

## PACIFIC IUTHERAN UNIVERSITY



## Catalog



Pacific Lutheran University does not discriminate on the basis of sex, race, creed, color or national origin in the education programs or activities which it operates and is required by Title IX of the Education Amendments of 1972 and the regulations adopted pursuant thereto and Title VII of the Civil Rights Act of 1964 not to discriminate in such manner. The requirement not to discriminate in education programs and activities extends to employment therein and to admission thereto. Inquiries concerning the application of said Title IX and published regulations to this University may be referred to:
I. The Director of Personnel, Room G-28 Harstad Hall, Pacific Lutheran University, telephone 531-6900 extension 397 , for matters relating to employment policies and practices, promotions, fringe benefits, training, and grievance procedures for personnel employed by the University.
2. The Executive Assistant to the Provost, Room A-1 00 Administration Building, Pacific Lutheran University, telephone 531-6900 extension 433, for matters relating to student admissions, curriculum, and financial aid.
3. The Director of Minority Affairs, Room A-113 Administration Building, Pacific Lutheran University, telephone 531-6900 extension 443, for matters regarding administrative policies relating to students, student services, and the student grievance procedure.
4. Or the Director of the Office of Civil Rights, Department of Health, Education and Welfare, Washington, D.C.

Pacific Lutheran University complies with the Family Education Rights and Privacy Act of 1974.

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

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# 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 moden 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 leaming 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 es tablish lifelong habits of study, reflection and learning. Through an emphasis on the liberating arts, the Univessity seeks to develop creative, reflective, and responsible persons. At the same time, the acquisition of specialized information and tecturical skill is recognized as a condition of successful involvement 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 Uni-
versity 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 poses 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.


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COLLEGE OF ARTS AND SCIENCES

SCHOOL OF BUSINESS ADMINISTRATION $\bigcirc \begin{aligned} & \text { SCHOOL OF } \\ & \text { EDUCATION }\end{aligned}$

SCHOOL OF FINE ARTS
$131^{\text {comsamem }}$ 132 "ax

## Academic Calendar 1977-78

## SUMMER SESSION 1977



FALL SEMESTER 1977
Sunday, September 4 to Tuesday. September 6

Orientation and Registration
Wednesday, September 7 . . Classes Begin, 8:00 a.m.
Friday, October 21 . . . . . Mid-Semester Break
Wednesday, November 23.. Thanksgiving Recess Begins, 12:50 p.m.
Monday, November 28 . . . Thanksgiving Recess Ends, 8:00 a.m.
Friday, December 10 . . . . Semester Eads

## INTERIM 1978

Tuesday, January 3 . . . Begins
Friday, January 27
Ends
SPRING SEMESTER 1978

Wednesday, February I
Thursday, February 2
Monday, February 20
lriday, March 17
Monday, March 27
Friday, May 19
Sunday, May 21

Registration
Classes Begin, 8:00 a.m.
Washington's Birthday Holiday
Easter Recess Begins, 6:00 p.m.
Easter Recess Ends, 4:00 p.m.
Semester Ends
Worship Service and Commencement


## Academic Calendar <br> 1978~79 <br> (Tentative)

SUMMER SESSION 1978

Monclay, Junc 19<br>Tuesclay, July 4<br>Wednesclay, July 19<br>Thursclay; July 20 . . . . Classes Begin - Second Term<br>Iricluy, August 18 . . . . Summer Session Closes<br>Friday. August 18 . . . . Worship Service and Commencement

FALL SEMESTER 1978

Sunday. September is to
Tuesclay: September 5 Wedresclay: September o
Friclay. October 20
Wednesclay, November 22 Monday. Vovember 27 Friday: December 15

Orientation and Registration
Classes Begin. 8:00 at.m.
Mid-Semester Break
Thanksgiving Recess Begins, 12:50 p.m.
Thanksgiving Recess Ends, 8:00 a.m.
Semester Ends

## INTERIM 1979

| Wednesclay, Jarmary 3 | Begins |
| :---: | :---: |
| edresday, January 31 | Ends |

SPRING SEMESTER 1979

Monday, Febrinary 5
Tuesclay, February 6 Monday, February 19
Friclay, April 6
Monday, April 16
Friday, May 25
Sunday, May 27

Registration
Classes Begin, 8:00 a.m.
Washington's Birthday Holiday
Easter Recess Begins. 6:00 p.m.
Easter Recess Ends, 4:00 p.m.
Semester Ends
Worship Service and Commencement


# Academic Structure 

## COLLEGE OF ARTS AND SCIENCES

Division of Humanities
English
Modern and Classical Languages
Philosophy
Religion
Division of Natural Sciences
Biology
Chemistry
Earth Sciences
Mathematics
Physics and Enginecring
Division of Social Sciences
Economics
History
Political Science
Psychology
Sociology, Anthropology, and
Social Welfare

## SCHOOL OF BUSINESS ADMINISTRATION

SCHOOL OF EDUCATION
SCHOOL OF FINE ARTS
Art
Communication Arts Music

SCHOOL OF NURSING
SCHOOL OF PHYSICAL
EDUCATION
DIVISION OF GRADUATE STUDIES

## DEGREES OFFERED

Bachelors
Bachelor of Arts
Bachelor of Science
Bachelor of Business Administration
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 Social Sciences
Master of Business
Administration
Master of Music
Master of Public Administration


## HISTORY

Pacific Lutheran University was founded in 1890 by men and women of the Lutheran Church in the Northwest, and by the 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 Pacific 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 fully accredited by the Northwest Association of Schools and Colleges 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. Thee 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 Assembly of Collegiate Schools of Business. The Social Welfare Program is accredited by the Council on Social Work Education at the baccalaureate level.

## INSTITUTIONAL MEMBERSHIPS

The University is a member of: American Association of Higher Education
American Council on Education Association of American Colleges Independent Colleges of Washington, Incorporated
Lutheran Educational Conference of North America
National Association of Summer Schools Washington Friends of Higher Education
Western Association of Graduate Schools
Western Interstate Commission for
Higher Education

## GROUNDS

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

## ENROLLMENT

2,572 full-time students 689 part-time students

## FACULTY

194 full-time faculty
67 part-time faculty

## STUDENT/FACULTY RATIO

 13:1
## MAJOR FIELDS

29

## 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 credit to course system. The course system reduces wasteful fragmentation of student and faculty time. With fewer courses (averaging 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 provides time during the month of January for focused, creative study in a non-traditional environment. It allows both faculty and students to inquire into areas outside the regular curriculum, to develop new methods of teaching and learning, and to enhance their imaginative and creative talents. The study options are various, including foreign study, interdepartmental study, numerous other on-campus programs, and exchange programs with other institutions. Special publications highlight the Interim program.



## Art

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 imnovation. 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, print making studio, sculpture studio, ceramics studio, glassblowing workshop, film making and photography workshop, design workshop, wood shop, metal shop, kiln yard, foundry, darkroom, seminar rooms. slide library, the Wekell Gallery and student exhibition areas.

Tomsic, Ch.; Elwell, Keyes, Kittleson, Roskos, Schwidder, Struxness. Artists in Residence: Cox and Torrens.

## STUDIO:

Basic media courses inay be repeated for credit for two or three semesters, or as approved.
160 Drawing
215 Crafts
216 Jewelry
230 Ceramics 1
250 Sculpture I
260 Life Drawing
296 Design
326 Film Arts: Photography/Film Making
330 Ceramics II
335 Fibers
338 Glass Blowing
341 Elementary Art Education
350 Sculpture II
365 Painting
370 Printmaking
394 Design Workshop
396 Graphics Workshop
492 Studio Projects
499 B.F.A. Candidacy Exhibition
HISTORY AND THEORY:
110 The Visual Arts
280 20th Century Art
294 20th Century Design and Architecture
382 Ancient Art
383 Medieval Mrt
384 Renaissance Art
385 Baroque Mrt
440 Seminar in Art Education
487 Ninetcenth Century Art
490 Seminar
497 Research in Art History
597 Research

## WORKSHOPS:

Special courses offered
on an occasional basis.
270 Sosaku Hanga: Japanese Wood Cut
332 Raku: Japanese Pottery
333 Kiln Building
374 Metal Plate Lithography
401 Bronze Casting

## INTERIM COURSES OFFERED)

IN 1977
301 The Body Beautiful
305 Crafts Workshop
307 Religion through Story and Art
309 Three Starred Capitals: Art in Rome, Paris and London
318 Life Sculpture
319 A Galaxy of Eyes: Creativity


The Biology Department at Pacific Lutheran University is dedicated to a teaching 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.
In addition to diverse faculty and balanced curriculum, the department provides anmerous facilities for its students, including: herbarium, invertebrate and vertebrate museums, greeihouse, vivarium and surgery room, climate control rooms, growth chambers, vertebrate physiology and cell physiology laboratories, a field station located on State of Washingtoin Parks laind, and a boat equipped for studies of Puget Sound. Qualified students are invited to use these facilities in independe.t study or participation in oingoing faculty research.
Gee, Ch.; Alexander, J. Carlson, Crayton, Hansen, Hinchee, J. Jensen, Knudsen, Lerum. Main, D.J. Martin, Mat thias, McGinnis.

111 Biology and Modern Man
155 Principles of Biology I: Population Biology and Diversity of Life
156 Principles of Biology II: The Cell and Bio-energetics
163 Functional Human Anatomy
201 Introductory Microbiology
253 Principles of Biology III: Biology of the Steady State
299 Introductory Clinical Physiology
321 Ornithology
322 Microbiology
324 Natural History of Vertebrates
326 Animal Behavior
331 Genetics
340 Plant Diversity and Distribution
346 Cellular Physiology
347 Cellular Physiology Laboratory
357 Plant Form and Function
358 Plant Physiology
361 Comparative Anatomy of the Vertebrates
371 Invertebrate Zoology
372 General Entomology
375 Biology of Parasitism
403 Developmental Biology
411 Histology
424 Ecology
425 Biological Oceanography
426 Field Me thods in Ecology
441 Mammalian Physiology
475 Evolution
490 Seminar
491.492 Independent Study

597,598 Graduate Rescarch

## INTERIM COURSES OFFERED

 IN 1977303 Patients, Heredity, and Society Whose Rights, Whose Responsibilities?
306 Biological Self-Recognition: How Animals Respond Immunologically to Foreign Cells and Tissues
307 Exploring the Northwest's Winter
309 Introductory Microtechnique
311 Galaxy of Man: Human Evolution and Ecology
315 The Biology of Mating Systems and Sexual Selection: Sex - Protozoans to Man
319 A Galaxy of Eyes: Creativity


## SCHOOL OF Business Administration

In concert with general university requirements, the business curriculum prepares graduates for responsible positions in business, education and government.
Optional conceitrations are offered in the field of accounting, marketing, fiilance, industrial and personnel management, and the area of public management.
King, Dean; Aaby, Bancroft,
Barnowe. Brumer, Carvey, Crooks, Dunn, Frecman, W. Haueisen,
Hutcheon, Lauer. McCarthy,
Nibler, O"Neill, Peterson, Schafer, Turner, Walton, Woolley, Zulauf.

230 Law and Society
241 「jusiness Communications
243 Family Financial Planning
281 Financial Accounting
282 Accounting Information Systems
350 Managcment
364 Managerial Finance
367 Financial Markets
370 Marketing Systems
381 Intermediate Accounting
383 Income Taxation
385 Cost Accounting
387 Data Processing Systems
392 Internship
435 Business Law
450 Manufacturing Management
451 Operations Analysis
453 Persomnel and Industrial Relations
455 Business Policy
456 Honors Seminar
460 Employee Bencfit Plans
461 Portfolio Management
464 Financial Planning and Control
470 Marketing Management
471 Marketing Rescarch and Consumer Behavior
472 ^dvertising and Sales Management
473 Industrial Marketing and Purchasing
482 Advanced Accounting
484 Auditing
490 Seminar
491 Directed Study
501 Fundamentals of Accounting and Finance
502 Fundamentals of Management and Marketing
550 Organizational Behavior and Environment
551 Seminar in Operations
Management
552 Applied Decision Analysis

553 Contemporary Issues in Management
555 Business Strategy and Policy
557 Seminar in Policy Sciences
564 Seminar in Financial Management
567 Scminar in Public Financial Management
570 Seminar in Marketing Management
581 Seminar in Financial Accounting Theory
582 Accounting Information and Control
587 Government Accounting Systems
590 Special Seminar
591 Independent Study
593 Thesis
596 Research Colloquium
INTERIM COURSES OFFERED IN 1977
243 Family Financial Planning
305 Managers at Work
310 N.A.S.A.: New Approach to Solicitation Activities
392 Internship
553 Contemporary Issues in Management


## Chemistry

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 studying the influences of science and technology on the enviromment 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 plamning is a key word 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.
Swank, Ch.; Anderson, Giddings, Huestis, Layman, Nesset, Tobiason.

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
INTERIM COURSES OFFERED
IN 1977
108 Mankind and Molecules
308 The Air Up There (And Down Here, Too)
312 So You Think You Are Human
350 Instrumentation for the Life Sciences


## Communication Arts

The communication arts program is concerned with improving interpersonal, group and public communication through a mastery of basic rhetorical processes and a comprehension of the nature of the mass media as well as offering cultural and artistic opportunities in the field 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/journalism.
Wilson, Ch.; Becvar, Doughty, Eman, Karl, Nordholm, Parker. Wells.

123 Fundamentals of Oral Communication
128 Argumentation and Debate
151 Stage Technology
162 History of American Film
171 Man, Media and Society
225,425 Communication Arts Practicum
235 Studies in Organizational Communication
241 Oral Interpretation of Literature
250 Fundamentals of Acting
272 The Broadeaster and Sound
275 Radio Production
283 News Reporting
326 Group Discussion
333 Foundations of Communication Theory
336 Persuasion
344 Advanced Interpretation of Literature
356 Stage Lighting
358 Advanced Acting
363 History of the Theatre: Aeschylus Through Turgeniev
364 History of the Theatre: Ibsen Through the Present
374 Television Production
378 Radio-Television News Reporting
384 Advanced News Reporting
402 Communication Arts in the Blementary Classroom

404 Communication Arts in the Sccondary School
452 Scenic Design
454 Play Direction
459 Summer Drama Workshop
474 Television and the Classroom Tcacher
475 Directing for Broadcast Media
478 Summer Television Workshop
490 Seminar in Broadeast/Journalism 491,492,493 Special Studies in Communication Arts
596-598 Research in Communication Arts

## INTERIM COURSES OFFERED IN 1977

304 Choreography and Dance Production
306 A History of the Comic Book: Its Development and Significance 308 Introduction to Documentary Film and Its Production
311 Leadership: $\wedge$ Guide to Being a Star... Or... Theory and Practice of Leadership and Group Behavior
318 Master Class: The Art of Mime
319 Children's Theatre Workshop


## Earth Sciences

The study of earth sciences explores components of the 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 geoplyysics and geochemistry.
Environmental problems are approached through the earth sciences. Field trips give a realistic understanding of human 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.
Lowes, Ch., Youngquist: Assisted by Batker. Fisk, Huestis.

101 World Geography
122 Introduction to Physical Science
131 Man and the Geologic Fnvironment
132 Historical Geology
136 Descriptive Astronomy
202 General Oceanography
222 Conservation of Natural Resources
323 Mineralogy
324 Petrology
325 Structural Geology
326 Optical Mincralogy
327 Stratigraphy and Scdimentation
328 Palcontology
351 Natural History of the Pacific Nurthwest
360 Geology of Western Washington
365 Glacial Geology
490 Seminar
491,492 Independent Study
597 Graduate Research

## INTERIM COURSES OFFERED

 IN 1977307 Exploring the Northwest's Winter
309 Use of Demonstrations in the Physical Sciences


## Economics

"Want is a growing giant whom the coat of Have was never large enough to cover." Ralph Waldo Emerson
Economics is the study of how people establish social arrangements for producing and distributiang goods and services to sustain and enhance human life. Its main objective is to determine a wise use of limited economic resources so that people receive the maximum possible benefit at the lowest cost.
The economics discipline embraces a body of technieques and conceptual tools that are useful for understanding and anatyzing our complex economic system. Career avenues for graduates are inmerous since their understanding of the economy and their problemsolving and thinking abilities are applicable to a wide range of activities in business and/or goveriment.
Brue, Ch., Aıkrim, R. Jensen, Miller, Vinje, Wentworth.

150 Principles of Economics
290 Contemporary Economic Problems
321 Human Resource Economics
331 International Economics
343 Operations Research
344 Applied Regression Analysis
351 Intermediate Macro Economic Analysis
352 Intermediate Micro Economic Analysis
361 Moncy and Banking
362 Public Finance
381 Comparative Economic Systems
432 Urban and Regional Economics
434 Industrial Organization and Public Policy
486 Evolution of Economic Thought
490 Seminar
491,492,493 Independent Study
504 Economic Analysis and Policy Decisions
543 Quantitative Methods
591,592,593 lndependent Study
599 Thesis
INTERIM COURSES OFFERED
IN 1977
305 Aggregate Economic Games
308 World Food Crisis: Myth and Reality


# school of Education 

The School of Education offers programs of study leading to certification for elementary and secondary teachers, counselors, nurses, 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 faculty is committed to the development of educational personnel sensitive to the varied individual needs of learners.

Johnston, Dean; Baughman, Brochtrup, Churney, Clarke, Cox,
DeBower, Fletcher, Hill, Mathers,
Minetti, Moe, Nokleberg. F. Olson,
Pederson, Rickabaugh, Stein,
Wentworth, Williamson.
Assisted by Barbour, Beal,
Ehlers. Gray, M. Hanson, Johnson, Ramsey, Smith, Yetter.

251 Learner and Society: Growth and Development
321 Human Development
322 General Methods - Primary
323 General Methods - Upper Elementary
324 General Methods - Elementary Model
325 Reading in the Elementary School
326 Mathenatics in the Elementary School
340 Business Education
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
436 Alternate Level Student Teaching - Elementary

437 Alternate Level Student Teaching - Secondary

440-448 Specific Methods in Teaching Secondary School Subjects

440 Seminar in Secondary Art Education
441 Teaching Secretarial Subjects
442 Teaching General Business Subjects
443 Chemistry in the Secondary School
444 English in the Secondary School
445 Methods in Teaching Foreign Languages
446 Mathematics in the Secondary School
447 Science in the Secondary School
448 Social Studies in the Secondary School
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
479 Special Techniques in Reading
482 Curriculum Enrichment in Early Childhood Education
483 Primary Reading
485 The Gifted Child
487 Theories of Early Childhood Education
488 Reading Center Workshop
489 Directed Teaching in Reading Centers
490 Introduction to Special Education
492 Characteristics of L.earning Disabilities
493 Learning Disabilities: Diagnostic Procedures
494 Learning Disabilities: Programming
495 Language Problems of Exceptional Children
496 Laboratory Workshop
497 Special Project
498 Curriculum for Exceptional Students in the Secondary School
499 Special Education: Student Teaching
501 Workshops
545 Methods and Techniques of Research
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
579 Diagnosis and Remediation in Reading
580 Curriculum Development
583 Educational Issues and Problems
585 Comparative Education
586 Sociology of 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 Secondary School
466 Introduction to Student Personnel Scrvices
468 Educational Psychology
469 Career Guidance
474 Affective Classroom Techniques
475 Reality Discussion Techniques
490 Introduction to Special Education
501 Workshops
560A,B,C,D, Continuing Practicum
561 Basic Relationships in Counseling
563 Practicum in Group Process and Leadership
565 Seminar: Non-Test Appraisal
570 Practicum and Fieldwork in Counseling and Guidance
572 Practicum in Student Personnel Work in High Education
575 Mental Health
578 Behavioral Problems of Students
INTERIM COURSES OFFERED
IN 1977
303 Classroom Photography
309 Use of Demonstrations in the Physical Sciences
311 Leadership: A Guide to Being a Star... Or... Theory and Practice of Leadership and Group Behavior
315 Sex Role Stereotyping in Education
317 Management Techniques (Processes) in Libraries and Media Centers
490 Psychology of the Handicapped Child
583 Readings in Educational Issues and Problems


As a discipline English assists students in achieving excellence ill 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 offers a full semester in London in the fall, and of ten a study tour of the British Isles during interim. A special program exploring careers in publishing with a summer internship was begun in 1975.
Van Tassel, Ch.:
Benton, Bergmann, Blomme, L. Johnson, Jones, Keller, Klopsch, D.M. Martin, Reigstad, Seal.

101 College English
217 Short Story
221 Literary Forms and Analysis
230 Introduction to Contemporary Litcrature
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
349 Modern Poetry
351 Modern 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 Rescarch
INTERIM COURSES OFFERED
IN 1977
303 The New World: Immigration to America in the ScandinavianAmerican Novel
305 Science Fiction: Human Futures
307 American Fiction and the Pursuit of Happiness, 1877-1977
312 The World of the Book
313 Kaleidoscope of British Fiction
315 Tales of Travel
319 A Galaxy of Eycs: Creativity
329 Freclance Writing


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 discovering truth wherever it may be found. The History faculty pursues these goals through courses which focus upon fundamental and significant political. social, economic, religious, philosophic, artistic, and legal ideas, movements, and institutions.
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.
Martinson, Ch.: Browning, Halseth, [). Johmson, Nordquist, Rozanski, Soden.
107. 108 History of C'ivilization
109. 110 World Civilizations

251 Colonial American History
252 Nincteenth Century Amcrican History
253 Twentieth Century American History
321,322 Classical Civilization
323 The Middle Ages
324 Renaissance
325 Reformation
326 European History from 1648 to 1789
327 The French Revolution and Napoleon
328 Nineteenth Century Europe
329 Twentieth Century Europe
331, 332 England
333 Russia
334 Modern Germany, 1848-1945
336 Colonial Latin America
337 Republican Latin America
340 Far Eastern History
356 History of American Foreign Policy
421 History of Ideas
451 American Constitutional History
460 West and Northwest
471 History of American Thought and Culture
492 Independent Study
494 Seminar: American History
495 Seminar: European History
496 Seminar: History and Historians
596 Graduate Research
599 Thesis

## INTERIM COURSES OFFERED

 IN 1977301 The Body Beautiful
306 From Paris to the Rhine: The Evolution of Euro pean Civilization
311 Northwest Mosaic: Minorities in Pacific Northwest History
312 The Desert in American Ilistory
313 Chinese Conversation, Calligraphy and Cuisine


## Mathematics

Mathematics is an indispensable tool that is utilized in industry, education, computer programming, the actuarial field, and govermment. 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 Computer Science Sof tware and Applied Math areas. Columbia University is cooperating with PLU in a 3-2 program in the Engineering/Computer Science area.
Peterson, Ch.: Batker, Brink, Comsia, Fisk, Herzog, Liebelt. N.C. Meyer. Yiu.

101 Intermediate Algebra
112 Planc Trigonometry
127 Finte Mathematics
128 Mathematics for Busincss and the Behavioral Sciences
133 College Algebra and Trigonometry
140 BASIC Computer Language
144 Introduction to Computer Science
151 Analytic Geometry and Calculus
152 Analytic Geometry and Calculus
199 Directed Reading
244 Datal Structures and Assembly Language Programming
253 Multivariable Calculus and Differential Equations
321 Geometry
323 Modern Elementary Mathematics
324 Algebra and Gcometry for the Elementary School Teacher
331 Linear Algebra and Calculus
334 Analysis of Variance and Experimental Design
341 Mathematical Statistics
345 Introduction to Numerical Analysis
346 Numerical Analysis
351 Applied Mathematics
433,434 Modern Algebra
446 Mathematics in the Secondary School
455,456 Mathematical Analysis
460 Elementary Topology
486 Scnior Seminar
490 Seminar
491,492 Independent Study
597,598 Graduate Rescarch
INTERIM COURSES OFFERED
IN 1977
308 Financial Mathematics
316 C'omputers and Society
318 Mathematics from an Historical Perspective


# Modern and Classical Languages 

Foreign language learning provides an urgently needed element in our domestic and global community: the ability to communicate effectively with and within other cultures. Through the medium of language, students increase their knowledge of the contributions other peoples have made to civilization, history, literature, and the arts and sciences.
The Department of Modern and Classical Languages in cooperation with several European universities provides specific students with an opporitunity to study abroad in France, Spain. Germany, Austria (Viemna), and Scandinavia.
Spangler, Ch.: Carleton, Faye, Payne, Predmore. Rasmussen, Sudermanin, Sundberg, Swenson, Toven. Webster. Assisted by Pilgrim.

100 English as a Foreign Language
400 Structural Linguistics
445 Methodology of Teaching Foreign Languages

## FRENCH

101, 102 Elementary French
201, 202 Intermediate French
205, 206 French Conversation
321 Civilization and Culture
351, 352 Composition and Conversation
421, 422 Masterpieces of French Literature
431, 432 Twentieth Century French Litcrature
442 History of Romance. Languages
491, 492 Independent Study
597, 598 Graduate Research

## GERMAN

101, 102 Elementary German
201, 202 Intermediate German
205, 206 German Conversation
321 German Civilization
351, 352 Composition and Conversation
421 German Literature: The Age of Goethe
422 German Literature: The Nineteenth Century
431 German Literature: The Tiventiech Century
432 Contemporary German Literature
442 History of the German Language
491, 492 Independent Study
597, 598 Graduatc Study

## GREEK

101, 102 Elementary Greek
201, 202 Intermediate Greek
421, 422 Masterpicces of Greck Literature
491, 492 Independent Study

## LATIN

101, 102 Elementary Latin and English Word Building
201, 202 Intermediate Latin 491, 492 Independent Study

## NORWEGIAN

101,102 Elementary Norwegian
201,202 Intermediate Norwegian
351 Conversation and Composition: Folktales
352 Advanced Conversation and Composition: Ballads and Poctry 491,492 Independent Study

## SCANDINAVIAN STUDIES

321 Vikings and Emigrants
322 Modern Scandinavian Civilization
421 Ibsen, Strindberg, and Their Contemporarics
422 Contemporary Scandinavian Literatur c
491,492 Independent Study

## SPANISH

101.102 Elementary Spanish
201.202 Intermediate Spanish

205,206 Spanish Conversation
321 Civilization and C'ulture
322 Latin American Civilization and Culture
351,352 Composition and Conversation
421,422 Masterpieces of Hispanic Literature
431,432 Tiventieth Contury Hispanic Literature
442 History of Romance Languages 491,492 Independent Study

## INTERIM COURSES OFFERED IN 1977

303 The Sacred and the Secular: A Thematic Survey of Medieval Litcraturc
307 Norwegian Folk Arts
309 The Fortunes of Faust
311 The African Experience in the 20th Century


The music department offers programs for students seeking intensive training in music history and literature, theory and composition, sacred music, and 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.
Pacific Lutheran University Department of Music is noted both regionally and nationally, for its performing ensembles which include: Choir of the West, University Chorale. Concert Choir, University Singers, University Band, Jazz Ensemble, University Symphony Orchestra, and Contemporary Directions Ensemble.
Skones, Ch.; Dahı, Farner, Gard, G. Gilbertson, Harmic, Hoffman, Irwin-Brandon, Kinapp. Kracht, L. Meyer, Poulshock, Robbins, Tremaine. Assisted by Abrahamson, Bergeson, Crockett. Dube, Edwards. Holland. Hopp, Housh, Kent, S. Knapp, Knuth, Koschmann, McCarty, Munson, Nace, Neff. Northrup, K. Robbins, Smith, Sundquist. Taylor. Thomas, Thompson. Ziegenfelder.

