toward sociology major requirements. No prerequisite. I

## 242 PHYSICAL ANTHROPOLOGY

Human biology in evolutionary perspective; evolutionary theory, fossil evidence of human development, the living non-human primates, present-day human as a biological creature. Does not meet Social Science General University Requirement. No prerequisite. II

341 ETHNOLOGY OF AMERICAN INDIANS
A comparative study of American Indian cultures at the time of European contact; the effects of white contact upon traditional American Indian cultures; Indians in contemporary North America. Prerequisite: 231 or consent. I

352 ETHNOLOGY OF AFRICA
The peoples of Africa south of the Sahara; native African cultural areas; the position of traditional cultures in the modern world. Prerequisite: 231 or consent. II

490 SEMINAR (1-4)
Prerequisite: departmental consent.
491 INDEPENDENT STUDY
Prerequisite: departmental consent.

## SOCIAL WELFARE

271 INTRODUCTION TO SOCIAL WORK
The history, philosophical roots, practice methods and "settings" (i.e. adoptions, public schools, public assistance, corrections, psychiatric hospitals and clinics) of professional social work; opportunities for observational experiences. No prerequisite. I II

365 SOCIAL INTERVENTION
Processes of social change; social conditions which create the need for intervention, the dynamics of change in individuals and groups, function of social movements in affecting change; intervention methods, tactics and strategies. May be applied toward sociology major. Prerequisite: 271 or consent. | ।

463 SOCIOLOGY OF SOCIAL WELFARE
How societies have defined social and personal needs and their responses and solutions; concepts of cultural and social institutions; contemporary welfare structures. May be applied toward sociology major. Prerequisite: 111 or consent. I

472 SOCIAL WORK PRACTICE
The profession of social work examined within the group of helping professions; the knowledge base, principles, methods and values generic to social work practice; observation of problem-solving structures and processes. Prerequisites: 271 and consent. II

## 473 INTERVIEWING (2)

Concepts, principles and techniques intrinsic to interviewing; "helping", problem-solving, or "ciinical" interviewing; for persons in the helping professions: sociai work/social welfare, clergy, nursing, physicians, parish workers, personnel officers. Open to juniors and seniors only. No prerequisite.

## 475, 476 FIELD EXPERIENCE

Supervised field work within an agency or institution:
application/integration of knowledge, theory and understanding; development of techniques common to the social welfare field. Prerequisite: 271 and consent. I II

490 SEMINAR (1-4)
Prerequisite: departmental consent.
491 INDEPENDENT STUDY (1-4)
Prerequisite: departmental consent.

## statistics

## (Interdepartmental)

Statistics, a branch of applied mathematics, is becoming increasingly popular as an area of inquiry. This area of study deals with methods of collecting and summarizing data and making generalized statements on the basis of sample information.

## 331 INTRODUCTORY STATISTICS

Descriptive statistics: measures of central tendency and dispersion. Inferential statistics: generalizations about populations from samples by parametric and non-parametric techniques. Methods covered will include estimation, hypothesis-testing, simple correlation analysis, linear expression and chi square analysis. (Not applicable to mathematics cre it.) | I|

## MATHEIMATICAL STATISTICS

Elementary probability theory, discrete and continuous distribution functions, sampling theory and hypothesistesting. Credit cannot be granted for both Statistics 331 and 341. Prerequisite: Mathematics 152. (May be applied to mathematics credit.) It a/y


# school of business administration 

## ADMISSION

The professiona! Bachelor of Business Administration degree program is composed of an upper division business curriculum with a strong base in liberal arts.

Undergraduate students are admitted to the School of Business Administration upon successful completion of at least 24 semester hours in arts and sciences with a cumulative grade point average of 2.00 or above, and declaration of business administration as a major in the registration process. Transfer students are required to have maintained the grade point average of 2.00 separately in both business and non-business courses. The student's interest to acquire a professional competence is desired and the assignment of a business faculty adviser is required,

Students considering graduate-level study should seek early planning advice from the faculty concerning appropriate undergr duate course selection.

Graduate students are admitted to the School of Business Administration when they meet the requirements specified in the procedures available from the Dean of Graduate Studies.

## AFFILIATIONS

The School of Business Administration of Pacific Lutheran University is a member of the American Assembly of Collegiate Schools of Business. The undergraduate program is nationally accredited by the Accreditation Council of the AACSB, and the School of Business Administration subscribes to all standards of the American Assembly of Collegiate Schools of Business. Pacific Lutheran University is accredited regionally by the Northwest Association of Secondary and Higher Schools.

The School of Business Administration is also a member of the Northwest Universities' Business Administration Conference, the Western Association of Collegiate Schools of Business and the National Association of Schools of Public Affairs and Administration.

## DEGREE REQUIREMENTS

Sixty-four semester hours or one-half of the minimum total degree requirements are taken in fields outside the School of Business Administration. As many as 24 semester hours can be chosen in any field without restriction (free electives). At least 40 semester hours are taken in required and elective business subjects.

The minimum Bachelor of Business Administration degree program is accredited by the American Assembly of Collegiate Schools of Business. It consists of 128 semester hours to be taken over a four-year period, and to be completed with an over-all grade point average of 2.00 or above. In practice, this work can be accelerated by taking a heavier than average load and by participating in summer sessions. On the other hand, many students find it useful to exceed the minimum requirements by including related or additional advanced work in their undergraduate studies.

BACHELOR OF BUSINESS ADMINISTRATION: 281, 282 , $290,350,364,370,453,455$, and 8 semester hours of upper division electives. Required supporting: Economics 150 and one
upper division economics course; Math 127 or 151 or equivalent; Statistics 331. A total of 28 semester hours (other than the 36 semester hours of General University Requirements) are required outside Business Administration. The elective courses are chosen to support the students' professional career objectives or graduate study plans. They may reflect business administration concentration(s) or selection(s) from entirely different field(s). The latter may include work in other professional schools or programs.

BACHELOR OF ARTS IN EDUCATION: (Concentration on Business Education) See School of Education.

MASTER OF BUSINESS ADMINISTRATION: See Graduate Catalog.

SAMPLE PROGRAM FOR THE
BACHELOR OF BUSINESS ADMINISTRATION DEGREE
This is a demanding minimum program of 128 semester hours designed to meet the needs of a student preparing for graduate studies leading to the Master of Business Administration degree or the Juris Doctor degree.

| FRESHMAN YEAR |  |  |
| :---: | :---: | :---: |
| Fall Semester | CA 123 | Fundamentals of Oral Communication |
|  | Eng 101 | College English |
|  | Soc 111 | Sociology |
|  | Rel 103 | Judaeo-Christian Life and Thought |
| Interim | Philosophy Interim |  |
| Spring Semester | Econ 150 | Principles of Economics |
|  | Math 127 | Finite Mathematics |
|  | CA 241 | Oral Interpretation of |
|  |  | Literature |
| SOPHOMORE YEAR |  |  |
| Fall Semester | BA 281 | Financial Accounting |
|  | BA 290 | Law and Society |
|  | Stat 331 | Statistical Methods |
|  | Math 151 | Analytical Geometry and |
|  |  | Calculus |
| Interim <br> Spring Semester | Philosophy Interim |  |
|  | BA 282 | Acc unting Information Systems |
|  | Eng 230 | Introduction to Contemporary |
|  |  | Literature |
|  | Phil 201 <br> Math 152 | Principles of Philosophy |
|  |  | Analytical Geometry and Calculus |

Students should schedule four one-hour courses in PE activities duri $g$ the first two years.

JUNIOR YEAR
Fall Semester

Interim
Spring Semester

| BA 350 | Management |
| :--- | :--- |
| BA 370 | Marketing Systems |
| BA 364 | Managerial Finance |
| Psych 101 | Introduction to Psychology |
| Business Administration Interim |  |
| BA 387 | Data Processing Systems |
| Econ 434 | Government and the Economy |
| BA 488 | Systems Analysis and Design |

(School of Business Administration cont.)

| SENIOR YEAR |  |  |
| :--- | :--- | :--- |
| Fall Semester | BA 455 | Business Policy |
|  | Phil 324 | Social Philosophy |
| Spring Semester | Soc 365 | Social Intervention |
|  | BA 453 | Personnel and Industrial |
|  | CA 374 | Relations |
|  | Television Production |  |
|  | Rel 490 | Senior Seminar |

## BUSINESS ADMINISTRATION COURSES

Courses numbered 100-299 are available to all students.
Courses numbered $300-499$ are open to students with junior standing and the required prerequisites.

Courses numbered 500-599 are reserved for students in the MBA program and students in other graduate programs who have an approved field in business. Consent of the Dean is required for other students.

The middle digit of the course number indicates field of concentration:

4 - general service
5 - personnel and industrial management
6 - finance and related subjects
7 - marketing and distribution
8 - accounting and information systems
9 - specialized and predominantly independent studies
For further information on suggested courses for areas of concentration, consult the Dean of the School of Business Administration.

## 241 BUSINESS COMMUNICATIONS

Development of applied writing skills and techniques in business communications. Included are letters of inquiry, orders and acknowledgments, sales and promotional communications, claims and adjustments correspondence, credit and collections ledgers, briefing and business reports, resumes, and application letters. Required for business education majors.

243 FAMILY FINANCIAL PLANNING
Consumer saving, spending and planning techniques; intelligent buying and budgeting, estate and tax planning, insurance and investment programs, retirement planning; ethical issues in government and business from the consumer viewpoint; consumer organization and influence in finance, marketing and production.

281 FINANCIAL ACCOUNTING
An introduction so accounting concepts and principles. Preparation and analysis of financial reports. Required for business and business education majors.

## 282 ACCOUNTING INFORMATION SYSTEMS

Introduction to management information systems. Emphasis on the analysis and interpretation of accounting and economic data and their use in planning and control. Required for business majors. Prerequisite: 281, or a complete course in accounting principles.

## LAW AND SOCIETY

A study of the legal system in the United States and the regulation of relationships between individual citizens, groups, and the governmentas agencies and branches. Review of the rights and obligations of individual citizens and corporations, administrative law, and the procedures and practices of the courts in a modern society. Required for business majors.

## 350 MANAGEMENT

A critical examination of the principles and processes of administration in industrial and other organizations. Management techniques and the functions of planning, organizing, direction, and control are discussed from both the classical and the behavioral points of view. Introduction to case analysis and problem-solving techniques. Required for business majors.

364 MANAGERIAL FINANCE
Concentrated study of the tools of financial analysis: Funds and cash flows, critical analysis of financial statements and other financial information, techniques of financial planning and budgeting, and the concepts related to capital expenditure budgeting, and the cost of capital. An introduction to financial strategies and decision-making for financing, expansion, and dividend policies. Required for business majors. Prerequisites: Economics 150 and Business 282, or equivalents.

365 REAL ESTATE
Study of land use planning and commercial development of land. The focus is on demand factors, government control in zoning and regulation, and real estate investment analysis.

366 RISK AND INSURANCE MANAGEMENT
An introduction to the principles of risk and insurance management. Analytical review of main functions and institutions of the insurance business.

370 MARKETING SYSTEMS
The flows of goods and services in the economy, economic and behavioral approaches to the analysis of demand; the role of the marketing functions in a business firm. Determination of the marketing mix - product policy, pricing, channels of distribution, and marketing communications. Required for business majors.

381 INTERMEDIATE ACCOUNTING
Concentrated study of the valuation theories for assets and liabilities. Analysis of related effects on income determination. Prerequisite: 281, or a complete course in accounting principies.

383 INCOME TAXATION
Comprehensive study of income tax concepts, regulations, and tax planning principles. Emphasis on individual and corporate income taxation. Prerequisite: 281 or equivalent.

COST ACCOUNTING

Basic and advanced concepts of costs in developing information for management use in the determination of income, evaluation of capital investment alternatives, and the measurement of performance. Prerequisite: 282.

## 387 DATA PROCESSING SYSTEMS

A omputer-laboratory-oriented course which includes basic. program and system analysis and flow charting, intensive study of programming languages with emphasis on FORTRAN and COBOL, and the development of a working knowledge with computer hardware and software systems. Prerequisite: 282 or permission of the instructor.

450 MANUFACTURING MANAGEMENT
Principles of scientific management; planning products, physical facilities, equipment and materials for production; methods and techniques of supervision and control of personnel; production control; purchasing and inventory management. The course includes supervised student projects and major case studies. Prerequisite: 350 or equivalent.

453 PERSONNEL AND INDUSTRIAL RELATIONS
Deaailed examination of behavioral processes of individuals and groups in business organizations. Emphasis on policy issues and specific problems in managing human resources with focus on modern practices of industrial relations and personnel management in industrial and other organizations. Prerequisite: $\mathbf{3 5 0}$ or equivalent.

455 BUSINESS POLICY
Formulation of policies to integrate all fanctions of business. Social, ethical, religious, economic, educational and international implications in the formulation of business policies and objectives. Includes comprehensive case analyses. Required for business majors. Prerequisite: Senior standing with thorough knowledge of business functions, or the consent of the instructor.

456 HONORS SEMINAR
461 FINANCIAL ANALYSIS
Study of financial policies and the analytical framework for suppliers and users of private industrial capital. Intensive studies of selected companies and industries. Prerequisite: 364 or permission of the instructor.

FINANCIAL MANAGEMENT
Problems of working capital management, planning the financial structure, issue of new securities, and major financial policies. Intensive and extensive use of cases and advanced readings. Prerequisite: 364 or equivalent.

470 MARKETING MANAGEMENT
Analytical approaches for the solution of marketing problems, developing strategies, planning and administering comprehensive marketing programs; evaluation and control of marketing operations. Prerequisite: $\mathbf{3 7 0}$ or equivalent.

471 MARKETING RESEARCH AND CONSUMER BEHAVIOR Techniques and uses of marketing research in the business decision-making process. Emphasis is placed on research design, various survey methods, research instruments, and sampling plans as they relate to marketing consumer products and services in a changing environment. Contemporary behavioral science concepts to be examined and incorporated in selected marketing projects. Prerequisite: 370 or equivalent.

472 ADVERTISING AND SALES MANAGEMENT
Role of advertising and personal selling in the marketing program; analysis of market targets; developing market potentials; media selection; designing the promotional message; evaluation and control of the promotional mix. Prerequisite: 370 or equivalent, or the permission of the instructor

473 INDUSTRIAL MARKETING AND PURCHASING
Analysis of the industrial buying and selling process; purchasing policies and procedures; selection of sources of supply; contract analysis and negotiation; marketing problems of manufacturers of industrial goods; developing and implementing industrial marketing strategies. Prerequisite: 350,370 or equivalent.

482 ADVANCED ACCOUNTING
Comprehensive study of accounting for corporations, including the accounting aspects of consolidations and mergers, and partnerships; treatment of incomplete data; specialized accounting concepts related to funds and cash flows, statement analysis, and accounting for estate and trusts. Prerequisite: 381 or equivalent.

484 AUDITING
The principles and procedures of auditing as they apply to the major balance sheet and income accounts; generally accepted auditing standards used by CPA's; professional ethics. Prerequisite: 482 or equivalent.

488 SYSTEMS ANALYSIS AND DESIGN
Computer-oriented-laboratory study of system design and analysis. Emphasis on systems documentation, the auditing of computerized systems, the use of mathematical models in systems and simulation techniques. Prerequisite: 387 or equivalent.

490 SEMINAR
Seminar on specifically selected topics in business. Offered on demand. Prerequisite: consent of the instructor.

491 DIRECTED STUDY
Individual studies; readings on selected topics approved and supervised by the instructor. Prerequisite: consent of the instructor.

495 BUSINESS LAW
Procedures, contracts, agencies, negotiable instruments, business organizations, property, trusts and wills, transportation, insurance and employment.

550 ORGANIZATIONAL ENVIRONMENT
Management, explored in relation to contributions from industrial psychology and sociology; external and internal social and economic environmentai changes as related to planning; groups and work teams as related to the functions of directing and controlling. Major case studie. Prerequisite: 350 or equivalent.

551 SEMINAR IN MANAGEMENT
Solutions for operational management; the relationship of production to other functions and external factors; case studies of modern techniques/methodologies as applied in

## (School of Business Administration cont.)

selected situatioris and industries; quantitative models, systems design and computers. Prerequisites: 350,550 , and a working knowledge of quantitative methods.

555 BUSINESS STRATEGY AND POLICY
Management functions of planning, organization and control. Prerequisite: Thorough graduate-level knawledge of analytical methods and functional fields of business management, last semester standing in the M.B.A. program.

564 SEMINAR IN FINANCIAL MANAGEMENT
Management's role in framing financial policies; case studies in the determination of needs, sources and uses of funds; the development of financial structures, evaluation of alternative financial plans and allocation of funds within the firm, the control of financial resources. Prerequisites: $364,555,582$, or equivalent.

570 SEMINAR IN MARKETING MANAGEMENT
Marketing management policies and programs; interrelated elements of the marketing mix and the relationship of marketing to other internal functions; changing social environment, innovation and modern marketing philosophies. Prerequisite: strong economics background and 370 or equivalent.

581 SEMINAR IN FINANCIAL ACCOUNTING THEORY
Advanced accounting concepts and standards; current problems and trends reflected in accounting literature: designed for professional accountants. Prerequisite: 482 or equivalent or consent.

582 ACCOUNTING INFORMATION AND CONTROL
Applications of accounting information, services and systems to management problems. Students excused from this course are expected to complete 581 or other acivanced accounting studies. Prerequisite: 281 or equivalent.

590 SPECIALSEMINAR
Selected advanced topics; offered on demand. Prerequisite: consent.

591 INDEPENDENT STUDY
Individual reading and studies on selected topics; minimum supervision after initial planning of student's work. Prerequisite: consent.