101 Introduction to Music
123 Theory I
124 Theory II
125 Ear Training I
126 Ear Training II
131 Music History 1
132 Music History II
223 Theory 111
224 Theory IV
225 Ear Training III
226 Ear Training IV
231 Music History III
232 Music History IV
241-242 String Laboratory
243-244 Woodwind Laboratory
245-246 Brass Laboratory
247 Percussion Laboratory
249 Electronic Music Laboratory
323 Lincarity I
324 Lincarity II
325 Kcyboard Harmony
326 Orchestration
327 Composition
331 Music of Johann Sebastian Bach
332 Ornamentation and Performance Practices of the Baroque
333 Music of Haydn and Mozant
334 Music of Beethoven
335 Late 19th Century Music
336 Chamber Music Literature
337 The 19th Century Art Song
338 History of Opera
339 History of Jazz Styles
341 Music in the Flementary School
343 Vocal Jazz Techniques
344 Jazı Laboratory Ensemble
345 Basic Conducting
349 Electronic Music Practicum
351 Accompanying
352 Organ Improvisation
353 Solo Vocal Literature
354 Performer's Primer
360 Choir of the West
361 University Chorale
362 Concert Choir
363 University Singers
364 Madrigal
366 Opera Workshop
370 University Band
372 University Jaza. Ensemble
380 University Symphony Orchestra
381 Chamber Ensemble
382 Contemporary Directions Ensemble
383 Two Piano Ensemble
423 Form I
424 Form II
425 Form III

426 Advanced Orchestration
431 History of Piano Literature and Performance
433 Music of Bela Bart oh
434 Scandinavian Music
435 Music in the United States: A Historical Introduction
436 History of Organ Building
437 Sacred Music Literature
438 Ilymnology and the Music of the Liturgy
441 Recent Techniques for F:Iementary Music
443 Methods and Materials for Secondary Choral Music
444 Methods and Materials for School Instrumental Music
445 Advanced Conducting
451 Piano Pedagogy
452 Organ Pedagogy and Repertoire
453 Vocal Pedagogy
454 String Pedagogy
491-492 Independent Study
527 Composition
532 Music Bibliography and Rescarch Techniques
545 Seminar in Advanced Conducting: Contemporary Literature
590 Graduate Seminar
596-598 Research in Music
599 Thesis
Private and Class Instruction
202,402,502 Piano
203,403,503 Organ
204,404,504 Voice
205,405,505 Violin/Viola
206,406,506 Cello/Bass
207,407,507 Flute
208,408,508 Oboe/English Hom
209,409,509 Bassoon
210,410,510 Clarinet
211,411,511 Saxophone
212,412,512 Trumpet
213,413,513 French Itorn
214,414,514 Trombone/Baritone
215,415,515 Tuba
216,416,516 Percussion
217,417,517 Guitar
218,418,518 Harp
219,419,519 Harpsichord

## INTERIM COURSES OFFERED IN 1977

303 A Cultural Experience in the Arts in New York City
308 The Orchestra Inside Out
317 Intensive Performance Study


A nursing career offers great opportunity for a rich and rewarding professional life. It affords virtually unlimited choice of location, ellviromment, and type of service. The physical, mental, social, and spiritual health of human beings is of universal concern; and thuse prepared to maintain their good health are in constant demand.
The School of Nursing is a professional school which combines professional and liberal arts studies in assisting students to develop a sense of responsibility for açuuiring the attitudes, knowledge and skill necessary for meeting nursing needs of the community. Graduates who successfully complete the State Board examinations (Registered Nurse) are prepared for begimning positions in professional nursing and for continuing their education at the graduate le vel.
Under the direct supervision of its faculty members. the School utilizes facilities of hospitals, health agencies, and schools in the commmity in providing optimal clinical learning experience for its students.
Stucke, Dir.: Acuff, Aikin, Carpenter, Carper, Carter, Cone, Gough, Hefty, Hostetter. Jacobson, E. Johnson, Litwrence, Mason, Myrabo, L. Olson, Page, Roediger, Schultz. Stiggelbout. Weirick.

## stroo $x$ Nursing

214 Nursing I: Socialization to Nursing
228 Nursing II: Health Assessment
334 Nursing Centrum I
344 Health Problems
354 Nursing Centrum II
384 Clinical Problems I
394 Nursing Practicum I
424 Nursing Centrum III
434 Clinical Problems II
444 Nursing Practicum II
464 Nursing Centrum IV
478 Senior Practicum
491,492 Independent Study
INTERIM COURSES OFFERED
IN 1977
301 The Body Beautiful
303 Patients, Heredity, and Society Whose Rights, Whose Responsibilities?
305 Health and Healing
311 Surgical Intervention


## Philosophy

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 him "to see life critically, appreciatively and whole."
The department offers a program of distinctive quality for those who seek to add depth and perspective in support of their work in such areas as: sciences. law, theology, business, and the health professions. It offers a unique and widely recognized course of study for those who wish to pursue philosophy itself as a career.
Arbaugh. Cl.: Huber, Menzel. Myrbo. Nordby.

Courses particularly useful for strengthening the preparation of students for various careers are listed below.

## NATURAL SCIENCES

Philosophy of Science
Logic
Modern Philosophy
Contemporary Philusophy

## SOCIAL SCIENCES

Philosophy of Science
Philosophical Analysis of Social Problems
Political and Legal Philosophy
Acsthetics
Theory of Value or Moral Philosoply

## LITERATURE

Kierkegaard and Existent tialism Aesthetics
Theory of Value or Moral Philosophy
One or more history of philosophy courses

## FINE ARTS

Acsthetics
Theory of Value
One or more history of philosophy courses

## BUSINESS

L.ogic

Philosophical Analysis of Social Problems Political and Legal Philosophy Theory of Value or Moral Philosophy

## HEALTH SCIENCES

Moral Philosophy
Problems in Medical Ethics
Philosophy of Religion
Philosophy of Science

## THEOLOGY

iongic
Ancient Philosophy
Medieval Philosophy
Kierkegaard and Existentialism
Philosophy of Religion
Philosophy of Science
Moral Philosophy
LAW
Moral Philosophy
Logic
Philosophical Analysis of Social Problems Contemporary Philosophy

201 Philosophical Issues
221 Moral Philosophy
233 Logic
324 Philosophical Analysis of Social Problems
328 Political and Legal Philosophy
331 Ancient Philosophy
332 Medieval Philosophy
333 Modern Philosophy
335 Contemporary Philosophy
365 Kierkegaard and Existontialism
371 Aesthetics
381 Theory of Value
385 Problems in Medical Ethics
393 Philosophy of Religion
395 Philosophy of Science
427 Philosophy and Current Problems
435 Advanced Seminar in Philosophy
491,492 Independent Reading and Rescarch
493 Senior Independent Study

## INTERIM COURSES OFFERED

 IN 1977303 Patients, Heredity, and Society Whose Rights, Whose Responsibilities?
307 Morality and the Profit Motive The Dilemmas of Social Responsibility in a Business-Oriented Society


## schooo of Physical Education

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 physical education activities. The activity program is uniquely characterized by a timely response to student interests in recreational opportunities. available in the Pacific Northwest.
D. Olson, Dir.; E. Anderson, Auping, Beckman, Broeker, R. Carlson, Chase, Hoseth, Kittilsby, Lundgaard, Officer, Westering. Assisted by Asher, Benson, Charles, Hemion, Iverson, Jarvis, Loverin, Mobley, Nicholson, Peterson, Phillips. Steilberg, Templin, Thieman.

100 Orientation to Physical Education
200-299 Individual and Dual Activities
230-239 Aquatics
240-249 Rhythms
250-259 Team Activitics
275 Water Safety Instruction
277 Foundations of Physical Education
281 Injury Prevention and Therapeutic Care
282 Professional Activities: Dance
283 Professional Activities: Gymnastics
284 Professional Activities: Team Sports for Men
285 Professional Activities: Individual and Dual Sports
287 Professional Activities: Recreation Activities
288 Professional Activities: Team Sports for Women
292 First Aid
295 School Health
322 Physical Education in the Elementary School
324 Personal Health
326 Community Health
328 Curriculum Development and Administration
330 Recreation Programming
331 The Woman as a Competitor
332 Officiating
334 Scientific Basis for Training
360, 361 Professional Practicum, Coaching Practicum
362 Rhythms and Dance
370-375 Coaching Theory
391, 392 Therapeutic Exercise, Ambulation Techniques
478 Psychological Concepts of Physical Education and Athletics
481 Exercise Physiology
482 Kinesiology
483 Recreation Administration
484 Measurement and Evaluation on Physical Education
485 Biomechanics
491 Independent Study
597 Graduate Research

## INTERIM COURSES OFFERED IN 1977

202 Intermediate and Advanced Golf
204 Bowling
208 Skiing
210 Slimnastics
212 Intermediate Badminton
215 Intermediate Tennis
220 Fishing: Outdoor Recreation in the Northwest
225 Co-ed Volleyball
237 Skin and Scuba Diving
245 Square Dancing
281 Injury Prevention and Therapeutic Care
303 Leadership for Outdoor Ministries
304 Chorcography and Dance Production
307 Exploring the Northwest's Winter
308 Sports - Motivation
313 Intro to Intra: Why, What, When and Where of Intramural Sports
497 A Corrective Therapy Internship 497B Oricntation to Therapy


## Physics and Engineering

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. Two introductory sequences are offered to majors: "College Physics" and "General Physics." These sequences differ in the level of mathematics used. as stated in the course descriptions. They also differ somewhat in emphasis, with "General Physics" involving more comprehensive analyses.
In its engineering program the department is committed to provide an education of sufficiently fundamental nature to permit rapid adaptation to new technical problems and opportunities and of sulficiently liberal scope to provide awareness of the broad social responsibilities implicit in engineering. The department seeks to promote the interaction between human values and the technical
works of humankind and the fundamental engineering sciences.
The department of fers B.S. level degree work in Engineering-Physics and a 3-2 Engineering Dual Degree program jointly with the Schools of Engineering and Applied Science of Columbia University and Stanford University. Admission to Columbia is automatic upon recommendation; admission to Stanford, however, is competitive. Concentrations in Electrical and Mechanical Engineering Sciences are available within each degree program.
Further descriptions are contained in the section "Special Programs for Careers - Engineering.'
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, "Man and the Physical Universe," and one for music majors, "Musical Acoustics," are also offered.
Heeren, Ch.; Adams, D. Haueisen, Nornes, Tang, Yung. Assisted by Brink. Liebelt.

## PHYSICS

106 Man and the Physical Universe
125, 126 College Physics
147. 148 Introductory Physics Laboratory
153, 154 General Physics
205 Musical ^coustics
223 Elementary Modern Physics
272 Solid State Electronic Devices
331 Electromagnetic Theory
332 Electromagnctic Waves and Physical Optics
336 Mechanics
351 Thermodynamics
354 Engincering 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

## ENGINEERING

MATHEMATICAL SYSTEMS
(Cross Listed with Mathematics Dept.)
144 Introduction to Computer Science
345 Introduction to Numerical Analysis
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

## MECHANICAL ENGINEERING <br> SCIENCE

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

## INTERIM COURSE OFFERED 1N 1977

305 Our Universe: Introduction to Astronomy


## Political Science

The study of political science helps to prepare students for the exercise of their rights, duties, and opportunities as citizens by giving them a better understanding of American political processes and of alternative systems. Courses in political science explore various topics in American government and politics, international relations and foreign policy, comparative government and area studies, political philosophy and theory, and public policy and law. The department provides pre-professional training leading to careers in teaching. law, government and related fields.
Students of political science have the opportunity to combine the academic study of govermment and politics with practical experience by participation in one of the internship programs spensored by the department. At present these are available in public administration, public law, and the legislative process.
Ulbricht, Ch.; Atkinson, Farmer, Spencer. Assisted by Bricker. Mork.

101 Introduction to Political Science
151 American Government
282 Comparative Government
321 Scope and Methods of Political Science
325 Political Thought
326 Recent Political Thought
331 International Relations
336 International Organization and Law
338 American Foreign Policy
345 Government and Public Policy
352 American State Government
356 Urban Government and Policy
361 American Political Parties
363 Political Communication and Opinion
364 The Legislative Process
368 The American Presidency
371 Judicial Process and Behavior
372 Constitutional Law
373 ('ivil Liberties
383 The Westminster Model
384 Communist Political Systems
387 Contemporary Revolutionary Movements
401 Seminar in Politics
457 Public Administration
458 Internship in Public Administration
464 Internship in the Legislative Process
471 Internship in Public Law
491,492 Independent Reading and Rescarch
597,598 Graduate Rescarch
599 Thesis
INTERIM COURSES OFFERED
IN 1977
303 Sub-Saharan Africa
305 The Right to Privacy


## Psychology

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 academic 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 (mentally retarded), Mental Health Clinics, Special Services Departments of local school districts, etc.
The laboratory classes offered by the department are small in size with maximum importance attached to individualized instruction.
Severtson. Ch.; Adachi, Fiedler, Larsgard, LeJeune, Moritsugu, Nolph. Stoffer.

101 Introduction to Psychology
110 Study Skills
221 The Psychology of Adjustment
243 Scientific Methods
330 Social Psychology
335 Development: Infancy to Maturity
340 Human Neuropsychology
403 The Psychology of Infancy and Childthood
405 Adolescent Psychology
410 Emotion and Motivation
420 Personality Theories
421 Abnormal Psychology
450 Psychological Testing
460 L.earning: Research and Theory
490 Systematic Thought in Psychology
491.492 Independent Study

493 Scminar
505 Social Science Mcthods
515 Psychological Assessment
540 Counseling Methods
550 Group Counseling
570 Practicum in Counseling and/or Assessment
577 Advanced Practicum in Counseling and/or Assessment
590 Graduate Seminar
596 Graduate Research
599 Thesis
INTERIM COURSES OFFERED IN 1977
300 Parapsychology
301 Cross-Cultural Psychology: A Living Lab with Hawaii's Ethnic Groups
311 Leadership: A Guide to Being a Star... Ot... Theory and Practice of Leadership and Group Behavior


The religious heritage of mankind, particularly the JudaeoChristian tradition, is critically examined for the purposes of preserving and applying its accumulating wisdom. The department's program examines religious dimensions encomentered in other disciplines and serves students who elect religion as their academic or vocational specialty.
The PLU Religion Department shares academic courses and exchanges professors in a series of courses offered and shared by Pacific Lutheran University and St. Martin's College as part of its involvement in the ecumenical movement and the unity of human family.
Lutheran Institute for Theological Education (LITE): The Religion Department also participates in a program of continuing theological 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.
Petersen, Ch.; Christopherson, Eklund, Gehrke, Govig, Ingram, Knutson, Pilgrim, Stivers. Assisted by Ard, Brasivell, Elgin, Hurst.

131 Judaeo-Christian Life and Thought
132 Religious Experience
241 Biblical Literature
251 Introduction to Theology
261 Religions of Man
262 Myth, Ritual, and Symbol
341 Old Testament Studies
342 New Testament Studies
343 The Life of Jesus
351 Christian Ethics
361 Philosophical and Religious Traditions of India
362 Philosophical and Religious Traditions of China
367 Judaism
371 Ancient Church History
372 Modern Church History
373 American Churches
381 Studies in Church Ministry
382 Christianity and the Social Crisis
383 Religious Experience Among American Minorities
391 Luther
392 Christian Classics
451 Christian Thought and Modern Consciousness
485 Christianity and the Arts
490 Scnior Seminar in Religion (open to seniors and graduate students)
(a) Iluman Sexuality
(b) Religion and Psychology
(c) Religion and Politics
(d) Death and Dying
(e) Literature and Theology

491,492 Independent Study
493 Major Christian and Other Religious Thinkers

## INTERIM COURSES OFFERED IN 1977

241 Biblical Literature: Old and New Testaments
307 Religion Through Stor y and Ait
309 Entering the Path of Enlightenment: An Introduction to Buddhism
312 So You Think You Are Human
314 The Quest for the Historical Jesus


## Sociology, Anthropology \& Social Welfare

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 graduate 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, and folk societies.
Opportunities exist for moving through the classroom and out into the community. Field experience (SW 475-6) insures this for Social Welf are majors, but similar possibilities surface during the lnterim, in one-semester courses, and predominantly, in what is termed Block Placement.

Jobst, Ch.; Briar, Clarke, W. Gilbertson, V. Hanson. Oberholtzer, Schiller, Walter, Willis. Assisted by guest lecturers.

## SOCIOLOGY

101 Introduction to Sociology
240 Social Problems
260 Interpersonal Relationships and Group Behavior
280 Introduction to Race Relations
340 (rime and Delinquency
342 Family
343 Changing Communities
344 Contlict Resolution
345 Bureaucracy in Society
381 Socialization
390 Sociology of Poverty
430 Religion in Socicty
441 Race, Revolution and the Developing C'ountries
442 Social Policy and Organization
443 Sociology of Education
444 Deviant Bchavior
470 Sociological Inquiry
491 Independent Study: Undergraduate Readings
492 Independent Study: Undergraduate Field Work
493 Seminar in Sociology
501 Program Seminar
503 Group Process
505 Social Science Methods
511 The C'riminal Justice System
512 Rehabilitation Models
513 Sociology of Human Service Systems, Planning and Change
521 Social Systems Intervention
531 Minority-Majority Rclations
541 Social Stratification in Social Systems
590 Seminar
595 Graduate Readings
597 Thesis
ANTHROPOLOGY
101 Anthropology: A Gencral Introduction
220 World Ethnology
221 Physical Anthropology

222 Archaeology and the Evolution of Culture
321-326 Culture and Peoples Series
321 Africa
322 Asia
323 Oce:ania
324 South/Central America
325 Traditional Liturope
326 Native North America
415 The Dynamics of Sociocultural Change
420 Economic Anthropology
435 Psychological Anthropology
445 Culture and Cognition
470 Anthropological Inquiry
491 Independent Study: Undergraduate Readings
492 Independent Study: Undergraduate Field Work
493 Scminar in Anthropology

## SOCIAL WELFARE

222 Community Services
271 Introduction to Social Work
333 Interviewing
365 Social Intervention
442 Social Policy and Organization
472 Social Work Practice
475,476 Field Experionce
484 Social Research
490 Seminar
491 Independent Study
501 Seminar in Family Group Therapy
502 Family Therapy Practicum

## INTERIM COURSES OFFERED IN 1977

303 The Human Scrvices
304 Women in Society
308 Being Gay in America: The Homosexual Alternative
309 A Cross-Cultural Look at Deviance

## FOREIGN STUIDY OPPORTUNITIES AT PLU

"Every man takes the limits of his. own vision for the limits of the world." --Schopenhauer

PLU encourages students to expand their vision of the world by making available various opportunities to study in other countries. The Foreign Studies Program Coordinator, Office of the Provost, has information on study, work, and travel in foreign countries and will gladly assist students in selecting appropriate programs. Faculty members in the Department of Modern and Classical Languages are also pleased to talk with students regarding foreigı study. The various options for such study are described below.

Students may choose to study on a program called Independent Liberal Arts Colleges Abroad. The program is sponsored by Pacific Lutheran University in consortium with four other colleges in the Pacific Northwest - Gonzaga University, University of Puget Sound, Whitman College, and Willamette University. To date, the programs have been one-semester programs during the fall in London. Programs in the future may be situated in other European countries or other parts of the world. PLU has also emphasized travel courses during the January Interim and the summer sessions. Ordinarily there are five or six offerings each year during the Interim and one or two offerings during the summer.

In order to make more foreign study options available to students, PLU has affiliated with Central College and with the Council for International Educational Exchange. Central has programs in Paris, Madrid, London, Vienna, and the Yucatan, and CIEE has study centers in Paris, Rennes, and Seville.

In addition to the above, students may also pursue studies in locations throughout the world by special arrangement with a variety of other programs for which PLU may grant academic credit. However, in the case of such programs with which PLU is not directly affiliated, students should file a letter of intent with the chairman of their respective major departments and with the Provost prior to leaving PLU. Such a letter should outline in broad terms what they propose to study, where and at what length of time, and how the foreign experience relates to their academic program. On the basis of this information, plus a record of lectures attended and examinations completed, academic credit may 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 acpuired before embarking. Upon return, students will, with the assistance of the chairman of the Department of Modern and Classical Languages, prepare a written request for academic credit. If studies have been pursued in several
academic fields, approval will be required from each department concerned.

In all cases, students who are considering study in another country should first discuss plans with the Foreign Studies Program Coordinator in the Office of the Provost and complete a Leave of Absence form from the Office of the Registrar before departing. This will facilitate return to the University at the conclusion of the foreign study program. Attendance at a foreign university docs not waive graduation requirements of PLU.

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

Students enrolled at PLU who have been selected for the Air Force ROTC Commission Program and transferees 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 fall semester preceding the expected date of entry into the Professional Officers Course. Selection for the course is on a sompetitive, best qualified 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 coure, the University conducts late-afternoon 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 offerings 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 credentials 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 submit a letter of academic standing or give other 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 Summer Session at the University.

## KPLU-FM, PUBLIC RADIO

KPLU-FM. . . Stereo 88.5 mHz . . is licensed by the Federal Communications Commission to the University Board of Regents.

KPLU-FM presents to the audiences of the Puget Sound region a program service purposefully designed to enrich homes, to inform persons, to entertain, to educate, and to serve as an alternative broadcast system.

KPLU-FM, on the air seven days a week, 52 weeks a year, is managed by a professional staff and operated by University students. Student employees represent a variety of academic backgrounds ranging from art to zoology.

KPLU-FM programming consists of classical music, jazz, news, and public affairs. The Cleveland Orchestra, Boston Symphony, and New York Philharmonic are among the performing groups heard weekly in concert over the station. Program sources include Mutual Broadcasting System, Parkway Productions, Library of Congress, National Public Radio, and Radio Canada International.

## CHOICE

Since 1969. CHOICE, Center for Human Organization in Changing Environments, has functioned as a community service and action-research arm of Pacific Lutheran University. The acronym, CHOICE, conveys its function and style: to initiate processes and programs both on and off campus which assist people to participate in making choices which may lead to improved quality of life.

CHOICE has assisted many communities caught up in the turmoil of urban change by providing linkages with community service agencies and offering channels for social involvement by faculty and students. Increasingly, CHOICE has been instrumental in catalyzing needed processes of change on campus in order to effect better use of the University's resources.

Through a network of skilled resource persons, CHOICE provides organizational development services, communications and planning workshops, and training programs for those involved in social change, human relations, and conflict resolution, as well as curricular and program evaluation.

CHOICE has participated in a consortium of colleges and television stations, The Puget Sound Coalition, a region-wide education-action 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, California Lutheran, Capital, Concordia-Moorhead, 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 complementary relationship exists between the students' intellectual development and satisfaction of their other individual needs. Interaction with persons of differing life styles, application of classroom knowledge 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.

## RESIDENTIAL LIFE

Residential living is an integral part of the educational process at PLU and the residence halls were constructed with that in mind. University 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 achieving senior status or the age of 22 years.

As a residential campus, Pacific Lutheran University offers students a valuable 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 human beings.

Campus residence halls are small. 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. Men and women of many backgrounds and cultures live on campus: therefore, students in residence have a unique opportunity to broaden their cultural horizons.

The University cares about the quality of life on campus. The attractive and comfortable residence halls enrich the quality of life and enhance the learning process. The University offers students high-quality housing opportunities including student leadership experiences, formal and informal programs, and peer associations. The student governing
bodies are strong and actively participate in improving the program.

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

Most of the halls are co-educational. Although they are housed in separate wings, men and women in co-ed halls share lounge and recreation facilities, and common residence government, and participate jointly in all hall activities. All-men's and all-women's halls are reserved for those who desire this type of living experience.

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

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.

## RESPONSIBILITIES OF COMMUNITY LIFE

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 students, their 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 Handhook which is available at the Student Life Office and is issued to accepted students preceding their freshmann year.

## 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 Congregation meets in regular worship and also celebrates the Lord's Supper each Sunday. Pastoral services of the University Ministers are available 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.

## ACTIVITIES

The PLU Student Handhook enumerates over 50 academic and пои-academic organizations, clubs, societies and interest groups, which testifies to the diversity of campus extra-curricular 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 development of the individual rather than the search for athletic glory, yet the University is proud of its varsity championships in many sport s .

## STUDENT SERVICES

*THE STUDENT HEALTH CENTER retains the services of a full-time Medex with a backup physician and nurses for basic medical care or referral. All students are entitled to the services of the Center.
*HEALTH AND ACCIDENT INSURANCE 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, Interim, or spring registration only. A brochure outlining the program is available from the General Services Office. All foreign students musi take out the school insurance.
*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 and interest inventories are available to assist students with career planning, educational adjustment and personal problems.

* Details available in the Student Handhook.

The LEARNING SKILLS SERVICE, located on the second floor of the Mortvedt Library, provides means by which students may further develop their academic skills as well as receive immediate, practical assistance with short-term academic problems.

LSS teaches a two-credit study skills/reading class, as well as non-credit speed reading classes and minicourses in such basic learning skills as handling time, writing term papers, exam preparation, and note-making. Short review classes in math and English grammar and usage are also offered.

LSS also offers a variety of individualized services: assistance with term papers, assistance with study problems, academic counseling, and private tutorials for most PLU courses. Most LSS services are free of charge to PLU students.

## THE 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 seeks to fulfill the PLU commitment to a developing program of career and life planning. Students are assisted during their education in making meaningful and realistic decisions concerning their life and work after graduation through conferences with professional staff, workshops and seminars, classroom and dorm presentations, and materials housed in the Careers Resource Center.

The Career Planniing Office lists partand full-time employment opportunities and summer job openings for students and alumni, assists candidates in developing job search techniques, and coordinates an on-campus interviewing schedule of recruiters from industry. business, government, and graduate schools.

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 st udents eating fewer than three meals per day.

The Food Service is closed during vacation periods.

Students with special diets can be accommodated at no extra cost.

Students living off campus are encouraged to eat their meals on campus.

Visitors are invited to eat in either dining hall at the cash price.

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

Student Government is an integral part of student activities at PLU. The associated students elect a senate to govern their affairs and oversee an extensive conmmittee program that involves hundreds of students in actively planning programs and representing student opinion on various University boards and committees.

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 suggested 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.

## THE UNIVERSITY CENTER

The University Center is headquarters for many of the campus activities and is the place where students and faculty gather to eat, enjoy the recreational facilities, and exchange ideas. The building itself has an interior design which features red and orange accenting the browns of northwest timber and is a beautiful as well as functional facility.

## PROGRAM FOR COMMUTING STUDENTS

Every effort is made to assure commuting students enjoy the same well-rounded university experience as those in residence. First-year students who will be at home are invited to participate in a special program which deals with enriching college for them. Of course, off-campus students are invited and encouraged to participate in the varied and frequent activities programs planned for all students.

## 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 Mt. 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 trancquil 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.


Admission

Applicants for admission are evaluated without regard to sex, race, creed, color, or national origin. Although there are no arbitrary entrance requirements, admission is selective. Applicants who present academic and personal traits which our experience indicates will enable them to succeed at the University and benefit from its environment will be offered admission. The criteria considered include grade point average ( 2.5 or above), class rank (top half), transcript pattern, test scores, and recommendations. Students are admitted to either the fall or spring semester. Acceptance 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.

## APPLICATION PROCEDURE: ENTERING FRESHMEN

Students planning to enter as freshmen may submit application materials anytime after completion of the junior year of high school. Admission decisions are made beginning December 1 unless a request for Early Decision is received. Candidates are notified of their status as soon as their completed application has been received and evaluated. Credentials required are:

1. Formal Application: Submit the Uniform Undergraduate Application for Admission to Four-Year Colleges and Universities in the State of

Washington. Available from high school counselors or the PLU Admissions Office.
2. $\$ 15.0()$ 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 indicates satisfactory completion of the senior year and attainment of a diploma must also be presented.
4. Recommendations: Two recommendations must be prepared by principals, counselors, pastors or other qualified persons. The PLU Admissions Office will supply the forms.
5. Test Requircment: All entering freshmen must submit scores from either the College Entrance Examination Board, Scholastic Aptitude Test (SAT) or the American College Test Assessment (ACT) or for Washington State residents, the Washington Pre-College Test (WPCT). Registration procedures and forms are available at high school counseling offices.

## EARLY DECISION

High school students who have decided upon PLU as their first choice may be offered admission as early as October 1 of their senior year. Early Decision Applications must be made by November 15 of the 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 degree after completion of the junior year or first semester of the senior year of high school. Exceptional students who wish to enroll before completing all required units in high school must have a letter submitted by a recognized school official which approves early college admission and gives assurance that a high school diploma will be issued after completion of specified college work. Only students highly recommended for Early Admission will be considered. Generally these students 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 65)


## ADVANCE PLACEMENT OPPORTUNITIES

I. CEEB EXAMINATIONS: Students interested in seeking advanced placement or credit toward graduation through the examination program of the College Entrance Examination Board should direct inquiries for specific information to the department or school which offers the academic subject of their choice. General inquiries about the CEEB program may be addressed to the Office of Admissions.
2. DEPARTMENTAL EXAMINATIONS: A number of departments and schools offer placement examinations in order that students may be advised as to the level at which they may most advantageously pursue a given subject. Credit toward graduation may be given in certain cases, depending on the examination score and whether the subject matter was nol part of the course work by which the high school diploma was earned. Again, inquiries for specific information should be directed to the department or school offering the particular subject.

## APPLICATION PROCEDURE: <br> TRANSFER STUDENTS

Students who began their higher education at other accredited colleges or universities are welcome to apply 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 $\mathrm{C}+$ grade point average $(2.25)$ in all college work attempted is required for regular admission. Test scores may be required for applicants who have limited college experience. Credentials required are:

1. Formal Application: Submit a Uniform Undergraduate Application with SI5.00 non - refundable application/records fee.
2. Transcripts: Official transcripts from all previous collegiate institutions at tended 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.
3. Clearance Form: The Office of the Dean of Students at your most recently attended (full-time) institution must complete a clearance form (provided by PLU Admissions Office).
4. Recommendations: Two recommendations 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 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
2. The University allows up to 20 semester hours of USAFI credit and up to 20 semester hours for military credit, providing the total of the two does not exceed 30 semester hours.
3. The University does not grant credit for college level GED tests.
4. For information on the College Level Examination Program (CLEP), refer to section on Credis by Examination (page 6.5).

## PROCEDURES: FORMER STUDENTS

Full-time students who have not been in attendance for one semester or more may seek re-admission 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 re-admitted. 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. Hedical Requirement: Before final matriculation, each new full-time student (ten semester hours or more) must submit a Medical History and Consent Form acceptable to the PLU Health Service. Students are not finally admitted until this form is approved.
2. Advance Payment: A $\$ 75.00$ Advance Payment is necessary following an offer of admission. This payment is the student's acknowledgement of acceptance and both guarantees a place in the student body and reserves housing on ca pus if requested. It is credited to the student's account and is applied toward expenses of the first semester. Fall applicants offered admission before May I 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 refund date for Interim is December 15. and for spring semester, January 15.
3. Two Forms: A Student Personnel Form and a Directory Information/Housing Application Form must be completed by all students and returned with the advance payment.

# Financial Aid 

Recognizing that many students who want to attend Pacific Lutheran would be unable to meet all expenses of enrollment from personal or family sources, the University attempts to provide financial assistance to all eligible students. Any student approved for enrollment or currently enrolled may request financial aid. About half of our students receive help in the form of gift assistance (i.e. scholarships, talent awards, grants), low interest deferred loans or employment. In many cases a financial aid award will be a combination of these forms of assistance.

The quantity and composition of an award is based upon demonstrated financial need, academic achievement, test scores, and other personal talents and interests. Need is determined from analysis of the Financial Aid Form (FAF), which is a statement of financial condition provided by the College Scholarship Service (CSS). Analysis of the Financial Aid Form determines an expected contribution for college expenses from the student and parents or guardian. "Financial Need" is defined as the difference between total student expenses for an academic year and the expected student/family contribution and is a primary factor in determining eligibility for most available aid.

## APPLICATION = <br> NOTIFICATION - <br> CONFIRMATION:

Application Procedure:
FRESHMEN - Mail a Financial Aid

Form to the College Scholarship Service by February 1. Apply for admission and receive acceptance by March 1. A finnancial aid decision will not be made unless $y$ ou have been accepted by the Office of Admissions. The Financial Aid Form is available from counseling offices, CSS, or the PLU Financial Aid Office.

TRANSFERS - Follow the same procedure as above and submit a PLU Financial Aid Application and a Financial Aid Transcript (available from PLU).

CONTINUING PLU STUDENTS, RENEWALS - Mail a Financial Aid Form to the College Scholarship service by March 1. Submit PLU Financial Aid Application by March I5. These steps must be taken each year.

NOTE - An application for financial aid may be submitted at any time but failure to satisfy the application deadlines may result in a denial even if financial need is demonstrated. Awards are for one year only and requests for renewal must be submitted annually.

## Notification of Award Decisions:

Ireshman and Transfer award decisions are made and notifications are sent beginning in March. Eurly Decision students will receive an award notice in January if their confidential statement has been received. Continuing PIU Student financial aid decisions are made and notifications sent out beginning in April.
Confirming Aid Offer:

Aid offers are confirmed by

returning the signed Financial Aid Award Notice and submitting the $\$ 75$ Advance Payment. This should be done as soon as a decision can be made hut must be completed by Mav 1. Any aid offer not accepted by May I will be cancelled. All awards made after May 1 must be accepted within two weeks. fiarly Decision Students must also respond within two weeks of their offer.

## TYPES OF AID:

## University Gift Assistance:

UNIVERSITY SCHOLARSHIPS are granted on the basis of academic achievement and financial need. To be considered, a freshman applicant must have a 3.30 secondary school grade point average. Scholastic ability must also be reflected in test scores from the Scholastic Aptitude Test (SAT), or the American College Test (ACT), or the Washington Pre-College Test (WPCT). Transfer and continuing students must have a 3.0 cumulative g.p.a. to be qualified for first time and/or renewal awards. PLU is a sponsor of Viational Mcrit Scholarships. Students who earn semifinalist standing are encouraged to contact the Financial Aid Office for information concerning a PLU Merit Scholarship.

PRESIDENT'S SCHOLARSHIPS of $\$ 500$ are awarded to entering freshmen in recognition of outstanding academic achievement in high school and in anticipation of superior performance at PLU. To be a candidate. a student must have a high school g.p.a. of 3.75 or higher, present high test scores, and be offered admission by March 1. Finaricial need is nett a determining factor and no application is required. Only a limited number of students who meet the above requirements are selected. The awards. made in March, are renewable if a 3.3 grade point is maintained.

## ALUMNI MERIT SCHOLARSHIPS

 of $\$ 1000$ are available to exceptional students. Preference will be given to sons and daughters of PLU Alumni. To be eligible entering freshmen must have a cumulative high school g.p.a. of 3.5 or higher. Non-freshmen and renewal applicants must have a minimum collegiate g.p.a. of 3.3 to be eligible. Financial need is not a determining factor and a special application is required.AIR FORCE ROTC SCHOLARSHIP recipients (4-year, 3-year, or 2-year) may attend Pacific Lutheran. AFROTC classes are held at the Aerospace Studies Department on the University of Puget Sound campus, about 20 minutes driving time from the PLU campus.

TALENT AWARDS are granted to students with financial need who have exceptional ability in the fields of forensics. drama, art, music, and athletics. The candidate must make arrangements with the school/department concemed for an audition and/or personal interview. In some cases a tape or film will be satisfactory. A recommendation from a faculty member must be on file before a student is considered for a Talent Award.

UNIVERSITY GRANTS are awarded in combination with loans and employment to students with financial need who do not qualify for Scholarship assistance. Minority (irunts are available for qualified minority students in addition to all other types of fimancial aid described. Foreign Student (irants are restricted to those foreign students who have provided their own resources for at least one year of attendance. Grants usually amount to less than one-third of the cost of attendance.

MINISTER'S DEPENDENT GRANTS are available to unmarried, dependent children of a regularly ordained, active minister or missionary of a Cliristian church. The minister's principal employment and primary source of income must be a result of church work. The minimum annual grant is $\$ 200$ but this may be increased to $\$ 700$ if the eligible student has a demonstrated financial need as detemined from the Finamcial Aid Form. If a FAF is submitted no special MDG application is required. June $I$ is the deadline for requesting this grant. Requests received thereafter will be honored only as budgeted funds permit.

SPECIAL GRANTS may be given to dependents of PLU faculty/staff. Married children are not eligible. The amount will be determined at the time of registration. An application must be submitted to the Personnel Office.

ALUMNI DEPENDENT GRANTS of $\$ 100$ for spring semester are given to full-time students whose parent(s) attended PLU (PLC) for two semesters or more. To be eligible the alumni dependent must have been a full-time student the previous fall semester and complete an application in the Financial Aid Office by December I.

GRANTS in the amount of $\$ 50$ per semester shall be given to each of two or more full-time students from the same family attending PLU simultaneously, provided that the main support for both is from parents and provided they have not received any other University grant or award. Married students are also eligible when both are full-time students. An application must be filed in the Business Office at/or following registration and the grant will be credited after eligibility is established.

In addition to its own scholarship funds, the University has at its disposal

the following restricted funds, generally awarded to those students who complete regular application and who have finished their freslıman year:
Aid Association for Lutherans Scholarships Altrusa Club, Tacoma Chapter Scholarship Alumni Scholarship Fund
American Association of Usiversity Women 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
Burelaff Memorial Scholarship
California Scholarship Federation Scholarship for Sealbearers
Carl Falk 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
Rebecca 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 Schelarship
Rev. Karl Kilian Memorial Fund
Kinsman Award
Melvin Kleweno Memorial Scholarship
Ladies of Kiwanis 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
Margare! 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
Tulerculosis Association of Pierce County Scholarship
Hopper Memorial
Olsen Memorial
Hedvig Arthur Memorial
Donald A. Brunner Memorial
Mark Salzman Memorial
J.P. Carlstrom Scholarship

Louis and Leona Lamp Scholarship
Shakey's Pizza Parlors
Gordon Pearson Memorial

## Governmental Grants:

THE BASIC EDUCATIONAL OPPORTUNITY GRANT PROGRAM (BEOG) is a Federal program designed to provide the "foundation" for a financial aid package. It is intended for students with high financial need. Eligibitity is determined by submitting a separate BEOC application directly to a Federally contracted agency. The application may be obtained from your school or from PLU. Basic Grants are available in amounts up to $\$ 1400$ per уеаг.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS (SEOG) are available to students who have exceptional finincial need. They range from $\$ 200$ to $\$ 1500$ per year and are limited to no more than one half the total financial assistance given to the student. Eligibility is determined by Federal guidelines. Residents of the State of Washington who attend PLU may be eligible for a WASHINGTON STATE NEED GRANT. These grants are intended for students with high need. On the basis of guidelines established by The Council on Post-Secondary Education, students with specified need as computed from the Financial Aid Form are submitted to the State for consideration. Present procedure does not require a separate application.

NURSING GRANTS to a maximum of $\$ 2000$ per year are available to students with high financial need who are accepted by or enrolled in the School of Nursing (usually not before the Sophomore year).

## LAW ENFORCEMENT EDUCATION PROGRAM (LEEP) -

 Loans and grants for those involved in or planning to pursue careers in Law Enforcement are available to students. Student Employment:There are employment opportunities on-campus and in the community that can help students meet college expenses. Priority for placement is given to those students who have demonstrated financial need. Over 700 students work on-campus each year and the University's annual student payroll is approaching $\$ 500,000$. Many jobs are temporary or occasional, but a student who works an average of 10 hours per week can expect to eam $\$ 600$ during an
academic year. There are limited number of full-time sumber jobs available.

Employment applications are distributed in the spring separately or with Award Notices. Actual assignments are made at the begimning of the school year and at other times as vacancies occur.

The Federal College Work-Study Program provides additional funds for jobs on and off-campus. Recipients are designated by the Financial Aid Office. Loans:

Many students invest in their future by borrowing educational funds. Low interest, deferred loans make it possible to pay some of the cost of education at a later time. Loans are of ten included with gift assistance and work to form the fintancial aid package.

There are three major sources of loans at PLU:

NATIONAL DIRECT STUDENT LOAN (NDSL) - Eligibility is determined by the PLU Financial Aid Office from the Financial Aid Form and is based on need. Most loans range from $\$ 600$ to SI200 annually but cannot exceed $\$ 2500$ for the first two years of school, nor an aggregate of $\$ 5000$ for an undergraduate degree. No interest accrues and no payments on principal are necessary until nine months after a recipient ceases to be a student. Simple interest is on $3 \%$ during the repayment period. Partial or total cancellation is available to military personnel serving in a hostile area and to teachers of handicapped or disadvantaged children.

NURSING STUDENT LOAN (NSL) - A Federal loan program limited to students with need who are accepted for enrollment or enrolled in the School of Nursing (usually not before the Sophomore year). The NSL has provisions similar to the NDSL.

FEDERALLY INSURED STUDENT LOAN (FISL) - Under this program, students may borrow from banks, credit unions, and savings and loan associations. A separate application procedure is required and forms are available from the PLU Financial Aid Office. As much as $\$ 2500$ can be borrowed each year but most lending institutions are limiting loans to \$1500. Repayment of principal is deferred until nine months after a recipient ceases to be a student. The interest rate is $7 \%$ but in cases where the family's adjusted income is less than $\$ 25,000$, interest is paid by the Federal Government while the recipient is attending school.

Short term loans are available from various restricted PLU loan funds which include:
Alumni Association Loan Fund
American Lutheran Church Women Loan Fund
Anson 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 Olson - 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

## VETERANS AFFAIRS AND VOCATIONAL REHABILITATION

Pacific Lutheran University is approved by the Superintendent of Public Instruction and the Veterans Administration to offer courses leading to a degree at the bachelor's and master's levels.

Students who are eligible for veterans' or vocational benefits should contact the PLU Veterans Affairs Office regarding registration information.


## Costs

## TUITION

Students at Pacific Lutheran University pay only for those courses in which they are enrolled. Tuition charges are determined by the number of credit hours for which students register. The 1977-8 rate for one semester hour is $\$ 92.00$. Most courses carry a value of four semester hours. A few specialized courses, i.e., Physical Education, Art, and Private Music Lessons may require extra costs which are listed with each semester's course offerings.

## SPECIAL FEES (1977-8 RATES)

late registration clearance . . . . . . . . . . . . . . . . . . . . . $\$ 25.00$
Audit per hour . . . . . . . . . . . . . . . . . . . . . . . . . . 12.50
Credit by examination: Departmental exam . . . . . . . . . . . . . . 25.00
Student parking:
Year permit (when registered for 10 hours or more) . . . . . . . . . 12.00
Year permit (when registered for less than 10 hours) . . . . . . . . . . 3.00
Student health and accident insurance (estimated fee; actual fee may be ligher) ( 24 hours, 12 month coverage, optional)65.00

## ROOM AND BOARD (1977-8 RATES)

Room and board, per semester, is as follows:

| Fall Semester Room and Board: | Room | Board |
| :--- | :--- | :--- |
| Double Occupancy Room | $\$ 333.00$ | $\$ 350.00$ |
| Single Occupancy Room | $433.00^{* *}$ | 350.00 |

Interim Roo
Continuing* Fall Semester Students,
Double Occupancy $0 \quad 85.00$
New Students, Double Occupancy
60.00 85.00
*(Continuing students must be taking classes or file
a Plan of Action in order to remain on-campus
during Interim)
Spring Semester Room and Board:

| Double Occupancy Room | 232.00 | 350.00 |
| :--- | :--- | :--- |
| Single Occupancy Room | 332.00 | $\mathbf{3 5 0 . 0 0}$ |

An appropriate fee will be assessed for rooms occupied during Christmas break and Spring break.
** Only a very small number of single rooms are available. They are limited to students with medical/physical handicaps which necessitate a single room, and to upperclass students. Students new to PLU normally do not receive single-room assignments.

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. On-campus students are required to eat in the University dining halls.

Students living off-campus are encouraged to eat their meals in the University dining halls. Information regarding board rates and meal plans for off-campus students can be obtained from the Director of Food Service in the Univensity Center.

## MARRIED STUDENT HOUSING

Two-bedroom ( 10 units), per month . . . . . . . . . . . . . . . . .S60.00
Three-bedroom (4 units), per month 75.00

Evergreen Court ( 12 units), two-bedroom, incl. all utilities 105.00

A deposit of $\$ 60.00$ must accompany a reservation for married student housing. This deposit will be held by the University until the occupant vacates the apartment, or cancels the reservation. One month's advance rent for apartments is required.

## PAYMENTS

## Payment Options:

1. Payment by Semester. If this option is selected, the total estimated costs of each semester must be paid prior to the beginning of classes.
2. The PLU Budget Plan provides for prepaying the estimated annual costs in twelve installments from May 10 through April 10.
Note: Enrollment is not complete until paym nt is made.

## ADVANCE PAYMENTS

New students are required to make a $\$ 75.00$ Advance Payment in order to finalize their offer of admission. For fall acceptance this is not refundable after May 1 (December 15 for interim; January 15 for spring semester).

All returning students must make a S75.00 Advance Payment prior to early class registration and/or reservation of a room for the next academic year. This Advance Payment is not refundable after May 1.

Students will not be permitted to finalize registration as long as any bill remains unpaid.

## 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. Student pay checks may be applied to unpaid balances.

## REFUNDS

Partial tuition refund will be made, when a student withdraws from the University, according to the following schedule:
One week or less . . . . . . . . $90 \%$
Between one and two weeks . . . $80 \%$ No refund af ter two weeks

A pro-rata board refund will be made for necessary withdrawal from the University. Board refunds will not be made for any University trips, such as choir, chorus, band, orchestra, athletics, and so forth. Refunds on room will not be made.


# Academic Procedures 

## REGISTRATION

The normal course load for full-time students is 13 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 higher may register for more than 17 hours per semester without the consent 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 may register on designated days.

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. Students must register for each new semester on the designated days and are not officially enrolled until their registration has been cleared by the Business Office and their Place of Residence form has been processed.

## CHANGES IN REGISTRATION

Students may add or drop classes with full refund during the first two weeks of a term. Necessary forms are available at the Registrar's Office. A $\$ 5.00 \mathrm{fec}$ is charged for any change that results in a class being dropped.

Students may officially withdraw from a class after the first two weeks by obtaining the professor's signature on the change form. The grade of $W$ will appear on a student's grade report and transcript.

Students may also completely withdraw for medical reasons. Written evidence from a physician must support a medical withdrawal. The grade of WM will appear on a student's grade report and transcript.

An unofficial withdrawal from a course will be recorded as E. No student may withdraw during final examination week.

## WITHDRAWAL FROM THE TERM

Students wishing to withdraw from the term must obtain a withdrawal form from the Office of the Registrar. IT IS ALWAYS TO THE STUDENT'S ADVANTAGE TO WITHDRAW OFFICIALLY. Students withdrawing for a specified period of time (for example, one semester to one year) may obtain a Leave of Absence form. Students are entitled to honorable dismissal from the University if their record of conduct is satisfactory and if all financial obligations are satisfied.

## 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 (Failure)
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)
W - no credit given (Withdrawal)
WM - no credit given (Withdrawal/Medical)

Incomplete (I) grades indicate that students have been unable to complete their work because of circumstances beyond their control. To receive credit an Incomplete must be converted to a passing grade WITHIN TIIE FIRST SIX WEEKS OF THE FOLLOWING SEMESTER. Incomplete grades which are not converted by removal are changed to the grade indicated by the professor when the Incomplete is submitted.

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 bc 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 <br> 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.
I. 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 eight 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 schools 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 mect 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 GRADING SYSTEM

The instructor of a 300-320 Interim course will indicate in the catalog description which of two grading systems will be used:
a. Honors (H) - for exceptional work; Pass (P): - no credit--the registration will not be recorded. ( H and P do not affect the grade point average.)
b. The regular letter grades: A, B, C, D, E. (Such grades contribute to the grade point average.)
Students in a "regular letter-grade" course may use one of their four pass-fail options.

## ACADEMIC PROBATION

Warning slips may be given to any students who are doing "D" or "E" work at the end of the sixth week. Students shall receive an academic warning if they fail to keep their current grade point average (immediately preceding semester) at or above 2.00 .

Students are placed on academic probation with transcript notation if they fail to keep their grade point average (cumulatively) at or above 2.00. Students receive official notice of such action. Probationary students may be advised to reduce their academic or extra-curricular activities or both.

The enrollment of a student on probation who fails to earn a cumulative average of 2.00 by the end of a probationary semester is terminated. A terminated student may apply for reinstatement 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 Admission and Retention of Students for action.

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

## 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 eligjble for interscholastic competition and 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 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 a degree; it may include any amount of the standard degree program. With the approval of a faculty sponsor and the Honors Council (in 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 attendance. No more than $71 / 2$ courses ( 30 semester hours) may be counted toward graduation, whether it be College Level Examination Program or any other examination. Exceptions to this rule for certain groups of students or programs may be made, subject to recommendation by the Educational Policies Committee and approval
by the faculty. Credit by examination is open to formally admitted, regular status students only.

Arrangements for departmental credit examinations must be made by students with respective departmental chairmen, deans, or directors. Evidence of approval and of payment of the fee should be presented by a student to the professor who administers the examination.

Students may, with the approval of the instructor or the department, gain credit for an audited course which they have 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 students 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 cxaminations 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 General University Requirements shall be consistent witls school, divisional, and departmental policies and standards.

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 degrces, 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, will defer to the needs of students and faculty members.

A UDITING 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 and does not 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, the 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 CLASSFS: Members of the academic community are encouraged to visit classes which interest them. No fee is charged for the privilege. Because regularly enrolled 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 ADVISING PROGRAM

The academic advising program at PLU is set up with two major goals in mind: (1) To maintain a system by which students have an e rly contact with a faculty member from whom they receive a good general introduction to the value of a liberal arts education and are encouraged to explore the many fields of study open to them; and (2) To provide the option for students to receive advising from a faculty member in a chosen academic area of in terest.

Each fresiman student (and each transfer student who wishes) is assigned fo an advising group with a faculty member responsible for general advising. If a student shows an interest in an academic area, that interest will be explored and, if it seems advisable, an area adviser will be assigned to replace the general adviser.

## FRESHMAN COURSE SCHEDULE

Students should 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 (I hour each scmester): 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.

FORLIGN LANGUAGE (4 hours each semester): Either first or second year courses, depending upon the previous preparation of students and whother or not they wish to meet Option I or II of the College of Arts and Sciences. (Applies only to) students seeking a degrec in the College of Arts and Sciences.)

ENGLISH 101 (or an equivalent prose writing course) (4 hours)

RELIGION ( 4 hours): Whenever possible. a religion course should be included in a student's fireshman year program.

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

## DEGREE REQUIREMENTS <br> BACCALAUREATE DEGREES

Baccalaureate degrees are conferred on students who lave completed a minimum of 32 courses ( 128 sementer hours) with a grade point avera e of 2.00 (School of Business Administration - 2.50; School of Education - 2.25) and who have net the following requirements for graduation:

1. The completion of a major as detailed by each schoal 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) numbercd 321 or above.
3. The completion of two 4 -semester-hour 300-320 Interim courses. Only one 300-320 Interim course designated as "advanced" may be used to meet this requirement. (Junior and Senior transfer students must complete only one 300-320 Interim course and it may be one which is "advanced.")
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.)
5. The completion of all courses counted toward a major or a minor with grades of C or higher.

## GENERAL UNIVERSITY REQUIREMENTS

## BASIC CORE REQUIREMENTS FOR all baccalaureate degrees

1. WRITING - 1 course (4 hours)

Met by English 101 or an equivalent prose writing course.

Because scholastic success is partly dependent on the ability to write well, all students are expected to fulsill the writing requirement as early as possible, preferably during the freshmon year. Stutents will not be permitted to enroll for the senior year if the writing requirement has not been met.
2. FINE ARTS - 1 course ( 4 hours)

Met by a course in art, communication arts, or music, as follows:

Art - any course except those in teaching methods.

Commonication Arts - one of the following: $151,162,241,250,363,364,459$.

Music - any course except those in teaching methods.
3. HISTORY AND LITERATURE - 1 course ( 4 hours)
Met by any history course, any literature course in the Department of Mudern and Classical Languages, or an English course (except 101, 328, 400, and 403).
4. PHILOSOPIIY - 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 required course may be chosen from lower or upper division offerings or from the Senior Semin r, an interdisciplinary offering that will help students see the relevance of religious issues and thought to their major fields. Transfer students entering as junior or seniors meet this requirement with one course chosen from the department's offerings.

Only one of the following may be taken to fulfill the University core requirement: 261, 361 . or 362.
6. NATURAE SCIENCES AND MATIIEMATICS - 1 course ( 4 hours)
Met by any course in biology, chemistry, earth sciences (except 101), physics and engineering, or mathematics.
7. SOCIAL SCIENCES - 1 course (4 hours) Met by any course in anthropology (except 221), economics, geography (ex cept Earth Sciences IOI), political science, psy chology (except 110), or sociology.
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. No course will be allowed to meet both University Requirements and College Requirements. Where possible, courses taken to fulfill requirements shall be in different areas. For example, students fulfilling the University history or literature requirement with a course in history, if they elect Option II, should choose a course in English or language to meet the requirement of the College.

## LIMITATIONS - ALL <br> 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 foward 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 four-year baccalaureate program.

## CORE II - THE INTEGRATED STUDIES PROGRAM

Core II is a program especially designed as an alternative means of satisfying the university's basic requirements (except Writing and Physical Education). Consisting of a constellation of interdisciplinagy courses, the program as a whole explores a central theme, "The Dynamics of Change," from a variety of perspectives.

A student who chooses Core II to meet the General University Requirements will begin with Sequence I, following this with any two Sequences chosen from II, III, or IV, and conclude the Program with the Seminar which would normally be taken in the junior or senior year. Individual courses in each Sequence are equivalent to four semester hours of vredit each.

A brochure with further details is available from the Office of Admissions or the Registrar. A brief summary of the program follows.
TIIE DYNAMICS OF CIIANGLE
SEQUENCE I:
The Idea of Progress
IS 211 Course 1: Nature and Supernature IS 212 Course 2: From Finite to Irsifinite SEQUENCE II:

## Human Responsibility

IS 221 Course 1: Developing Man
IS 222 Course 2: The Burden of Human
Responsibility: 20th Century Europe

## SEQUENCE Ill:

Word and World: Ex ploring the Creative
Imagination
IS 231 Course 1: Symbol, Language, Myth
IS 232 Course 2: Metaphor and Model: Inventing the World
SEQUENCE IV:
Limits to Growth
IS 241 Course 1: The Technological Society and the Thrust for Growth
IS 242 Course 2: The Technological Society and the Limits to Growth
SEMINAR:
IS 251 Seminar

## REGULATIONS GOVERNING CORE II

I. Sequence I is prerequisite to all following sequences. A waiver of this sequence may be allowed for a student whose previous work in liberal studies is judged to have been sufficiently broad and relevant to the principal ideas to be studied in the remaining sequences. A committee of the Program's faculty will evaluate such a waiver request.
2. Sequences II, III, or IV may be taken independently of enrollment in the Program as a whole, but will not satisfy any portion of the General University Requirements. Credit will be given for such courses, however, and may count as elective credit or er dit toward a major if a course is specifically allowed by the appropriate department(s).
3. If, for any reass)n, students who emroilled in the Program do not complete it, a Transfer Committee (composed of the three Divisional Chairmen and the Dean of the School of Fine Arts) will evaluate their work in the light of its scope and in viei of the General University Requirements and make a decision concerning what areas of study such students must still take to satisi'y the normal General University Requirements.
4. Enrollment in the concluding Seminar is open only to students who have completed Sequences I and any two of II-IV, or any two of II-IV with a waiver of Sequence I.
5. Sequence I may be taken in the freshman or sophomore year, and any two of Sequences II-IV may be taken in the sophomore, or sophomore and junior years. Normally, the concluding Seminar will be taken in the juniur or senior year.
6. Students successfully completing the components of this Program as outlined above will be regarded as having fulfilled all the Gencral University Requirements except courses in Writing and Physical Education and the Interim requirement.
7. Since one of the emphases of this Program is to develop the writing, critical and analy tical skills of students, participation in the actual course work and discussion is essential. Therefore, component courses in the Program may not be taken by means of challenge examinations, nor will CLEP credit, work-study or other acadernic experience be substitutable for course credit in this Program.
8. Passsfail credit may not be elected by students enrolled in this Program in any sequence of courses after the first or in the Seminar. No component course may be offered by the instructional staff as an
exclusive pass-fail course.
9. Since a sequence of courses is especially designed as a consecutive and interrelated whole, the first course in each sequence is prerequisite to the second. They may not, therefore, be interchanged.

## GRADUATION

Students expecting to fulfill degree requirements WITHIN THE ACADEMIC YEAR are required to file application for graduation with the Registrar.

There are four degrec-completion dates (end of fall semester, interim, spring semester, and second summer session). Degrees are formally conferred at May and August Commencemen is. 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 permanent 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.

Students who are 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. Their status will be designated on the commencement program and their diplomas will be dated in August.

Students who planl to transier back to Pacific Lutheran University for a degree (math, plyysics. engineering programs) must apply for graduation prior to or during the first semester of their junior year so that deficiencies may be met before they leave campus.