596 RESEARCH COLLOQUIUM
Supervised individual intensive study of either the case collection process and problem-solving approaches (completion of case research, including a comprehensive commentary arid literature summary, acceptable for inclusion in intercollegiate Case Clearing House Bibliography), or a formal research study for a thesis. Registration for a minimum of one semester is required for all M.B.A. students. Prerequisite: last semester standing in the M.B.A. program.

## school of education

## ACCREDITATION

The School of Education is accredited by the Northwest Association of Secondary and Higher Schools, the Washington State Board of Education for the preparation of elementary and secondary teachers, principals and quidance counselors, with the Master of Arts, the highest degree approved. The accreditation gives PLU graduates reciprocity in twenty-eight states.

Programs for the preparation of school librarians, school nurses, school counselors, administrators and supervisory personnel are available. The School offers work toward the conversion, renewal or reinstatement of teaching certificates.

## ADNIISSION REQUIREMENTS

in the sophomore year, a student with a cumulative grade point average of 2.15 or above may register for Ed. 201. The student will make application for admission to the School of Education during the sernester enrolled in Ed. 201.

Transfer students who may have had education courses in other institutions should meet with an education adviser for evaluation of work completed and must arrange for screening inio the School of Education.

Students become candidates for the Bachelor of Arts in Education degree when they have met the following requirements:

1. Have earned a cumulative of 2.25 after completion of Ed. 201 and prior to admission to the professional se uence courses. Students must have "C" or better grades in English 101 and in Psychology 101 or Sociology 111.
2. Have completed CA 123.
3. Have ideals and personality qualities which make for successful teaching.
4. Have a clearly defined purpose or goal.
5. Have selected a preferred level of preparation and the area or areas of concentration to be followed.
6. Have completed satisfactorily the screening program.
7. Have received approval during an individual conference with representative(s) of the School of Education.
The candidate is required to maintain these standards in order to retain his standing in the School.

Students who have taken the Bachelor's degree at PLU or another institution and who contemplate meeting certification requirements are expected to meet the same requirements for admission. The certification sequence will normally require a summer session and two or three semesters.

## CURRICULUM REQUIREMENTS

In addition to the general University courses required in all curricula, certain specific requirements in general education must be met:

1. History 462, required of all elementary teacher candidates, and all secondary candidates with a major or minor in a social science.
2. ES 101, World Geography, required of all elementary teacher candidates.
3. Prospective elementary teachers usually meet the science general education requirement by completing Biology 111, or another life science course, and ES 122. A year course in one laboratory science may be substituted by those who have adequate hign school background in life science.
4. PE 295, School Health, required of all teacher candidates.

## TEACHER CERTIFICATION

Guidelines for the preparation and certification of teachers have been established by the State Board of Education. The recommended program pattern includes: broad liberal education, 35 per cent; subject matter specialization, 35 per cent; professional study, 20 per cent; and electives, 10 per cent.

The four-year curriculum leads to the Bachelor of Arts in Education degree and the Provisional Certificate, an initial license to teach, issued for a period of three years. PLU recommends the candidate for the first teaching pasition on the basis of his preparation.

Authorization for Elementary Teaching requires student teaching in the elementary school, twelve semester hours of professionalized subject matter, and thirty-six semester hours of subject matter specialization.

Authorization for Secondary Teaching requires student teaching in the secondary school and forty-four to forty-six semester hours of subject matter specialization in approved teaching areas.

Authorization for Elementary and Secondary Teaching requires student teaching at both levels. Students who elect to change levels will be expected to meet the minimum requirements as given above for the new level. Any teacher may complete his preparation for a new level during the fifth year of college.

## ELEMENTARY PREPARATION

Professional Sequence
$\begin{array}{ll}\text { Ed. } 201 & \text { Learner and Society } \\ \text { Ed. } 322 & \text { General Methods (Primary Level) }\end{array}$
Ed. 323 General Methods (Upper Elementary Level)
ot
Ed. 324 General Methods (Elementary Methods Model and Ed. 430 Studen 4 Teaching (Primary Level) 10 hours
or
Ed. 432 Student Teaching (Upper Elementary) 10 hours
Ed. 435 Professional Seminar (to be taken concurrently with Ed. 430 or 432) 2 hours

Professional Subject Minor (Required of all elementary candidates) Required - 8 semester hours
Ed. 325 Reading in the Elementary School
Ed. 326 Mathematics in the Elementary School (2)
(Prerequisite Math 323)
Art 341 Elementary Art Education (2)
or
Music 341 Music in the Elementary School (2)
Electives - 4 semester hours
Ed. 408 Language Arts in the Elementary School (2)
Ed. 410 Science in the Elementary School (2)
Ed. 457 Preparation and Utilization of Instructional
Materials (3)
English 323 Children's Literature
PE 322 PE in the Elementary School (2)
Additional choices in consultation with education adviser.

## SPECIALIZED EDUCATION MINORS

The following specialized minors in education are available to all students pursuing teacher certification. Elementary candidates are
cautioned that these specialized minors are not intended to take the place of the required professional subject minor. Students desiring to work toward a specialized minor should consult an adviser in the School of Education for assistance in planning their program.

Reading - 15 semester hours
Prerequisite
Ed. 325 Reading in the Elementary School
Required
Ed. 408 Language Arts in the Elementary School
Ed. 483 Primary Reading (2)
Ed. 479 Diagnosis and Practicum in Reading
Electives - minimum of 3 semester hours
PE 401 Perceptual Motor Skills (1)
CA 402 Speech in the Elementary School (2)
Ed. 456 Storytelling (2)
Eariy Childhood Education - 18 semester hours
Prerequisites
Ed. 201 Learner and Society
Ed. 322 Primery Methods
Required
Ed. 482
Ed. 496
Curriculum Enrichment in Early Childhood (3)
Ed. 483
Practicum in Early Childhood
Primary Reading (2)
Theories of Early Childhood (3)
Electives - minimum of 4 semester hours
Ed. 501 Kindergarten Workshop (2)
Ed. 456 Storytelling (2)
Ed. 474 Affective Education (2)
PE 401 Workshop - Perceptual Motor Skills (1-2)
Special Education - 16 semester hours
Required
Ed. 492 Learning Disabilities in the Classroom
Ed. 493 Learning Disabilities: Diagnostic Procedures
Ed. 494 Learning Disabilities: Developing Educational Programs Electives - minimum of 4 semester hours
Ed. 495 Learning Disabilities: Developing Teacher Effectiveness Ed./Psych. 490 Psychology of the Handicapped Child

## PREPARATION OF SCHOOL LIBRARIANS

(Learning Resources Specialist)

Students interested in preparing for the responsibility of administration of a school library may meet suggested standards through the following program:

1. Book and media selection

Ed. 455 - Instructional Materials (2)
Ed. 456 - Storytelling (2)
English 323 - Children's Literature
2. Cataloging

Ed. 453 - Processing School Library Materials (2)
3. Reference

Ed. 452 - Basic Reference Materials (3)
4. Media utilization and production

Ed. 454 - Selection of Learning Resource Materials (2)
5. Curriculum

Ed. 580 - Curriculum Development (2)
6. Administration

Ed. 451 - Administration of the School Library (2)
(School of Education cont.)

## SECONDARY PREPARATION

## Professional Sequence

Ed. 201 Learner and Society
September Experience
Professional Semester ( 14 hours)
Ed. 420 Teaching of Reading
Ed. 423 General Methods
Ed. 434 Student Teaching
Specific Methods in Academic Major (2-4 hours)
Education Electives (2-4 hours)

## ACADEMIC PREPARATION

Candidates for teacher certification must complete a teaching major in an academic area other than education. The strength of the teaching major depends both upon the subject area and the level that the candidate is preparing to teach. Teaching majors are offered in the following areas: art, biology, business education, chemistry, communication arts, earth and general sciences, economics, English, French, German, history, language arts, mathematics, music, physical education, physics, political science, social sciences, sociology and Spanish.

Preparation for Elementary Teaching: A student preparing for elementary school teaching must complete 24 semester hours in a major teaching area, and two minors consisting of 12 semester hours each. One of the minors must be the professional subject, and one in a teaching field other than that covered in the 24 semester hour concentration. The courses included in the two minors are to be determined in consultation with the School of Education.

Preparation for Junior High Teaching: Students preparing for teaching on the junior high level are required to complete a teaching major of approximately $24-32$ semester hours. Students are encouraged to consult an education adviser regarding teaching major and minor combinations appropriate for junior high teaching.

Preparation for Senior High School Teaching: Students preparing for senior high teaching must complete approximately 44-48 semester hours in the academic area in which they plan to teach. This emphasis normally consists of a teaching major of 24-32 semester hours in one subject field, supported by $16-20$ hours in a related area. A second or minor teaching area is optional to students preparing for the senior high classroom. In all cases, students should discuss their program with an adviser in the department of their academic major, and an adviser from the School of Education.

Secondary Teaching Minors (Junior and Senior High): A secondary teaching minor is required of all students with a junior high emphasis and is optional for students pursuing a senior high teaching program. It is essential that students pursuing a secondary teaching minor discuss their program with their education adviser.

## ART

Senior High Teaching Major: 46 semester hours* required: Art 110, 160, 230, 250, 365, 370, 440, two courses in art history plus electives.
Junior High Teaching Major: 30 semester hours required: Art 110, 160, 230, 250, 365, 440 plus electives. Teaching Minor: 20 semester hours required: Art 110, 160, 230, 250, and 365.

Elementary Teaching Major: 24 semester hours required: Art 110, $160,250,341$, and eight semester hours of 230,365 or 370 . Teaching Minor: 12 semester hours as determined by the School of Education
"Up to three supporting courses may be recommended.

## BIOLOGY

Senior High Teaching Major: 44 semester hours required: Biology 153, 154, 253, 275, 340, 380, (taken for Education credit as professional elective) and a choice of four semester hours from each group: Group A: Biology 331, 346, 403, Chemistry 404*; Group B: Biology 424, 475, Anthro 242*; Chemistry 115, 331, 332, 333, 334; Math 133, (recommended supporting: Math 151); Physics 125, 126, 127, 128; ES 131, 132, 133, Chemistry 116. Additional courses: select four semester hours from Biology 324, 372, 425, or 321-426 (combination). One of these biology courses should be elected as part of the fifth-year work if not taken as part of major program.
*Not taken for biology credit but satisfies group requirement. Elect an approved biology course in its place.
Elementary Teaching Major: 24 semester hours required: Biology 153, 154, 253; Chemistry 115, 116, plus electives. Teaching Minor: 12 semester hours: $153,154,253$.

## BUSINESS EDUCATION

Senior High Teaching Major: 48 semester hours required: Econ 150, BA $241,243,281,290$ or $495,387,443$ and 2 semester hours of Advanced Typing; elect 4 semester hours from BA 350, 364, or 370; elect four hours of emphasis: Accounting: BA 381 plus 4 hours of upper division accounting; or Economics: Econ 351 plus 4 hours of upper division economics; or Shorthand: one year of advanced shorthand. (Strongly recommended: the following courses not taken during the four-year program should be included in the fifth-year: BA $350,364,370,387$ and 488 .) Also Ed. 340 , and 441 or 442.

Typing and shorthand are not offered on campus; these courses may be taken to meet degree requirements at Fort Steilacoom Community College for transfer credit anytime during the four-year program.

## CHEMISTRY

Senior High Teaching Major: 49 semester hours required: Chemistry 115, 116, 321, 331, 332, 333, 334, 341, 342, and 343; Physics 153, 154, 155, and 156; Math 151, 152.
Elementary Teaching Major: 24 semester hours required: 16 hours of approved chemistry and 8 hours as determined by the School of Education. Teaching Minor: 12 hours as determined by the School of Education.

## COMMUNICATION ARTS

Senior High Teaching Major: 44 semester hours required: 16 semester hours of Communication Arts 123, 128 or 250, 241, and 404, plus 12-20 semester hours chosen in consultation with the major adviser. Supporting classes: Alternative of 16 to 20 semester hours in English or modern or classical language.
Junior High Teaching Major: 24-28 semester hours required: 12 semester hours of Communication Arts 123, 128 or 250, 241, and 404, plus additional 8 semester hours in Communication Arts. Additional 8-12 semester hours to be determined with department and Schooi of Education. Teaching Minor: 16 to 20 semester hours required: Communication Arts 123 and 241, plus 8 to 12 elective semester hours.
Elementary Teaching Major: 24 semester hours required: Communication Arts 123 and 402, plus 8 semester hours in

Communication Arts and 8 semester hours in English. Teaching Minor: 12 semester hours to be determined in consultation with the School of Education.

## EARTM SCIENCES

Senior High Teaching Major: (Earth Sciences) 44 semester hours required: including $131,132,136,202,324$, or 325 ; plus one additional course in ES preferably a field course such as: 351, 360 or 365. Required supporting: Chemistry 103, 104 or 115, 116; Physics 125, 126 (and labs) or 153, 154 (and labs); Math 133: appropriate Biology courses. Additional supporting courses should be discussed with adviser.
Junior High Teaching Major: (Earth Sciences) 28 semester hours required, including: $131,132,136,202,324$, or 325 ; plus one additional course in ES. A field course such as: 351,360 or 365 is recommended. Suggested supporting: Chemistry 104 or 115, 116 ; Physics 126, 127 (and labs) or 153, 154 (and labs); Math 133: appropriate Biology courses. Additional supporting courses should be discussed with adviser.
Elementary Teaching Major: (Earth Sciences) 24 semester hours required: ES 131, 132, 136 and 202; Chemistry 104 or 115 and one upper division science course. Teaching Minor: 12 semester hours in earth and physical sciences.

## ECONOMICS

Senior High Teaching Major: 44 semester hours required: Economics $150,351,352,486 ; 12$ semester hours from the following: Econ $321,331,361,362,44$; History 462 plus 12 semester hours distributed over areas of sociology, political science or anthropology. (Recommended Ed. 448 to meet professiona! education requirem nt.)
Junior High Teaching Major: 28 semester hours required: Ecollomics 150, 434, 486; 4 hours from: Econ. 321, 331, 351, 361, 432; History 462 plus 8 semester hours distributed over areas of sociology, political science. Teaching Minor: 12 semester hours required: Econ. 150, plus 12 hours of upper division economics. (Recommended: Ed. 448 to meet professional education requirement.)
Elementary Teaching Major: 24 semester hours r quired: Economics 150, 434, 486; 4 emester hours from: Econ. 321, 331, 351, 352, 361, 362, 432; History 462, 4 semester hours from the areas of sociology or political science. Teaching Minor: 12 s mester hours required: Economics 150 and 8 hours of upper division economics. (Recommended: Ed. 445 to meet professional education requirement.)

## ENGLISH

Senior High Teaching Major: A minimum of 32 semester hours, 16 of which are to be upper division, is required beyond 101 and with the following distribution: (a) one course in American literature; (b) two courses in British literature (one before 1700 and one after) ; (c) one course in advanced composition, English 328; and (d) one course from 382, 400, or 403. All majors mus1 present two years of one foreign language at the college level or show equivalent proficiency. Ed. 444 is required to meet professional education r quirement. Recommended: CA 404 or FL 445.
Junior High Teaching Major: A minimum of 32 semester hours in English beyond 101 as stated in Senior High Teaching Major above including the distribution requirernents. Majors must present two years of one foreign language at the college level or show equivalent proficiency and must take Ed. 444 to meet mrofessional education requirement.

Elementary Teaching Concentration: 24 sernester hours. 12 hours in English distributed as in (a) and (b) under Senior Hign Teaching Major above, and 12 additional hours in English as determined by the School of Education. Recommended: English 323. Teaching Minor: 12 hours required, as determined by the School of Education.

## FRENCH

Senior High Teaching Major: 44 semes er hours required: French 201, 202 (or equivalent), 321, 351, 352, 445 and 12 additional hours; 445 will $m$ et part of the professional education elective requirement. Supporting courses: 12 hours in related areas selected with the approval of the department.
Junior High Teaching Major: 28 semester hours required as list $d$ for senior high preparation; supporting courses chosen in consultation with major adviser
Secondary Teaching Minor: 16 semester hours above 200 level.

## GERMAN

Senior High Teaching Major: 44 semester hours required: German 201, 202 (or equivalent), 321, 351, 352, 445 and 12 additional hours; 445 will meet part of the professional education elective requirement. Supporting courses: 12 semester hours in related areas selected with the approval of the department.
Junior High Teaching Major: 28 semester hours required as listed for senior high preparation; supporting courses chosen in consultation with major adviser.
Secondary Teaching Minor: 16 semester hours above 200 lev I.

## HISTORY

Senior High Teaching Major: 44 semester hours required: History 107 of $109 ; 108$ or $110 ; 8$ hours of 251, 252 and $253 ; 462$ and 12 additional upper division hours in history including a senior seminar. Supporting cour es: 12 additional semester hours selected from Economics, Geography. Political Science, Psychology and Sociology.

## LANGUAGE ARTS

Junior High Teaching Major: 32 semester hours required: English 328; 4 hours of English 403 or Linguistics 400; 4 hours of upper division lite ature (in addition to course taken to meet general education requirement); CA 241 or 327 , and CA 404; Ed. 444 and 12 semester hours from areas of English, journalism, CA or foreign language beyond fr shman level lat least 8 of the 12 hours must be in the same discipline, and 4 hours must be upper divisionl. Teaching Minor: 16 semester hours required: selected from offerings in English, Journalism, CA or Foreign Language beyond freshman level; English 328 is required.
Elementary Teaching Major: 24 semester hours required; English 328, one of English 403 or Linguistics 400; English 323, CA 402 and one of CA 241 or 327 or 336; 2 courses selected from one of the following areas: English, CA of foreign language beyond feshman level ( 4 hours must be upper division). Teaching Minor: 12 semester hours required: selected from offerings in English, journalism. CA or foreign language beyond freshman level; English 328 is required.

## MATHEMATICS

Senior High Teaching Major: 44 semester hours required (in addition to Math 446): Prerequisite: Math 133 or equivalent. Required: Math 151, 152, 331, 433, 446; 321 or 434 or $455 ; 4$ additional upper division hours; 8 hours in Chemistry or Physics and 8 additional science hours.
(School of Education c:ont.)
Junior High Teaching Major: 24 semester hours: Prerequisite: Math 133 or equivalent. Required: Math 151, 152, 331, 433, 446 Teaching Minor: 16 semester hours required (in addition to Math 4461: Prerequisite: Math 133 or equivalent. Required Math 151, 152: 127 or 331 ; 446 ; 433 or 321.
Elementary Teaching Major: 24 semester hours: Math 133 or equivalent; 127, 151, 152 ; plus math elective. Teaching Minor: 323; 324; 8 additional hours determined in consultation with department and School of Education.

## MUSIC

Senior High Teaching Major - Choral Music": 58 semester hours required (Prerequisite: Music 123 or equivalent): Music 124, 211, $212,223,224,323,325,339^{* *}, 340^{* *}, 442,445^{* *}, 447^{* *}$; four hours of private vaice lessons; 2 hours of private piano lessons; and 4 hours of literature and performance; 4 hours of musical electives. Senior High Teaching Major - Sacred Choral Music*: 58 semester hours required (Prerequisite: Music 123 or equivalent): Music 124, $211,212,223,224,323,339^{* *}, 340^{* *}, 367,368,445^{* *}, 447^{* *}, 8$ hours of private instruction in major per ormance medium (voice or piano and/or organ); 2 semester hours in minor performance medium \{voice or piano and/or organ); 8 hours of literature and performance.
Senior High Teaching Major - Instrumental Music*: 58 semester hours required (Prerequisite: Music 123 or equivalent): Music 124, $141,142,211,212,223,224,243,244,245,246,247,323,325$, $326,339^{* *}, 445^{* *}, 447^{* *}$; 8 hours of private instruction earned in student's major instrument plus 2 semester hours of piano; 8 semester hours of literature and performance.
Junior High Teaching Major: 28 semester hours required \{Prerequisite: Music 123 or equivalent\}: Music 124, 211, 212, $339^{* *}, 340^{* *}, 445^{*}$ "; 2 hours of private piano lessons; 2 hours of secondary instrument or voice; 4 hours of literature and performance and 2 hours of music electives. Teaching Minor: 20 semester hours required: Music 120, 339, 341 plus 2 hours of private piano; 2 hours of rivate instruction; 4 hours of literature and performance, and 2 hours of music electives.
Elementary Teaching Major: 24 semester hours required: Music 120, 339,341 , plus 2 hours of private piano and 2 hours of private voice; 4 hours of music ensemble and 6 hours of electives in music Teaching Minor: 12 semester hours required as determined by the Music Department and the School of Educatiori.
*Students desiring cerrification in K-12 must student teach on both elementary and secondary levels.
**Applies toward the professional education requirements.

## PHYSICAL EDUCATION

Senior High Teaching Major: 44 semester hours required: PE 277; 12 semester hours of professional activities courses: $481,478,482$ and either 322 or 328 ; 10 semester hours selected from PE courses numbered 300-499; Biology 161, 162; participation in at least one intercollegiate or exeramural sport; 1 hour in aquatics. (Students desiring K-12 certification must complete PE 322, 328, a teaching practicum at the elementary level, and student teaching on both elementary and secondary levels.)
Junior High Teaching Major: 28 semester hours required: 22 hours as listed for serior high major plus 6 hours of electives from PE courses numbered 300-499. Teaching Minor: 16 hours required: PE $277,286,284$ or 288,481 or 482 , plus 2 hours of electives from PE courses numbered 300-499.
Elementary Teaching Major: 24 semester hours required: PE 277, 284, 286 or 288,322 and 10 hours from PE courses numbered 300-499.

Athletic Coaching Minor for Men: PE 277, 481, 482, 16 hours selected from PE 281, 361, 370-375, and participation in at least one intercollegiate or extramural sport.
Athletic Coaching Minor for Women: PE 277, 331, 481, 482, plus 12 hours selected from PE 281, 332, 361, 370-375, and participation in at least one intercollegiate or extramural sport.
Heslth Minor: Required: PE 295, 324, 326, Biology 161 and 162.

## PHYSICS

Senior High Teaching Major: 44 semester hours required: Physics 106, 153, 154, 155, 156, 205, 223, 355, 421 (2 semester hours); Math 151, 152; 4 hours of Chemistry.
Junior High Teaching Major: 28 semester hours required: Physics 106 or $355,125^{*}, 126^{*}, 127^{*}, 128^{*}, 205,223,272,421$ (2 hours). Teaching Minor: 20 hours required: Physics $125^{*}, 126^{*}, 127^{*}$, 128*, 421 ( 2 hours), and 8 hours from the following: 106, 205, 223, 272, 355.
"Physics 153, 154, 155, 156 may be taken instead of these courses, with concurrent or prior registration in Math 151 or 152.

## POLITICAL SCIENCE

Senior High Teaching Major: 44 semester hours required: 16 hours in Political Science electives; History 462; suggested supporting areas in anthropology, economics, geography, history, sociology or psychology. (Recommended: Ed. 448 to meet professional education requirement.)

## SCIENCE (GENERAL)

See Earth Science

## SOCIAL SCIENCE

Senior High Teaching Major: 44 semester hours required: 4 hours from History 251, 252, 253; History 462; 4 hours for each of the following areas: arithropology, economics, geography, political science, psychology and sociology; 12 upper division hours from two of the following areas: economic, political science and sociology. (Recommended: Ed. 448 to meet professional education requirement.)
Junior High Teaching Major: 28 semester hours required: 4 hours from Hisiory 251, 252, 253; History 462; 4 hours from three of the following areas: anthropology, economics, geography, political science, psychology and sociology; 8 upper division hours from two of the following areas: economics, political science and sociology. Teaching Minor: 12 hours required: 4 hours from History 251, 252 , 253; History 462; and 8 hours from: economics, political science and sociology. (Recommended: Ed. 488 to meet professional education requirement.)
Elementary Teaching Major: 24 semester hours required: 4 hours from History 251, 252, 253; History 462; and 16 hours from three of the following: anthropology, economics, political science, psychology and sociology. Teaching Minor: 12 semester hours required: as determined by the School of Education. (Recommended Ed. 445 to meet professional education requirement.)

## SOCIOLOGY

Senior High Teaching Major: 44 semester hours required: Sociology 111, 423, 494, 16 hours of sociology electives; History 462; 12 semester hours distributed over three areas of other social sciences. (Recommended: Ed. 448 to meet professional education requirement.)

## SPANISH

Senior High Teaching Major: 44 semester hours required: Spanish 201, 202 (or equivalent), 321, 351, 352, 445 and 12 additional hours; 445 will meet part of the professional education elective requirement. Supporting courses: 12 hours in related areas selected with the approval of the department.
Junior High Teaching Major: 28 semester hours required: as listed for senior high preparation; supporting courses chosen in consultation with major adviser.
Secondary Teaching Minor: 16 semester hours above 200 level.

## FIFTH-YEAR AND STANDARD CERTIFICATION

The fifth-year of teacher education is to follow a period of one year of initial teaching experience. The student must complete a minimum of eight semester hours applicable toward the fifth-year, before the beginning of the fourth year of teaching. Thirty semester hours in an approved program must be completed before beginning the seventh year of teacling. The student may choose the institution in which he wishes to take his advanced work as follows:

1. If he chooses to work at PLU, or any other of the teacher education institutions in this state, that institution shall be responsible for recommending him for the Standard Certificate upon successful completion of the fifth-year program.
2. If the PLU graduate wishes to undertake the fifth-year in an out-of-state institution, PLU will be responsible for recommending him for the Standard Certificate. The student must secure general approval of his plan from the University ir advance.

There are four provisions governing the fifth-year pattern of work, according to State Board Regulations:

1. The fifth-year must include a minimum of 30 semester hours of which at least fifty per cent must be upper division and/or graduate courses.
2. No more than eight semester hours of extension and/or correspondence study may be approved as a part of the 30 semester hours in the student's fifth-year program.
3. Graduates must take 15 semester hours of the fifth-year in residence at PLU. A transfer student who wishes to be recommended by PLU must take a minimum of 20 semester hours in residence at PLU.
4. The student may take 15 of the required 30 semester hours prior to or during the first year of teaching experience with prior permission of the School of Education.

Following are requirements and procedures for the approval of fifth-year programs of work at PLU:

1. Specific course requirements are:
(a) Ed. 467, or its equivalent. (Ed. 473 may be used by elementary teachers.)
(b) Ed. 463, (Elementary) or Ed. 465 (Secondary).
2. Any courses recommended for the individual student prior to the granting of the Bachelor's degree must be completed. These may be recommended by either the undergraduate adviser or the School of Education.
3. Courses taken should strengthen areas of concentration and build stronger general education background as well as fill needs in the professional field. This program of studies is to be selected by the student with the guidance of those who have worked with him during his period of initial teaching and the advisers at the recommending institutions.
4. The student secures approval of the recommending institution for work taken elsewhere before the work is begun.

Some of the work taken during the fifth-year may also apply toward a master's degree. Graduate students may undertake a program coordinating requirements for standard certification and the master's degree upon the approval of their committee chairman and the coordinator of fifth-year programs.

## PRINCIPAL'S CREDENTIALS*

The candidate for the principal's credentials will be guided by the following:

1. He must meet graduate standards for the master's degree.
2. He must work toward the provisional principa!'s credentials at his chosen level. To receive this he must have completed work
for his Standard Teaching Certificate plus six semester hours.
3. He must complete experience and study requirements for the Standard Principal's Credential at his chosen level. To receive this he needs to have (1) had administrative experience, (2) earned a minimum of eight more semester hours since issuance of the Provisional Certificate, and (3) earned his Master's degree.
Students who intend to work toward the master's in the field of education must apply for admission to the Graduate Division and meet the requirements outlined by that division. Candidates should see the course requirements as set forth in the Graduate Catalogue.**
*Details of the program are available at the School of Education upon request.
** Available at the office of the Dean of Graduate Studies upon request.

## CERTIFICATION REQUIREMENTS FOR SCHOOL NURSES <br> PROVISIONA L CERTIFICATE REQUIREMENTS

1. Registered nurse licensed in the State of Washington, and
2. Bachelor's degree in a program accredited (or approved) for first-level positions in public health nursing, or Certificate in Public Health Nursing (or equivalent) with three years of successful supervised experience in a public health program which includes experience in school nursing.
3. Completion of a minimum of two semester hours of professional education courses including practice teaching or directed iaboratory experiences in a school situation.

## Standard Certificate:

1. Two years of successful experience in school nursing as a school nurse under the Provisional Certificate and
2. Master's degree with a major in school nursing or its equivalent in Public Health Nursing.

Professional Education Courses for School Nurse Certificate
Professional education courses recommended for meeting the requirement of a minimum of 10 semester hours are as follows: Ed. 201 or $321 ; 463$ or Soc. 422 or $465 ; 552,574$ or 585.

Laboratory experiences in a school situation will be provided on an individual basis.

## School Counselors and Nurses

(ESA Certification)
Educational Staff Associate certification for school counselors and nurses is individually designed through consortium consisting of a school district, related professional associations, and Pacific Lutheran University. Additional information on these programs can be obtained by contacting the Dean of the School of Education.

## 201 LEARNER AND SOCIETY: GROWTH AND <br> \section*{DEVELOPMENT}

Orientation to contemporary schools; human development in relation to individuals and groups in an educational setting. Public school observation reauired weekly with studenes responsible for their own transportation. Prerequisite: Psychology 101 or Sociology 111.

HUMAN DEVELOPMENT
Emotional, social, intellectual and physiological development from infancy through adolescence. A weekly two-hour observation of the public school is required. (Individually assigned.) Students responsible for their own transportation. Prerequisite: Psychology 101 or Sociology 111.

322 GENERAL METHODS - PRIMARY
Competencies will be developed for teaching in grades K-3; with observation and participation in public schools. Prerequisite: 201 or 321.

323 GENERAL METHODS - UPPER ELEMENTARY
Competencies will be developed for teaching in grades 4-6, with observation and participation in public schools. Prerequisite: ? 201 or 321 .

324 GENERAL METHODS - ELEMENTARY METHODS MODEL
Competencies wili be developed for teaching in grades K-6. Extended experience and participation in public school classrooms will be provided. Prerequisites: 201 or 321, Math 323, and concurrent enrollment in EMM block courses, 325 , 326, 408, 410, 412.

READING IN THE ELEMENTARY SCHOOL
Teaching reading in elementary grades, including modern approaches, materials, methods, techniques, procedures and some diagnosis of reading difficulties. Prerequisite: 201 or 321.

326 MATHEMATICS IN THE ELEMENTARY SCHOOL (2-4) Basic mathematical skills and abilities needed by elementary school teacher; recent developments and materials. Prerequisite: Math 323 or consent.

401 WORKSHOPS (1-6)
Workshops in special fields for varying periods of time.

408 LANGUAGE ARTS IN THE ELEMENTARY SCHOOL
The functional teaching of communication skills, grade K-6; areas include: oral and written expression, listening, reading, literature, dramatization, spelling, grammar, handwriting, children's language and language study, vocabulary development and lexicography.

410 SCIENCE IN THE ELEMENTARY SCHOOL (2)
The objectives, materials and methods of teaching science.
412 SOCIAL STUDIES IN THE ELEMENTARY SCHOOL (2)
Objectives, materials and methods of teaching the social s?udies; recommended to student teachers and experienced teachers.

420 PROBLEMS OF READING IN THE SECONDARY SCHOOL (2)

Teaching secondary reading; attention to developmental reeding problems; materials, methods, techniques, procedures and some observation and diagnosis of reading difficulties. Prerequisite: 201; taken concurrently with 423 and 434.

423 GENERAL METHODS - SECONDARY
Curriculum, materials and methods of secondary teaching; observation and discussion. Prerequisite: 201 or 321; taken concurrently with 420 and 434.

430 STUDENT TEACHING - PRIMARY (10)
Teaching in the public schools under the direction and supervision of classroom and university teachers. Prerequisites: 201 or 321,322 or 324 , and 325 ; concurrent enrollment in 435.

432 STUDENT TEACHING - UPPER ELEMENTARY (10)
Same course description as 430 except 323 should be taken in place of 322; concurrent enrollment in 435 .

434 STUDENT TEACHING - SECONDARY (8)
Same course description as 430 except Prerequisites: 201 or 321 , taken concurrently with 420 and 423.

435 PROFESSIONAL SEMINAR (2)
An opportunity for students to share experiences with an exchange of ideas on pupil behavior, curriculum practices, and ways of improving teaching performance. (Taken concurrently with 430 or 432 .)
440-448 SPECIFIC METHODS IN TEACHING
SECONDARY SCHOOL SUBJECTS
Curriculum, methods and materials of instruction in a variety of subjects; may be taken for graduate credit.
440 SEMINAR IN SECONDARY ART EDUCATION (2)
441 TEACHING SECRETARIAL SUBJECTS (2)
The application of research findings and psychological principles to the teaching of shorthand, office practice, and related subjects in secondary schools. Intended for business education majors. Prerequisites: Advanced Shorthand, Advanced Typewriting, BA 241 and BA 340 or equivalent.

442 TEACHING GENERAL BUSINESS SUBJECTS (2)
The application of research findings and psychologicat principles to the teaching of general business, consumer economics, economics, business law, business mathematics, and business communications subjects in secondary schools. Prerequisites: BA 241, 243, 290 or 495,350 , Economics 150 , or consent of the instructor.

## CHEMISTRY IN THE SECONDARY SCHOOL (2)

ENGLISH IN THE SECONDARY SCHOOL (2)
Development of teaching aids and methods; demonstrations of method and strategy of master teachers.

METHODS IN TEACHING FOREIGN LANGUAGES (2)
Theory and techniques of foreign language teaching; special problems in the student's major language, emphasis on audio-linguâl techniques. G

446 MATHEMATICS IN THE SECONDARY SCHOOL (2)
447 SCIENCE IN THE SECONDARY SCHOOL (2) 448 SOCIAL STUDIES IN THE SECONDARY SCHOOL (2)

449 BUSINESS EDUCATION
First part includes the objectives of high school business programs, the business curriculum, layout and facilities planning, the evaluation of business teachers and competence for business occupations. Also included is the examination of information resources and current thought in business education. The second part of the course concentrates on the application of research findings and psychological principles to the teaching of typewriting and bookkeeping in secondary schools. Required for business education majors. Prerequisite: Advanced Typing and BA 281 or equivalent.
451 ADMINISTRATION OF THE SCHOOL LIBRARY (2) Library organization and administration in the elementary school. G

452 BASIC REFERENCE MATERIALS (2)
Those services of a school librarian related to the preservation of all materials which form the sources of reference. G
453 PROCESSING SCHOOL LIBRARY MATERIALS (2)
Classification, cataloging and technical processing of materials. G

454 SELECTION OF LEARNING RESOURCE MATERIALS (2) Criteria, professional literature and techniques of evaluation of library materials (print and non-print); the librarian's responsibility to faculty, students and the general public. G

455 INSTRUCTIONAL MATERIALS (2)
Audio and visual materials and aids, their use, organization and administration. G
456 STORYTELLING (2)
A combination of discovery and practicum in the art of storytelling. Investigates the values and background of storytelling, the various types and forms of stories; techniques of choosing and of telling stories. Some offcampus practice. Demonstrations and joint storytelling by and with instructor.