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

## SPECIAL PROGRAMS

## WASHINGTON STATE COUNCIL ON ECONOMIC EDUCATION

The Washington State Council on Economic Education is a state-wide organization headquartered at PLU, and is designed to raise the level of understanding concerning economic principles and procedures among teachers and students in the Pacific Northwest. The program includes a Center for Econornic Education, and is recognized nationally by the Joint Council on Economic Education. Its functions are:

1) To offer special courses to noneconomics majors at PLU, especially to future teachers and to current members of the teaching profession. These courses emplasize 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 state, 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 eceromic principles and issues.

The WSCEE is an cducational organization supported by a coalition of community groups representing education, business,
labor, agriculture, and government. It operates as an independent non-profit, non-partisan educational organization dedicated to the principle that each citizen's ability to recognize and objectively analyze economic issues is essential to his or her welfare and the country's progress.

## CLASSICS

At PLU the Classics Program is a cooperative effort among the departments of foreign languages, history, philosophy, religion and fine arts. Its goal is to unite the "heart of the liberal arts" with the mind, through history and philosophy, and the soul, through religion, and to embellish this trinity of themes with the visual experience of art.

This in terdepartmental major requires the completion of 10 courses, including at least one year of one of the Classical Languages and two of the other (Greek and Latin). The remaining courses are selected from the list below in consultation with the program coordinator.

Latin 101-102 Elementary
Latin 201-202 Intermediate
Greek 101-102 Elementary
Greek 201-202 Intermediate
Greek 421-422 Masterpieces of Greek
Art $280 \quad$ Twentieth Century Art
Art 382 Ancient Art
Art 383 Medieval Art
Art 384 Renaissance Art
Art 385 Baroque Art
Art $487 \quad$ Nineteenth Century Art
Art 490 Seminar
History 321-322 Classical Civilization
Phil 331 Ancient Philosophy
Religion $241 \quad$ Biblical Literature
Religion $341 \quad$ Old Testament Studies
Religion 342 New Testament Studies
Religion 371 Ancient Church History
Independent Study Courses
Selected Interim Courses
The student is expected to become familiar with the reading list for that part of the program (Art, Literature, History, Philosophy or Religion) in which his or her interest lies.

The program is designed to be flexible. In consultation with the Classics Committee, a student may elect a course or courses not on the Classics course list.

## SCANDINAVIAN STUDIES

The Scandinavian Area Studies major requires the completion of ten courses ( 40 semester hours), including two years of either Danish, Norwegian, or Swedish language courses, one course in Scandinavian literature, and one course in Scandinavian history. The remaining four courses are selected from the list below in consultation with the program coordinator.
Anthropology 325 S-Culture and Peoples of Traditional Europe

## Economics 331

S-International
Economics
Economics 381 S-Comparative Economic Systems
English 231
S-Masterpieces of European Literature
History 323
History 495
S-The Middle Ages
S-Seminar: European History

Mod \& Classical Scandinavia in the
Lang/History Tiventieth Century
370
Mod \& Classical
Lang/History 470
Music 434
Scandinavian Music
Norwgian $101 / 102$ Elementary Norwegian Norwegian 201/202 Intermediate Norwegian
Norwegian 351
Conversation and Composition: Folktales
Norwegian 352 Advanced Conversation and Composition: Ballads and Poctry
Philosophy 365
Kierkegaard and Existentialism
Political Sci 282 S-Comparative Government
Religion 372
Scandinavian 321
Scandinavian 322
S-Modern Church History
Vikings and Emigrants
Modern Scandinavian Civilization
Scandinavian 421 Ibsen, Strindberg, and their Con temporaries
Scandinavian 422 Contemporary Scandinavian Literature
Scandinavian 491-2 Independent Study (1-4) Sociology 342 S-Family

Interim courses approved by the Scandinavian Study Committee may also he included as electives. Courses indicated by the prefix $S$ in the title are regular departmental offerings in which readings and work assignments to a significant extent are focused on Scandinavia for those students enrolled in the Scandinavian Area Studies major.

Students are encouraged to spend one year in Scandinavia, though this is not required to fulfill major requirements.

## NON-WESTERN AND <br> COMPARATIVE AREA STUDIES

Students interested in Non-Western and Comparative Area Studies may complete a cross-disciplinary minor program, reflecting their geographic, theoretical, or disciplinary interests. The minor program consists of six courses ( 24 semester hours), chosen from those listed below. A minimum of four courses must be selected from four different disciplines. A fifth course may be chosen from any diseipline. The sixth course must be an independent study course supervised by the student's adviser, which will integrate the program.

All students participating in this minor must meet with the program coordinator first. The coordinator assists students to select advisers and approves all programs developed by students in consultation with their advisers.

Courses completed in a major program cannot be credited also to the minor program. Students who have not declared majors may be credited for courses previously taken which are in the minor program, upon approval of the coordinator and their adviser.


New courses and Interim courses may be ennsidered for fulfillment of program requirements upon approval of the coordinator and program advisers.
Courses approved for the Non-Western and Comparative Area Studies minor program:
Anthro 220
Anthro 222
World Ethnology
Archacology and the Evolution of Culture
Anthro $321 \quad$ Culture and Peoples of Africa
Anthro $322 \quad$ Culture and Peoples of
Anthro 323 Culture and Peoples of Oceania
Anthro 324
Anthro 326
Anthro 415
Anthro 420
Anthro 435
Anthro 445
Anthro 493
E.conomics 331

Economics 38 I
History 109,110
History 333
Ilistory 336
Ilistory 337
History 340
Ilistory 356
Political Sci 282
Political Sci 331
Political Sci 336
Political Sci 338
Political Sci 383
Political Sci 384
Political Sci 387
Religion 261
Religion 262
Religion 361

Religion 362

Sociology 344
Sociology 430
Sociology 441

Sociology 363

FALL 1977
Art 387
English 381

English 384

English 391
History 331
Poli Sci/Soc 483

Contemporary British Culture and Society

Victorian Art and Society
Epic and Romance: A Panorama of Medieval England
Literature and Thought of the Renaissance in England
Major Victorian Authors
The IIstory of England
Modern British Politics and Society
Additional information about the London Program is available from the Office of the Provost.

## ENVIRONMENTAL <br> 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 11I, Chemistry 103, 104, Earth Sciences 101, 131, 202.

SOCIAL SCIE:NCES - 16 semester hours: Economics 150; Political Science 101 or Sociology 101, 240, or 260: Business Administration 230; and one approved upper division course, such as Economics 362 or 432: llistory 460; Physical Education 326; Political Science 352 or 356 : Psychology 330; or Sociology 343, 345 , or 430.

IIUMANITIES - 16 semester hours: Art 294; Philosophy: two approved courses, such as: $324,328,385,395,427$; Religion: one approved course, such as: $351,382,451$. Integrated Studies 241-242 may apply as part of the Humanities component with adviser's approval.

INTEGRATIVE EXPERIENCE: - 8 semester hours: During the Interim and final semester of the senior year or at another approved time, all students would participate in a study-research-action program designed to draw upon the broad background of the above courses and the expertise of their own major fields. Appropriate courses may be identified in the Interim Catalog. Semester courses may include, but are not limited to, appropriate departmental or interdisciplinary seminars: independent study or research courses; field experience and internship programs: employment or volunteer service within community action agencies.

## ENGINEERING

The University offers two programs leading to carecrs in enginecring. Concentrations in Electrical and Mechanical Enginecring Sciences are possible in each offering. In either program, students should have had High School mathematics at least through trigonometry.

## ENGINEERING; PIIYSICS

This program prepares students for employment in many diverse industries or for graduate studies in nearly all engineering fields. Strength may be built in Electrical or Mechanical Engineering Sciences. For maximum flexibility in upper division courses, students should schedule their first two years as indicated:
FRESHMAN YEAR:
Fall EGR 151
PHYS 147, 153
MTH 15 I
Basic Core
PE Course
TOTAL
2
5
4
4
1
16
4
5
4
4
1
18
Spring EGR 182
PHYS 148, 154
MTH 152
Basic Core
PE: Course
TOTAL
SOPIIOMORE YEAR:
Fall EGR 23I or 271
PHYS 223
MTH 253
Basic Core
PE Course
TOTAL 15
Spring EGR 232 or 272
EGR 354
MTH 144
Basic Core
PE Course

## TOTAL

17
Other schedules are possible and can be worked out in consultation with the Physics and Engincering Department. Chemistry II5 and Mathernatics 144 may be worked into a schedule in various places. Junior and senior year schedules are determined by upper, division requirements and by the students' objectives. See detailed course descriptions and requirements in the "Physics and Finginecring" section of this catalog.

## 3-2 ENGINIEERING

A dual-degree 3-2 collaborative tic-in with Columbia and Stanford Universities is designed to immerse engineering students in the uniqueness of two institutional settings over a period of five years, three at PLU and an additional two at Columbia or Stanford. Students out of this program have also gone 3-2 quite successfully with the University of Washington or other state universities in the Pacific Northwest.

A smaller university setting such as PLU is uniquely suited to foster a student's personal development while making a firm but not premature commitment to professional and carcer goals. In this type of setting, it is possible to clarify the social context in which engineers function. A major school of Enginecring such as both Stanford's and Columbia's emphasizes advanced studies, research, and interaction with industry. Our 3-2 Engineering Program gives students the best of two settings, breadth while at PLU
and then depth in engineering specialty at Columbia or Stanford.

During the first threc yoars of the PLU engineering program, the student must complete all Basic Core Requirements (Humanities), two Interims, all basic science and mathematics r quirements, and sufficient enginecring to gain a clear sense of direction before a recommendation to Columbia or Stanford can be granted. Specific courses are detailed in the "Engineering" section,

Two degres are earned: B.S. in Engineering-Science by PLU at the end of the student's first year at the major school (fourth college year) and the B.S. in an Eingineering Specialty awarded by Colambia or Stanford at the end of the second year (fifth college year) at the major school.

Stadents slould make every effínt to schedule their courses in their first two years in 3-2 Enginecring similar to that tisted above for Engineering-Physies. Other schedules are possible depending upon one's accomplishoments in lligl School science and mathematics and can be worked out in consultation with the Plysics and Engineering Department.

## 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 beller preparat on for the study of law. In addition to meeting degree requitements, prospective law students are advised to complete four semester hours each of economics, history, philosophy, political science, psychology, wociolegy and speech. Pre-law students are advised also to complete substantial work in accounting. Students should plan their course sequence accordirg to requitements of the law school in which they ane 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 school bulletins, and a newsletter, The Pre-law Achescate. and other resource matcrials are available. In addition, students may wish to discuss their program with the pre-law adviser in the Department of Political Science.

## URBAN AFFAIRS

(Career possibilities in state and local government service.)

For certification, successful completion of the following courses is requ red: Political Science 101, 151, 325, 326, 352 or 457 . and 458: Economics 150 and 362; and Suciology 101 and 344.

## PUBLIC AFFAIRS

(Administration and policy-planning careces in pubtic agencies.)

Required: 32 semester hours of Political Science: 20 semester hours of Economics: plus 12 semester hours of electives on advisement.

## PUBLIC POLICY

Stadents interested in integrative approaches to public policy issues are encouraged to participate in the study and research activities of the Center for the Study of Public Pulicy in the Division of Social Sciences. Currently four spccial study groups
are active: FFamily Research and Policy; Human Rights; Experience-Based Education; and Non-Western and Comparative Area Studies

## LAY CHURCH WORKER PROGRAM

A student who seeks to fulfill a Christian vocation of service to the church and community as an unordained professional may prepare for certification by the appropriate church judicatory as a church staff worker. Positions currendy filled by such workers include:

Church Business Administrator
Church Musician
Christian Education Director
Cristians Day School Teacher
Parish Worker
Youth Work Director
A major in Religion is nommally required for this prograin with supporting work selected in the fields of Busiлess Administration, Education. Music, Social Sciences, and Physical Education.

Students enrolled in this program will be advised as to those institutions, boards, and agencies within the church that may assist them in planning educational programs and obtaining placement after graduation.

The department designates one of its members as director of the pregram. This person is assisted by one faculty member from a supporti 8 area and by a member of the administration.

## THE STLDYY PROGRAM

Required courses in Religion: 241, 381. Recommended courses: 131 or 251 : 132 or 261; 373; plus two courses selected from "Religion, Culture, Society, and the Individual" area.

Recommended supporti gareas:
Business Administration (Accounting, Management)
Communication Arts
Education
Music
Psychology
Physical Education (Recreation)
Sociology

## THEOLOGICAL STUDIES

Pre-theological students should complete the requirements for the Bachelor of Arts degrec. Besides the general degree requirements, the Association of Theological Schouls reconmends 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.

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

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

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

Religion - a thorough knowledge of Biblical content together with an intreduction to major religious traditions and theological problems in the context of the principal aspects of human culture as outined above. Al least three semesters. Students may well seck counscl from the sominary of their choice.

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

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

## HEALTH SCIENCES

A health sciences committee advises students aspiring to careers in the health sciences. During the first semester of attendance at PLU, the student should contact the Health Sciences Committee Coordinator, who will assist the student in obtaining the appropriate advisor. This advisor will provide the detailed requirements and procedures for each career. Briefly, the requirements for each area follow:
DENTISTRY, MEDICINE AND VETERINARY MEDICINE

The overwhelming majority of students entering the professional schools of these careers have devoted four years of study to secure the broad educational background required. This background includes a thorough preparation in the sciences in addition to study in the social seiences and the humanities. There are no pre-professional majors but rather the student should select the major which is of interest and which best prepares the student for an alternative career. In addition to the General University Requirements and the requirements of the student's major, the following are required:

Biology: 155, 156, 253; Chemistry:
115-116, 331-332 plus laboratories;
Mathematics: at least one semester 133 or higher; Physics: one year course with I a boratory 125-126 or 153-154. In addition to these minimum required science courses, most professional schools have their own specific requirements. (Check with your advisor.)

## OPTOMETRY

Although two years of preoptometric study is the minimum required, most students accepted by a school or college of optometry have completed three years in an undergraduate college. A large percentage of students accepted by the schoolsand colleges of optometry have carned a bachelor's degree.

The requirements for admission to the schools and colleges of optometry vary. However, all optometric schools and colleges require at least two years of preoptometric study which should include:

Biology: 155. 156, 253: Chemistry: 115.
116; Physies: 125-1 26 or 153 ; English: 1/2
to I year: College Mathematics (including calculus): 1 year.
In addition, each optometry school has its own set of requirements. (Clicek with your advisor.)

## MEDICAL TECIINOLOGY

The minimum academic requirements for entry into clinical training as published by the National Accrediting Agency for Clinical Iaboratory Sciences (NAACLS) are:

A minimum of 16 semester units of Chemistry to include organic chemistry or biological chemistry, 16 semester units of biology to include microbiology, one course in mathematics. The content of chemistry and biology courses nust be acceptable towards a major in those fields of study or the equivalent; the mathematics requirement is met by courses recognized as prerequisites for admission to physics courses. In addition to these specific requirements, the student must have acquired a minimum of 90 semester units of academic credit prior to admission to the clinical program.
Although the minimum requirements for medical technology are as outlined above, many of the clinical internship programs require or strongly recommend a bachelor's degree in biology or chemistry prior to admission to clinical training. Therefore, a student should consider first carning a bachelor's degree in either of these majors.

The student must complete a twelve-month medical technology internship in an American Medical Association accredited clinical laboratory. Upon completion of this internship, the student is eligible to take the medical technology certification examination given by the Board of Registry of Medical Technologists of the Science in Medical Technology.

The minimum required courses for the B.S.M.T. at PLU are: Chemistry 115,116 , 321, 331, 332. 333, 334; Biology I55, 156, 275; Ma thematics 133. Very sirongly recommended: Plıysics 125, 126, 147, 148. Also recommended: Biology 253, 331, 346 441: Chemistry 404. The remainder of the requirements for a major in biology or cliemistry must also be fulfilled.

## PILARMACY

Although the pre-pharmacy requirements for individual schools of pharmacy vary (check with your advisor), the following courses are usually required:

General chemistry, I year; organic chemistry with laboratory, I year; college level mathematics (mav include calculus). English composition and literature, 1 year. Often required are microbiology, quantitative analysis, and introductory courses in communication arts, economics, political science.
An example: The University of Washington School of Pharmacy has approved the following schedule 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 II5, Mathematics 133 (may be omitted if trigonometry was taken in high school), Engish 101, P.E.: (second semester) Chemistry 116, Mathematics 151, Communication Arts 123 , elective.
Sophomore year: (first semester) Chemistry 331, 333, Biology 155, Physics 125, 147, elective, P.E.; (second semester) Chemistry 332, 334, Biology 156, Physics I 26, 148, P.E.

## DENTAL HYGIENE AND PHYSICAL

 THERAPYAcceptance to schools of Dental Hygiene and Plysical Therapy has become increasingly competitive in recent years and you are strongly encouraged to contact your advisor as early as possible and together determine the specific pre-requisites for the schools you are planning to attend.

The minimum requirement in either professional track is 2 years of pre-professional work

Two examples:
I. Minimum pre-requisites for the Physical Therapy program at the University of Washington: Biology: 163, 201, 299; Chemistry: 103, 104; Mathematics: 133; Physics: 125-126: Psychology 101 plus one additional course; English 101, plus one additional course; plus electives in the humanities and social sciences.
2. Minimum prerequisites for the Dental Ilygiene program at the University of Washington:
Biology: 155, I56, 253, 403; Chemistry 115-116. 331-332; Mathematics: 133: an introductory course in Speech. Sociology', and Psychology; plus electives in the hamanities and social sciences.
If you lave questions regarding health science careers other than thosie listed above, please contact the Health Sciences Coordinator.

## SPECIFIC DEGREE <br> 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 Schoois of Business Administration. Education, Fine Arts, Nursing, and Pliysical Education. Detailed degree requirements, of ten including supplementary sample programs, are available in the offices of the individual schools and departments.

## COURSE NUMBERINGS

100-299 Lower Division Courses: ()pen 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.

500-599 Giraduate 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 acadenic record.
*Upon approval of their adviser and course instructors, lower division students may be assigned to upper division courses if prerequisites have been met.

## COURSE OFFERINGS

Most tisted courses are offered every year. A system of alternating upper division courses is practiced in some departments, thereby assuring a beoader curriculum. The University reserves the right to modify specific course requirements, to discontinue chasses 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 description 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 lirst and second
semester in sequence
I II - Course offered either semester
S - Corsurse offered in the summer
a/y - Course offered in alternate years
a/s - Course offered in alternate summers
G - Course may be used on graduate
programs as a inajor

## COLLEGE OF ARTS \& SCIENCES

Division of Humanities
English
Modern and Classical Languages
Philosophy
Religion
Division of Natural Sciences
Biology
Chemistry
Larth Sciences
Mathematics
Physics and Einginecring
Division of Social Sciences
Economics
History
Political Science
Psychology
Sociology, An thropology, and Social Welfare

## Degrees Offered

Bachelor of Arts
Bachelor of Science

## MAIOR 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 (or 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:
anthropology
art
biology
chemistry
classics
communication arts
earth science
economics
engineering
English
French
German
history
mathematics music
Norwegian
philosophy physical education physics
political science psychology religion
Scandinavian Studies sociology social welfare Spanish

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

## FOREIGN LANGUAGE/ALTERNA-

 TIVE REQUIREMENTS:In addition to meeting University Requirements, candidates in the College must meet the requirements of Option 1, Il or III:
I. 16 semester hours in one foreign Janguage*
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 language
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 students have less than four years, placement and credit should be determined by examination. Freshmen planning to continue in a foreign language begun in high school should take the College Board Placement Test offered during orientation. (This test is required of those freshmen who plan to study German, 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. Students may receive credit for any language course in which they are placed without regard to high school credit. Final decision of placement is made by the Department of Modern and Classical Languages. Students may not receive credit if they voluntarily select a course level lower than that in which the department places them.

The foreign language requirement in Option 11 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 shall be in different areas. For example, students fulfilling the University history or literature requirement with a course in history, if they elect Option II. should choose a course in English or language to meet the requirement of the College.

## Biology

Biology majors develop their academic program in consultation with a departmental adviser. A departmental adviser must be consulted prior to completion of Biology 253. the final course in the initial three semester core courses required of all biology majors, for guidance in the selection of an appropriate upper division program of study.

BACHELOR OF ARTS: 28 semester hours, including $155,156,253$, and 16 hours chosen in consultation with departmental adviser. Required supporting: Chemistry 115 , 116, 331, 332, 333, 334, and Math 133 or equivalent. Additional courses in Physics, Earth Sciences, and/or Mathematics are recommended as appropriate in consultation with adviser. A maximum of 40 semester hours of biology courses may be counted toward graduation. Interim courses (300-320) cannot be counted toward the major.

BACHI:LOR OF SCIENCE: 40 semester hours, including $155,156,253$, and 28 hours chosen in consultation with departmental adviser. Required supporting: Chemistry 115, $116,331,332,333,334$;one year of Physics; and Mathematics through 151. A maximum of 40 semester hours of biology courses may be counted for graduation. Interim courses (300-320) cannot be counted toward the major.

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 discussion. I II

## 155 PRINCIPLES OF BIOLOGY I: POPULATION BIOLOGY AND DIVERSITY OF LIFE

Introduction to science and levels of organization in biology; Mendelian genetics and population biology; history and diversity of life. Required of all biology majors. Includes laboratory. Co-registration in Chemistry is strongly recommended. I

## I 56 PRINCIPLES OF BIOLOGY II: THE CELL AND BIO-ENERGETICS

Cellular and molecular levels of biological organization; cell ultra-structure and physiology, molecular genetics, energy transduction; energy flow and nutrient cycles in ecosystems. Required of all biology majors. Includes laboratory. Assumes completion of one semester of college chemistry ( 104 or 115). Prerequisite: 155. II

## 163 FUNCTIONAL

HUMAN ANATOMY
Basic anatomy and physiology of the human. Laboratory includes dissection of the cat and experiments in muscle physiology, sensory mechanisms , respiration and circulation. Satisfies General University Requirement; however, will not count towards a biology major except by permission of the department chairman. I, II

## 201 INTRODUCTORY

## MICROBIOLOGY

The growth, control, physiology, isolation and identification of micro-organisms, especially those which affect man. Includes laboratory. Prerequisites: 1 || and Chemistry 103 or consent. This course is suitable for nurses and other non-science majors; not open to biology majors. I

## 253 PRINCIPLES OF BIOL.OGY III: BIOLOGY OF THE STEADY STATE

The basic problems faced by plants and astimals in maintaining themselves; structural adaptations, homeostasis, internal regulation, water and temperature control, gas exchange, vascular systems, and interaction between organisms. Required of all biology majors. Includes laboratory. Prerequisites: 155, 156 and first-year chemistry. I

## 299 INTRODUCTORY

## CLINICAL PHYSIOLOGY

Functions and control mechanisms of the major lzuman organ systems, with emphasis on clinical application and including some pharmacology. Suitable for nursing majors. Includes laboratory. Prerequisites: 111, 163 and Cliemisiry 103. I

## 321 ORNITHOLOGY

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

## 322 MICROBIOLOGY

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

## 324 NATURAL HISTORY

## OF VERTEBRATES

Classitication, natural history and economic insportance of vertehrates with the exception of birds. Field trips and laboratory. Prerequisite: 253 a/y 1977-78

## 326 ANIMAL BEHAVIOR

Description, classitication, cause, function and development of the behavior of animals. Lecture will emphasize an ethological approach to the study of behavior focusing upon comparisuns among species, as well as physiological. ecological and evolutionary aspects of behavior. Laboratory is not rigidly scheduled and will consist of a hehavioral investigation of the students choosing. Prerequisite: 253 or consent of instractor. a/y 1978-79. II

## 331 GENETICS

Basic consepts including consideration of molecular basis of gene expression. recombination, genetic variability, and consideration of cytogenetics and population genetics. Includes laboratory. Prerequisite: 253.1

## 340 PL.ANT DIVERSITY AND DISTRIBUTION

A systematic introduction to plant diversity. Interaction between plants, theories of vegetational distribution. Emphasis on higher
plant taxonomy. Includes labora tory and field trips. Prerequisite: 253. 11

## 346 CELLULAR PHYSIOI.OGY

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. Prerequisites: 253 and Organic Chemistry. I.

## 347 CELLULAR

PHYSIOLOGY LABORATORY Accompanies Cellular Plysiology; 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. (I) I

## 357 PLANT FORM AND FUNCTION

 Plant anatomy, function and reproduction: emphasis on seed-producing groups. Includes laboratory. Prerequisites: 253 and Clzemistry 116. Organic Chemistry recommended. I
## 358 PLANT PHYSIOLOGY

Plant growth from seed to flower: seed germination, water relations, respiration, mineral nutrition, growth regulators, photosynthesis and other light effects on plant cycles. Includes laboratory. Prerequisites: 253 and Organic Chemistry. Cellutar Physiology strongly recommended. I

## 361 COMPARATIVE ANATOMY OF THE VERTEBRATES

Taught from a plylogenetic viewpoint, considers how and why living vertebrates attained their present structure. At tempts not only to learn vertebrate anatomy, but also to understand if. Presequisite: 253.

## 371 INVERTEBRATE ZOOLOGY

Introduction to the form, function, natural history and phylogeny of the major phyla of invertelorates Laborator exercises will include dissections, field studies and collections. Prerequisite: 253 or cunsent of instructor, a/y 1977-78. II

## 372 GENERAL ENTOMOLOGY

An introduction $c o$ insect anatomy, physioloyy: ontogeny and behavior. Laboratory includes gross dissectisn, field study and the collection and classification of insects. Prerequisite: 253. a/y 1978-79. II
375 BIOLOGY OF PARASITISM
Parasitism as a mode of life: the nature of the parasite and of the host-parasite asseciation including host responses. The gamut of parasitic forms includes viruses, other microurganisms. helminthes and insects as they affect plant and animal loosts. Includes laboratory. Prerequisite: 253. a/y 1978-79. I

## 403 [JEVELOPMENTAL BIOLOGY

Consideration of the development of multicellular organisms, focusing on the molecular bases for development. Topics include morphogenetic movements, cell determination and differentiation, pattern formation. cell interactions in development,
chemical messengers in development, and genctic regulation of development. Laboratory includes experimental problenis and descriptive embryology. Prerequisite: 253. 11

## 411 HISTOLOGY

Microscopic study of normal cells, tissues and organs of vertebrates. This study is both structurally and physiologically oriented. Prerequisite: 253. II

## 424 ECOLOGY

Organisms in relation to their environment, including organismal adaptations, population growth and interactions, and ecosystem structure and function. Prerequisite: 253. II

## 425 BIOLOGICAL <br> OCEANOGRAPHY

The ocean as environment for plant and animal life; an introduction to the structure. dynamics and history of marine ecosystems. Lab, field trips, and term project in addition to lecture. Prerequisite: 253. II

426 FIELD METHODS IN ECOLOGY Sampling techniques and analysis of natural ecosystems. Independent project required. Prerequisites: 253 and 424 or consent of instructor. II (2)

## 441 MAMMALIAN PHYSIOLOGY

Functions of principal mammalian organ systems emphasizing con trol mechanisms and homeostatic relationships Laboratory includes experintents with electrocardiograplıy, endocrine functions, regulation of body fluids, temperature regulation and an introduction to animal surgery. Prerequisites: 253. Chemistry 332. Biochemistry recommended. II

## 475 EVOLUTION

Evolution as a process: sources of variation; forces overcoming genetic inertia in populations; speciation. Evolution of genetic systems and of life in relation to ecological theory and earth history. Lecture and discussion. Term paper and mini-seminar required. Prerequisite: 253. I a/y 1978-79

## 490 SEMINAR

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

## 491,492 INDEPENDENT STUDY

Investigations or research in areas of special interest not covered by regular cuurses; open to qualified junior or senior majors; a student should not elect independent study unless he knows in advance the specific area lie wishes to investigate and can demonstrate a serious interest in pursuing it. It is suggested that the student spend one semester researching the literature and writing a proposal (for I sem. hr. of credit) and the next semester actually carrying out the project (for another I sem. lur. 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. (1-4)
597, 598 GRADUATE RESEARCH
Prerequisite: Graduate standing and prior approval of the student's graduate adviser. (2-4)

## Chemistry

Students contenplating a major in chemistry are invited to discuss their 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 Cloemistry 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 147-148, I53-154: Mathematics 151-152: German, Russian or French (Option I or II).

BACHELOR OF SCIENCE (3 alternatives)
I. 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: Biolngy 155, 156. 253, 331. 346. and 347: Physics 147-148, 153-154; Mathematics 151-152: foreign language (Option 1 or II).
3. Chemical Plysics emphasis: Chemistry II 5, 116, 331-334, 341-344, and 460: Physics 147-148, 153-154; 331, 332, 336, and 356; Mathematics 151, 152, and 253: foreign language (Option Ior 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 $115, \quad 116$; Mathematics 151, 152; forcign language

Sophomore: Chemistry 331-334; Physics 147-148. 153-154.