457 PREPARATION AND UTILIZATION OF
INSTRUCTIONAL MATERIALS (3)
The production and use of a variety of instructional materials, flat pictures, charts, maps and the 35 mm camera; participants produce items useful in instruction. \$10.00 iab fee is charged. G

467 EVALUATION (2)
Evaluation of $s$ hool experiences; problems in connection with development, organization and administration of tests (standardized and teacher-made). Required of fifth year students. Prerequisite: student teaching or teaching experience. G

473 PARENT-TEACHER CONFERENCE (2)
Principles and techniques of parent-teacher conferences; introduction of such programs to school and community; evaluation of various grading systems. Prerequisite or curequisite: student teaching or teaching experience. $\bar{G}$

474 AFFECTIVE CLASSROOM TECHNIQUES (2)
This course will explore various techniques designed to facilitate understanding of self and others; methods for working with students.

DIAGNOSIS AND PRACTICUM $\mathbb{N}$ READING
This course is designed to provide insight and experience in diagnosis through observation, teacher tests, standardized tests and tests of specific skills. Each participant will be expected to tutor a child in reading. (Formerly 579)
482 CURRICULUM ENRICHMENT IN EARLY CHILDHOOD EDUCATION (3)
This course is designed for persons interested in early childhood education. It will explore programs that attempt to meet the interests, needs and capabilities of each child through an integrated curriculum.

483 PRIMARY READING (2)
Materials and methods of the primary reading program and its relation to other activities. Prerequisite: teaching experience. G
485 THE GIFTED CHILD (2)
The gifted child, his characteristics and problems and procedures; designed to further development. G
487 THEORIES OF EARLY CHILDHOOD EDUCATION (3)
This course is designed to explore the various programs and practices in early childhood education. Identification of the theoretical and philosophical basis upon which each is based will be studied.

488 READING CENTER WORKSHOP (2)
Clinical study of reading problems and suggested corrective measures; to be taken concurrently with 489. Prerequisite: teaching experience. S G
489 DIRECTED TEACHING IN READING CENTERS
Directed observation and teaching in summer remedial classes in public schools; to be taken concurrently with 488. Prerequisite: teaching experience. S G

492 LEARNING DISABILITIES IN THE CLASSROOM
An introductory course to prepare the classroom teacher to identify and to accornmodate children with moderate learning disabilities in the classroom. Currant diagnostic techniques, methods, and materials useful in individualizing instruction for the learning disabled child will be emphasized. Practicum included.

493 LEARNING DISABILITIES: DIAGNOSTIC PROCEDURES The course is designed to familiarize the student with a broad range of screening and diagnostic procedures, through study and practicum experience. He will learn to organize data from such persons as the school psychologist, occupational therapist, speech therapist, and medical doctor, and to form a hypothesis regarding the child's disabilities. He will use various educational tests, formal and teacher-made, to determine where a child is functioning academically. Practicum included. 492 recommended.

494 LEARNING DISABILITIES: DEVELOPING EDUCATIONAL PROGRAMS
The student uses diagnostic information as the basis for
behavioral objectives, task analysis, learning sequences, and selecting appropriate methods and materials. Practicum included. Prerequisite: 492

495 LEARNING DISABILITIES: DEVELOPING TEACHER EFFECTIVENESS
A course designed to help the teacher bridge the gap from theory into practice through developing organization skills. Outstanding teachers with workable systems of instruction and organization shall be called upon to share expertise. Students will develop their own system for organization for instruction. Prerequisite: 492.

496 LABORATORY WORKSHOP
Practical course using elementary-age children in a classroom situation working out specific problems; provision will be made for some active participation of the university students. Prerequisite: conference with the instructor or the Dean of the School of Education. G

497 SPECIAL PROJECT (1-6)
Individual study and research on educational problems or additional laboratory experience in public school classrooms. Prerequisite: consent of the Dean. G

501 WORKSHOPS (2-4)
Graduate workshops in special fields for varying lengths of time.

545 METHODS AND TECHNIQUES OF RESEARCH (2)
Seminar in social science research methods and techniques; illustrations primarily from education and psychology; secondarily from fields such as sociology, history and political science; the designing of a research project in the student's area of interest. Required for M.A. and should be taken early in the degree program. Prerequisite: Admittance to the graduate program.

550 SCHOOL FINANCE (2)
Local, state and federal contributors to school finance, its philosophy and development; the development and administration of a school budget.

552 PUBLIC SCHOOL ADMINISTRATION (3)
Administration and supervision of school personnel, plant and program; the structure and organization of the school system. Prerequisite: teaching experience or consent of the Dean.

554 HIGH SCHOOL ORGANIZATION AND ADMINISTRATION (2)
Planning and organizing the high school curriculum, scheduling, extra-curricular activities, teachers' meetings, public accounting and control, finance and reports. Prerequisite: 552.

ADMINISTRATION AND SUPERVISION WORKSHOP
Projects discussed determined by the class; typical projects include curriculum planning and adjustment, public relations programs, personnel employment and in-service training; financing building and educational programs. Prerequisite: one course in administration and/or supervision.

ADMINISTRATIVE INTEFINSHIP (2-4)
Internship in school administration planned with the School of Education in cooperation with selected school administrators. Prerequisite: course work in school administration and admission to the graduate program.

571 HISTORY AND PHILOSOPHY OF HIGHER EDUCATION Historical perspective and currenz status; development of functions and structures; issues in curriculum; philosophy of administration; case studies.

573 STUDENT PERSONNEL WORK IN HIGHER EDUCATION Student personnel services in higher education; use of personnel data; co-curricular activities; student welfare; contemporary trends in counseling problems related to student life.

579 DIAGNOSIS AND REMEDIATION IN READING (2)
Causative factors relating to reading difficulties; some opportunity to apply remediation techniques; open to those with teaching experience.

580 CURRICULUM DEVELOPMENT (2)
Types of curriculum organizations; programs and techniques of curriculum development.

583 EDUCATIONAL ISSUES AND PROBLEMS (1-4)
Individual reading, investigation, reseafch and/or a practicum, experience in school or agencies.

585 COMPARATIVE EDUCATION (2)
Comparison and investigation of certain material and cultural systems of education throughout the world.

587 HISTORV OF EDUCATION (2)
Great educators, educational theories and educational systems from antiquity to the present.

589 PHILOSOPHY OF EDUCATION (3)
Philosophical and theoretical foundations of education.
590 GRADUATE SEMINAR (0)
A workshop for all Master of Arts candidates in the School of Educ tion which provides a forum for exchange of research ideas and problems; candidates should register for this seminar for assistance in fulfilling requirement. No credit is given, nor is tuition assessed.

596 RESEARCH STUDIES IN EDUCATION (1)
For Master of Arts candidates who elect to write two research papers instead of a thesis. (One paper mav be in the candidate's minor field under the supervision of the minor adviser.) The candidate will be required to review his research papers before his Graduate Committee Isee Graduate Catalog).

599

RESEARCH STUDIES IN EDUCATION (2)
See Education 596
THESIS (3-4)
For Master of Arts candidates who elect to write a thesis instead of two research papers. The thesis problem will be chosen from the can idate's major field of concentration and
must be approved by his Graduate Committee. The candidate will be expected to defend his thesis in a final oral examination conducted by his committee.

## EDUCATIONAL PSYCHOLOGY

461 GROUP PROCESS AND THE INDIVIDUAL (2)
A human interaction laboratory to facilitate the exploration of the self concept through the mechanisms of interpersonal interactions and feedback. Emphasis placed on the acquisition of skill in self-exploration, role identificarion and climate-making. G

463 GUIDANCE IN THE ELEMENTARY SCHOOL (2)
Major orientations to guidance and how they translate into operational programs in the school setting.

465 GUIDANCE IN THE SECONDARY SCHOOL (2)
Major orientations to guidance and how they translate into operational programs in the school setting. G

466 INTRODUCTION TO STUDENT PERSONNEL SERVICES (2)

Student personnel services offered by colleges and universities; familiarization with literature in the field; exposure to local service agencies and student government. G

## 468 EDUCATIONAL PSYCHOLOGY

Principles and research in human learning and their implications for curriculum and instruction. G

469 CAREER GUIDANCE
A study of careers, theories of choice and guidance techniques.

490 PSYCHOLOGY OF THE HANDICAPPED CHILD
Study of the psychological state of the handicapped child and his societal environment. Concepts of status and roles are pursued. A focus will be made upon the characteristics necessary for facilitative personnel. Practicum included.

560A CONTINUING PRACTICUM (i)
A practical experience in the techniques of counseling; enrollment limited to students beginning the Master's Program in Counseling and Guidance, and is a prerequisite to admission to the program; pract icum makes use of counseling sessions with clients utilizing verbal and nonverbal attending behavior.

560B CONTINUING PRACTICUM (1)
A pra ticum experience in individual counseling to assist students integrate cognitive and affective learnings. Opportunity for developing counseling skills. Required for M.A. students in Counseling and Guidance. Prerequisite: 560A.

560 C CONTINUING PRACTICUM (1)
Continuation of 560B. Required for M.A. students in Counseling and Guidance. Prerequisite: 560B.

560D CONTINUING PRACTICUM (1)
A practicum experience in small group settings. Opportunities include family counseling, consultation groups

and discussion groups. Students enrolled in the M.A. program in Counseling and Guidance are required to take 560D. Prerequisites: 560A and 560B.

561 BASIC RELATIONS IN COUNSELING
A study of the process, techniques and characteristics of the counseling relationship. A basic course for M.A. students in she Counseling and Guidance program. (Formerly Counseling Theory).

563 PRACTICUM IN GROUP PROCESS AND LEADERSHIP (2) A human interaction laboratory which explores interpersonal operations in groups and facilitates the development of selfinsight; emphasis on leadership and development of skill in diagnosing individual, group and organizational behavior patterns and influences. Prerequisite: 461.

565 SEMINAR: NON-TEST APPRAISAL (2)
Assessment of personal characteristics and behavioral patterns to better understand the individual; utilization of non-test data (sociometric scales, case studies, autobiographies, interviews, etc.)

570 PRACTICUM AND FIELD WORK IN COUNSELING AND GUIDANCE
A culminating practicum of field experience in schools or agencies utilizing theory, skills and techniques previously learned; a variety of work experiences with individual groups.

572 PRACTICUM IN STUDENT PERSONNEL WORK IN HIGHER EDUCATION
A culminating practicum of supervised collegiate experience in residence halls, administrative offices, service agencies, research on projects associated with practicum.

573 STUDENT PERSONNEL WORK IN HIGHER EDUCATION Student personnel services in higher education; use of personnel data; co-curricular activities; student welfare; contemporary trends in counseling problems related to student life.

575 MENTAL HEALTH
Basic mental health principles as related to interpersonal relationships.

578 BEHAVIOR AND LEARNING PROBLEMS OF STUDENTS (2) Psychosexual causes of emotional and behavioral problerns, the child's mistaken goals as they affect behavior and iearning, and opportunity for practice in active listening and reflective communication.

## school of fine arts

The School of Fine Arts of Pacific Lutheran University is a community of artists dedicated:
to provide energies and facilities for the focused refinement of that most elusive of human imperatives, creative activity;
to operate on the leading periphery of artistic understanding and to assume as additive rather than imitative position relative to that understanding;
to pursue study of both the historical and theoretical constructs that surround our legacy of creativity;
to recognize the ongoing, self-defining, self-authenticating nature of artistic criteria without devaluing the traditional concepts of discipline, craftsmanship, and academic professionalism;
to foster activity unfettered by the caprice of the marketplace but, by virtue of its substance, not aloof from nor incompatible with pragmatic concerns;
to animate and "humanize" the academic climate of Pacific Lutheran University via the creative presence by sponsoring a rich and varied program of events in the Arts;
and to provide the students of Pacific Lutheran University an opportunity to experience first hand the unique "chemistry" of autonomous imagining.

Comprised of these departments:
Art
Music
Communication Arts
Candidates for the B.M. and B.F.A. degrees must meet University requirements and the specific requirements of the Departments of Music, Art, or Communication Arts.

## art

This department does not adhere to formal prerequisites for entrance; rather students are encouraged to select courses relating to their interest as early as possible in order to reasonably determine aptitude and suitability for this area of study. Transfer students wishing advanced standing must submit a portfolio of previous work: to the chairman of the department.

The department reserves the right to retain, exhibit, and reproduce student work submitted for credit in any of its courses or programs.

Use or materials fee required in certain courses.
BACHELOR OF ARTS: Minimum of $t$ enty-eight semester hours including: $110,160,250,230$ or $350,365,370$ and four semester hours in art history. A maximum of forty semester hours may be applied toward this degree. Candidates are registered in the College of Arts and Sciences and must complete all requirements.

BACHELOR OF FINE ARTS: Minimum of fifty-six semester hours including: $110,160,250$, with a minimum of eight hours in pictorial media (260,326,365,370, or as approved), a minimum of eight hours in materials media ( $230,330,338,350$, or as approved), three period courses in art history, and electives in areas of emphasis to complete requirements.

Courses in art teaching methods may not be included. Students are encouraged to choose an area of emphasis by their junior year. Areas include: Pictorial Media (drawing, painting, printmaking, photography), Materials Media (sculpture, ceramics, glass, metals),

Design (interiors, illustration, graphics), or Art History. Candidates are registered in the School of Fine Arts and must complete all requirements of that chool. Foreign language is not required in programs with studio emphasis. For art history emphasis, French and/or German is required as determined by the student's adviser.

BACHELOR OF ARTS IN EDUCATION: See School of Educ tion.

## Studio

Basic media courses may be repeated for credit as noted, for iwo or three semesters or as approved.

## 160 DRAWING

Techniques and media of drawing with emphasis on composition; an introduction to color theory. I II

230 CERAMICS I
Ceramic materials and techniques including hand-built and wheel-thrown methods, ciay and glaze formation. Includes a survey of ceramic art. I II

250 SCULPTURE I
Various techniques and materials of sculpture and their influence on three-dimensional form. Includes study of the human figure. I II

260 LIFE DRAWING
A multi-m dia exploration of human form. May be repeated for credit. Prerequisite: 160 or consent. I II

326 FILM ARTS
Theory and practice of photography as an art form. Alternating sections in still photography and cinematography. May be repeated for credit. I II

330 CERAMICS II
Advanced techniques in cer mic construction and experiments in glaze formation. May be repeated for credit. Prerequisite: 230. I II

338 GLASSBLOWING
Working techniques and individual expression in blown glass. May be repeated for credit. Prerequisites: one semester of ceramics and consent. I II

341 ELEMENTARY ART EDUCATION (2)
Various projects and media suitable for the instruction of art in elementary schoo!; emphasis on developmental theory. I II

350 SCULPTURE II
Concentration on a particular medium of sculpture. Alternating semesters in metals, wood, or other media. May be repeated for credit. Prerequisite: 250. 1 II

## 365 PAINTING

Media and techniques of painting with emphasis on an individualized expression. May be repeated for credit. Prerequisite: 160. I II

370 PRINTMAKING
Media and methods of printmaking, with alternating semesters in planographic techniques or intaglio techniques. May be repeated for credit. Prerequisite: 160. 1 II

394 DESIGN WORKSHOP
Design probiems and procedures; drafting, illustiation and model building. Emphasis on architectural and interior planning. May be repeated for credit. I

492 STUDIO PFIOJECTS
A tutorial course with individual investigation in a particular medium, for major students only. May be repeated for credit. Prerequisite: senior status and consent of instructor and department chairman. I II

494 GRAPHICS WORKSHOP
Design and execution of printed materials; emphasis on technical procedures and problems in mass communication. May be repeated for credit. Pierequisite: 394. II

499 B.F.A. CANDIDACY EXHIBITION (no credit) Exthibition of undergraduste work by B.F.A. candidates in studio areas; students are responsible for scheduling installation, publicity and final disposition of work. I II

History and Theory
110 THE VISUAL ARTS
Western man's expression in the visual arts seen through the perspective of historical development. I II

280 TWENTIETH CENTURY ART
Th visual arts in the twentieth century with an introduction to aesthetical theory. II

294 HABITATS
Humarr habitats - planning and building the house; interior design. Introduction to community planning. II

382 ANCIENT ART
Art of the ancient Near Eas. Greece and Reme. $1 \mathrm{a} / \mathrm{y}$
383 MEDIEVAL ART
Western European styles from the decline of Rome so the beginning of the Renaissance. II $\mathrm{a} / \mathrm{y}$

384 RENAISSANCE ART
European art of the fifteenth and sixteenth centuries, with an emphasis on Italian developments. I a/y

385 BAROQUE ART
Styles in European art from the late sixteenth century th ough the neriod of the Rococo. It $\mathrm{a} / \mathrm{y}$

440 SEMINAR IN ART EDUCATION (2)
A seudy of instruction in the scondary schoul including appropriate media and curriculum development. II

487 NINETEENTH CENTURY ART
Art of the ninetgenth century from neo-classicism through Post Impressionism. I

490 SEMINAR
Selected topics considering some aspect of the visual arts. May be repeated for credit. Prerequisite: consent.

497 RESEARCH IN ART HISTORY
A tutorial course for major students with research into a
perticular period or area of art history. May be repeated for credit. Prerequisite: senior status and consent of instructor arid depaitment chairman. I II

## 597 RESEARCH

For master of arts candidates who elect to write a research paper in art. I II

## communication arts

All students in ommunication Arts will participate in some phase of dramatic, forensic and broadc sting co-curricular activities, and will be required to take two practicums.

BACHELOR OF ARTS: At least 32 semester hours plus 2 practicums in one or a combination of the three areas of concentration: of which Communication Arts 123 is required:

Broadcast/Journalism: Required courses 123, 271, 272, 275 or 374, 283, 284, 375, 377, plus 12 semester hours selected in consultation with adviser.