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: Students interested in this degree develop their chemistry program through the department in conjunction with the School of Education. See School of Education section.

## 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. II

## 104 ENVIRONMENTAL <br> CHEMISTRY

Basic principles of chemical structure and reactions, with applications to human activities and the natural environment. No
prerequisite: students without high school chemistry are encouraged to take 104 before taking 103 or 115 . Physical therapy and military nursing programs requiring a year of chemistry should include 104 and 103. Also suitable for environmental studies, general science teachers, B. $\Lambda$. in earth science, and General University Requirements or College of Afts and Sciences Option III. I
108 MANKIND AND MOLECULES
The role of science in society and the particular influence of chemistry on our civilization. Such topics as medicine, nutrition, food additives, petroleum products and chemical warfare are discussed. ^ non-laboratory liberal arts based course with no math background. Meets General University Requirements.

## 115 GENLRAL CIIEMISTRY

The structure of matter, atomic and molecular theory, quantitative relationships: designed primarily for students who want to major in biology, chemistry, engincering, geology or physics. Includes all premedical, predental, pharmacy, medical technology students, and students planning to transfer to a Dental Hygiene Program. High school chemistry or permission of instructor required. Students with no high school chemistry or weak background should take 104 before this course. Corequisite: Math 131. I 11

## 116 SYSTEMATIC <br> INORGANIC CHEMISTRY

Study of the elements grouped according to the periodic table, chemical equilibrium, radiochemistry, and inorganic qualitative analysis. Prerequisite: 115 . Il

## 321 QUANTITATIVE ANALYSIS

Chemical methods of quantitative analysis, including volumetric, gravimetric, and selected instrumental methods. Prerequisites: 116 and Mathematics 133 . 1

## 331, 332 ORGANIC CHEMISTRY

An interpretation of properties and reactions of aliphatic and aromatic compounds on the basis of current chemical theory. Prerequisites: 103 and 104 or 115. Corequisites: 333,334 . III

## 333, 334 ORGANIC

CIIEMISTRY LABORATORY
Reactions and conventional and modern techniques of synthesis, separation, and analysis of organic comprounds. Must accompany 331,332 . I II (1.1)

## 336 HONORS ORGANIC

CHEMISTRY LABORATORY
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 (1)

341, 342 PHYSIC AL 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. Prerequisites: 115, Math 152, Physics 154 . 1 II

## 343, 344 PHYSICAL

## CHEMISTRY LABORATORY

Experiments in thermodynamics, solution behavior and 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 (1,1)

## 350 INSTRUMENTATION <br> 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 a tomic absorption, gas chromatography, ultraviolet, visible and infrared spectrophotometry, and flame photometry. Prerequisites: 166 and Biology 155.

## 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. Prerequisites: 332 and 334 . I

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. II

## 460 SEMINAR

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 (1)

## 490 INTEGRATED

 PROBLEMS APPROACHInvolvement 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 (2)

## 491 INDEPENDENT STUDY

Library and/or laboratory study of topics not included in regularly offered courses. Proposed project must be approved by department chairman and supervisory responsibility accepted by an instructor. May be taken more than once. III (1, 2 or 4 )

## 497 RESEARCH

Experimental or theoretical investigation open to upper division students with consent of department chairman. May be taken more than once. III (1, 2 or 4)

597, 598 GRADUATE RESEARCH Open to master's degree candidates only. Prerequisite: consent of department chairman. 1 ll (2-4)

## Earth Sciences

BACIIELOR OF SCIENCE (GEOLOGY SPECIALTY'): 40 semester hours in geology, including 131, $132,323,324,325,327,328$, and at least two courses from $326,360,365$, and 49 I : also required is approved experience in field study techniques. Necessary supporting courses include: Chemistry 115 , 116; recommended for petrologists are Chemistry 341, 342; Physics 125, 126, 147. and 148 (or Physics 153, 154 and labs): recommended - Physics 223; Mathematics 151, 152; Biology courses are recommended where paleontology is elected major interest.

BACHELOR OF ARTS: 32 semester hours, including $131,132,136,202,324$, 327. plus at least two upper division Earth Science courscs. A field course such as 351, 360 , or 365 is recommended. Required supporting courses include: Chemistry 103, 104, or 115,116 , Physics $125,126,147,148$; Mathematics 151 , recommended 152 ; appropriate Biology courses also recommended. Options reflect a student's Earth Science intercsts and are discussed with an adviscr.

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, physics or geology. I

## 131 MAN AND THE:

## GEOLOGIC 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

136 DESCRIPTIVE ASTRONOMY
The inoon, the solar system, the coordinate systems for locating steilar objects and characteristics 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
Principles and problems of public and private stewardship of our resources with special reference to the Pacific Northwest. (2)

## 323 MINERALOGY

Crystallography and mineralogy, both oreand rock-forming minerals. Prercquisites: 131 and high school chemistry or consent. Available periodically, or at UPS. I

## 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

## 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. Prerequisitc: 131 or consent. II a/y 1977-78
326 OPTICAL MINERALOGY
Theory and practice of mineral studies using the petrographic microscope, including immersion oil techniques, production of thin sections and determination of minerals by means of their optical properties. This provides an introduction to the broader subject of petrography. I

## 327 STRATIGRAPHY AND SEDIMENTATION

Formational principles of surface-accumulated rocks, and their incorporation in the stratigraphic record. This subject is basic to field mapping and structural interpretation. I a/y 1978-79

## 328 PALEONTOLOGY

A systematic study of the fossil record, combining principles of evolutionary development, paleohabitats and preservation, with practical experience of specimen identification. Thesc studies are fundamental to the understanding of stratigraphy and the geologic time scale. I a/y 1977-78

## 351 NATURAL HISTORY

OF THE PACIFIC: NORTHWEST
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 (6)

## 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 1978

365 GLACIAL GEOLOGY
Gacial 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 1977

490 SEMINAR

491,492 INDEPENDENT STUDY (1-4)

597 GRADUATE RESEARCH

## Economics

BACHELOR OF ARTS: Minimum of 32 semester hours including $150.351,352,486$, two upper division cconomics electives, Statistics 331 or 341 , and Business Administration 281. MINOR: 20 semester hours, including $150,351,352$, one clective in Economics and one elective in Economics or Statistics.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

## 150 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.
## 290 CONTEMPORARY <br> ECONOMIC PROBLEMS

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

## 321 HUMAN

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

## 343 OPERATIONS RESEARCH

Quantitative methods for decision problems. Emphasis on linear programming and other deterministic models. Prerequisite: Statistics 331 or equivalent. (2)

## 344 APPLIED REGRESSION ANALYSIS

Simple and multiple regression analysis as investigative tools. Course stresses construction of elementary linear models and interpretation of regression results. Prerequisite: Statistics 331 or equivalent. (2)

## 351 INTERMEDIATE MACRO <br> 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.

## 381 COMPARATIVE ECONOMIC SYSTEMS

An analysis and comparison of major contemporary economic systems. Includes an examination of capitalism, market socialism, centrally planned economies, and systems used in selected countries. Prerequisite: Economics 150 or consent.

## 432 URBAN AND

REGIONAL ECONOMICS
Economic growth process in developing regions of the U.S.; the inter-relationship of political, economic, cultural and institutional factors in the growth process. Prerequisite: 150.

## 434 INDUSTRIAL ORGANIZATION AND PUBLIC POLICY

An analysis of the structure, conduct, and performance of American industry and the public policies that foster and alter industrial structure and behavior. Topics include the economics of firm size, motivations of the firm. concentration, mergers, patents, antitrust, public utility regulation, public en terprise, and subsidization. Prerequisite: Economics 150 or consent.

## 486 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 <br> STUDY

Prerequisite: consent. (1-4)

## 504 ECONOMIC ANALYSIS

 AND POLICY DECISIONSBasic economic concepts applied to policy formation and operating decisions.
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 (1-4)

599 THESIS
(1-4)

## Engineering

(See Plyysics and Engineering)

## English

BACHELOR OF 1 RTS: Major - 28 to 40 semester hours of English beyond English 101, including: 4 hours in American literature, 4 hours in British literature before 1700, and 4 hours in British literature after 1700. At least 16 hours should be upper division.

Individual programs are designed by students and their advisers, with approval by the full department in a review during the junior year. Advanced courses in writing or grammar may be required.

All English majors must complete at least two years of a foreign language at the college level, or the equivalent.

MINOR: 16 semester hours, excluding courses for Interim credit, of which at leas! 8 hours should be upper division. These courses should include 4 hours in American literature, 4 hours in British literature before 1700, and 4 hours in British literature after 1700.

MINOR (EMPHASIS ON WRITING): 16 semester hours, excluding courses for Interim credit, of which at least 8 hours should be upper division. These courses should include 4 hours in British literature before 1700. 4 hours in American or British literature after 1700, and 8 hours in writing courses drawn from 327.328, and 403.

All English minors must complete at least one year of a foreign language at the college level, or the equivalent.

B $\wedge$ CHELOR OF ARTS IN EDUCATION: Sec School of Education.

## 101 COLLEGE ENGLISH

Develops a student's powers to read, think. and write critically. (Students whose English skills are weak are encouraged to work in the Learning Skills Service programs before registering for English 101.) III

## 217 SHORT STORY

Themes and techniques in short fiction. II

## 221 LITERARY

FORMS AND ANALYSIS
Designed to familiarize students with for ms of literature (poetry, fiction, drama), with basic literary terms, and with major critical approaches. II

## 230 INTRODUCTION TO CONTEMPORARY LITERATURE

Emphasis on American fiction since 1950. I.

## 231 MASTERPIECES OF

 EUROPEAN LITERATURERepresentative works of the literature of Western Europe, especially classical, medieval, and Renaissance. I

## 241 INTRODUCTION TO

## AMERICAN LITERATURE

The continuity of themes and forms in American prose, poetry, and fiction from
colonization to the First World War. Emphasis on major works of the 19th century. I II

## 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 romanticisn to the 20th century. II

323 CHILDREN'S LITERATURE
An introduction to a rich literary tradition to guide reading and book selection in the schools and the fanily. I II

## 327 IMAGINATIVE WRITING

A workshop in writing poetry and short fiction. Includes practical study of techniques and forms to develop critical standards and an understanding of the process of composition. III

## 328 ADVANCED COMPOSITION

A study of rhetorical principles used in writing persuasively and imagnatively. Required for certification by the School of Education. I II

## 349 MODERN POETRY

Emphasis on American poetry since 1950. II

## 351 MODERN DRAMA

A study of modern classics from Ibsen to lonesco: Scandinavian, German, French, Italian, Spanish, Russian, English, Irish, and American. II

## 358 TIIE BRITISH NOVEL

A study of the form from Defoe and Fielding to Lawrence, Joyce, and the moderns. II

382 CHAUCER AND HIS AGE
A study of Chaucer's major works, especially The Canterbury Tales. in their lively 14 th-century setting. Includes an introduction to the development of the English language. I

## 383 SHAKESPEARE

Ten to twelve representative plays. Recommended as background: 251 . 1

388 MILTON AND HIS AGE
A study of Milton's work, especially Paradise Lost, and the work of other major authors (Donne, Herbert) of the 17th century, the golden age of religious poetry in England. II

## 389 ENGLISH SATIRE

AND SENSIBILITY, 1660-I800
A study of neo-classic writings and the developing social awareness of the pre-romantic age: Dryden and Pope to Johnson and Blake. I

## 390 THE ENGLISH

RCMANTIC MOVEMENT
A study of the romantic awakening in England: Blake, Wordsworth, Coleridge. Shelley, Keats, Byron, and others. I

## 391 LIFE ANI) LETTERS <br> IN VICTORIAN ENGLAND

Selected authors and topics from a period of rapid and momentous social change. (In 1976: Dickens, Hardy, Tennyson). II

## 392 TWENTIETH CENTURY BRITISH LITERATURE

Selected playwrights from Shaw to Beckett; poetry of Yeats, Thomas, and Auden; fiction of Joyce, Lawrence, Greene, and others. II

400 LINGUISTICS
See Modern and Classical Languages.

## 403 MODERN

## ENGLISH GRAMMAR

A study of three major approaches to grammar: the traditional, the structural, and the transformational. Includes introduction to the history of the English language. I

## 441 AMERICAN ROMANTIC <br> LITERATURE, 1820-1880

Studies in literary romanticism from Cooper to James, with emphasis on the Age of Emerson. Readings in Thoreau, Whitman, Poe. Melville and Hawthorne for upper division students. I

## 442 AMERICAN REALISM

AND NATURALISM, 1880-1915 Fiction and criticism in the years of America's urbanization and emergence as an industrial power: Twain, James, Crane, Norris, Dreiser.

## 443 AMERICAN

LITERATURE SINCE 1915
Introduction to the modern tradition in poetry (Frost, Williams, Pound) and fiction (Fitzgerald, Hemingway, Faulkner) for upper division students. II

## 491, 492 INDEPENDENT <br> READING AND RESEARCH

An intensive course of reading. May include a thesis. In tended for upper division majors. I II (2-4)
597 GRADUATE RESEARCH (2-4)

## 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 460. 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: Major - A minimum of 32 semester hours including 4 semester hours from a survey course in Civilization (107, 108, 109, 110); 4 semester hours from a survey course in American
history (251, 252, 253); senior seminar; electives by advisement.

MINOR: 20 semester hours. Five courses are to be chosen in consultation with the department.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

## 107, 108 HISTORY OF CIVILIZATION

Analysis of institutions and ideas of selected civilizations: Mesopotamia, Egypt, the Hebrews, Greece, Rome. the rise of Cluristianity, 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

From Jefferson to Theodore Roosevelt; interpretation of eras from social, political, economic, and biographical viewpoints.

## 253 TWENTIETH CENTURY

 AMERICAN HISTORYTrends 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. III

## 323 THE MIDDLE AGES

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.

## 325 REFORMATION

Political and religious crisis in the sixteenth century: Lutheranism, Zwinglianism, Anglicanism, Anabaptism, Calvinism, Roman Cathol ceform; Weber thesis, the beginnings of Baroque art.

## 326 EUROPEAN HISTORY FROM 1648 t 1789

Developments during the early modern and scientific age; the enlightenment, the Old Regime.

## 327 THE FRENCH <br> REVOLUTION <br> 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 from earliest times; the collapse of Czarism, the rise of communism, present world relations.

## 334 MODERN

GERMANY, 1848-1)45
The failure of the Revolution of 1848 and the unification of Germany; the Bismarckian and Wilhelmian Empires: the Weimar Republic and the rise of National Socialism; and the Third Reich.

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

## 337 REPUBLICAN <br> LATIN AMERICA

From independence to the present; emphasis upon Mexico, Argentina, 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
Leading ideas in world civilization since the disintegration of Rome.

## 451 AMERICAN

CONSTITUTIONAL HISTORY
The development of the constitution from colonial times.

## 460 WEST AND NORTHWEST

Interpretive and comparative history of frontier and regional topics in the 19th and 20th centuries.

## 471 HISTORY OF AMERICAN THOUGHT AND CULTURE

Dimensions of American social and intellectual history; ideas as they relate to historical periods and ethnic groups.

## 492 INDEPENDENT STUDY (1-4)

494 SEMINAR: AMERICAN HISTORY

495 SEMINAR: EUROPEAN HISTORY
496 SEMINAR:
HISTORY AND HISTORIANS

596 GRADUATE RESEARCH
(1-4)
599 THESIS

## Integrated Studies

## IS 211 NATURE

AND SUPERNATURE
Study of the creative and reactionary responses of the Renaissance, Reformation and counter-Reformation periods to the authoritarian Medieval mentality. Luther, Galileo, Kepler and Newton are given special emphasis together with developments from 1500-1700 in art and political history. Analysis of the emerging idea of progress. Prerequisite to 212, From Finite to Infinite.

## IS 212 FROM FINITE <br> 10 INFINITE

Developments in literature, politics and industrialization in the 18th and 19th centuries. Emphasis is given to the influence of the Enlightenment on the development of the idea of progress, and to the formation of Darwinism, the Romantic movement and Marxism.

## IS 221 DEVELOPING MAN

The development of moral valucs and conscience are studied from a biotogical, philosophical and sociological point of view, in connection with contemporary moral issues. Particular attention is given to criminal behavior and gene manipulation and the pertinent moral and social questions raised by these phenomena. Prerequisite to 222 , Burden of Human Responsibility.

## IS 222 BURDEN OF HUMAN RESPONSIBILITY

An examination of human responsibility on the social level in Europe during the lirst half of the 20th century. The earlier explosion of technology and the development of deterministic methods in the social sciences are explored, with emphasis on Social Darwinism and Marxism. The iconoclasm and moral despair of the age are portrayed against the background of the rise of German National Socialism and the moral dilemmas generated by World War II.

## IS 231 SYMBOL,

LANGUAGE AND MYTH
The phenomenon of language is examined through a study of its role in shaping knowledge, its history as a symbolic system, and its nature as a depository of cultural traits. The nature of symbolic systems generally, including numerical systems, and the role of myth as a genre for expressing "reality" are given emphasis. Prerequisite to 232, Metaphor and Model: Inventing the World.

## IS 232 METAPHOR AND MODEL: INVENTING THE WORLD

An examination of the creative use of language, symbol, and myth in literature. Readings in folk titerature, Japanese Kojiki, Hindu Puranas, youruba tales, and Icelandic saga illustrate the social function of art and serve as examples of the basic forms of epic, lyric, drama. These forms are pursued into later literary works by such authors as Blake,

Shakespeare, Sophocles, Brecht, and Kafka. A section on modern physics, "the work of art of the twentieth century" (Bronowski) shows that the creative imagination is not limited to "the arts."

## IS 241 THE TECHNOLOGICAL SOCIETY AND THE THRUST FOR GROWTH

An analysis of the impact of technology on modern society and of the emergent concept of secularism is developed in an effort to understand contemporary culture. Problems of the interface of technology with culture are examined from philosophical, religious, biological and economic points of view. Prerequisite to IS 242, The Technological Society and the Limits to Growth.

## IS 242 THE TECHNOLOGICAL SOCIETY AND THE LIMITS TO GROWTH

An exploration of creative futures beyond a technological society. Emphasis is given to a study of the limits to growth in connection with food production, energy, pollution and material resources. The moral choices involved in alternative futures are examined together with aesthetic values and their implications for future social order.

## IS 251 SEMINAR

## Mathematics

During their sophomore year students intending to major in Mathematies should complete an application form available from the departmental secretary. If accepted, they will be assigned to an adviser on the Mathematics faculty.

BACHELOR OF ARTS: Major Minimum of 28 semester hours in courses numbered above 150, including 331, 433. 455,486 , and either 434 or 456 . The 434 or 456 choice may be replaced by taking eight semester hours from 321, 341, 345-346, 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: Major - 40 semester hours, including 331 and 486 and at least 20 semester hours of upper division courses. Twelve 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.

Two minors are available in the Mathematics Department:

MATHEMATICS MINOR: 20 semester hours, including 151, 152, 253 and two upper division courses. Interim courses and 323, 324, and 446 may not be counted toward the Mathematics minor.

COMPUTER SCIENCE MINOR: 20 semester hours, including 144, 151, 152, 244, 345 and four semester hours from 140, 346, Business Administration 387, Engineering 352 , or other computer-related courses approved by the Mathematics Department.

NOTE: Only 151 and 152 may be counted towards more than one major or minor in the Mathematics Department.

Two cooperative programs in Computer Science or in Applied Mathematics are available from Pacific Lutheran University and Washington State University:
(I) a 3-1 program leading to a B.A. or B.S. degree in Mathematics/Computer Science or Applied Mathematics from PLU; and
(2) a 3-2 program leading to a B.A. or B.S. degree in Mathematics from PLU and a B.S. or M.S. degree in Computer Science or Applied Mathematics from Washington State University.

Students in these programs must satisfy the PLU requirements for a B.A. degree in Mathematics except for the Senior Seminar. The required courses together with recommended semesters and years for taking them are as follows:
Math 151: Analytic Geometry and Calculus $-\mathrm{Fr} I$
Math/Egr 144: Introduction to Computer
Science - Fr I
Math 152: Analytic Ceometry and Calculus - Fr II

Math 253: Multivariable Calculus and
Differential Equations - So I
Phys 153: General Physics - So I
Math 331: Linear Algebra and Calculus - So II
Math 244: Data Structures and Assembly
Language Programming - So 11 (or Fr 11)
Phys 154: General Physics - So Il
Math 433: Modern Algebra - Jr I
Math 351: Applied Mathematics - Jr I
Math/Egr 345: Introduction to Numerical Analysis - Jr I (or So I)
Math/Egr 346: Numerical Analysis - Jr I (or So l)
Egr 354: Engineering Analysis - Jr 11
Math 140 or Business Administration 387 is also required and can be scheduled as appropriate.

Senior year at Washington State University:

COMPUTER SCIENCE OPTION: 6-12 hours of math, including Advanced Calculus, and 12 hours of Computer Science.

APPLIED MATH OPTION: 6-12 hours of math, including Advanced Calculus, and 12 hours of supporting applied courses.

The remaining courses at PLU must be chosen to fulfill General University Requirements, Interim requirements, and one of the three foreign language options. Students in this program must schedule their courses carefully and are urged to con tact the Mathematics Department early in their college carcer, preferably in their first semester, to design an appropriate schedule.

## 101 INTERMEDIATE ALGEBRA

A thorough review of first year high school algebra and material beyond quadratics. Does not count toward University core requirements. III (2)

## 112 PLANE TRIGONOMETRY

Radian measure, trigonometric and inverse trigonometric functions, identities, graphing, solution of triangles, and complex numbers. Prerequisite: two years of high school algebra. Students with only one year of high school algebra should take 133. I II (2)

## 127 FINITE MATHEMATICS

Truth tables, sets, elementary probability, matrices, linear programming, Markov chains. Prerequisites: high school algebra and geometry. 1 II

## 128 MATHEMATICS FOR <br> BUSINESS AND TIIE <br> BEHAVIORAL SCIENCES

Review of algebra, matrix theory and linear programming, probability theory, introduction to differential and integral calculus. Concepts are developed intuitively with applications. The use of mathematical tools is stressed throughout the course. Prerequisile: high school algebra or 10 I . I II

## 133 COLLEGE ALGEBRA AND TRIGONOMETRY

Solving equations, functions, exponentials. logarithms, radian measure, trigonometric identities, graphing, and other topics such as comples numbers. Prerequisites: two years of high school algebra or 101 or consent. I II
140 BASIC COMPUTER LANGUAGE The BASIC computer language is applied to problems occurring in besiness, science, social science, and other fields in a conversational mode. Topics include data, expression formation, input/output, transfer commands, arrays and subprograms. Prerequisite: high school alge bra. III (2)

## 144 INTRODUCTION

## TO COMPUTER SCIENCE

Computer science and a working knowledge of FORTRAN as applied to scientific problems; computer classification, organization, data structure, algorithms, flow charts and FORTRAN iV. Prerequisite: 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 and trigonometry (or concurrent registration in 112) or 133 or equivalent. I II

## 152 ANALYTIC

GEOMETRY $\triangle$ NL (ALCULUS
Integration, applications and techniques of integration, transcendental functions, polar coordinates, improper integrals, L'llospital's Rule, intïnite series. Prerequisite: 151. III

## 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. (1-2)

## 244 DATA

SIRUCTURES AND ASSEMBLY LANGUAGE PROGRAMMING
Computer assembly language, instruction execution, addressing techniques, representation of data. macro definition, program segmentation and linkage. Prerequisite: 144 or consent. II a/y 1978-79 (2)

## 253 MULTIVARIABLE <br> CALCULUS AND

DIFFERENTIAL EQUATIONS
An in troduction to vectors, multidimensional calculus, and differential equations. Emphasis will be on using these topics as tools for solving physical problems. Prerequisite: 152. I

## 321 GEOMETRY

Foundations of geometry and basic theory in Euclidean, projective and non-Euclidean geometry. Prerequisite: 152 or consent. a/y 1978-79

## 323 MODERN <br> ELEMENTARY MATIIEMATICS

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. III S

## 324 ALGEBRA AND GEOMETRY FOR THE ELI:MENTARY <br> SCHOOL TEACHER

Properties of real numbers. linear and quadratic equations and inequalities, comples numbers, polynomials, algebraic structures, functions; a study of informal geometry from a mature viewpoint using modern vocabulary and notation. Geometry topics include congruence, similarity, symmetry, properties of geometry figures such as quadrilaterals and circles, and relationships among geometrical figures. Prerequisite: 323 or by placement exam. III

## 331 LINEAR

## ALGEBRA AND) CALCULUS

Vectors and vector spaces, matrices, quadratic forms, linear transformations, multivariable calculus. Prerequisite: 152. II

## 334 ANALYSIS OF VARIANCE

 ANL) EXPERIMENTAL DESIGN Random sampling, lactors which destroy experimental design, one-way analysis of variance, two-way ansalysis of variance, factored design, block and latin square design. Students will also critique published experiments and perform an experimental design project. Prerequisites: Statistics 331 or equivalent. II (2)
## 341 MATIIEMATICAL STATISTICS

 Elementary probability theory, discrete and continuous distribution functions, introduction to sampling theory and hypothesis testing. Prerequisite: 152. II a/y 1978-79
## 345 INTROLDUCTION TO

 NUMERICAL ANALYSISNumerical theory and applications in the areas of solutions of equations, lincar systems, interpolation, and approximation. Prerequisite: 152 and ( 144 or 140 ) or consent. I a/y 1977-78 (taught during first half of seniester) (2)

## 346 NUMERICAL ANALYSIS

Costinuation of 345 , including numerical theory and applications in the areas of matria theory, numerical differentiation and integration, and solution of differential equations. Prerequisite: 253 and 345 or consent. I a/y 1977-78 (taught during second half of semester) (2)

## 351 APPLIED MATHEMATICS

Real, ordinary differential equations. Theory of functions of a complex variable, power series and a treatment of second order linear differential equations on a complex plane, Orthogonal functions. Prerequisite: 253.1

## 433,434 MODERN AI GEI3RA

Linear Algebra, groups, rings, modules, fields. field extensions. Prerequisite: 331, 433 offered I each year; 434 offered 11 a/y 1977-78

## 446 MATHEMATICS IN THE SECONDARY SCHOOL

Methods and materials in secondary school math teaching. Basic mathematical concepts: principles of number operation, relation, proof, and problem solving is the context of arithmetic, algebra, and geometry. Prerequisite: 253 or 331 or equivalent. I (2)

## 455, 456 MATHEMATICAL ANALYSIS

Extended treatment of topics introduced in elementary calculus. Prerequisite: 253. 455 offered I each year; 456 offered II a/y 1978-79

## 460 ELEMENTARY TOPOLOGY

An introduction to point-set topology. Prerequisite: consent. II a/y 1977-78

## 486 SENIOR SEMINAR

Presentation by students of knowledge gained in research under the direction of an assigned protessor. Required of all senior math majors seeking a B.A. or B.S. degree. Seminar program will be held both semesters, but formal registration will be in the spring semester. Prerequisite: senior math major or consent of department chairperson. II (1)

## 490 SEMINAR

Prerequisite: consent of department chairman. (1-4)
491, 492 INDEPENDENT STUDY Prerequisite: consent of department chairman. I II (1-4)
597, 598 GRADUATE RESEARCH
Open to Master's degree candidates only. Prerequisite: consent of department chairman. I II (1-4)

## Modern and Classical 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. Students with previous experience may qualify for placement into intermediate or advanced courses. To determine the appropriate level students are encouraged to take the language placement examination at the beginning of the fall semsester or to consult with a departmental adviser. Those qualifying for advanced placement may also receive credit toward the major for work completed in high school, thus enabling them to pursue a second major.

Major and minor programs are available in Classics, French, German, Norwegian and Spanish. Departmental courses are a primary component in the interdisciplinary majors offered in Classics and Scandinavian Studies. Minors are also offered in Greek and Latin.

BACHELOR OF ARTS: Major in French, German or Spanish - Minimum of 32 semester hours beyond 101-102, including 20I, 202, 321, 351, 352, plus upper-division
electives. including at least four semester hours of literature. Spanisis 322 may be substituted for Spanish 321. Major in Norwegian - Minimum of 32 semester hours, including 101, 102, 201, 202, 351, 352, and at least one of the 400 -level literature courses from Scandinavian Studies.

Major in Classics - 40 semester hours. including eight semester hours of Greek and eiglnt semester ho rs of Latin and an dditional eight hours of either Greek or Latin. Remaining courses are selected in consultation with the Classics Coordinator. Major in Scanclinavian Area Studies - 40 semester hours, including sixteen semester hours in Danish. Norwegian, or Swedish and four semester hours each in Scandinavian literature and Scandinavian history. Remaining courses are selected in consultation with the program coordinator. See the Special Programs section of this catalog for additional information about the interdepartmental major programs in Classics and Scandinavian Area Studies.

MINOR IN FRENCH, GERMAN, NORWEGIAN, OR SPANISH - 24 semester hours. including 101. 102, 201, 202, 351 , and one other upper division course. MINOR IN CLASSICS (GREEK OR LATIN) - $\mathbf{2 0}$ semester hours which may include 101-102. Courses in all minors programs will be chosen in consultation with a departmental adviser. Advanced placement may be granted.

BACHFLLOR OF ARTS IN EDUCATION: Students enrolled in this program are required to take 445. For further details, see School of Education.

## 100 ENGLISH

AS A FOREIGN LANGUAGE
A course adapted to the needs of students whose native language is not English. Course content will emphasize idiom, especially A merican usage, vocabulary building, comprehension, and intonation. Considerable oral practice, with goal of improving fluency in speaking.

## 400 STRUCTURAL LINGUISTICS

The study of the nature of language; principles and techniques of descriptive language analysis; elementary application of linguistic analysis to selected materials. No prerequisites.

## 445 METHODOLOGY <br> OF TEACHING <br> FOREIGN LANGUへGES

Theory and techniques of foreign language teaching: special problems in the student's major language; emphasis on audio-lingual lechniques. (2)

## FRENCH

101. 102 ELEMENTARY FRENCH Fssentials of pronunciation, intonation and structure; basic skills in listening. speaking, reading and writing. laboratory attendance required. 1 II

201, 202 INTERMEDIATE FRENCH A continuation of elementary French: reading selections which reflect the French cultural heritage as well as contemporary materials. Laboratory alterdance required. III

## 205, 206 FRENCH

## CONVERSATION

Offers the opportunity for practice in French conversation in an informal setting during the noon lunch hour. All students with a basic knowledge of French are invited to participate. Conversation may include recent news events, contemporary life, or other topics of student interest. Pass/Fail only. 1 II (I)

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.

## 351, 352 COMPOSITION

 AND CONVERSATIONAdvanced 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. Prerequisite: 202. III a/y

## 431, 432 TWENTIETH CENTURY FRENCH LITERATURE

Major twentieth century writers; emphasis on the period since World War II. Prerequisite: 202. 1 II a/y

## 442 HISTORY OF <br> ROMANCE LANGUAGES

The historical development of Romance Languages with reference to current languages; same as Spanish 442. II a/y
491,492 INDEPENDENT STUDY (2-4)
597, 598 GRADUATE RESEARCH (2-4)

## GERMAN

101, 102 ELEMENTARY GERMAN Introduction to the (ierman language. Basic skills of oral and written communication in classroom and laboratory practice. Use of materials reflecting contemporary German Jife. Meets five hours weekly. III

201, 202 INTERMEDIATE GERMヘN Continued practice in oral and written communication in classroom and laboratory. Use of materials which reflect contemporary life as well as the German cultural heritage. Concurrent enrollment in German 205 (206) is encouraged. Meets four hours weekly. I Il

## 205, 206 GERMAN

## CONVERSATION

Offers the opportunity for practice in German conversation in an informal setting during the noon lunch hour. All students with a basic knowledge of German are invited to
participate. Conversation may include recent news events, contemporary life, or other topics of student interest. Pass/Fail only. I II (I)

## 321 GERMAN CIVILIZATION

(ierman cultural and linguistic history from the 17 th century 80 the present. Aesthetic and listorical consideration of representative works from the Enlightenment. the Age of Goethe, the 19th and 20th centuries. Prerequisite: 202 or equivalent. II a/y

## 351, 352 COMPOSITION

AND CONVERSATION
Intensive review of gr mmar with emphasis on idiomatic usage; use of contemporary authors as models of style. Conversation on topics of student interest. Conducted in German. Prerequisite: 202 or equivalent. I II

## 421 GERMAN LITERATURE:

## THE ACE OF GOETHE

Representative works from the Enlightenment to Goethe's death, circa 1750-1832, including Storm and Stress, Classicism and Romanticism. Prerequisite: 202 or equivalent. $1 \mathrm{a} / \mathrm{y}$

## 422 GERMAN LITER 1 TURE:

THE NINETEENTH CENTURY
Representative works from the various literary movements of the nineteenth century, 1820-1890, including Biedermeier, Young Germany and Realism. Prerequisite: 202 or equivalent. II a/y

## 431 GERMAN LITERATURE: <br> THE TWENTIETH CENTURY

Representative works of German literature from Naturalism to Expressionism, 1890-1925. Prerequisite: 202 or equivalent. I a/y

## 432 CONTEMPORARY

GERMAN LITERATURE
Representative works from 1925 to the present; authors from East and West Germany, Austria and Switzerland. Prerequisite: 202 or equivalent. 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
491,492 INDEPENDENT STUDY (2-4)
597, 598 GRADUATE STUD)Y (2-4)

## 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 [NTERME[JIATE GREEK
Selected koine readings from Hellenistic Greek literature with major emphasis on the New Testament. 1 II

## 421,422 MASTERPIECES OF GREEK IITERATURE

Available through consultation with the department. Prerequisites: 101, 102. I II

## 491,492 INDEPENDENT STUDY (2-4)

## LATIN

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

## 101, 102 ELEMENTARY LATIN AND <br> ENGLISH WORD [3UILDING

Basic skills in reading Latin; excursions into Roman history and mythology; English vocabulary building from Latin and English word construction from Latinate prefixes and suffixes are emphasized. I II

## 201, 202 INTERMEDIATE LATIN

Lyric and epic poet $y$, its translation and adaptation by English and American puets: the second semester includes the reading of an Italian author. I II

## 491,492 INDEPENDENT STUDY (2-4)

## NORWEGIAN

## 101, 102 ELEMENTARY NORWEGIAN

Introduces the students to the pleasure of speaking, reading and writing a foreign language. These skillsare developed through a conversation $\downarrow$ approach, using songs and other cultural materials, as well as audio-visual media. I II

## 201. 202 INTERMEDIATE NORWEGIAN

Develops the students' command of the language while further acquainting them with the Norwegian cultural heritage. Reading selections introduce the students to Norwegian short stories, poetry, novels, and plays. III

## 351 CONVERSATION AND

COMPOSITION: FOLKTALES
Develops the students ability to express themselves weld in the language, orally and in writing. Selected folktales and other material will be used as models of style and usage. 1'rerequisite: 202 or equivalent. I

## 352 ADVANCED CONVERSATION AND COMPOSITION: BALLADS AND POETRY

Develops the students. command of the language by emphasizing finer points of struclure, style, and good taste. The subject matter will be selected poetry from the beginning to the presenc. Prerequisite: 351 or equivalent. II
491.492 INDEPENDENT STUDY (2-4)

## SCANDINA VIAN STUDIES

321 VIKINGS AND EMIGRANTS Highlights of Scandinavian histo $y$, from the beginning to the present. Emphasis on periods and ways in which Scandinavia has contributed to world history. Readings in the
original for majors; class conducted in Englislı. I a/y

## 322 MODERN SCANDINAVIAN CIVILIZATION

Scandinavian cultural listory from the beginning to the present. Discussion of literature, music, visual arts, and their backgrounds, as well as social and politic I issues. Readings in the orizinal for majors: class conducted in English. II a/y

## 421 IBSEN, STRINDBERC, AND

THEIR CONTEMPORARIES
Selected authors from the romantic and realistic periods in Scandinavian literature. Readings in the original for majors: class conducted in Englisli. I a/y

## 422 CONTEMPORARY

SCANDINAVIAN LITERATURE Literature in all genres. reflecting current trends and issues in Scandinavia. Readings in the original for majors: class conducted in English. II a/y

## 491,492 INDEPENDENT STUDY

 (1-4)
## SPANISH

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

## 201. 202 INTERMEIIATE

 SPANISHA continuation of elementary Spanish: reading selections which retlect the Hispanic cultural heritage as well as contemporary materials. Laboratory attendance required. I 11

## 205, 206 SPANISH

CONVERSATION
()fters the opportunity for practice in Spanish conversation in an information setting during the noon luneh hour. Allstudents with a basic knowledge of Sp nish are invited to participate. Conversation may include recent news events, contemporary life, or other topics of student interest. Pass/Fail only. I II (1)

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

## 322 LATIN AMERICAN

CIVILIZATION AND CULTURE Historic, artistic, literary, sociological and geographic elements shaping the development of the Spanish-speaking New World. Both Hispanic and non-Hispanic elements will be studied. Prerequisite: 202 or four years of high school Spanish. II

### 351.352 COMPOSITION

## AND CONVERSATION

Topics of current interest as a basis for improved oral and written expression; conducted in Spanish. Perequisite: 202. I II

### 421.422 MASTERPIECES OF HISPANIC LITERATURE

All genres of major literary works from the Poema del C"icl. to 1898; forces whicls produced the literature: appreciation of literature as a work of art. Prerequisite: 202. I II a/y

## 431,432 TWENTIETH CENTURY HISPANIC LITERATURE

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

## 442 HISTORY OF

ROMANCE LANGUAGES
Historical development of Romance languages with reference to current language; same as French 442. II a/y

## 491,492 INDEPENDENT STUDY <br> (2-4)

## Philosophy

The General University Requirement of one course in philosophy may be satistied by any course offered by the Department except 233. LOGIC, or 385, PROBLEMS IN MEIDICAL ETIIICS. The initial course in the subject is customarily 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. Departmental cunsent may be required for some courses.

Courses in philasoplyy are designed 10 meet the needs of a variety of stadents: (I) those who desire some knowledge of philosoplyy as a basic element in a liberal education: (2) those who wish to pursue some special interest, for example, in ethics, science, religion, the history of thought, or the ideas of particular people; (3) those who wish so develop an understanding of philosophy to su pport their work in fields like literature, listory, or the sciences: (4) those who plan to use a major or minor in philossophy as a preparation for graduate study in another field, e.g., theology, literature, the sciences, or kw; and (5) those who plan to do graduate work in philosoplyy itself, usually with the infention of teaching in the field.

Students intending to major or minor in Philosoplyy must arnounce their intention (o) the Department and plan their programs in continuing consultation with an adviser and other members of the Department. It is enpected that students will meet regularly but informally with both faculty and other advanced students to discuss and thereby facilitate and enrich their work in the field.

BACHELOR OF ARTS: Major Minimum of 28 semester hours, including $23 \overline{3}$ and 493 and eight semester hours irom 331 , 332. 333, and 335. Ninor - Minimum of 16 semester hours: courses to be selected in consultation with departmental advisers.

Consultation with Departmental faculty is important in planning a meaningful major program and should be sought as early as possible. In addition to course requirements. the Department's reading program is required
of all students except those with double majors or special needs, who may petition for a different or reduced requirement. It is intended to provide a more systematic and thorough overview of the field of philosophy than course work alone would afford. In planning and conducting their reading prograns, students should consult with professors in the Department who shall also certify the completion of the individual requirements.

The following points should be noted in regard to this requirement:
I) Reading the listed materials does not constit ute a simple addition to course requirements. A significant proportion of the reading is in fact related to courses taken by majors.
2) Readings are seldom fully self-explanatory and should be studied in conjunction with such secondary so urces as The lincuclopedia of Philosophy, Dictionary of Philosophy, histories and topical works.
3) The reading program must be completed before the time of the departmental examination, except for works and topics related to courses taken in the last semester.
A. Required reading in Primary Sources Plato, Republic (or an approved abridged edition)
Aristotle, Nicomachean lithic's (or an approved abridged edition)
Aquinas, Summa Contra Centiles. Book One
R. Descartes, Meditutions on l-irst Philosophy
G. Berkeley, A Treatise Concerning the Principles of Iluman Knowledge
D. Hume, 1 In İnquiry Concerning Human linderistanding
I. Kant, Prolegomena to Ivery Fiuture Metaphysic's
S. Kierkegaard, Training in Christianity J.S. Mill, E:tiliturianism: On Liherty W. James, Pragmatism A.J. Ayer, Ianguage, Truth and Logic J.P. Sartre, Existentialism
B. Reading in Historical Works

Majors are expected to have a reasonably comprehensive understanding of the main themes of the history of western philosophy. Although this may be achieved by taking courses in the history of philosophy sequence $(331,332,333$, 335), additional reading is desirable, especially for historical periods not covered by course work.
C. Movements in Modern Philosophy with which the Major is Expected to Demonstrate Acquaintance
Idealism, Realism. Pragmatism, Logical
Empiricism (or Positivism), Linguistic
Analysis, Existentialism and Phenomen-
ology, Dialectical Materialism.

## 201 PHILOSOPHICAL ISSUES

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 Cod. Development of critical and systematic philosophical thinking about all issues. I II

## 221 MORAL PHILOSOPHY

Major moral systems of Western civilization; intensive examination of some contemporary
moral theories; critical application to selected moral problems. 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. I

## 324 PHILOSOPHICAL ANALYSIS of SOCIAL PROBLEMS

An examination of fundamental concepts of social thought: human nature, society, authority, community, liberty, equality, justice. Application of these concepts in a discussion of contemporary social institutions and their problems: war, racism, poverty, crime.

## 328 POLITICAL AND

## LEGAL PHILOSOPHY

The nature and justification of the authority of a democratic state; the role of human rights in limiting that authority; the nature of judicial reasoning about constitutional rights and their relationship $t o$ moral rights and to social justice: the justification of legal punishment and disobedience to law.

## 331 ANCIENT PHILOSOPHY

The development of philosophic thought and method from the Presocratic period to the end of the fourth century A.D. Special emphasis is given to the philosophies of Plato and Aristotle. I a/y

## 332 MEDIEVAL PHILOSOPHY

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

The development of philosophy from the seventeenth through the early nineteenth centuries; continental rationalism, British empiricism and German idealism; Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Kant, Fichte, Schopenlaauer and IIegel. II a/y

## 335 CONTEMPORARY

 PHILOSOPHYThe development of philosophy 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. II a/y

## 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, Jaspers, 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 $a / y$

## 385 PROBLEMS

## IN MEDICAL ETHICS

An analysis of selected moral problems in medical relationships, using basic distinctions and normative theories developed in philosophical ethics. General issues of the value of life and the disvalue of suffering, the necessary conditions of human rights, the distinction between wrongs of commission and wrongs of omission, exceptions to rules, and assessment of risks for others. Specific problems of informed consent, euthanasia, allocation of scarce medical resources, rights to health care, patient responsibility for health, truth-telling and confidentiality, genetic counseling and screening, etc. For the general student as well as students in the health sciences. Not for General University Requirement. Prerequisite: Consent of the instructor. Il a/y

## 393 PHILOSOPHY OF RELIGION

Classical and contemporary views of traditional religious problems: the existence of God, religious experience, revelation, immortality and others. II

## 395 PHILOSOPHY OF SCIENCE

The general charac ter, fundamental concepts, methods and significance of modern science; some attention to specific areas of science; physical, biological, social ; the implications of science and scientific methodology for ethical, aesthetic and religious values. I a/y

## 427 PHILOSOPHY

AND CURRENT PROBLEMS
A reading and discussion course conducted by one or more staff members. Students will read in topical areas of current interest in which philosophical literature has been developed for comparison and analysis. Topics envisioned are such as free enterprise, ecology and environment, affirmative action and discrimination, public and private education, democratic pluralism and the problem of authority.

## 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
Prerequisite: Departmental consent. I II (I-4)

## 493 SENIOR

## INDEPENDENT STUDY

Preparation for a comprehensive senior examination and the writing of a major rescarch paper. Preparation of the research paper constitutes two-thirds of the course: reading for the comprehensive examination the remaining third. Paper due November 1 or March 15: examination to be taken by

December I or April 20. For philosophy majors only. Prerequisite: at least 4 courses in philusophy. I II

## Physics and Engineering

BACHELOR OF SCIENCE: Major - 32 semester hours: $147,148,153,154,223$, 331. 332. 336, 356, 421, 422. 497-498 may be substituted for $421-422$ with consent of the department. Eight additional semester hours may be desirable, depending on the sludent's professional objectives. For example, it is recommended that pre-Ph.D. students take 401 and 406. Consult the department for specific recommendations.

Required supporting courses: Math 151, 152, 353; Engincering 354; Chemistry 115; plus either Chemistry 341 or Enginecring 351.

BACHELOR OF ARTS: Major - 24 sernester hours: $147,148,153,154,223$, plus ten semester hours. Under special circumstances 125-126 may be substituted for the 153-154 sequence. This requires the consent of the department. Additional courses may be desirable, depending on the studient's profession 1 objectives. Consult the department for specific recommendations.

Required supporting courses: Math 151. 152.

BACHELOR OF SCIENCE (ENGINEERING PHYSICS): Major - 44 semester hours: $147,148,153,154,223$, 331, 336, 356 (optional). 421, 422. Engineering Basics: 151. 182, 354. Engineering Concentration: 12 semester hours selected from $231,232,271,272,351,352$, 441, 442. (Courses are selected on the basis of the student's career objectives: Electrical, Mechanical or Combination. See Engineering section.)

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

Required supporting courses: Math 144, I51, 152,353 ; Chemistry 115.

MINOR IN PHYSICS - 22 semester hours, including 147-148 (one-hour labs), 153, 154 (or 125,126 ); three additional courses, of which at least two must be upper division.

Students wishing to major in physics or engineering are encouraged to contact the department carly in their college career, preferably prior to entering as freshmen. Early consultation provides greater flexibility in designing one's program.

## OUTLJIIE: BACHELOR OF SCIENCE IN PHYSICS <br> fRESHMAN <br> Iall: 153 General Physics <br> 147 Lab <br> Math 151 Analytic (icometry and Calculus <br> Spring: 154 General Physics <br> 148 Lab <br> Math 152 Analytic (ieometry and Calculus

Si)PHOMORE
Iall: 223
lementary Modern Physics
Math 253 Multivariable Calculus and Differential Equations
1 nyincering
231 Statics
Spring: 336 Mechanics
354 Engineering Analysis
JUNIOR
Fall: 331 Electromagnet ic Theory
356 Mathematical Physics
: 351 Thermodynarnics or
Chem341 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 Laberatory
*Optional
** Optional, recommended for graduate school candidates

## OUTLINE: BACHELOR OF ARTS

 IN PHYSICS| l'all: | 153 | Gencral Physics |
| :---: | :---: | :---: |
|  | 147 | Lab |
|  | Mathl5l | Analytic Geometry and Calculus |
| Spring: | 154 | General Physics |
|  | 148 | Lab |
|  | Mathl52 | Analytic Geometry and Calculus |
| l'all: | 223 | Elementary Modern |

PLUS 10 additional semester hours
106 MAN AND
THE PHYSICAL UNIVERSE
An introduction to the meaning and structure of physics primarily for liberal arts students. A non-mathetical description of the physical universe; and the significance and role of physics in other fields and society.

## 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 147,148 is required.

## 147, 148 INTRODUCTORY

 PHYSICS LABORATORYBasic laboratory experiments are performed in conjunction with the General and College Physics sequences. Concurrent registration in 125,126 or 153,154 is required. (1)

153, 154 GENERAL PHYSICS
A calculus-level survey of the general fields of physics, including classic 1 mechanics, thermodynamics, electricity and magnetism and optics. Concurrent registration in 147, 148 and prior or concurrent registration in Math 151,152 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 physicsare 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 SOLID STATE ELECTRONIC DEVICES <br> See Engineering 272.

331 ELECTROMAGNETIC THEORY Electrostatics, dipole fields, fields in dielectric materials, electromagnetic induction, magnetic propertics 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.

## 336 MECHANICS

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 <br> 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 tourd 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 <br> 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.

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 mechanical techniques are emphasized when appropriate．Prerequisite： 401.

## 421，422 AIJVANCED LABORATORY（1）

49I． 492 INDEPENDENT STUDY （1－4）

497． 498 RESEARCII（1－4）
597， 598 GRADUATE RESEARCH Open to Master＇s degree candidates only．（1－2）

## ENGINEERING PROGRAM

DEGREES OFFERED
（a）B．S．Engineering－Physics（4 year degree）
（b）B．S．Engineering－Science after one additional year in Dual Degree 3－2 Engincering with Columbia or Stanford
3－2 DUAL DEGREE：Dual B．S．degrees from PLU and Columbi，Stanford or other ECPD accredited Engineering School．Three full－time years at PLU plus 2 additional full－time years at Columbia or Stanford．PLU B．S．in Engineering－Science is granted after lirst year at Columbia or Stanford；B．S．in Engineering Specialty（E．E．，M．E．，etc．） granted by Columbia or Stanford at end of lifth colle e year．

PHYS： 14 credits－ $153.154,155,156$. 223：331（optional）

EGR BASICS： 10 credits－ $151,182,354$
EGR CONCENTRATION（ 3 selections＊） － 10 credits－Electrical：271，272，352，441； Mechanical：231， 232 （or PHYS 336）， 351 ． 442.
＊Courses selected on basis of the student＇s career objectives．

Additional courses beyond the above minimum are possible and nay be desirable in order to strengthen the student＇s professional objectives．Continuing consuleation with the Fingineering Program Director for specilicic recommendations concerning advanced teclanical electives and transfer requirements to Columbia，Stanford，or regional state universitiess is desirable and encouraged．

Required supporting courses：Math 144. 151．152，253：Chemistry 115.

B．S．DEGREE IN ENGIN－ FERING－PHYSICS：Similar to the 3－2 program with additional course work at PL．U． in Engineering and Physics： 4 y ears al PLU．

PHYS： 24 credits－ $153,154,155,156$. 223．331： 336 （optional）： $356,421,422$

EGR BASICS： 10 credits－ 151.182 .354
EGR CONCENTRATION（ 4 selections＊） － 12 credits－Filectrical： $271,272,352.441$ ； Meclanical：231， 232 （or PHYS 336），351． 442.
＊Courses selected on hasis of the student＇s carcer objectives

Additional courses may be desirable in order to strengthen the student＇s protessional objectives．Continuing consultation with the

Physics and Engineering Departments for specific recommendations concerning advanced teclenical electives is desirable and encouraged．

Required supporting courses：Math 144. 151．152，253：Chemistry 115.

## SCHEDULE OF COURSES

## FRESIIMAN

Fall：lGR！51
PIIYS I47， 153
MTH1 151
Basic Core
PI：Course TOTAL
Spring：EGR 182
PIIYS I48， 154
MTH152
Basic Core
PIE Course
TOTA．
SOPHOMORE
1all：EGR 231 or 271
PIIYS 223
MTH 253
Basic Core
plicourse
IO1才L

16に354
MTH144
Basic Core
PI：Course
rOTAL

## －

Other schedules are possible and can be worked out in consultation with the ［ingineering Program Director．Chemistry 115 as well as Mathematics $1 \$ 4$ may be worked into a schedule in various places．High school mathematics through trigonometry is essential．

Completion of the Basic Core Requirements and two Interims，as well as all Technical Courses（EGR，PHYS，MTH， ChiEM），within 3 years is required of 3－2 Dual Degree Engineering students before a recommendation to Columbia or Stanford can be granted．Students aspiring to the 4 year degree program in Engineering－Physics have， of course，the full 4 years in which to complete the Basic Core and Interim Requirements．

## Mathematical Systems

## 144 INTRODUCTION TO COMPUTER SCIENCE

## See Mathematics 144

## 345 INTROIDUCTION TO

## NUMERICAL ANALYSIS

Sce Mathematics 345.
346 NUMERICAL ANAI YSIS
See Mathenratics 34 h

## Engineering Basics

## 151 VISUAL THINKING

Thiree 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 major who must be able to think three dimensionally as
demanded in mechanics or structural chemistry．Emplasis upon fluent and thexible idea production．（2）

## 182 MAN AND MATERIALS

Fundamentals of man－made materials （insulators，semiconductors，metals， dielectrics，and optical materials），their relationship to clamistry and physics，and implications for modern lechnological man． Discussion of what useful properties engineering materials have and how these properties can be altered by adjusting the internal micro－structure．A particularly useful starting point for the study of Electrical Enginecring and Mechanical Engineering． Physics and Chemistry majors also may find the viewpoint of Materials Science of special value．Background：one course in chemistry．

## 354 ENGINEERING ANALYSIS

Introduction to vector and tensor calculus， functions of a complex variable，Laplace and Fourier transforms，and undetermined multipliers Comprehensive and illustrative examples from the fields of electromagnetism， waves，transport，vibrations，and mechanics． May be taken as a package witl PHYS 356. Requirements：Mathematics 253.

## Electrical Engineering Science

## 271 ELECTRICAL CIRCUITS

Fundamental concepts of electrical science and its utilization in circuits，components， and devices．Requirement：Current registration in Physics 154．（2）

## 272 SOLID STATE

## ELECTRONIC DEVICES

Useful properties of semiconductors as related to electronic devices：pn－junction diodes and transistors：FET and MOS structures：solid state lasen．Requirement：Enginecring 271.

## 352 ANALOG AND DIGITAL

 ELECTRONIC CIRCUITSActive solid state circuits．Analog：AC－DC converts，anıplifiers，uscillators．Digital： Boolean algebra，sequential lngic circuits， switching networks．Requirement： Engineering 271 ot 272.

## 441 NETWORK ANALYSIS

Analysis of electrical circuits in transient and steadystate modes；formulation of network equations and theorems，impedance matching and fundamentals of network topology． transfer functions，development of Laplace transforms and Fourier series；time－and frequency－domain analysis．Requirement： Engineering 271．a／y

## 491 INDEPENDENT STUDY

Selected topics of mutual interest to student and instructor．Entollment is limited and open only to students who have discussed a proposed topic or course of study in considerable depth with instructor． Requisement：mutual interest．（1－4）

## Mechanical Engineering Science

## 231 STATICS

Fundantental engineering statics using vector algebra：conditions for equilibrium，resultant force systems，centroid and center of gravity． methods of virtual work，friction． Requirement：Plysics 153．（2）

## 232 MECHANICS OF SOLIDS

Mechanics of deformable solid bodies: deformation, stress, constitutive equations for elastic nuaterials, thermoelasticity, tension, flexure, torsion, stability of equilibrium. Requirement: Enginecring 231.

## 351 THERMODYNAMICS

Concepts and equations of classical, macroscopic ihermodynamics; thermodynamic cycles, flow and non-flow systems. properties and mathematical relations of pure substances, mixtures and solutions, phase transition and chemical reactions; an elementary treatment of statistical thermodynamics. Requirement: Physics 154.

## 442 TRANSPORT: MOMENTUM, ENERGY ANU MASS

Unifying concepts of the transport of momentum, energy, and mass in planar, cylindrical, and spherical geometries: methematical aspects of fluid mechanics: boundary layers; transport coelficients-viscosity, thermal conductivity, mass diffusivity; an elementary treatment of turbulent flow. Requisement: Engineering 351 or consent of instructor. a/y

## 492 INDEPENDENT STUDY

Selected topics of mutual interest to student and instructor. Enrollment is limited and open only to students who lave diseussed a proposed topic or course of study in censiderable depth with instructor. Requirement: mutual interest. (1-4)

## Political <br> Science

There are no prerequisites for political science conrses, except as noted. Prior consultation with the instructor of any advanced course is invited. Students wishing to parsue a major or minor in political science are requested to declare the najor or minor with the Department Chairman as soon as possible.

BACHELOR OF ARTS: Major Misimum of 32 semester hours, including 101, 151, and 325. Major programs are planned in consultation with a departmental autviser.

MINOR: Minimum of 20 semester hours, including 101 or 151 . Minor pregrams are planned in consultation witla a departmental adviser.

For students wishing to prepare themselves specifically for carcer possibilities in public affairs and politieal life, the department designates three special programs: Urban Affairs. Public Affairs, and Pre-Law. For further information see the Special Pregrams section of the catalog.

BACHELOR OF ARTS IN EDUCATION: Sce School of Education.

## 101 INTRODUCTION TO POLITICAL SCIENCE

An introduction to the major concepts, theorics, ideas and fields of study relating to politics and governmental systems. Explores governmental structures and processes, political power and authority, conflict,
decision-making, policy, and stability and change.