Communication: Required courses: 123, 241, 333, plus 20 semester hours selected in consultation with adviser,

Drama: R quired courses: 123, 241, 250, 251, plus 16 semester hours selected in consultation with adviser.

EACHELOR OF FINE ARTS: At least 52 semester hours plus 2 practicums in one or a combination of the three areas of concentration of which Communication Arts 123 is required.

Broadcast/Journalism: Required courses: 123, 271, 272, 275 or $374,283,284,375,377$, plus 22 semester hours selected in consultation with adviser.

Cemmunication: Requirements same as Bachelor of Arts plus an additional 40 semester hours selected in consultation with a viser.

Drama: Required courses: 123, 241, 250, 251, 352 or 354,363, plus 28 semester hours selected in consultation with adviser.

BACHELOR OF ARTS IN EDUCATION: See School of Efocation.

123 FUNDAMENTALS OF ORAL COMMUNICATION Foundations course dealing with basic theories of oral communication. Emphasis on group activity with some platform work. I II S

128 ARGUMENTATION AND DEBATE
Argumertation, evidence, proof and the adaptation and application or argument to various types of oral communication; emphasis on forms of debate, their preparation and presentation. II
161 INTRODUCTION TO THE THEATRE
Theatre as a fine art and its contribution to the cuiture of a people; the correlation bet en playwright, designer, actor, director and their influence in felation to one another. I

## 225. 425 COMMUNICATION ARTS PRACTICUM (1)

Section A - Broadcast
Section B - Drama

## Section C - Forensics

Section D-- Journal ism
One semester-hour credit may be earned each semester, but only 4 semester hours may be used to meet university requirements. Majors are required to take at least two practicums in one or a combination of the three areas of interest. Instructor's consent required. I II

235 STUDIES IN ORGANIZATIONAL COMMUNICATION
Communication systems and studies within formal organization. Focused on theory and research of informational and directive communication as related to channels, structures, status, involvements, morale and leadership. I

236 PERSUASION
The decision-making process in contemporary society methods of appealing to human motivations and their a lication in platform experience. II

241 ORAL INTERPRETATION OF LITERATURE
The ar of communicating the essence of a piece of literature to an audience, interpreting it experientially, logically, and emotionally. Individual and group performance. I II

250 FUNDAMENTALS OF ACTING
The actor, his work, his natural and learned skills; exercises in memory, imagination and observation; improvisations and scenes from modern play; theory and practice of sta e make-up. I

251 STAGE TECHNOLOGY
Basic theory and procedure of technical aspects in set building, costume construction, basic drafting, scenery, the assembling, handling, manegement of the stage, and extensive shop work. I

271 MAN, MEDIA, AND SOCIETY
Survey of the mass media, including newspapers, łagazines, books, television and the cinema. History, organization and mechanics of printed and electronic media. Role of the mass communication in developing the political, social, and economic fabrics of a democratic society. Analysis of the journalist's audience, journalistic vo ations and social and legal responsibilities of the media. I

272 THE BROADCASTER AND SOUND (2)
The theory and structure of sound for the broadcaster: in truction and practice in the use of typical audio-control e uipment in radio, TV and recording studios. I

## 275 RADIO PRODUCTION

Elements of radio production; analysis of program design writing for radio and production tools and techniques. Lecture and laboratory. Extensive use of KPLU-FM studio facilities and equipment. I

NEWS REPORTING (2)
Techniques of basic news and feature writing for the media. Newspaper and broadcast-media, news organization, procedures and libel. Preparation of varied stories, analysis of news sources, techniques of interviewing and essential fact gathering. Typing ability highly preferred. Prerequisite: 271
or concurrent enrollment. Student must register for Newspaper or Radio News Practicum laboratory at the same time. I

284 ADVANCED NEWS REPORTING (2)
In-depth reporting, investigative news writing and ractice in handing advanced news reporting assignments in the environment of the newsroom. Typography, headline writing, copy editing as well as printing processes. Typing at 40 words per minute required. Prerequisite: 271 and 283. II

## 326 GROUP DISCUSSION

Principles of group discu sion in problem-solving and learning situations, development of individual skills in di cussion, participation and leadership. Included is a limited emphasis on parliamentary law based on Roberts Rules of Order. II

333 FOUNDATIONS OF COMMUNICATION THEORY
Communication principles, theories and research relevant to both the speaker and the listener. I

344 ADVANCED INTERPRETATION OF LITERATURE
Projects and exercises directed toward program planning. Advanced skills in the communication of the experience of a piece of literature through pesformance. Prerequisite: 241. II

## 352 SCENIC DESIGN

Artistic and technical development of abilities in designing scenery, costumes and make-up for plays of all periods; various styles and periods as well as preparation of models, renderings, working drawings and scenic painting. Prerequisite: 251. II a/y

354 PLAY DIRECTION
The role of the director, historically and critically, an intensive study that is both practical and theoretical in its approach to the art of the play director. Many different directing philosophies are studied and each student is required to direct scenes from plays representative of a $\$$ periods of theatre history. Prerequisites: 250, 251, and junior status. $11 \mathrm{a} / \mathrm{y}$
356 STAGE LIGHTING
Stage lighting from the basic development of electricity and lighting instruments to he complete design of lighting a show. II a/y

358 ADVANCED ACTING
Study of the work of an actor; character analysis and embodiment, using improvisations and scenes from plays; includes styles of act ing. Prerequisite: 250 . If a/y

363 HISTORY OF THE THEATRE
Theatre and drama in representative societies; early Greece and Rome, Asia, Renaissance and modern Europe, American and others; individual res arch and participation. I

374 TELEVISION PRODUCTION
Analysis of program design, writing and production tools and techniques, lecture and laboratory; extensive use of KPLU-TV studios. II

375 DIRECTING FOR BROADCAST MEDIA
An analysis of the structure form and technique of directing
(Communication Arts conr.)
for the Broadcast Media - extensive use of Radio and TV studio facilities. II

377 BROADCAST MANAGEMENT (2)
Factors in station management, programming, labor relations, political and legal consideration, station promotion and community relations. II

402 CDMMUNICATION ARTS IN THE ELEMENTARY CLASSROOM (2)
Communication Arts problems and opportunities which confront the teacher in grades one through eight. I

404 COMMUNICATION ARTS IN THE SECONDARY SCHOOL (2)

Curriculum construction; communication arts philosophy: co-curricular activities; administration of drama, radio and forensic activities. I

459 SUMMER DRAMA WORKSHOP (6)
One session of intensive work in drama, acting, stage management, lighting instruction and all other phases of production. S

474 TELEVISION AND THE CLASSROOM TEACHER (2)
Television as a teaching tool; general criteria for technolo y in teaching and specific criteria for the use of television in the classroom. II

478 SUMMER TELEVISION WORKSHOP
Creative and production techniques of television programming; extensive use of KPLU-TV studios; for the mature student. S

492, 493 SPECIAL STUDIES IN COMMUNICATION ARTS (2-4) Investigations or research in area of special interest not covered by regular courses; open to qualified junior or senior students. A student should not begin registration for independent study until the specific area for investigation has been approved by a departmental sponsor.

596-598 RESEARCH IN COMMUNICATION ARTS (1-4)
For graduate students only.

## music

Students intending to major in music should begin the major music sequences in the first year. Failure to do so may mean an extra semester or year to complete the major program.

Music majors must fill out a declaration of major form during their first semester of enrollment in the program and be assigned to a music faculty adviser.

Only grades of "C" or better in music courses may be counted toward a music major. Courses in which the student receives lower than a " C " must be repeated unless substitute course work is authorized by the department.

BACHELOR OF ARTS: Maximum of 40 semester hours including 123, 124, 211, 212, 223, 224, 323 plus 4 hours in Literature and Performance, and 8 hours of private lessons including 2 hours in private piano.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

The Department of Music also offers the following degree programs:

1. Bachelor of Music in Piano Per ormance
2. Bachelor of Music in Organ Performance
3. Bachelor of Music in Vocal Per ormance
4. Bachelor of Music in Instrumental Performance
5. Bachelor of Music in Sacred Music
6. Bachelor of Music in Theory and Composition
7. Bachelor of Arts in Secondary Education - Choral Music
8. Bachelor of Arts in Secondary Education - Instrumental Music
9. Bachelor of Arts in Elementary Education - Music Specialist
10. Master of Music in Piano Performance
11. Master of Music in Organ Performance
12. Master of Music in Vocal Performance
13. Master of Music in Instrumental Performance
14. Master of Music Education
15. Master of Music in Theory and Composition

Consult the Music Department Handbook, available in the Music Office, for complete details concerning required courses, recommended four-year programs by the semester, progress charts and other pertinent information.

## 120 INTRODUCTION TO MUSIC

The music literature of Western Civilization; form and meaning of musical masterpieces; designed to enhance the enjoyment of music. Not open to majors. I II

123 THEORY
Fundamentals and notation of music through elementary part-writing; application through keyboard, sightsinging and ear training. I

124 THEORY
Continued part-wiriting, modulation, and ear training; introductory work in analysis. II

211, 212 HISTORY OF MUSIC
Music from ancient civilizations to modern times.
Prerequisite: 124 or consent. I II

## 223, 224 THEORY

Completed study in traditional harmony and ear training; introduction to counter-point and composition; application of harmonic practices through analysis, writing, keyboard and ear training. I II

241, 242 STRING INSTRUMENTAL LABORATORY $(1,1)$ Instrumental laboratory, I II

243, 244 WOODWINDS INSTRUMENTAL LABORATORY $(1,1)$ Methods and problems of teaching and playing woodwind instruments. I II a/y 1974/75

245, 246 BRASS INSTRUMENTAL LABORATORY $(1,1)$
Methods and problems of teaching and playing brass instruments. a/y 1973/74

247 PERCUSSION LABORATORY (1)
Methods and problems of teaching and playing percussion instruments. I a/y 1974/75

249 ELECTRONIC MUSIC LABORATORY (1)
A laboratory experience dealing with materials and methods of elementary electronic-music synthesis. Real-time experience in the Pacific Lutheran University Electronic Music Studio, as well as discussion of various popular synthesizers, electronic music aesthetics, and the use of electronic instruments in secondary education.

323 CONTEMPORARY TECHNIQUES, ANALYSIS AND LITERATURE
Compositional techniques, early development and current trends. 1

324 CONTRAPUNTAL WRITING, FORM, ANALYSIS AND LITERATURE
Review of non-harmonic tones; melody writing; species counterpoint, two and three-part invention, fugue, forms; listening, melodic and harmonic dictation. II a/y 1974/75

325,326 ORCHESTRATION $(2,2)$
The range, transposition, sound, technical abilities, limitations and notation of instruments; scoring and arranging for conventional and unique instrument grouping. I il

327 COMPOSITION (1-4)
A systematic approach to contemporary musical composition; students create, notate and perform works for solo, small and large ensembles. May be repeated for additional credit.

330 CHOIR OF THE WEST (1)
Auditions at the beginning of each fal! semester, sacred and secular music, with and without accompaniment. I II

331 UNIVERSITY CHORALE (1)
Auditions at the beginning of each fall semester, sacred and secular music with and without accompaniment. I II

332 VOCAL. ENSEMBLE (1)
Membership by audition; emphasis on swing choir literature. I II

333 UNIVERSITY BAND (1)
Membershipby audition. I II
334 UNIVERSITY ORCHESTRA (1)
Membership by audition. I II
335 CHAMBER ENSEMBLE (1)
Prerequisite: consent. I II
336 TWO PIANO ENSEMBLE (1)
Two piano and piano duet literature from all periods; open to majors and non-majors.

337 ACCOMPANYING (1)
To assist the pianist in gaining experience and knowiedge in accompanying literature from all periods.
338 CONTEMPORARY DIRECTIONS ENSEMBLE (1)
Public and laboratory performance experience in contemporary music; membership by audition.

BASIC CONDUCTING (2)
Basic technique of reading and conducting scores; practice in instrumental and vocal conducting. I II

340 MUSIC FUNDAMENTALS (2)
The rudiments of music; rhythms, sight reading, elementary keyboard experience and creative music; techniques and procedures for the elementary music program. I II

341 MUSIC IN THE ELEMENTARY SCHOOL (2)
Techniques and procedures for the elementary school program; the rote song, child voice, rhythm activities, Kodaly method. Prerequisite: 123 or 340 or equivalent background.

PRIVATE INSTRUCTION (1-4)
350 PIANO
351 ORGAN
352
353
354
355
356
357
358
359
360
HARPSICHORD
363 HISTORY OF PIANO LITERATURE AND
PERFORMANCE (2)
Representative compositions from all periods of piano literature open to majors and non-majors. a/y 1974/75

364 HISTORY OF ORGAN BUILDING (2)
Historic and contemporary traditions of organ building; tonal design, acoustics, architecture and playing mechanisms; basic techniques for tuning and maintenance; examinations of several organs and two organ-building shops. Prerequisite: consent. a/y Interim 1974

365 SOLO VOCAL LITERATURE (2)
Solo vocal literature from antiquity through the present. In-class performance. I

367 HYMNOLOGY AND SACRED MUSIC LITERATURE
Christian hymnody with an analysis of poetry and music; principles underlying effective worship music and a survey of anthem, cantata and oratorio literature. I a/y 1974/75

368 WORSHIP AND LITURGY
The nature and scope of Christian worship; main liturgies beginning with temple and synagogue, Eastern Orthodox, Roman Catholic, Lutheran, Calvinist and Anglican; special corisideration of Lutheran. I a/y 1975/76

401 OPERA WORKSHOP (1-4)
Stage production of operas. Prerequisite: consent.

## (Music cont.)

423 ADVANCED FORM AND ANALYSIS
Harmonic and structural analysis of literature, classical through contemporary periods. Prerequisite: 224. Il a/y 1975/76

441 KEYBOARD PEDAGOGY (1-3)
Teaching techniques for prospective instructors of beginning and advanced piano and organ; opportunity for practical application

442 VOCAL PEDAGOGY $(2)$
Clear, concise approaches to teaching vocal technique based upon physiological and acoustical laws which govern singing; comparison of texts on vocal production, in-class demonstrations and a project in student teaching, diction, phonetics, interpretation. II

443 ORGAN REPERTOIRE AND IMPROVISATION (2)
Organ literature and its relationship to organ design and stylistic performance; techniques in practical improvisation; emphasis on liturgical hymn-tune improvisation for introductions, interludes and free accompaniments. Prerequisite: consent, a/y 1974/75

445 ADVANCED CONDUCTING, TECHNIQUES AND MATERIALS (2)
Literature, its reaching and conducting problems. Prerequisite: 339.1

447 MUSIC IN THE SECONDARY SCHOOL (2)
The organization and administration of the secondary school music program. I
491. 492 INDEPENDENT STUDY (1-4)

590 GRADUATE SEMINAR (1-4)
Offered on demand.


## school of nursing

## ADMISSION AND CONTINUATION POLICIES

When there are more qualified applicants than the School can accept, selection is made on a competitive basis. The School of Nursing reserves the right to request the withdrawal of a nursing student who fails to demonstrate competency, or who fails to maintain professional conduct. Minimum criteria for admission to or continuation in the Schcool of Nursing are as follows:

1. A minimum grade of 2.00 in all required nursing and prerequisite courses. A student receiving a grade of less than 2.00 in any course which is a prerequisite for a nursing course may not continue in that nursing course until the prerequisite course is repeated with a grade point of 2.00 or above.
2. A minimum cumulative g.p.a. of 2.00 .
3. Physical health and stamina necessary to withstand the demands of nursing.
4. Emotional stability sufficient to cope with the stresses inherent in lear ning and practicing nursing.

## HEALTH

The nursing student is responsible for maintaining optimal health and is a teacher of health. Physical examination, x-rays and immunizations are required prior to admission to the clinical areas and periodically thereafter and are the responsibility of the student. Each student should carry personal health insurance.

## ADDITIONAL COSTS

In addition to regular university costs, students are to provide their own transportation between the university campus and the clinical laboratory areas beginning with the sophomore year. Students are required to carry professional liability insurance during all periods of clinical experience.

## RESOURCES AND FACILITIES

Under the direct supervision of its faculty members, the School utilizes facilities of hospitals, health agencies, and schools in the community in an effort to provide optimal clinical learning experience. Libraries and classrooms are available in these facilities as well as on campus. Clinical laboratory learning is directed by regular university faculty members in the following health agencies:

Good Samaritan Hospital, Puyallup, Wash. (170 beds)
David K. Hamry, M.H.A., Executive Dire tor
Jean Short, R.N., M.N., Ass't Exec. Director - Nursing
Lakewood General Hospital, Tacoma, Wash. (100 beds)
Walter W. Wilhelm, B.A., Administrator
Orpha Lucas, R.N., Director of Nursing
Madigan General Hospital, Tacoma, Wash. ( 536 beds)
Brigadier General Wm. Meroney, M.D., Commanding Officer
Colonel Marilynn C. Stevens, R.N., B.A., A.N.C., Chief, Department of Nursing

Mary Bridge Children's Hospital, Tacoma, Wash. ( 68 beds)
Frederick A. Pritchard, M.B.A., Administrator
Karen Lynch, R.N., B.S.N., Director of Nursing

## (School of Nursing cont.)

Puget Sound General Hospital, Tacoma, Wash. (287 beds)
Charles T. Hoffman, M.H.A., Adminis rator
Gretchen Brezarich, R,N., Director of Nursing Service
St. Joseph's Hospital, Tacoma, Wash. (250 beds)
Sr. Marga et Hudon, O.S.S., Administrator
Florence Reidinger, R.N., Director of Nursing Service
St. Peter's Hospital, Olympia, Wash. (150 beds)
Sr. Claire Gagnon, R.N., B.S., J.D., Administrator
Christine Hitch, R,N., Dire tor of Nursing
Tacoma General Hospital, Taooma, Wash. (263 beds)
Walter L. Huber, B.B.A., Executive Vice President
Betty Hoffman, R.N., B.S.N., Director of Nursing Service
Tacoma-Pierce County Health Department, Tacoma, Wash.
Paul McNutt, M.D., M.P.H., Director of Health
Nancy Cherry, R.N., M.P.H., Director of Nursing
Tacoma Public Schools, Tacoma, Wash.
Orvis A. Harrelson, M.D., M.P.H., Administrative Director of Heal th Services
Donna G. Ferguson, R.N., M.N., Assistant in Pupil Personnel, Health Services Department

The Doctors Hospital, Tacoma, Wash. (70 beds)
Fred A. Pritchard, M.B.A., Administrat or
Harriet Huffman, R.N., Director of Nursing
Veterans Administration Hospital, American Lake, Wash.