## 151 AMERICAN GOVERNMENT

A survey of the constitutional foundations of the American political system and of institutions, processes, and practices relating to participation, decision-making, and public policy in American national government.
282 COMPARATIVE GOVERNMENT Examination of political systems from a comparative perspective. Principal focus is on contemporary issues, the societal setting and policy fo mation in selected countries at various stages of political and economic development.

## 321 SCOPE AND METHODS OF POLITICAL SCIENCE

An examination of analytic frameworks, research methods and techniques, and information sources in political science.

## 325 POLITICAL THOUGHTT

A survey of the origin and evolution of major political concepts in ancient, medieval, and early modern times. Such ideas as state, obligation, authority, community, law and freedom will be studied developmentally.

326 RECENT POLITICAL THOUGHT A critical evamination of the major idecologies of the modert world: democracy, conservatism, capitalism, socialism, anarcho-syndicalism, communism, racial political elitism, nationalism, liberalism, Christian political thought, and contemporary problems.
331 INTERNATIONAL RELATIONS Aralysis of concepts and vocabulary of international relations: centemporary international problems and foreign policies.

## 336 INTERNATIONAL

## ORGANIZATION AND LAW

Cooperation and conllict in intermational institutions. Issues before the Linited Nations and other international organizations. The rele of international law in inferstate relations.

338 AMERICAN FOREIGN POI.ICY
The role of the United States in intermational affairs. An analysis of the major factors in the formułation and execution of L'nited States foreign policy and its impact on other powers.

## 345 GOVERNMENT

 AND PUBLIC POI.ICYAn integrated approach to the nature of public policy, with emphasis on substantive problems, the development of policy responses by political institutions, and the impacts of policies. Special attention to policy at the American national or subnational levels, in international politics, or from a comparative perspective, as announced by the department.

## 352 AMERICAN

## STATEGOVERNMENT

Study of governmental structures, processes, problems, and public policy at the state level. Special topics and field study may be arranged as appropriate. Particular attention to the State of Washington.

## 356 URBAN

GOVERNMENT AND POLICY
Examination of American government at the community and metropolitan level, political structures and processes, urban problems and policies, and relationships with other levels of government. Special topics and field study as appropriate.

## 361 AMERICAN

## P()LITICAL PARTIES

An examination in theory and practice of American political partics and interest groups; special attention to party leadership and recruitment, individual political socialization and participation, electoral processes, and to the role of interest groups in American politics.

## 363 POLITICAL COMMUNICATION AND OPINION

Inquiry into the relatienship between public will and public policy in America. Examines democratic values in the contexts of opinion formation, expression, and effects. Parlicular attention to political culture, public opinion polls, the mass media, and governmental secrecy and information marragement.

## 364 TIIE LEGISLATIVE PROCESS

A study of the theory, organization, and procedure of the Congress and other legislative bodies in the United States; special emphasis on the dynamics of confliet and compromise in the legislative arena including citizen and interest group participation and lobbying.
368 TIIE AMERICAN PRESIDENCY Study of the nation's leighest political office in terms of the roles and expectations of the office, styles of Icaderships, Presidential decision-making, the powers and limitations of the office, and the interaction of personality and institution.

## 371 JUDICIALPROCESS ANI) BEHAVIOR

An examination of the nature of law, judicial organization, and judicial roles. Particular emphasis is given to the political nature of the judiciary and the mutual impacts of law and the political system.

## 372 CONSTITUTIONAL LAW

The consticutional basis of govermmental powers in the United States with special emphasis given to judicial review, separation of powers, federalism, and interstate commerce. Includes an examination of the political and constitutional restrictions on governmental power.

## 373 CIVIL LIBERTIES

Constitutional rights and liber ties with special attention given to freedom of expression and association, religious freedom. rights in criminal procedure, due process and equal protection.

## 383 THE WESTMINSTER MOIDEL

An examination of the evolution of the political system of the United Kingdom and its transplantation to the states of the British Commonwealth including Canada, Australia, and New Zealand.

## 384 COMMUNIST

POLITICAL SYSTEMS
Comparative examination of Marxist political systems, particularly the U.S.S.R., eastern Furope, China, and Cuba. Special attention will be given to ideology and to the role of the Communist Party.

## 387 CONTEMPORARY REVOLUTIONARY MOVEMENTS

Causes, goals and tactics; the term "revolutionary movement" to include both successful and unsuccessful challenges to existing sovereigntics and constitutional structures.

## 401 SEMINAR IN POLITICS

Selected topics in the study of government and pulitics as announced by the Department.

## 457 PUBLIC ADMINISTRATION

Management as occurs in the affairs of state: the nature of human behavior in organizations; administrative law and quasi-judicial practices; civil service, budget and fiscal control, centralization, coordination in administrative areas.

## 458 INTERNSHIP IN

PUBLIC ADMINISTRATION
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 Department only.) (4-12)

## 464 INTERNSHIP IN THE <br> LEGISLATIVE PROCESS

Direct involvement with the Washington State legislature. An opportunity to study the process from the inside by working with legislative participants. (Open only to juniors and seniurs with at least one year at PLU. By consent of the Department only. Political Science 364 prerequisite or taken concurrently.) (4-12)

471 INTER:NSHIP IN PUBLIC LAW
An internslip with a state or local government unit engaged in public law enforcement and litigation. (By consent of the Department only.) (4-12)

## 491,492 INDEPENDENT

READING AND RESEARCH
(By consent of the Department only.) (1-4)
597. 598 GRADUATE RESEARCH
(Open to master's degree candidates only. Consent of the Department required.) (1-4)

## 599 THESIS

(Open to master's degree candidates only. Consent of the Department required.)

## Psychology

BACHELOR OF ARTS: Major - 32 semester hours, including 101, 243, 340, 460, 490. In addition, Statistics 331 is required. Minur - 20 semester hours. 110 and 221 may not be counted toward the major or minor. Courses at the 500 level are exclusively for graduate students.

## 101 INT RODUCTION 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, adjustment, and social behavior. I II

## 110 STUDY SKILLS

To assist in the improvement of reading skills and other techniques for effective study; class work supplemented by individual counseling. (May not be connted in the major or minor.) I 11 (2)

## 221 THE PSYCHOLOGY OF ADJUSTMENT

Problems in personal adjustment in everyday living. Prerequisite: 101. (May not be counted in the major or minor.) I II (2)

## 243 SCIENTIFIC METHODS

Basic research design and theory construction; applications to both laboratory and field. Special emphasis is placed on perception and cognition. Lecture and laboratory. Majors must take four credit hour option. Prerequisite: 101. I II (2 or 4)

## 330 SOCIAL PSYCHOLOGY

Research and theory concerning the interaction between groups and the individual. Language, attitudes, aggression, leadership, person perception, and related topics are examined and their relationship to various types of social change and influence are discussed. Prerequisite: 101. II

## 335 DEVELOPMENT:

INFANCY TO MATURITY
Physical, intellectual, social, and emotional growth from infancy through adolescence to maturity. Prerequisite: 101. II
340 HUMAN NEUROPSYCHOLOGY 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
Physical, intellectual, emotional and social development of the individual from the pre-natal period to adolescence; problems of behavior and adjustment. Prerequisite: 335. (2)

## 405 ADOLESCENT PSYCHOLOGY

Physical development. mental traits, social characteristics and interests of adolescents: adjustments in home, school and community. Prerequisite: 335. 11 (2)

## 410 EMOTION AND MOTIVATION

 Characteristics of emotion and motivation: their role in determining behavior. Physiological, cognitive, and behavioral orientations are emphasized. Prerequisite: 243. 11
## 420 PERSONALITY THEORIES

Strategies for the study of personality and for the formulation of personality theories.

Techniques of measurement and implications for counseling and/or psychotherapy. Prerequisite: 101. I II

## 421 ABNORMAL PSYCHOLOGY

Etiology and treatinent of abnormal behavior; special emphasis on psychosocial factors. Prerequisite: 101. 111

## 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 SYSTEMATIC THOUGHT IN PSYCHOLOGY

Historical development, contemporary forms, and basic assumptions of the major psychological theories and traditions. Primarily for advanced majors and graduate students. I

## 491,492 INDEPENDENT STUDY

 A supervised reading, field or research project of special interest for advanced under graduate or graduate students. Prerequisite: departmental consent. I II (1-4)
## 493 SEMINAR

Selected topics in Psychology as announced. Prerequisite: instructor's consent.
505 SOCIAL SCIENCE METHODS
Basic research concepts applied to laboratory, field, and bibliographical studies. Topics include formulating research questions, rescarch designs, data-gathering techniques, analysis of data and theory construction. Emphasis is placed on understanding and evaluating rather than conducting research. Admission by consent of the student's graduate committee.

## 515 PSYCHOLOGICAL <br> 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 Revised Wechsler Intelligence Scale: for the latter, interview techniques, self-report tests such as the MMPI and projective methods. Prerequisite: 450. II

## 540 COUNSELING METHODS

Counseling process from initial contact through termination. Emphasis on case conceptualization, communication skills, and instruction in commonly used techniques. Prerequisite: 420. I II

## 550 GROUP COUNSELING

Counseling theories and methods applied to the group context. Prerequisite: Psych 540.

## 570 PRACTICUM IN COUNSELING AND/OR ASSESSMENT

Ar opportunity to develop counseling and/or assessment shills in a setting in which these professional services are offered. Prerequisite: 515 and/or 540. III

## 577 ADV ANCED PRA('TICUM IN COUNSELING AND/OR ASSESSMENT

An opportunity for the more advanced student to work in the areas of counseling and/ur assessment in a setting in which these professional services are provided. Prercquisite: 570. 1 II

## 590 GRADUATE SEMINAR

Selected topics in Psycholozy as announced. Prerequisite: instructor's consent. (1-4)

## 596 GRADUATE RESEARCH

Supervised independent research. Prerequisite: departmental consent. I 11 (1-4)

## 599 THESIS

Development of a thesis 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 REQLIREMENTS: 8 semester hours for students entering as freshmen or sophomores. Four lower division hours shall be taken before the end of the sophomore year. The second 4 hours may be selected from most of the other offerings in the religion curriculum. Transfer students entering as juniors or seniors are required to take 4 semester hours of religion unless presenting eight transfer hours of religion from other accredited colleges or universities.

BACHELOR OF ARTS: 28 semester hours, with 12 concentrated in one of five areas (Biblical Studies; History of Christianity, History of Religions; Theology and Ethics; and Religion, Culture, Society, and the Individual), and 16 distribu ted so that at least 4 hours are taken in each of two other areas. Transfer majors must take at least 12 hours in residence. Students may apply for the Contract Major, without previously specified requirements, designed to encourage student freedom, initiative, and responsibility. See Chairman for details on the five areas or the conntract major. 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.

MINOR: 16 semester hours, with no more than 8 hours in one of the five areas listed above.

## I3I JUDAEO-CHRISTIAN <br> \section*{LIFE AND THOUGHT}

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

## 132 RELIGIOUS EXPERIENCE

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

## 241 BIBLICAL LITERATURE

## Literary, historical and theological dimensions

 of the Bible, including perspective on contemporary problems.
## 251 INTRODUCTION TO THEOLOGY

Basic questions of the Christian faith approached topically. Questions such as what does Christianity mean by "God" will be considered through Biblical, historical and contemporary resources. Some attention given to challenges to the Christian faith and its interaction with other perspectives.

261 RELIGIONS OF MAN
The religions of man. A critical introduction to the study of the religions of mankind emphasizing historical origins and cultural developments. Readings centered upon primary sources in translation.
NOTE: Only one of the following courses may be taken to fulf ill the (ieneral Iniversity Requirement: 261, 361 , or 362.

## 262 MYTH, RITUAL AND SYMBOL

An examination of the nature of myth and its expression through symbol and ritual. Attention given to pre-literate mythology, Asian mythology, and Occidental mythology and the role these mythological traditions have played in the development of modern man's ethical, social, and religious values.

## 341 OLD TESTAMENT STUDIES

Major areas of inquiry: archaeology and the Bible, the Prophets, or the Wisdom Literature. Prerequisite: 241 or consent of instructor.

## 342 NEW TESTAMENT STUDIES

Major areas of inquiry: such as Intertestamental, Synoptic, Johannine or Pauline literature. Prerequisite: 241 or consent of instructor.

## 343 THE LIFE OF JESUS

Gospel concerning the life and teachings of Jesus; a historical survey of "Life of Jesus" research, form and reduction criticism of the Gospel tradition: the religious dimensions of Jesus' life and thought. Prerequisite: one lower division course or consent of instructor.

## 351 CHRISTIAN ETHICS

An introduction to the personal and social ethical dimensions of Christian life and thought with attention to primary theological positions and specific problem areas. Prerequisite: one lower division course or consent of instructor.

## 361 PHILOSOPHICAL AND RELIGIOUS

## TRADITIONS OF INDIA

Emphasis on Vedic and Upanishadic traditions, BHAGAVAD-GITA, "six orthodox schools," Buddhism, and contemporary Indian philosophical and religious developments. Readings centered on primary sources in translation. Prerequisite: Religion 261 or consent of instructor.

NOTE: Only one of the following courses may be taken tofulfill the Gencral University Requirement: 261, 361, or 362.

## 362 PHILOSOPHICAL

## AND RELIGIOUS

TR.ADITIONS OF CHINA
Classical and modern philosophical and religious traditions of China (the six "classical schools," the neo-Taoist, and neo-Confucian traditions), Chinese Buddhism, and how these schools relate to contemporary China's Marxist-communist ideology. Readings centered on primary sources in translation. Prerequisite: Religion 261 or consent of instructor.
NOTE: Only one of the foltowing courses may be taken to fulfill the General University Requirement: 261, 361, or 362.

## 367 JUDAISM

Faith and commitment, structure and dynamics, as expressed in this major Western religion; including studies of interpretation of the Hebrew Bible, theological emphases, religious observances, historical developments, modern groups, and Jcwish-Christian dialogre.

## 371 ANCIENT CHURCII 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). Prerequisite: one lower division course or consent of instructor. I a/y

## 372 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. Prerequisite: Religion 131 or consent of instructor. 11

## 373 AMERICAN CHURCHES

The development and trends of Christianity in the United States. Prerequisite: Religion 131 or consent of instructor.

## 381 STUDIES

IN CHURCH MINISTRY
Toward a functional viewpoint of the church's ministry: worship and education, programs for the youth and the elderly, counselling, and administration. First-hand observation of selected ministries. Prerequisite: one lower division course or consent of instructor.

## 382 CHRISTIANITY AND <br> THE SOCIAL CRISIS

An intensive, in-depth exploration from the perspective of Christian theology and ethics of one or two current social issues. Prerequisite: one lower division course or consent of instructor.

## 383 RELIGIOUS <br> EXPERIENCE AMONG <br> AMERICAN MINORITIES

Concentrating on the religious experiences and contributions of those sectors in American society that have a minority identity and are of ten not included in the usual study of American churches, this course will in different semesters focus on different minorities such as Blacks, Indians, Chicanos. Prerequisite: one lower division course or consent of instructor.

## 391 LUTHER

The man and his times, with major emphasis on his writings and creative theology, such as the radical centrality of the Gospel and faith, the Word and Scripture, the sacraments, Church and State. Prerequisite: one lower division course or consent of instructor. Il a/y

392 CHRISTIAN CLASSICS
Cliristian literature: devotion, biography, theology, poetry: Augustine, Thomas a Kempis, Dante, Luther, Calvin, Pascal, Wesley, Kierkegaard and others; group core plus seminar reports. Prerequisite: one lower division course or consent of instructor. Il a/y

## 451 CHRISTIAN THOUGHT AND MODERN CONSCIOUSNESS

Contemporary issucs and problems in theology with reference to Biblical and listorical resources 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 consent of instructor.

## 485 CHRISTIANITY

## AND THE ARTS

Relationships of Christian thought to the forms and contents of various media of artistic creativity. $11 \mathrm{a} / \mathrm{y}$

## 490 SENIOR SEMINAR <br> IN RELIGION

(O) onen only to seniors and graduate students.) (a) Human Sexuality

The psychological, sociological, ethical and theological dimensions of sexuality.
(b) Religion and Psycholagy

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-understanding 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 cxamined from a variety of perspectives with special emphasis on theological dimensions.
(e) Literature and Theology

A study of significant literature from both a literary and a theological perspective. Basically directed toward 19th and 20th century American and European literature.

### 491.492 INDEPENDENT STUDY

Intended for religion majors, advanced and graduate students: consent of the department is required.

## 493 MAJOR CHRISTIAN AND OTHER <br> RELIGIOUS THINKERS

The in-depth and intensive study of one or two major figures in Christian theology or other religious thought, e.g.. Augustine, Bonhoeffer, Buber. Bultmann, Niebuhr, Radhakrishtran. Tillich. Prerequisite: one lower division course or consent of instructor.

## Sociology, Anthropology \& Social Welfare <br> SOCIOLOGY

BACHELOR OF ARTS: Major - 32 senester hours, including 101, one course al the 200 -level, three courses at the 300 -level. and three courses at the 400 -level.

MINOR: 20 semester hours, including 101, one course at the 200 -level, two courses at the 300 -level, and one course at the 400 -level.

BACHFLOR OF ARTS IN EDUCATION: See School of Education.

CRIMINAL JUSTICE COURSES: The department also offers graduate courses related specifically to the field of corrections and law enforcement. Supportive courses in sociology and other fields should be chosen in consultation with departmental faculty.

STATISTICS: See Statistics 331. 341 listing under Statistics (Interdepartmental listing). Either one may be counted toward the 32 hour major in Sociology. Statistics is especially appropriate for those considering graduate work in Sociology.

## 101 INTRODUCTION <br> TO SOCIOLOGY

An introduction to the principles, concepts. and areas of Sociology as well as the analysis tools used in studying social behavior.

## 240 SOCIAL PROBLEMS

Analysis of the processes of social and personal disorganization, conflich and fechniques of reintegration in relation to poverty, crimee, family disorganization, work alienation and other sowial problems.

## 260 INTERPERSONAL RELATIONSHIPS AND GROUP BEHAVIOR

An examination of processes of interaction that the person experiences in small group settings and the implications that has for interpersonal behavior and self-conceptions.

## 280 INTRODUCTION TO <br> RACE RELATIONS

The bistury of American race relations. Factors accounting for changes in relationships between whites and non-whites. Critical areas of conflict among the races.

## 340 (.RIMI: AND DELINQUENCY

Analysis of adult crime and juvenile delinquency with attention to their social routs. development, and social impact.

## 342 FAMILY

The family as a sucial system and social institution. Couriship, marrage and parenthood functions of the family. Personality development, marriage adjustment, changing family patterns, disorganization and alternate lamily forms.
343 CHANGING COMMUNITIES
Analysis of the causes and consequences of changing patterns of American community life from rural to postindustrial society.

## 344 CONFLICT RESOLUTION

Factors accounting for interpersonal and intergroup tensions. Interpersonal, intergroup, national, and international methods of resolution.

## 345 BUREAUCRACY IN SOCIETY

Analysis of structures, processes. and cliange in bureaucratic organizations; their effects upon the individual and the organization; interrelationships between society and organizations.

## 381 SOCIALIZATION

How individuals Ieam social roles and role competency through the socialization and resocialization process. Emphasis will be on adolescent and adult socialization within the context of institutions, organizations, and society.

## 390 SOCIOLOGY OF POVERTY

Sources of inequality; analysis of lifestyles and belavior of groups it society who experience inequality.

## 430 RELIGION IN SOCIETY

A multi-cultural investigation of religious experience, belief, and ritual in relation to their social settings with particular attention to new forms of religion in America.

## 441 RACE.

## REVOLUTION AND THE

DEVILLOPING COUNTRIES
An investigation of racism and stratification processes within the developing countries and between the developed and developing countries: its consequences and implications the significance of American non-white minoritics.

## 442 SOCINL POLICY

ANI) ORGANIZATION
Analysis of how societies have defined social and personal needs and developed and organized responses to those needs. Special emphasis will be given to the response of American society.

## 443 SOCIOLOGY OF EDUCATION

The nature of functioning of the educational system will be examined from a sociological perspective. Topics will include: education, stratification, and social change: school as a complex organization: the school as a social instilution; and the sociology of learning.

## 444 DEVIANT BEHAVIOR

An exploration of nonconforming belavior such as drug use, homosexuality, cultic religion with particular attention to the dialectical process of its gradual emergence and its social rejection.

## 470 SOCIOLOGICAL INQUIRY

An investigation of the ways in which theory and method unlock a sociological understanding of human socieites.

## 491 INDEPLNDENT STUDY:

 UNDERGRADUATE READINGS Readings in specific arcas or issues of sociology under supervision of a faculty member. Prerequisite: Departmental consent. (1-4)
## 492 INDEPENDENT STUDY: UNDERGRADUATE FIELD WORK

Study of specific areas or issues in sociology through in-field methods of analysis and research supported by appropriate reading under supervision of a faculty member. Prerequisite: Departmental consent. (1-4)
493 SEMINAR IN SOCIOLOGY
Student or faculty initiated seminar in one of four fundamental areas in Sociology: (a) Contemporary Issues and Problems: (b) Social Process and Clange; (c) Social Structure; and (d) Theory and Method. Prerequisite: Departmental consent. (1-4)

## 501 PROGRAM SEMINAR

An analysis of social explanation and the social scientific frame of reference. Offered in the Human Relations Program.

## 503 GROUP PROCESS

A human interaction laboratory to facilitate the exploration of the self concept through the mechanisms of interpersonal interactions and feedback.

## 505 SOCIAL SCIENCE METHODS

Basic research concepts applied to laboratory, field and bibliographic 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 research.

## 51] TIIE CRIMINAL

## JUSTICLE SYSTEM

Sociological analysis of the segments of the criminal justice system, their interrelationships, and their relationships to crime prevention, social control, correction, and rehabilitation.

## 512 REHABILITATION MODELS

Study of various models that strive to help offenders return to a productive role in society: institutionalization models, social action models, community based models, etc.

## 513 SOCIOLOGY OF HUMAN SERVICE SYSTEMS, PLANNING AND CHANGE

Analysis of human service systems such as correctional institutions, probation and parole agencies and social service agencies to understand planning processes and change.

## 521 SOCIAL SYSTEMS <br> INTERVENTION

A survey of the processes of social change, including an examination of social conditions which create the need for intervention. Offered in the Human Relations Program.

## 531 MINORITY-MAJORITY RELATIONS

The history and culture of minority groups in American Society, examined within the context of the interaction between minority-majority groups and population and composition and movement of these groups. Offered in the Human Relations Program.

## 541 SOCIAL STRATIFICATION IN SOCIAL SYSTEMS

The economic, social, and political systems in

America are explored to gain some basic understanding of how class, status, and power operate in society. Offered in the Human Relations Program.

## 590 SEMINAR

Student or faculty initiated seminar in selected areas.

## 595 GRADUATE READINGS

Independent study card required. (1-4)
597 THESIS
Independent Study card required.

## ANTHROPOLOGY

BACHELOR OF ARTS: Major - 32 semester hours, including 220, 221, 222, 470, and 16 additional hours in Anthropology chosen in consultation with the department.

MINOR - 20 semester hours, including 101, one course at the 200 -level, one course at the $300-l e v e l$, one course at the $400-l e v e l$, and one additional course chosen in consultation with the department.

BACIHELOR OF ARTS IN EDUCATION: Sce School of liducation.

## 101 ANTHROPOLOGY: A

## GENERAL INTRODUCTION

An introduction to the four fields of Anthropology: sociocultural and physical anthropology, archaeology, and linguistics; the basic concepts and theories that anthropologists use in describing, explaining, and interpreting human biology and behavior, both past and present.

## 220 WORLD ETIINOLOGY

A survey of the major culture areas of the world, analysis and comparison of econumic, social, political, and religious systems from a variety of societies, including our own. Not open to freshmen.

## 221 PHYSICAL ANTHROPO LOGY

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.

## 222 ARCHALOLOGY AND THII: EVOLUTION OF CULTURE

The development of culture, emphasizing the adaptive role of culture in a variety of environmental settings. The rise of the state in Mesopotamia, Egypt, Asia, Middle and South America. The theory and methods of Archacology.

## 321-326 (ULTURE ANI) PEOPLES SERIES

A comparative study of each area; the position of these traditional cultures in the modern world: the major themes that have concerned anthropologists working in the area. One or two of this series offered each year.

## 321 CULTURE AND PE.OPLES OF AFRIC`A

## 322 (UULTURE AND

PEOPLES OF ASIA

## 323 ('ULTURE AND PEOPLES OF OCEANIA

## 324 CULTURE AND PEOPLES OF

 SOUTH/CENTRAL AMERIC'A
## 325 (ULTURE AND) PEOPLES OF TRADITIONAL EUROPE

## 326 CULTURE ANI PEOPLES OF NATIVE NORTH AMERICA

## 415 THE DYNAMICS OF

SOCIOCULTURAL CHANGE
Anthropological approaches to the study of social, economic, and cultural change, with particular emphasis on the impact of the western world on non-western societies. Prerequisite: Anth. 101 or 220 or consent of instructor.

420 ECONOMIC` ANTHROPOLOGY Theoretical approaches within Anthropology to the study of economic systems in pre-literate and peasant societies, and to the effect of colonialism on those systems. Prerequisite: Anth. 101 or 220 or consent of instructor.

## 435 PSYCHOLOGICAL <br> ANTHROPOLOGY

A review of the basic concepts and contributions of this subfield of an thropology; the influence of culture on the development of personality: the position of the individual in sociocultural analysis and culture change. Prerequisite: Anth. 101 or 220 or consent of instructor.

## 445 (ULTURE AND ('OCNITION

An investigation of cognitive studies in anthropology, including category systems and information processing, structure and function of taxonomic systems, componential analysis and the relationship between culture, cognition, and behavior. Prerequisite: Anth. 101 or 220 , or consent of instructor.
470 ANTHROPOLOGICAL INQUIRY A systematic study of the theoretical foundations of sociocultural anthropology: researeh methods; how theory and method are used to establish anthropological knowledge. Prerequisite: Anth. 101 or 220 or consent of instructor.

## 491 INDEPENDENT STUDY:

UNDERGRADUATE READINGS
Reading in specific areas or issues of Anthropology under supervision of a faculty member. Prerequisite: Departmental consent. (1-4)

## 492 INDEPENDENT STUDY: UNIDERGRADUATE FIELDWORK

Study of specific areas or issues in Anthropology through in-tield methods of analysis and research supported by appropriate reading under supervision of a faculty member. Prerequisites: Anth. 470 and Departmental consent. (1-4)

493 SEMINAR IN ANTHROPOLOGY Student or faculty initiated seminar in one of four fundamental areas in Anthropology: (a) Contemporary Issues and Problems: (b) Social

Process and Change; (c) Social Structure: and (d) Theory and Method. Prerequisite: Departmental consent. (1-4)

## SOCIAL WELFARE

BACHELOR OF ARTS: Major - 44 semester hours, including 271, 333, 365, 442, 472. 475,476 , and 484 , and 12 additional hours chosen from each of the following three areas: (I) either Political Science 101 or 373; (2) either Economics 150 or 321 or 362 ; (3) either Psychology 335 or Sociology 381.

Unless otherwise stated, 271 or consent is a prerequisite for all courses in Social Welfare.

## 222 COMMUNITY SERVICES

Designed to provide an opportunity for freshman and sophomore level students to test their interest in the field of social welfare through a five to ten hour per week participant-observation experience in a local agency. The purposes are to provide opportunity for a self-evaluation of one's aptitude for and interest in the field, and secondly, to introduce the idea of evaluating the effectiveness of the agency in terms of achicving its stated goals. No prerequisites. Will not meet General University Requirements.

## 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 ohservational experiences. No prerequisite. I II

## 333 INTERVIEWING

Concepts. principles, and techniques intrinsic to interviewing: "helping," problem-solving, or "clinical" interviewing for persons in the helping professions: social work/social welfare, clergy, nursing, physicians, parish workers, personnel officers. No prerequisites.

## 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. Prerequisite: 271 or consent. I II

## 442 SOCIAL POLICY

AND ORGANIZATION
Analysis of how societies have defined social and personal needs and developed and organized responses to those needs. Special emphasis will be given to the response of American society.

## 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 problent-solving structures and processes. Prerequisites: 271 and consent. II

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

484 SOCIAL RESEARCH
Principles of research design and assessment of various research methods. Evaluation research will be given special attention. Primary emphasis will be placed upon understanding and critically examining actual research.