## $(904$ beds)

Valerija 日. Raulinaitis, M.D., Director
Florence Naske, R.N., B.S., Chief, Nursing Service

## BACHELOR OF SCIENCE IN NURSING

The School of Nursing has been involved in an intensive study of its curriculum and began implementation of the first year of the new curriculum in September, 1972. The new curriculum is being designed to be growth-fostering and self-pacing, and will encourage greater initiative and salf-direction on the part of the student. In addition to the Nursing core requirements, the student is expected to meet university requirements. Nursing courses are sequential in nature and all have prerequisites. A student interested irt the Bachelor of Science in Nursing degree should contact the School of Nursing and begin the course sequence upon entrance to the University. The first three years of the four-year curriculum are listed below. The fourth year is being developed and may be secured upon request from the School of Nursing as it becomes available.

A sample curriculum for the first three years is as follows:

## FRESHMAN VEAR

Fall Semester
Chem 103

- Religion Elective
*Psych 101
PE Activity
+Optional Elective
Chemistry of Life
Introduction to Psychology 4

| Spring Semester |  |  |
| :---: | :---: | :---: |
| "Biology 111 | Biology and Modern Man | 4 |
| +English 101 | College English | 4 |
| Istudent may be or | exempt on basis of proficiency |  |
| Elective |  |  |
| "Sociology 111 | Sociology | 4 |
| PE Activity |  |  |
| +Optional Elective |  | 0-4 |
|  |  | 13-17 |
| SOPHOMORE YEAR <br> Fall Semester |  |  |
|  |  |  |
| Biology 201 | Microbiology | 4 |
| "Psychology 335or | Childhood and Adolescence |  |
|  |  | 4 |
| Education 321 | Human Development |  |
| +Philosophy Elective |  | 4 |
| Nursing 210 | Nursing 1: Socialization to | 4 |
| PE Activity |  | 1 |
|  |  | 17 |
| Interim |  |  |
| Elective |  | 4 |
| Spring Semester |  |  |
| Biology 161 | Human A natomy | 4 |
| +Optional Elective |  | 0.4 |
| PE Activity | Nursing 11: Health Assessrnent | 8 |
|  |  | 1 |
|  |  | 13-17 |
| JUNIOR YEAR |  |  |
| Fall Semester |  |  |
| Biol gy 299 | Introduction to Clinical | 4 |
| Nursing 321 | Nursing Centrum I | 4 |
| Nursing 322 | Heatth Problems | 4 |
| + Fine Arts Elective |  | 4 |
|  |  | 16 |
| Interim |  |  |
| Optional Elective |  | 4 |
| Spring Semester |  |  |
| Nursing 350 | Nursing Centrum II | 4 |
| Nursing 351 | Clinical Problems | 4 |
| Nursing 352 | Cinical Practicum | 4 |
| +Literature or History Elective |  | 4 |
|  |  | 16 |
| - May be taken either freshman or sophomore year. <br> - May be taken either semester. <br> +May be taken any time. <br> tMay be taken earlier but not later. |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| Students enrolled in, or transferring to, the junior year during |  |  |
| 1973-74 and to the senior year in 1973-74 or 1974-75 will follow |  |  |
| Prerequisites: |  |  |
| Biology 161 and 162 (Human Anatomy and Physiology)Biology 201 (Microbiology) |  |  |
|  |  |  |

JUNIOR YEAR
Fall Semester

Nursing 321
Introduction to Clinical
Nursing Centrum 1 4
Nursing 322
Heatth Problems

Interim
Optional Elective 4

Spring Semester
Nursing 350
Centrum II
4
Nursing 351 Clinical Problems

4
Nursing $352 \quad$ Cinical Practicum
*May be taken either freshman or sophomore year.
May be taken either semester.
+May be taken any time.
aken earier
Students enrolled in, or transferring to, the junior year during 1973-74 and to the senior year in 1973-74 or 1974-75 will follow e betow:

Biology 161 and 162 (Human Anatomy and Physiology)
El ctive

Chemistry 103 (Chemistry of Life)
Psychology 101 (General Psychology)
Sociology 111 (Introduction to Sociology)
Nursing 251 (Mental Health)
Nursing 252 (Nursing Techniques)
Nursing 253 and 263 (Disease Entities)
Nursing 254 (Patient Health Teaching)
Nursing 255 (Surgical Intervention)
Nursing 256 (Rehabilitation Nursing)
Other r quirements for the degree
English 101 (College English)
Physical Education (Activity courses)
Religion (Lower Division Elective)
Sociology 425 (The Family) or 325 (Minorities)
Interim Elect ive

## JUNIOR YEAR (1973-74 oniy)

Fall Semester
"Nursing 371-72 Psychiatric Nursing 8
Psych. 305
Development of Child and

- Philosophy elective

Interim
Optienal Electi e
Spring Semester
*Nursing 361 -63
-Religion elective
MCN 12

SENIOR YEAR (1973-74 and 1974-75 oniv)
Fall Semester
Nursing 410A Trends 2

- Nursing 450, 451

Selected Clinical Problems 8
Nursing 452 Leadership

## Interim

Optional Elective
Spring Semester
Nursing 410B
Trends
Community Nursing

- Nursing Lish Literature or History Elective
**Fine Arts Elective
- 

*May be taken either semester of the year.
" ${ }^{*}$ May be taken any time.

## 210

NURSING I: SOCIALIZATION TO NURSING
Orientation to the philosophy and objectives of the nursing program and a comparison with various types of programs available in nursing education. The student is introdured to concepts regarding self, dynamics of feelings and communication, of satisfactory peer and teacher relationships and group process, as well as principles of learning. He will also be introduced to the concept of levels of wellnese. and illness. Historical milestones in nursing will be included to give perspective to present day trends in nursing. The student will be helped to relate his liberal arts courses toward nursing. An orientation to multi-media equipment and materials will
facilitate students' self-directed study. The course will consist of lectures, seminars, independent study and field experience. Prerequisite: Psychology 101, and prior or concurrent enrollment in Sociology 111, Biology 11 i and Philosophy.

211 NURSING II: HEALTH ASSESSMENT (8)
Designed to introduce the student to the different techniques involved in the assessment of health needs of the client. The student will begin to function as part of the health tearn in well-child clinics and other related community agencies, and will gain an understanding of the utilization of resources in the health delivery system. He will build on previously learned concepts in developing an understanding of the family and the influence of the eco-system on the health needs of society. The student will have selected experiences regarding stress and adaptation in health facilities. These courses will consist of seminars, independent study. lectures and field experiences. Prerequisites: 210 and Chemistry 103, and prior or concurrent registration in Psychology 335 lop Education 321). Biology 161 and 201.
321 NURSING CENTRUMI
Introduces the student to the less complex medical-surgical situations of children and adults, the uncomplic ted pregnant family, and preventive aspects of psychiatric nursing. Theories of physical and psychosocial development as well as drug and diet therapy are included. This course will consist of lectures, seminars and independent study. Prerequisites: 211, concurrent registratinn in 322, and prior or concurrent registration in Biology 299.

322 HEALTH PROBLEMS
Introduces the student to medical-surgical problems of a less stressful nature with appropriate nursing a tions to facilitate adaptation. The student will be assigned a pregnant family in the community to follow through the pr natal, natal and postnatal periods. The student will be expected to apply principles of crisis-intervention in dealing with health problems in their selected clinical experiences. This course will consist of seminars, independent study, laboratory and clinical experiences. Prerequisites: 211, concurrent registration in 321, and prior or concurrent registration in Biology 299.

## NURSING CENTRUM II

Introduces the student to the more complex medical-surgical situations of children and adults, to complications of pregnancy, and to psychiatric disorders. Emphasis will be placed on the pathophysiological and psychopathological aspects and their application to the nursing process. This course will consist of lectures, seminars, and independent study. Prerequisites: 321 and 322, and concurrent registration in 351 and 352 .

CLINICAL PROBLEMS
Introduces the student to obstetrical and medical-surgical problems of a stressful nature with the appropriate nursing actions to facilitate adaptation. The student will al so develop increasing skill in intervening in psychopathology on an interpersonal level. The student will also examine the effects of politico-socio-economic stress on the client, family and community as it relates to their levels of wellness. This course will consist of seminars, independent study and laboratory. Prerequisites: concurrent registration in 350 and 352.

## 352 CLINICAL PRACTICUM

The clinical application of 350 and 351 . The student will be expecied to apply theoretical principles based on pathophysiological and psychopathological concepts in the clinical setting utilizing interpersonal and technical skills. The course will consist of independent study, laboratory and clinical practice. Prerequisites: concurrent registration in 350 and 351 .

361-363 MATERNAL CHILD NURSING I, II, III
The essential knowledge and understanding which will enable the student to give intelligent care to families during the child-bearing and child-rearing processes. Aspects of health: promotion and care of the sick are included. Experience includes observation and care of mothers and children in hospital wards, clinics and related community agencies. Six clinical laboratory periods and nine hours of class per week. Prerequisites: 254, 255, 256 and previous or concurrent registration in Psychology 335 or Education 201 or 321, and Sociology 425 or 325. i II (Offered for the last time in 1973/74.)

## 371,372 PSYCHIATRIC NURSING

Major concepts of mental health and psychiatric nursing as they elate to the nurse in the total therapeutic milieu of psychiatric patients. Guidance is given in understanding personal needs and behavior patterns of adjustment. Four hours of class and six clinical laboratory periods per week. Prerequisites: 254, 255, 256. I II (Offered for the last time in 1973/74.)

## 410 TRENDS IN NURSING

The forces and issues which influence nursing today, including its professional heritage, the nursing organizations, employment opportunities, and problems and responsibilities in professional nursing. Among the problems discussed are preparation for nursing, economic security, legislation, organizational structure, roles of the professional nurse, continued education and professional growth and the future of nursing. Prerequisites: senior standing. Half of the course will be offered each semester. (Offered for the last time in 1974/75.)

446 COMMUNITY NURSING
Guided experiences in giving nursing care in the home and community with ernphasis on the role of the nurse in working with patients and families, and the utilization of health and welfare resources. Prerequisites: senior standing, 363 and 372.1 II (Offered for the last time in 1974/75.)

450 SELECTED CLINICAL PROBLEMS I
Selected clinical problems in the nursing care of medical-surgical patients. Among the problems discussed are nursing assessment, criteria for determining priorily of patient needs, principles for planning nursing care for groups of patients, emergency and resuscitative nursing measures, and current trends in community and hospital planning for emergency nursing activities. Three hours of class and individually arranged laboratory experiences. Prerequisites: senior standing and 363 and 372.1 II (Offered for the last time in 1974/75.)
medical-surgical patients, including acutely ill patients and patients with complex nursing needs. Students will be introduced to some of the new parameters in nursing. Four hours of class and three clinical laboratory periods as arranged, per week. Prerequisites: senior standing, 363 and 372, and prior or concurrent registration in Nursing 450. I II (Offered for the last time in 1974/75.)

452 NURSING LEADERSHIP
Nursing team leadership with emphasis on identifying principles of leadership in nursing. Discussion will also include utilization of nursing personnel, in-service education, the interdisciplinary health team, and the basic concepts and principles of nursing ma agement. Two hours of class and three clinical laboratory periods as arranged, per week. Prerequisites: senior standing, 363 and 372, and prior or concurrent registration in Nursing 451. I || (Offered for the last time in 1974/75.)

491, 492 INDEPENDENT STUDY
Prerequisite: Permission of the Director.


# school of physical education 

UNIVERSITY REQUIREMENT: Students are encouraged to complete the physical education requirement (four one-hour courses including PE 100) during the freshman and sophomore years. Eight. one-hour ac ivity courses may be count $d$ toward graduation. Students are encouraged to select a variety of activities at appropriate skill levels. Most physical education activities are offered on a coeducational basis. All physical education activity courses are graded on an "A". "Pass" or "Fail" basis.

BACHELOR OF ARTS (Recreation Concentration): 40 semester hours, including PE 277, 330, 483, 497, Psych. 335; 4 semester hours of PE 481, 482 or 284-288; 10 hours of: Art 230-330, 235 or $350,326,341,365,370$, CA 450 , Music 340, 341, PE 292, 322 or 365; 8 hours of: BA 281, 290, 350, Poli. Sci. 356, 457, Psych 243, 340,410 , or Sociology $211,325,328,365,425,432$.

BACHELOR OF ARTS (Corrective Therapy Concentration) : 48 semester hours including PE 277, 292, 360, 391, 392, 478, 481, 482, 484, 497; Biology 161. 162; Psychology 101, 221, plus two hours of a psychology elective.

HEALTH MINOR: 18 semester hours including PE 295, 324, 326, and Biology 161, 162

ATHLETIC COACHING MINOR FOR MEN: 18 semester hours including PE 277, 481, 482 and four courses selected from PE 281, extramural sport

ATHLETIC COACHING MINOR FOR WOMEN: 18 semester hours including PE 277, 331, 481, 482, and three courses selected from PE 281, 332, 361, 370-375 and participation in at least one intercollegiate or extramural sport.

BACHELOR OF ARTS IN EDUCATION: See School of Education,

## :00 ORIENTATION TO PHYSICAL EDUCATION (1)

To stimulate student interest in functional personally designed programs of physical activity; assessment of physical condition and skills; recommendation of specific programs for maintaining and improving physical health.
Should be taken as a freshman. III
200-229 INDIVIDUAL AND DUAL ACTIVITIES (1)
201 (Beginning Golf), 202 (Intermediate and Advanced Golf), 203 (Archery), 204 (Bowting), 207 (Gymnastics), 208 (Skiing), 209 (Intermediat e Gymnastics), 210 W (Slimnastics), 211 (Beginning Badminton), 212 (Intermediate Badminton), 214 (Beginning Tennis), 215 (Intermediate Tennis), 218 (Backpacking), 219 (Canoeing), 222M (Handball, Squash and Paddleball), 223W (Squash and Paddleball), 225 (Aerobics), 227M (Weight Training), 228 (Basic Mountaineering), 229 (Equitation).

## 230-239 AQUATICS (1)

230 (Beginning Swimming), 231 (Intermediate Swimming),
232 (Advanced Swimming), 234 (Senior Life Saving), 236 \{Synchronized Swimming), 237 (Skin and Scuba Diving).

240-249 RHYTHMS (1)
240 (Folk and Social Dance), 241 (Modern Dance), 242 (Intermediate Modern Dance).

250-259 ATHLETIC GAMES (1)
251W (Voileyball and Field Hocky), 252W (Basketball and Softball), 253M (Speedball and Volleyball), 254M (Basketball and Softball).

275 WATER SAFETY INSTRUCTION (2)
The Amer ican Red Cross Water Safety Instructor's Course; pool management and operation. Prerequisite: 234. I II

277 SCIENTIFIC FOUNDATIONS OF PHYSICAL EDUCATION (2)

The relationship of physical education to education; the biological, sociological, psychological and mechanical principles underlying physical education and athletics. II

281 INJURY PREVENTION AND THERAPEUTIC CARE (2) Prevention, treatment and rehabilitation of all common injuries sustained in athletics; physical therapy by employment of electricity, massage, exercise, light, ice and mechanical devices. II

284 PROFESSIONAL ACTIVITIES, TEAM SPORTS FOR MEN Planning, teaching and evaluating team activities: basketball, volleyball, soccer, speedball, track and field, wrestling, touch football, softball. II a/y

285 PROFESSIONAL ACTIVITIES, INDIVIDUAL AND DUAL SPORTS
Planning, teaching and evaluating these activities: tennis, badminton, archery, golf and bowling. I IIntermediate skill level or completion of a beginning activity course is a prerequisite.)

286 PROFESSIONAL ACTIVITIES, GYMNASTICS AND DANCE
Planning, teaching and evaluating gymnastics and dance. II (Intermediate skill level or completion of a beginning activity course is a prerequisite.)

288 PROFESSIONAL ACTIVITIES, TEAM SPORTS FOR WOMEN
Planning, teaching and evaluating these activities: basketball, field hockey, soccer, speedball, volleyball, softball, track and field. II a/y

292 FIRST AID (2)
This course meets requirements for the American Red Cross Standard and Advanced Cards. I a/y

295 SCHOOL HEALTH (2)
Health concepts which relate to the total school health program, including instruction, services and environment; the relationship between health and all levels of education. I II

322 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL (2-4)
Organization and administration of a developmental program for grades K-6; sequential and progressive programming; large repertoire of activities. PE 277 is recommended. I II
(School of Physical Education cont.)

## 324 PERSONAL HEALTH

Practical application of health knowledge to daily living; a foundation for understanding health behavior. II a/y

## 326 COMMUNITY HEALTH

Organizations associated with public health and their implications to community health problems.

328 CURRICULUM DEVELOPMENT AND ADMINISTRATION Organization and administration of physical education and athletics (7-12); curriculum development implementation. Prerequisite: 277. II a/y

330 RECREATION PROGRAMMING
Supervising and administering recreational programs for the school or community. I

331 THE WOMAN AS A COMPETITOR (2)
The psychology of coaching, coaching technique and methodology; training, care and prevention of selected athletic injuries; sociological implications of athletic competition for women; designed for women physical education majors and minors interested in coaching competitive teams. I

## OFFICIATING FOR WOMEN (2)

Rules and of ficiating techniques of the common team sports: soccer, field hockey, volleyball, basketball and softball; designed to train qualified women officials; open to all women. Recommended as an elective for majors and minors II a/y
360, 361 PRACTICUM IN TEACHING AND COACHING (2)
Assistant coaching teaching experiences; planning and conducting intercollegiate athletics and physical education instruction; students work under supervision of the head coach or physical education instructors. Prerequisite: one course professional activites, departmental approval. I II

362 RHYTHMS AND DANCE
Historical background, establishment and conduct of dance program, teaching techniques and accompaniment, planning and presentation of dances; modern dance techniques. I a/y

## 370-375 COACHING THEORY (2)

Techniques, systems, training methods, strategy and psychology of coaching; 370 (Basketball), 371 (Football), 372 (Track and Fieid), 373 (Baseball), 374 (Wrestling), I II

## 391, 392 CORRECTIVE THERAPY

A corrective-therapy, clinical-training program including lecture, laboratory, experiences and clinical practices. Prerequisite: departmental approval (maximum enrollment 5). I II

478 PSYCHOLOGICAL CONCEPTS OF PHYSICAL EDUCATION AND ATHLETICS
A study of the important psychological factors (methods of communicating, use of teaching aids, learning strategies, motivations, etc.) in the learning and teaching of gross motor skills. II a/y

481 PHYSIOLOGICAL BASIS FOR MOTOR PERFORMANCE Scientific basis for training and the physiological effect of
 recommended: Biology 162 .

BIOMECHANICS OF HUMAN MOTION
The kinesiological and mechanical aspects of human movement; analysis of various activities. Prerequisite: 277, recommended: Biology 161. II

483 RECREATION ADMINISTRATION
The organization, management and direction of recreational services: legal basis, administrative procedures, financial aspects, personnel management, facilities and internal organization. II

484 MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION (2)
The selection, construction and interpretation of evaluatory techniques related to the physical education program. II a/y

491 INDEPENDENT STUDY (1-4)
Prerequisite: consent of the director. I II S
597 GRADUATE RESEARCH (2-4)
Open to graduate students whose minor is in the field of physical education. Prerequisite: consent of the director. I II S

## division of graduate studies

The Division of Graduate Studies is an all-university division which coordinates graduate level work. The University offers the following graduate level programs:*

## MASTER OF ARTS

## 1. Education

a. Elementary or Secondary School Administration: For those wishing to qualify for the provisional or standard principal's credential (elementary, secondary or general). Students may major in this field without qualifying for a principal's credential.
b. School Counselor Program: For those wishing to qualify as public school counselors (elementary and secondary) or student personnel workers in higher education.
c. Elementary Classroom Teaching: For those wishing advanced work in efementary teaching or wishing to qualify as elementary school supervisors or consultants.
d. Secondary Classroom Teaching: For those wishing to increase their preparation for teaching in an area of social science.
2. Humanities

A degree program designed for librarians, clergymen, teachers and others who wish to extend and broaden their understanding and appreciation of the various fields of the humanities.

## 3. Social Sciences

A degree program designed for personnel workers in industry, welfare workers, librarians, clergymen, teachers, and others wishing to extend and broaden their understanding and appreciation of the various fields of the social sciences.

## MASTER OF BUSINESS ADMINISTRATION

A degree program designed to provide a thorough foundation for responsible leadership in business.

## MASTER OF MUSIC

A degree program designed to provide advanced study in three basic areas: music education, performance, theory and composition.

## MASTER OF NATURAL SCIENCES

A degree program designed especially for teachers who need to extend and broaden their knowledge in the fieids of science and mathematics.
*Details of these programs, including admission requirements, procedures, degree and research requirements, are contained in the Graduate Catalog which is available from the office of the Dean of Graduate Studies.


## the register

## the board of regents

## Ownership, Support, Government

The University is owned and operated by Pacific Lutheran University, Inc., a Wash ington corporation whose purpose is to maintain a Christian institution of higher learning. Membership of this corporation coincides with membership of the North Pacific District of the American Lutheran Church and the membership of that portion of the ALC'S Rocky Mountain District which is Iocated in Idaho and Moritaria, west of the Continental 贝ivide. The anrual meeting of the corporation is held in comjunction with the annual convention of the North Pacific District.

Voting members include the members of the Board of Regents, and the pastors and lay delegates of congregations in the constituent area. The University receives regular financial support from the American Lutheran Church, the Pacific Northwest Synod of the Lutheran Church in America and from the Pacific Lutheran University Alumni Association. In addition to Church assistance, the University r ceives considerable support from individuals, organizations, and businesses throughout the nation and world.

The policy-making and governing body of the University is the Board of Regents. On the basis of rec:ornmendations made by the President, it charts a course for the development of the total program of the University and strives to provide essential funds.

The University corporations' constitution provides for not more than 30 regents elected for three-year terms. Fifteen regents represent the North Pacific and Rock.y Mountain Districits of the Armerican Lutheran Church, six are chosen by the Pacific Northwest Synod of the Lutheran Church in Arnerica, three represent the PLU Alumni Association, and not more than 6 regents-at-large are chosen by the Board of Regents. The President of the University, the President of the North Pacific District (ALC), and the President of the Pacific. Northwest Synod (LCA), are regents by virtue of their position. The student body and the faculty have non-voting representatives who meet with the Board.

## Officers

Mr. Thomas W. Anderson, Chairman
Mr. Gerald Schimke, Vice Chairman
Mr. Lawrence Hauge, Secretary

## Ex-Officio

Bishop Clarence Solberg, 2007 Third Avenue, Seattle, Washington 98121, ALC
Bishop A. G. Fjellman, 5519 Phinney Avenue North, Seattle, Washington 98103, LCA
Dr. Eugene Wiegman, Pacific Lutheran University, Tacoma, Washington 98447, PLU

## 1971-1974 Term

Mr. E. Lee Barton, 5520 South Custer, Spokane, Washington 99203, ALC
Mr. John Bustad, 1020 Riverside Drive, Mt. Vernon, Washington 98273, LCA
Mr. Theodore C. Carlstrom, 459 Channing Avenue, Palo Alto, California 94303, Alumni
Mr. Douglas Gonyea, 1618 Puget Sound Bank Building, Tacoma, Washington 98402, Regent-at-large
Mr. Chester Hansen, 125 Niemi Road, Longview, Washington 98632, ALC
Rev. Glenn Husby, 812 North Fifth, Coeur d'Alene, Idaho 83814, ALC
Mr. Warren Peterson, 2200 One Washington Plaza, Tacoma, Washington 98402, LCA
Mr. Gerald Schimke, 2247 Prescott Avenue Southwest, Seattle, Washington 98126, ALC
Dr. Roy Schwarz. 100394 1st Northeast, Seattle, Washington 98125, ALC

## 1972-1975 Term

Mr. R. Gene Grant, P. O. Box 1936, Tacoma, Washington 98401, Regent-at-large
Mr. Lawrence Hauge, 8860 Gramercy Place Southwest, Tacoma, Washington 98498, Alumni
Mr. Galven Irby, 14343 Nor heast Alton, Portland, Oregon 97220, ALC
Mrs. Ruth Jeffries, 1811 No h Bennett, Tacoma, Washington 98406, LCA
Mr. Melvin Knudson, 6928 100th Street Southwest, Tacoma, Washington 98499, ALC
Mr. Roger C. Larson, 205 Southwest Skyline Drive, Pullman, Washington 99163 , ALC
Rev. Philip Natwick, 1857 Potter, Eugene, Oregon 97403, ALC
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Mr. Frank Sigloh, 9875 Los Ranchitos Drive, Boise, Idaho 83705, LCA
Rev. David Wold, 3719 Northesst 21 si Siree1, Puyallup, Washington 98371, ALC

## 1973-1976 Term

Mr. Thomas W. Anderson, 7525 H gra Road, Tacoma, Washington 98465, Regent-at-large
Mr. Carl T. Fynboe, 827 Tacoma Avenue North, Tacoma, Washington 98403, Alumni

Dr. Richard Klein, 9618 59th Avenue Southwest, Tacoma, Washington 98499, ALC
Mr. John M. Nelson, 2227 West Raye Street, Seattle, Washington 98199, LCA
Dr. Jesse Pflueger, 608 West Division, Ephrata, Washington 98823, ALC
Rev. Robert Quello, P. О. Box 465, Pullman, Washington 99163, ALC
Rev. Dr. Alfred Stone, 1604 Northeast 50th Street, Seattle, Washington 98105, LCA
Rev. F. Warren Strain, 6720 East Greenlake Way North, Seattle, Washington 98103, ALC
Rev. Donald Taylor, 2104 Northeast Hancock Street, Portland, Oregon 97212, ALC
Mr. George A. Wade, 1910 Fairview East, Seattle, Washington 98102, Regent-at-large

## Advisory

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Dr. Donald Farmer, Chairman, Department of Political Science, Faculty Alternate Dr. Emmet Eklund, Department of Religion
Ms. Kelsey Redlin, ASPLU President, Student Alternate: Mr. Daniel Hauge, ASPLU Executive Vice President
Dr. Norman Fintel, Executive Director, ALC Board of College Education, 422 South 5th Street, Minneapolis, Minnestoa 55415
Dr. Richard Solberg, Executive Secretary LCA Board of College Education, 231 Madison Avenue, New York, New York 10016
Rev. Walton Berton, ALC Committee on Higher Education, 4330 Northeast 37th Street, Portland, Oregon 97211
Rev. Llano Thelin, LCA Coinmittee on Higher Education, 1816 Northwest Irving Street, Portland, Oregon 97209


## Church Officials

## AMERICAN LUTHERAN CHURCH

## General

Dr. David W. Preus, President, 422 South Fifth Street, Minneapolis, Minnesota 55415
Mr. N. Burdette Nelson, Treasurer, 422 South Fifth Street, Minneapolis, Minnesota 55415
Mr. Arnold Mickelson, Secretary, 422 South Fifth Sireet, Minneapolis, Minnesota 55415

## North Pacific District

Dr. Clarence Solberg, President (Bishop), 2007 Third Avenue, Seattle, Washington 98212
Rev. Paul Braafladt, Executive As istant to the President, 2007 Third Avenue, Seattle. Washington 98121
Rev. Karl Ufer, Executive Assistant to the President, Northeast 600 IIlinois Street, Pullman, Washington 99163

## Board of College Education

Mr. Charles R. Bruning, 2500 Seabury Avenue, Minneapolis, Minnesota 55406 (term expires 1978)
Mr. Otis J. Grande, 111 14th Avenue, Fox Island, Washington 98333 (1976)
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## LUTHERAN CHURCH IN AMERICA, PACIFIC NORTHWEST SYNOD

Dr. A. G. Fjellman, President, 5519 Phinney Avenue North, Seattle, Washington 98103
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Rev. Kenneth C. Johnson, Assistant to the President, 7425 Southwest 140th, Beaverton, Oregon 97005
Rev. Waldo C. Lindberg, Assistant to the President, 2434 Southwest 308 Place, Federal Way, Wasington 98002
The Pacific Northwest Synod of the Lutheran Church in America has accepted Pacific Lutheran University as one of the institutions of higher education which it endorses and supports. The Synod has representation on the University's Board of Regents, but does not share ownership of the institution.

## REPRESENTING BOARDS OF COLLEGE EDUCATION

Dr. Norman Fintel, Executive Director, Board of College Education, The American Lutheran Church
Dr. Richard Solberg, Executive Secretary, Board of College Education and Church Vocations, Lutheran Church in America

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Administ rative Assistant
Assistant to the President
University Minister
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| Philip Miner | Assistant Director of Admissions |
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| Loleta G. Espeseth | Assistant Registrar |
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| David Christian | Chief Engineer, Radio and Television Studio |
| Terry Denbrook | Radio and Television Engineer |
| Victor Nelson | Operations Supervisor, Radio and Television |
| Robert K. Menzel | Director of CHOICE |
| Frank H. Haley | Librarian |
| Noel Abrahamson | Coordinator of Cultural Affairs |

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Director, General Services
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Director, University Center

## faculty

Eugene W. Wiegman, 1969-, President; B.S., Concordia College, River Forest, III., 1953; M.S., Ed.D., University of Kansas, 1956, 1962.
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tHarry S. Adams, 1947-51, 1962-, Professor of Physics; B.S., M.S., Kansas State University, 1945, 1947; Ph.D., University of Minnesota, 1962.
=Angelia G. Alexander, 1971-, Assistant Professor of Biology; B.S., Juniata College, 1962; M.A., University of California at Davis, 1966.
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/George F. Arbaugh, 1959-. Profess r of Philosophy; B.A., Augustana College (Rock Island), 1955: M.A., Ph.D., University of Iowa, 1958, 1959.
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Arthur W. Bearse, 1971, 1973-, Assistant Professor of Business Administration; A.B., Harvard University, 1959; M.B.A., Pacific Lutheran University, 1971.

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Lois M. Bergerson, 1970-, Assistant Professor of Nursing; B.S., Loyola University, 1946; M.N., University of Washingtori, 1952.

[^1]tW. Harold Bexton, 1965-, Profes or of Psychology; B.A., McMaste University, 1935; M.A., University of Saskatchewan, 1950; Ph.D., McGill University, 1953.
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Judd C. Doughty, 1962-, Associate Professor of Communication Arts, Director of Broadcast Services and Instructional Materials Production; B.A., M.A., Pacific Lutheran University, 1955, 1964.
Harrington Max Drake, 1973-, Assistant Professor of Sociology/Anthropology; A.B., San Diego State College, 1954; M.A., Ph.D.. University of Nor th Carolina, 1961, 1974.

Emmet E. Eklund, 1964-, Professor of Religion; B.A., Bethany College, 1941, B. ©., Augustana Seminary, 1945; M.A.. Universily of Chicago, 1958; Prı. O. Boston University, 1984.
George R. Elwell, 1959-, Assistant Professor of Art; B.S.. Youngstown University, 1949; M. A., New York University, 1955.
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Donald R. Farmer, 1955-, Professor of Political Science; B.S.Ed., Ph.D., University of Minnesota, 1944, 1954.

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Robert S. Fisk, 1968-, Assistant Professor of Mathernatics; B.S., M.S., University of Wyoming, 1960, 1962.
M. Josephine Fletcher, 1963-, As ociate Professor of Education; B.S.N., North Park College, 1960; M.S., DePaul University, 1963; M.A., Pacific Lutheran University, 1969; Ph.D., University of Washington, 1971.
Mary S. Forster, 1973-, Assistant Professor of Biology; B.A., Western College, 1964; M.S., Ph.D., University of Illino is, 1965, 1970.
Reba Frohlich, 1973-, Instructor of Nursing; B.S., University of California, 1965; M.A., Unive sity of Washington, 1971.
Arthur Gee, 1968-, Associate Professor of Biology; B.S., M.S., Ph.D., Purdue University, 1962, 1964, 1969.
William P. Giddings, 1962-, Professor of Chemistry, Chairman of the Division of Natural Sciences; B.A., DePauw University, 1954; A.M., Ph.D., Harvard University, 1956, 1959.
Gordon O. Gilbertson, 1954-, Associate Professor of Music; B.A., Concordia College (Moorhead, Minn.), 1937; M.M., Northwestern University, 1942.
William Gilbertson, 1968-, Associate P ofessor of Sociology/Social Welfare; B. A., University of Puget Sound, 1954; M.S.W., University of Washington, 1956.

Fern A. Gough, 1971-, Instructor in Nursing; B.S.N., Wheaton College, 1956; M.N., University of Washington, 1961.
Stewart D. Govig, 1958-60, 1961- Associate Professor of Religion; B.A., St. Olaf Coll ge, 1948; B.Th., Luther Theological Seminary, 1952; M. Th., Princeton Theological Seminary, 1954; Ph.D., New York University, 1966.
James A. Halseth, 1966-68, 1970-, Assistant Professor of History; B.A., Concordia College (Moorhead, Minn.), 1962; M.A., Eastern New Mexico University, 1963.
Vernon R. Hanson, 1970-, Assistant Professor of Sociology/Social Welfare; B.A., Pacific Lutheran University, 1955; B.D., Luther Seminary, 1962; A.M., University of Chicago, 1970.

Edward Harmic,1971-, Assistant Profes or of Music; B.A., Pacific Lutheran University. 1962; M.M., University of Arizona, 1969.
Robert Heeren, 1973-, Assistant Professor of Engineering; B.S.E.E., Purdue University, 1960; M.S., Ph.D., University of Illinois, 1962. 1968.
Luella Hefty, 1973-, Instructor of Nursing; B.S.N., Pacific Lutheran University, 1969; M. A., Universit of Washington, 1973.
/John O. Herzog, 1967 -, Professor of Mathematics; B.A., Concordia College (Moorhead, Minn.), 1957; M.A., Ph.D., University of Nebraska, 1959, 1963.
Paul E. Hoseth, 1968-, Assistant Profes or of Health and Physical Education; B.A., Concordia College (Moorhead, Minn.), 1966; M.S., South Dakota State University, 1967.
Thelma M. Hostetter, 1971-, Assistant Professor of Nursing; B.S.N., University of California at Berkeley, 1957; M.S.N., University of Illinois, 1969.
Theodore L. Houk, 1972-, Adjunct Professor of Physics; B.S., University of Washington, 1957; B.A., Honours, Oxford University; M.A., Ph.D., Harvard University, 1962, 1967.
Curtis E. Huber, 1964-, Professor of Philosophy, Chairman, Division of Humanities; B.A., M.Div., Concordia Seminary, 1950, 1953; M.A., Ph.D., University of Wisconsin, 1958, 1962.
/Tentative leave, 1974-75
/Laurence D. Huestis, 1961-, Professor of Chemistry; B.S., Ph.D., University of California, 1956, 1960.
William R. Hutcheon, Jr., 1967-, Adjunct Professor of Business Administration; B.S., University of Rhode Island, 1953; M.B.A., Ph.D., University of Washington, 1963, 1969.

Katherine D. Iverson, 1972-, Assistant Professor of Physical Education; A.B., Stanford University, 1967; M.A., University of Southern California, 1970.
Clarence G. Jacobs, 1969 -, Assistant Professor of Physics; B.A., Concordia College (Moorhead, Minn.), 1964; M.S., University of Minnesota, 1968; Ph.D., University of Iowa, 1969.
Lois E. Jacobson, 1966-, Assistant Professor of Nurisng; B.S., M.S.N., University of Washington, 1959, 1969.
JoAnn Jensen, 1967-, Associate Professor of Biology; A.B., Pacific Lutheran University, 1954; M.A., University of Southern California, 1957; Ph.D., Iowa State University, 1961.
Robert J. Jensen, 1968-, Assistant Professor of Economics; B.A., Dana College, 1964; M.A., University of Nebraska, 1967.
Richard J. Jobst, 1967-73, 1973-, Adjunct Professor of Sociology; B.A., University of San Francisco, 1964; M.A., University of California, 1967.
David W. Johnson, 1970-, Assistant Professor of History; B.A., Hamline University, 1961; M.A., Stanford University, 1963; Ph.D., University of Kansas, 1972.
/Lucille M. Johnson, 1953-, Professor of English; B.A., Concordia College (Moorhead, Minn.), 1940; M.A., Washington State University, 1943; Ed.D., (Rhetoric), University of Montana, 1967.
Roosevelt Y. Johnson, 1973-, Assistant Professor of Biology, B.S., Harvard University, 1968; Ph.D., Indiana University, 1972.
=William L. Johnson, 1969-, Associate Professor of Mathematics; B.A., Reed College, 1960; M.A., Ph.D., University of California at Los Angeles, 1963, 1964; M.B.A., Pacific Lutheran University, 1972.
Kenneth A. Johnston, 1964-, Professor of Education, Dean of the School of Education; B.A., Western Washington State College, 1947; M.A., Stanford University, 1953; Ed.D., Washington State University, 1964.
Richard P. Jones, 1969-, Assistant Professor of English; B.A., Harvard, 1964; M.A., M.F.A., University of Massachusetts, 1969.

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Richard P. Jungkuntz, 1970-, Professor of Religion, Provost; B.A., Northwestern College, 1939; B.D., Wisconsin Lutheran Seminary, 1942; M.A., Ph. [I., University of Wisconson, 1955, 1961.
Theodore O. H. Karl, 1940-42, 1948-, Professor of Communication Arts; B.A., M.A., Gustavus Adolphus College, 1934, 1936.

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=Vivian C. King, 1969-, Assistant Professor of Music; B.M., University of Oregon, 1966; M.M., University of Southern California, 1969.
=Special leave, 1973-74
/Tentative leave, 1974-75


Lars E. Kittleson, 1956-, Associate Professor of Art; B.S., University of Wisconsin at Milwaukee, 1950; M.S., University of Wisconsin, 1951; M.F.A., University of Southern California, 1955.
Raymond A. Klopsch, 1953-, Associate Professor of English; B.S., Illinois Institute of Technology, 1949; M.A., Ph.D., University of Illinois, 1950, 1962.
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rRegency Professor, 1973-74

Henry Kuhlman, 1973-, Adjunct Professor, School of Business Administration; B.S.C., Swedish School of Econornics, (Helsinki), 1956; M.B.A., University of San ta Clara, 1964.
John O. Larsgaard, 1970 , Assistant Professor of Psychology; B.A., Pacific Lutheran University, 1944; B.Th., Luther Theological Seminary, 1947; S.T.M., Pacific School of Religion, 1965; Ph.D., University of Washington, 1971.
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Neale E. Nelson, 1970-, Assistant Professor of Sociology; B.A., Sustavus Adolphus College, 1940; M.Div., Lutheran School of Theology, 1945; M.S.W., Ph.D., University of Litah, 1967, 1970.
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David M. Olson, 1968-, Professor of Physical Education, Director of the School of Physical Education, Athletic Director; B.A., Concordia College (Moorhead, Minn.), 1956; M.A. University of Minnesota, 1957; Ph.D., University of Iowa, 1966.

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Linda M. Olson, 1967-, Assistant Professor of Nursing; B.S.N., M.N., University of Washington, 1959, 1964.
Burton T. Ostenson, 1947 -, Professor of Biology; B.A., Luther College, 1932; M.S., Ph.D., University of Michigan, 1934, 1947.
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David P. Robbins, 1969-, Assistant Professor of Music; B.M., M.M., University of Michigan, 1968, 1969.
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=Paul M. Webster, 1969-, Assistant Professor of Foreign Languages (German), B.A., M.A., University of California, 1964, 1967.
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Forrest Westering, 1972-, Associate Professor of Physical Education; B.S., University of Ornaha, 1952; A.M., Ed.D., Colorado State College, 1960, 1966.
Margaret Wickstrom, 1951-, Assistant Professor of Religion, Director, Foreign Students \& Special Programs; E.A., Augustana College, 1937; M.R.E., Biblical Seminary of New York, 1951.
Wera Wilhelm, 1973-, Instructor in Foreign Languages (German); B. A., University of Puget Sound, 1967; M. A., University of Washington, 1968; M.A., University of Puget Sound, 1973.
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Chang-Li Yiu, 1973-, Adjunct Professor of Physics; B.S., Tunghai University, 1962; M.S., Tsinghua University, 1965; Ph.D., Columbia University, 1972.
tDwight J. Zulauf, 1949-53, 1959-, Professor of Business Administration; B.S., University of Oregon, 1948; M.S., Columbia University, 1949; Ph.D., University of Minnesota, 1965; C.P.A., State of Washington.

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Edrice Addleman, Dir ctor of Computer Center and Institutional Research; B.A., Agnes Scott College, 1949; B.A., Georgia State College, 1964; M.Ed., University of Georgia, 1969; Ed.D., East Texas State University, 1972.
Harold Gamble, Director Minority Affairs Office; B.A., University of Washington, 1972.
Anibal Mejia, Associate Director of CHOICE; A.B., Genesee College, 1960; B.B.A., University of Michigan, 1962;
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Robert K. Menzel, Director of CHOICE; B.A., M.Div., Concordia Seminary, St. Louis, 1941, 1944; M.S.T., Pacific Theological Seminary, 1963.
Charles Nelson, R gistrar; B.S., Dakota State College, 1963; M.A., Adams State College, 1964.
Richard Seeger, Learning Skills Coordinator; B.A., M.A., Ph.D. (Cand.) , University of Washington, 1966, 1968, 1972.

## LIBRARY

Frank Hamilton Haley, Librarian; B.A., Willamette University, 1935; B.D., Drew University, 1946; A.B.L.S., University of Washington, 1950.
Richard Warren Grefrath, Reference Librarian; B.A., New York University, 1968; M.A., Temple University, 1972; M.L.S., University of Maryland, 1972.

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Noel Abrahamson, Music; B.A.Ed., Pacific Lutheran University, 1951.
Garrett Allman, Music; B.M., Pacifir, Lutheran University, 1971; M.M., New England Conservatory, 1973.
Douglas Anderson, Religion; B.A., Pacific Lutheran University, 1961; B.D., Luther Seminary, 1965; Ph.D., Boston University, 1973.
Robert Anderson, Art.
Steven Anderson, Music; B. A., Central Washington State College, 1970.
Theresa Benshoof, Music.
Robert Bergeson, Music; B.A., University of Washington, 1961.
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Daniel Dube, Music; B.M., Pacific Lutheran University, 1973.
Wayne H. Ehlers, Education; B.A., Western Washington State College, 1960; M.L., University of Denver, 1967.
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Mary C. Kent, Music; B.M., Cornish Schoo! of Music, 1967.
Sandra Knapp, Music; B.S., M.S., Juilliard School of Music, 1951.
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Barbara Poulschock, Music.
ivan Rasmussen, Music; M.M., Syracuse University, 1934.
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Judy Smith, Education; B.A., Pacific Lutheran University, 1964.
Phyllis Smith, Education; B.A., Seattle Pacific, 1950; M. A., University of Washington, 1966.
June Stehn, Education.
Joan Stiggelbout, Nursing; M.N., University of Washington, 1972.
Richard Sundquist, Music; M.E., Western Washington State College, 1964.
C. William Suver, Economics; Ph.D., Boston University, 1971.

Mary Helen Thompson, Music; B.M., Oberlin College, 1946.
Vernon Utzinger, Business Administration; B.A., North Central College, 1922; M.A., Northwestern 1929; Ph.D., University of Southern California, 1952.
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Nancy Wintz, Nursing; B.S.N., Texas Christian University, 1971.
Kenneth W. Woolley, Business Administration; B.S., University of Colorado, 1942.

## PROFESSORS EMERITI

Elvin Martin Akre, 1937: 1970, History
Miriam Ruth Beckman, 1964: 1973, Reference Librarian
Irene O. Creso, 1955; 1971, Biology
J. E. Danielson, 1960; 1969, Director of Admissions

Arnold Jasper Hagen, 1955; 1971, Education
Philip Enoch Hauge, 1920; 1968, Education
Olaf Melvin Jordahl, 1940; 1969, Physics
Erich Carl Knorr, 1949, 1969, Sociology
Anne Elise Knudson, 1946; 1970, English
Ottilie Elise Little, 1946; 1966, German
Gunnar Johannes Malmin, 1937; 1969, Music, Latin and Norwegian
Eline Kraabel Morken, 1953; 1967, Nursing
Robert A. L. Mortvedt, 1962, 1969. President
Fredrick Laurence Newnham, 1950; 1969, Music.
Robert C. Olsen, 1947; 1973, Chemistry
Anders William Ramstad, 1925; 1961, Chemistry
Herbert Robert Ranson, 1940; 1968, English
Kelmer Nelson Roe, 1947; 1967, Religion and Greek
Josef Emil Running, 1948; 1961, Mathematic:s
Vernon Alfred Utzinger, 1950; 1969, Speech
Paul G. Vigness, 1956; 1965, Religion and History

## FACULTY STANDING COMMITTESS AND OTHER UNIVERSITY COMMISSIONS, BOARDS, 1974-75

The President is an advisory member of all committees.
ADMISSIONS: 3 faculty and 2 students, 3 advisory members.
ARTIST SERIES: 3 faculty, 3 advisory members.
ATHLETICS: 3 faculty, 3 advisory members.
COMMITTEE ON COMMI EES: 3 faculty members.
EDUCATIONAL POLICIES: 9 faculty, 1 advisory and 2 student advisory members.
FACULTY WELFARE: 3 faculty, 1 advisory members.
FINANCIAL ASSISTANCE: 3 faculty, 3 advisory and 2 student advisory members.
COMMITTEE TO PROMOTE GRADUATE STUDY: 3 faculty, 3 advisory members.
INTERIM COMMITTEE: 4 faculty and 2 student members.
JUDICIARY COMMITTEE: 3 faculty members.
LECTURE AND CONVOCATION: 3 faculty and 3 students, 3 advisory members.
LIBRARY: 3 faculty, 3 advisory members.
PUBLICATIONS: 3 faculty, 2 advisory members.
RANK AND TENURE: 7 faculty (4 tenured, 3 non-tenured), 1 advisory and 2 student advisory members.
RELIGIOUS ACTIVITIES: 3 faculty, 2 advisory members.
SOCIAL: 3 faculty and 2 students, 1 advisory inembers.
STANDARDS: 3 faculty and 3 student members.
STUDENT ACADEMIC STATUS: 5 faculty, 5 advisory inembers,
STUDENT ACTIVITIES AND WELFARE: 3 faculty and 3 students, 5 ex-officio members.
STUDENT PUBLICATIONS: 3 faculty and 4 students, 7 advisory members.
ALL-UNIVERSITY COMMISSION: 5 faculty, 1 advisory, 6 students, 2 administrative and 4 staff members.
UNIVERSITY CENTER BOARD: University Center Director, 4 student, 2 faculty, 1 advisory members.

# campus guide 



Pacific Lutheran University is located in
Tacoma, Washington, a metropolitan area with a population of over 411, 027. Railways and highways make the University easily acce sible. Seattle-Tacoma International Airport is a thirty-minute drive from the University on Interstate 5. Tacoma city buses run regularly to and from downtown and stop in front of the campus.

The campus, which is seven miles south of the city center, is situated in Parkland, one of Tacoma's unincorporated suburbs. The main campus is bounded by South 121 st Street on the north and South 127th Street on the south, by Park A.venue on the east, and South " 1 " on the west.

Most of the University buildings are located on what is termes the "upper-campus". "Lowercampus", below a slight hill to the south, is the selting for the athletic complex, some residence halls, married-student housing, and the golf course. The University Center, located on the hillside, is accessible from upper- or lowercampus, tying the two areas together.



1) TACOMA-PIERCE COUNTY ADMINISTRATION BUILDING
2) MORTVEDT LIBRARY
3) MAIN ENTRANCE
4) XAVIER HALL
5) HARSTAD HALL
6) UNIVERSITY CENTER
7) RAMSTAD HALL
8) EASTVOLD AUDITORIUM
9) HONG HALL
10) HINDERLIE HALL
11) KRIEDLER HALL
12) AIDA INGRAM HALL
13) RAMSEY HOUSE
14) HAAVIK HOUSE
15) ORDAL HALL
16) STUEN HALL
17) MUSIC ANNEX
18) MAINTENANCE BUILDING
19) CLIFFORD OLSON AUDITORIUM
20) SWIMMING POOL
21) MEMORIAL GYMNASIUM
22) FOSS HALL
23) PFLUEGER HALL
24) TINGELSTAD HALL
25) COLUMBIA CENTER
26) IVY HALL
27) DELTA HALL
28) EVERGREEN COURT
29) ALUMNI HOUSE
30) STUDENT HEALTH CENTER

## RELIGIOUS AFFILIATIONS

Fall 1973

## statistical summary

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

| Washington | 2284 |
| ---: | :--- |
| California | 293 |
| Oregon | 254 |
| Montana | 85 |
| Alaska | 63 |
| Minnesota | 34 |
| Idaho | 27 |
| Hawaii | 25 |
| IIlinois | 23 |
| Colorado | 23 |
| North Dakota | 21 |
| New York | 13 |
| Texas | 12 |
| New Jersey | 11 |
| South Dakota | 11 |
| Utah | 9 |
| Iowa | 8 |
| Arizona | 7 |
| Florida | 7 |
| Michigan | 7 |
| Ohio | 7 |
| Nevada | 6 |
| Pennsylvania | 5 |
| Virginia | 5 |


| Indiana | 4 |
| ---: | :--- |
| Massachusetts | 4 |
| Wisconsin | 4 |
| Maryland | 3 |
| Missouri | 3 |
| Nebraska | 3 |
| West Virginia | 3 |
| Connecticut | 2 |
| Georgia | 2 |
| Kansas | 2 |
| New Mexico | 2 |
| North Carolina | 2 |
| Oklahoma | 2 |
| South Carolina | 2 |
| Tennessee | 2 |
| Arkansas | 1 |
| Delaware | 1 |
| Washington D.C. | 1 |
| Louisiana | 1 |
| Rhode Island | 1 |
| Vermont | 1 |
| Foreign | 85 |
| Total | 3371 |


| Lutheran <br> The ALC | 1110 |
| ---: | :--- |
| The LCA | 199 |
| LC-MS | 125 |
| Unclassified | 39 |
| Total Lutherans | 1473 |
| Other Denominations |  |
| Presbyterian | 199 |
| Methodist | 157 |
| Catholic | 247 |
| Episcopalian | 83 |
| Baptist | 119 |
| Congregational | 18 |
| Other Affiliations | 399 |
| No Affiliation | 676 |
| Total | 1898 |
| GRAND TOTAL | 3371 |

ENROLLMENT

| 1972-73 | Men | Women | Total |
| ---: | ---: | ---: | ---: | ---: |
| Graduates | 502 | 400 | 902 |
| Seniors | 257 | 263 | 520 |
| Juniors | 244 | 257 | 501 |
| Sophomores | 249 | 319 | 568 |
| Freshmen | 312 | 445 | 757 |
| Specials | 55 | 84 | 139 |
| Total Regular School Year | 1619 | 1768 | 3387 |
| Total Summer Session Enrollment, 1973 | 798 | 909 | 1707 |
| Net Total | 2417 | 2677 | 5094 |
|  |  |  |  |
| FALL 1973 | Men | Women | Total |
| Graduates | 459 | 191 | 650 |
| Seniors | 302 | 331 | 633 |
| Juniors | 265 | 281 | 546 |
| Sophomores | 233 | 291 | 514 |
| Freshmen | 395 | 506 | 901 |
| Specials | 73 | 44 | 117 |
| Total Fall 1973 | 1727 | 1644 | 3371 |

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[^0]:    *Offered cooperatively with the
    University of Puget Sound

[^1]:    Date after name indicates beginning of term of service
    +Sabbatical leave, 1973-74
    -Special leave, 1973-74
    Tentative leave, 1974-75