## 490 SEMINAR

Prerequisite: Departmental consent. (1-4)

## 491 INDEPENIDENT STUDY

Prerequisite: Departmental consent. (1-4)

## 501 SEMINAR IN

FAMILY GROUP THERAPY
This seminar seeks to examine the current family orientation as it relates to behavioral science theory and practice with families through an analysis of the theoretical and practical considerations that shape delivery of services to families. The relation between the thinking and doing in family therapy will be clarified and expanded upon.

## 502 FAMILY

THERAPY PRACTICUM
This seminar seeks to provide students with a meaningful process and structure by which family therapy is learned at the practicum level. Theoretical concepts will also be examined in the terms of diagnosis and treatment implications in the delivery of services to family systems.

## Statistics

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 credit.) I II

341 MATHEMATICALSTATISTICS Elementary probability theory, discrete and continuous distribution functions, sampling theory and hypothesis-testing. Credit cannot be granted for both Statistics 331 and 341. rerequisite: Mathematics 152. (May be applied to mathematics credit.) $11 \mathrm{a} / \mathrm{y}$

## SCHOOL OF BUSINESS ADMINISTRATION

admission

The professional 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
the successful completion of at least 24 semester hours with a cumulative grade point average of 2.5 or above, and the declaration of business administration as the major field of study. Transfer students are required to have maintained the grade point average of 2.5 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 undergraduate 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. B.B.A. and M.B.A. programs are nationally accredited by the Accreditation Council of the AACSB. Pacific Lutheran University is accredited regionally by the Northwest Association of Schools and Colleges.

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 Bachelor of Business Administration degree program 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 2.50 or above as well as a 2.50 grade point average separately in business courses. D grades in business administration core courses (including the two upper division business electives) will not meet the BBA graduation requirements. 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: 230, 281, 282, 350, $364,370,453,455$, and 8 semester hours of upper division business electives. Required supporting: Economics 150 and one upper division economics course: Math 128 (or 127 and 15I): 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.

CERTIFICATES - Certificates of concentration are issued upon completion of specialized studies in these areas: Accounting, Finance, Marketing, Operations Management, Personnel and Industrial Relations. At least 16 hours of upper division courses in an area of specialization must be completed with a 2.50 grade point average, as prescribed by the School of Business Administration.

MINOR - 28 to 32 semester hours. Non-business courses: Math 127 and I5I OR Math 128: Economics 150; Statistics 331. Business courses: 281, 350, 364, 370.

MASTER OF BUSINESS ADMINISTRATION: See Graduate Catalog.

MASTER OF PUBLIC ADMiNISTRATION: See Graduate Catalog.

## BUSINESS ADMINISTRATION

 COURSESCourses 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 and MPA programs and students in other graduate programs who have an approved field in business.

The middle digit of the course number indicates field of concentration:

3 - law
4 - general service
5 - personnel and industrial management 6 - finance.
7 - marketing
8 - accounting and information systems 9 - specialized and predominantly independent studies

## 230 LAW AND SOCIETY

A study of the legal system in the United States and the reguiation of relationships between individual citizens, groups, and the governmental 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. I II

## 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. I
## 243 FAMIL Y 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. I II

## 281 FINANCIAL ACCOUNTING

An introduction to accounting concepts and principles. Preparation and analysis of financial reports. I II

## 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. Applications utilizing computer terminal. Prerequisite: 281. 111

## 350 MANAGEMENT

A critical examination of the principles and processes of administration. Management techniques and the functions of planning, organizing, direction, and control are discussed from both the classical and the behavioral points of view. Study of the concepts and characteristics of the production function. Introduction to case analysis and problem-solving techniques. Prerequisites: Econ 150, Math 128 (or 127 and 151) (may be concurrent), Stat 331 (may be concurrent), and BA 218. Junior standing. I II

## 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 tinancial strategies and decision-making for financing, expansion, and dividend policies. Required for business majors. Prerequisites: Econ 150, Math 128 (or 127 and 151), Stat 331, and BA 281. Junior standing. I II

## 367 FINANCIAL MARKETS

Analysis of the characteristics and deterninants of an efficient financial system; pricing of capital assets; supply and denand for loanable funds and the level and structure of interest rates; savings-investment process and financial intermediaries; insurance and reinsurance markets; commodity markets, and intermational finance. Prerequisites: Econ 150, Math 128 (or 127 and 151), Stat 331, BA 281 , BA 364.

## 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. Prerequisitcs: Econ 150, Math 128 (or 127 and 151), Stat 331, and BA 281. Junior standing. II II

## 381 INTERMEDIATE ACCOUNTING

Concentrated study of the valuation theories for assets and liabilities. Analysis of related effects on income determination. Prerequisite: 281. III

## 383 INCOME TAXATION

Comprehensive study of income tax concepts, regulations, and tax planning principles. Emphasis on individual and corporate income tavation. Prerequisite: 281. II

## 385 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. Prerequisites: 281 and 282 . 1

## 387 DATA PROCESSING SYSTEMS

 A computer-laboratory-oriented course which includes basic program and system analysis and flow charting, intensive study of progamming languages with emphasis on BASIC, and the development of a working knowledge with computer hardware and software systems. Prerequisites: 281 and 282. 111
## 392 INTERNSHIP

A program of full time experience closely related to the student's specific career and academic interests. The student is expected to develop the internship opportunity with a firm or organization. Before registration, the student, the organization, and the School will prepare an internship agreement. This agreement identifies the problems to be researched, experience to be gained, and related readings to be accomplished. Monthly progress reports and other measures of achievement will be used to determine the grade. Not more than 2 hours of credit will be granted for a full month of internship, and not more than 8 hours of accumulated credit will be granted for the internships taken. The internship cannot be used to meet the minimum requirement for 2 business administration elective courses, and it must be completed prior to the last semester before graduation. Prerequisites: BA 281, 282, 350; Economics 150; Statistics 331; one additional course in the student's area of concentration. (2 or 4)

## 435 BUSINESS LAW

Procedures, contracts, agencies, negotiable instruments, business organizations, property. trusts and wills, transportation, insurance and employment. II

## 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. I

## 451 OPERATIONS ANALYSIS

Introduction to and the examination of selected decision sciences techniques and their applications to accounting, finance, management, marketing, and production. Topics include modeling, inven tory control, resource allocation, project planning, forecasting, and logistics. Prerequisites: BA 281, 282, 350; Economics 150; Statistics 331.

## 453 PERSONNEL AND

## INDUSTRIAL RLLATIONS

Detailed examination of behavioral processes of individuals and groups in business organizations. Enıphasis on policy issues and specific problems in managing human resources with fecus on modern practices of industrial relations and personnel management in industrial and other organizations. Prerequisite: 350 . I II

## 455 BUISINESS POLICY

Formulation of policies to integrate all functions of business. Sucial, ethical, religious, economic, educational and international implications in the formulation of business policies and ohjectives. Includes compreliensive case analyses. Required for business majors. Prerequisites: Senior standing; 281, 282, 350, 364 and 370 . I II

## 456 HONORS SEMINAR II

460 EMPLOYEE BENEFIT PLANS Intensive analysis of employee benefit plans: profit sharing plans, pension plans, group health and life insurance; structure and effect of governmental regulation of various benefit plans. Prerequisites: Econ 150, Math 128 (or 127 and 151), Stat 331, BA 281, BA 364.

461 PORTFOLI O MANAGEMENT Discussion of sound portfolio inanagement techniques: Security selection and construction of efficient asset portfolios; measuring investment performance; capital market efficiency; selected recent developments in portfolio analysis. Emphasis on risk and return relationships of securities and portfolios. Prerequisites: Fcon 150. Math 128 (or 127 and 151). Stat 331, BA 281. BA 364.

## 464 FINANCI AL PL.ANNINC AND CONTROL

Intensive analysis of major financial decisions; financial planning and budgetary control; mergers and acquisitions: prediction or corporate failure: bond refunding; new equity issues: recent developments in capital structure theory as applied to financial decisions. Emphasis on decision-making. Prerequisites: Econ 150. Math 128 (or 127 and 151), Stat 331, BA 281, BA 364.

## 470 MARKETING MANACEMENT

Analytical approaches for the solution of marketing problems, developing strategies, planning and administering comprehensive marketing programs; evaluation and control of marketing operations. Prerequisite: 370. I

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. Stat 331 strongly recommended. I

## 472 ADVERTISING AND <br> 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. I II

## 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 strategics. Prerequisites: 350 and 370. II

## 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. Prerequisites: 281 and 381 . II

## 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. Prerequisites: 281, 381 and 482. II

## 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. (1-4)

## 501 FUNDAMENTALS OF

 ACCOUNTING AND FINANCEFundamental assumptions, principles, and procedures underlying accoun ting; transaction analysis and the fundamental accounting model; matching of expenses with revenue: measurement and reporting of income statement and balance sheet accounts; consolidated statements; and using and interpreting financial statements. Theoretical framework for financial decisions; decision theory relative to working capital management, short- and intermediate-term financing, capital investments and valuation capital structure and dividend policy. and long-term financing.

## 502 FUNDAMENTALSOF MANAGEMENT AND MARKETING

Principles and processes of administration. Techniques and functions of planning, organizing, directing and controlling. The flows of goods and services in the economy, economic and behavioral approaches to the analysis of demand: the marketing functions in business firms. Determination of the marketing inix.

## 550 ORGANIZATIONAL BEHAVIOR AND <br> ENVIRONMENT

The study of open sociotechnical systems within which a manager must operate. It encompasses three major perspectives: the external organization environment, including legal, ethical, social, cconomic and political influences; the organization itself as an entity; and the internal organization environment. I II

## 551 SEMINAR IN

OPERATIONS MANAGEMENT Analytical approaches to operational management: the relationship of production to other functions and external factors; case studies of modern techniques/methodologies as applied in selected situations and industries; quantitative models, systems design and computers. Prerequisites: 350, 550, Stat 331 and Econ 543. 1 II

552 APPLIED DECISION ANALYSIS Use and application of selected decision science techniques to projects. The focus is on the examination of managerial decision situations and the development of decision analysis methods for the manager. Applications include forecasting, resource allocation, project planning, data analysis, and simulation. Prerequisite: Economics 543.

## 553 CONTEMPORARY ISSUES IN MANAGEMENT

Investigation of the roles of managers in the modern society. The exploration includes, but is not limited to the topics of corporate responsibility, ethical issues in management, and the impact of technological change on organizations and society. The workshop approach to these topics combines the use of cases, readings, discussions, and simulations. Prerequisites: BA 550; Economics 504, or equivalent.

## 555 BUSINESS STRATEGY AND POLICY

Management functions of plaming, organization and control. Prerequisites: 551, 564 and 570. 111

## 557 SEMINAR IN POLICY SCIENCES

Integrate conceptual elements and decision-making techniques. Development and implementation of specific strategies appropriate to public sector programs. Case studies and field work used to explore important policy issues and management interfaces to formulate managerial improvements. Prerequisites: 551, 567, PS 457, and PS 459.

## 564 SEMINAR IN <br> 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 and 582. III

## 567 SEMINAR IN PUBLIC FINANCIAL MANAGEMENT

Exploration of budgeting concepts and procedures in the public sector. Consideration of recent developments and the changing functions of public budgeting; the roles of participants in the budget process: and strategies and counterstrategies in developing and gaining approval of budgets. Financial management topics include: cash, debt, revenue and expenditure management: expenditure control programs; evaluation of performance. Prerequisite: BA 587 or 582.

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 and legal environment, innovation and modern marketing philosophies. Prerequisites: 370 and Econ S04. I II

## 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 consent. I

## 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 advanced accounting studies. Prerequisite: 281. III

## 587 GOVERNMENT <br> ACCOUNTING SYSTEMS

Man agement information systems; accounting and economic data and their use in government agencies. Recent trends in fund accounting, and analysis of accounting requirements and techniques in program management. Case studies. Prerequisite: Economics 504.

590 SPECIAL SEMINAR
Selected advanced topics; of fered on demand.
591 INDEPENDENT STUDY
Individual reading and studies on selected topics; minimum supervision after initial planning of student's work. Prerequisite: consent. (1-4)

## 593 THESIS

Research study to meet Thesis Option requirement for elective in the MBA or MPA degree programs. (4)

## 596 RESEARCH COLLOQUIUM

Research approaches and uses in the administrative decision making process. Emphasis is placed on the various aspects of ressarch design: secondary data sources, survey methods, research instruments, sampling plans, data a nalysis, and reporting of results. Both qualitative and quantitative research approaches are examined in terms of their application to exploratory, descriptive, causal and problem-solving studies. Prerequisites: Stat 331 and two 500 -level business courses.

## SCHOOL OF EDUCATION

The School of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE), the Northwest Association of Secondary and Higher Schools, and the Washington State Board of Education for the preparation of elementary and secondary teachers, principals and guidance
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 course work toward the conversion, renewal or reinstatement of teaching certificates

The School of Education offers graduate degrees in Elementary Education, Secondary Education, School Administration, and Counseling and Guidance. Information regarding these programs is available through the Dean of Graduate Studies.

## ADMISSION REQUIREMENTS

In the sophomore year, students with a cumulative grade point average of 2.15 or above may register for Ed. 251 . Studen ts will make application for admission to the Schoo of liducation during the semester enrolled in Ed. 251. Prior to Ed. 251 students should meet the following requirements:

1. They must have " C " or better grades in English 101 and Psychology IOI or Sociology 101.
2. They must have completed C 123.

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 in to the School of Education.

Students who have earned a bachelor's degree at PLC or another institution, and who contemplate meeting certification requirements are expected to meet the same requirements for admission and certification The certification sequence will normally require a summer session and two or three semesters.

## BAE and/or CERTIFICATION REQUIREMENTS

Students become candidates for certification when they have satisfied the following:

1. Have a cumulative GPA of 2.25
2. Have completed the Professional Education Sequence.
3. Have completed approved teaching major(s) or concentrations (see requirements as listed under Academic Preparation).
4. Complete PE 295.
5. Complete all courses in education and in major and minor fields with grades of $C$ or higher. Grades of $D$ are applicable toward a degree but not for excess hours toward fifth year programs.

## 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; professional study, 20 per cent; and electives, 10 per cent.

The four-year curriculum leads to the Bachelor of Arts in Education degrec and the Provisional Certificate, an initial license to teach, issued for a period of three years. PLU recommends candidates for their first teaching position on the basis of their preparation.

Students may earn a baccalaureate degree in an academic field and qualify for a teaching credential upon completion of teacher certification requirements. These requirements include a major as described under "Academic Preparation" (majors and minors) as listed in this section of the Catalog.

## ELEMENTARY PREPARATION

In addition to the general Liniversity courses required in all curricula, certain specific requirements in general education must be met:

1. History 460 , required of all elementary teacher candidates.
2. ES 101, World Gcography or Antluropology 220, required of all elementary teacher candidates.
3. Prospective elementary teachers usually meet the science general education requirement by completing Biology III, or another life science course, and ES 122. A year course in one laboratory science may be substituted by those who have adequate high school background in science.

## Professional Sequence

Ed. 251 Learner and Society
Ed. 322 General Methods (Primary or Level)
Ed. 323 General Methods (Upper or Elementary Level)
Ed. 324 General Methods (Elementary Education Model) September Experience
Ed. 430 Student Teaching (Primary or Level) 10 hours
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 or equivalent)
Art 341 Elementary Art Education (2) or
Music341 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. 412 Social Science in Elementary School (2)
Ed. 457 Preparation and Utilization of Instructional Materials (3)

Ed. 483 Primary Reading (2)
Eng. 323 Children's Literature
PE 322 PE in the Elementary School Additional choices in consultation with education adviser.

## SECONDARY PREPARATION

Professional Sequence
Ed. 251 Learner and Society (Sophomore Year) (4)

Ed. 468 Educational Psychology (Junior Year) (4)
Protessional Semester (Senior Year) (14 hours) - Students must contact the School of Education for application procedures. Applications must be submitted no later than six weeks prior to the end of the preceding semester.

Ed. 420 Teaching of Reading (2)
Ed. 423 General Methods (Secondary) (4)

Ed. 434 Student Teaching (8)
September Experience
Specific methods in major and minor (Junior or Senior Year).

Students must complete 24 hours in professional education course work.

## SPECIAL ENDORSEMENTS

The following specialized endorsements in education are available to all students pursuing teacher certification. Students desiring to work toward a specialized endorsement should consult an adviser in the School of Education for assistance in planning their program.
READING - 14 semester hours
Prerequisite: Ed. 325 Reading in the
Elementary School
Required
Ed. 408 Language Arts in the
Elementary School (2)
Ed. 483 Primary Reading (2)
Ed. 479 Diagnosis and Practicum in Reading
Fillectives - minimum of osemester hours
PLi 401 Perceptual Motor Skills (1)
CA 402 Speech in the F.lementary School (2)
Ed. 456 Story telling (4)
Eng. 323 Children's Literature (4)
\%)ther similar courses may be used as electives if approved by the program adviser before registration is completed.
EARLY CHILDHOOD EDUCATION - 18 hours
Prerequisites:
Ed. 251 Learner and Society
Ed. 322 Primary Methods
Required
Ed. 482 Curriculum Enrichment in Early Childhood (3)
Ed. 496 Practicum in Early Childhood (4)

Ed. 483 Primary Reading (2)
Ed. 487 Theories of Early Childhood (3)
EdPsy578 Behavioral Problems of Students
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

Preparation of School Librarians
(LEARNING RESOURCES SPECIALIST) 16 semester hours

Students interested in preparing for the responsibility of administration of a school library may meet suggested standards through the following program:

Book and media selection Ed. 455 -
Instructional Materials (2)
Ed. 456 - Storytelling (2)
English 323 - Children's Literature

Cataloging
Ed. 453 - Processing School Library Materials (2)
Reference
Ed. 452 - Basic Reference Materials (3)

Media utilization and production
Ed. 454 - Selection of Learning Resource Materials (2)
Curriculum
Ed. 580 - Curriculum Development (2)

Administration
Ed. 451 - Administration of the School Library (2)

## ACADEMIC PREPARATION

A major from those listed must be completed. Completion of a teaching major/minor in a second academic area is strongly recommended. (Students do not major in education.) 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 in the professional subjects 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 HJGH TEACHING: Students preparing for teaching on the junior high level are required to complete a teaching major of approximately 24-32 semester hours. A teaching minor is also required. Students must consult an education adviser regarding teaching major and minor combinations.

PREPARATION FOR SENIOR HIGH SCHOOL TEACIING: Students preparing for senior high teaching must complete approximately $44-48$ semester hours in the academic area in which they plan to teach. A minor in a second teaching area is recommended. In all cases, students must discuss their program with an adviser from the School of Education.

PREPARATION FOR K-12 TEACIIING: Students preparing for K-12 leaching in Art. Music, or Physical Education must have teaching experience on 1soth the elementary and secondary levels. Detailed information regarding K-1 2 certification is available in the School of Education Office.

## 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 155, 156, 253, 322, 340: a choice of four semester hours from Biology 324, 371, or 372 and four semester hours from Biology 346, 358, or 441; 12 semester hours in Chemistry $(115,331,332$, 333,334 ): Math 133. Recommended: Chemistry 116, Earth Sciences 131, 132, Math 151.

Elementary Teaching Major: 24 semester hours required: Biology 155, 156, 253; Chemistry 115, 116, plus electives. Teaching Minor: 12 semester hours: $155,156,253$.

## BUSINESS EDUCATION

Senior High Teaching Major: 48 semester hours required: Econ 150, Ed. 450, BA 230 or $435,241,243,281$ and 2 semester hours of Advanced Typing: elect 4 semester hours from BA 350,364 , or 370 ; elect four hours of emphasis: Accounting: BA 38I plus 4 hours of upper division accounting; 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; thesc courses may be taken to meet degree requirements at Fort Steilacoom Community College for transfer credit anytine during the four-year program.

## CHEMISTRY

Scnior lligh Teaching Major: 49 semester hours required: Chemistry $115,116,321$, $331,332,333,334,341,342$, and 343 ; Physics $147,148,153$, and 154; 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 liducation.

## COMMUNICATION ARTS

Senior High Teaching Major: 44 semester hours required: 16 semester hours of Communication Arts 123, 128 or 250, 241 and 404 , plus $12-29$ semester hours chosen in consultation with the major adviser. Supporting classes: Alternative of 16-20 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 School of Education. Teaching Minor: $16-20$ semester hours required: Communication Arts 123 and 241. plus 8-1 2 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.

## EARTH 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 125, 126 (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 coursc. Teaching Minor: 12 semester hours in earth and physical sciences.

## ECONOMICS

Senior ßligh Teaching Major: 44 semester hours required: Economics 150, 351, 352, 486: 12 semester hours from the following: Econ 321, 331, 361, 362, 434; History 460 plus 12 semester hours distributed over areas of sociology, political science or anthropology. (Recommended Ed. 448 to meet professional education requirement.)

Junior High Teaching Major: 28 semester hours required: Economics 150, 434, 486; 4 hours from: Econ 321, 331, 351, 361, 432; llistory 460 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 cconomics. Ed. 448 to mect professional education requirement.

Flementary Teaching Major: 24 semester hours required: Economics $150,434,486 ; 4$ semester hours from: Econ 321, 331, 351 , 352, 361, 362, 432: History 460, 4 semester hours from the areas of sociology or political science. Teaching Minor: 12 semester hours required: Economics 150 and 8 hours of upper division economics. Ed. 412 to meet professional cducation 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 must present two years of one foreign language at the college level or show equivalent proficiency. Ed. 444 is required to meet professional education requirement. 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 requirements. Majors must present two years of one foreign language at the college level or show equivalent proficiency and must take Ed. 444 to meet professional education requirement.

Elementary Teaching Concentration: 24 semester hours: 12 hours in English distributed as in (a) and (b) under Senior High 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 semester hours required: French 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.

Elementary Teaching Major: 6 courses required: 5 approved French courses and one additional course selected in consultation with department and School of Education. Teaching Minor: 3 courses required: as determined by department and School of Education.

## GENERAL SCIENCE

(Sec adviser.)

## 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 level.

Elementary Teaching Major: 6 courses required: 5 approved German courses and one additional course selected in consultation with department and School of Education. reaching Minor: 3 courses required: as determined by department and School of Education.

## HISTORY

Senior High Teaching Major: 44 semester hours required: History 107 or 109:108 or 110: 8 hours of 251, 252 and 253: 460 and 12 additional upper division hours in history including a senior seminar. Supporting courses: 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 literature (in addition to course
taken to meet general education requirement); CA 241 or 326 , and CA 404; Ed. 444 and 12 semester hours from areas of English, journalism, CA or foreign language beyond freshman level (at least 8 of the 12 hours must be in the same discipline, and 4 hours must be upper division). Teaching Minor: 16 semester hours required: selected from offerings in Engish, 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 326 or $336 ; 2$ courses selected from one of the following areas: English, CA or Foreign language beyond freshman level.

Teaching Minor: 12 semester hours required as determined by the School of Education. 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 140 or $144,151,152,331$, 433, 446: 321 or 434 or 455 ; four additional upper division hours in Math: eight hours of Chemistry or Physics; and four additional science hours.

Junior High Teaching Major: 24 semester hours required. Prerequisite: Math 133 or equivalent. Required: Math 140 or 144,151 , 152, 331, 433, 446. Teacling Minor: 16 semester hours required in addition to Math 446. Prerequisite: Math 133 or equivalent. Required: Math 151, 152; 127 or 144 or 331; 321 or $433 ; 446$. Math 140 is recommended if 144 is not taken.

Elementary Teaching Major: 24 semester hours. Required: Math 133 or equivalent: 127 , 151, 152; 323 or equivalent; 324 or equivalent. Math 140 or 144 is also strongly recommended. Teaching Minor: 12 semester hours. Required: Math 323 or equivalent: 324. Math 140 is strongly recommended.

## MUSIC

Secondary Teaching Major - Choral: 49 semester hours required: Music 123, 124, 125, 126, 223, 224, 225, 226, 231, 232, 343 , 366, 445, 453, eight hours of large ensemble, four hours of piano lessons (minimum class level 6$)^{*}$, six hours of voice lessons, and two hours of guitar lessons. Music 341 and 441 are required in the Professional Education sequence for Certification.

Secondary Teaching Major Instrumental: 51 semester hours required: Music 123, 124, 125, 126, 223, 224, 225. 226, 231, 232, ive hours from 241/242, 243/244, 245/246, and 247; ten hours of large ensemble, two hours of piano lessons (minimum class level 4)*, seven hours of private instruction on principal instrument, 345 , 445. Music 444 is required for the Professional Education sequence for Certification.

Junior High Teaching Major: 28 semester hours required: Music 123, 124, 125, 126, 223, 224, 225, 226, 231, 232, 345, two hours of large ensemble, two hours of piano lessons (minimum class level 4)*, and two hours private lessons on principal instrument or voice. Two to four semester hours of Music 443 and 444 are required in the Professional Education sequence for Certification.

Teaching Minor: two to four semester hours from Music 341, 441, 443 and 444 plus 20 hours to be determined in consultation with the School of Education and the Department of Music.

Elementary Music Specialist - Choral: Music 123, 124, 125, 126, 223, 224, 225, $226,231.232,345,453$, eight hours of large ensemble, four hours piano lessons (minimum class level 8)*, six hours voice lessons, two hours guitar lessons. Music 341 and 441 are required in the Professional Education sequence for Certification.
*See Department of Music Handbook for descriptions of class piano levels.

Elementary Music Specialist Instrumental: See Secondary Teaching Major - Instrumental above.

Elementary Teaching Major: Two to four semester hours from Music 341, 441, 443, and 444 plus 20 hours to be determined in consultation with the School of Education and the Department of Music. Elementary Teaching Minor: Two to four semester hours from Music $3 \$ 1$ and 441 plus 12 hours to be determined in consultation with the School of Education and the Department of Music.

## PHYSICAL EDUCATION

Secondary Teaching Major (44 hours): Required (24 hours): PE 277, 328, 478, 482 and 485; Biology 163; participation in a varsity or club sport. Electives: 20 hours from among the following: PE 275, 282, 283, 284, 285, 287, 288, 332, 360, 362, 484 and 491. Students desiring K-12 Certification must complete PE 322, 362, 283 and 284 or 288 in addition to meeting requirements as set forth by the School of Education.

Elementary Teaching Major ( 24 hours): Required: PE 277, 284 or 288, 283, 322, 334,362 and 4 hours electives in physical education with approval of department chairperson. Elementary Teaching Minor ( 12 hours): PE 322 and 8 hours from among the following: 284 or 288,283 , and 362.

Secondary School Teaching Minor (18 hours): Required: PE 277, 334 and 485 and 12 hours of electives from among the following: PE 282, 283, 284, 285, 287 and 328.

K-6 Physical Education Specialist and K-6 Classroom Teacher ( 32 hours): Required: PE 277, 283, 284 or $288,322,481,482,485$; Biology 163.

Liementary School Physical Education Specialist: Required: PE 277, 283, 284 or 288, 322, 360, 481, 482, 484, 485; Biology 163 and eight hours of electives (Education 457 and Music 341 are recommended.)

## PHYSICS

Senior High Teaching Major: 44 semester hours required: Physics $106,147,148,153$, 154, 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 $355,125^{*}$, $126^{*}, 147,148,205,223,272,421$ ( 2 semester hours). Teaching Minor: 20 hours required: Pliysics $125^{*}, 126^{*}, 147,148,421$ ( 2 semester hours), and 8 hours from the following: 106, 205, 223, 272, 355.
*Physics 153 and 154 may be taken instead of 125 and 126 , with concurrent or prior registration in Math 151 or 152.

## POLITICAL SCIENCE

Senior High Teaching Major: 44 semester hours required: Political Science 101, 151, 331, plus 16 hours of Political Science electives; History 460; 12 hours from the following supporting areas: economics, geography, history, sociology, anthropology, or psychology. Ed. 448 to meet professional education requirement.

## SCIENCE (GENERAL)

Sec Earth Sciences.

## SOCIAL SCIENCE

Senior High Teaching Major: 44 semester hours required: 4 hours from History 251, 252, 253; History 460; 4 hours from each of the following areas: an thropology, economics, geography, political science, psychology, and sociology: 12 upper division hours from two of the following areas: economics, political science and sociology. Ec'. 448 to meet professional education requirement.

Junior High Teaching Major: 28 semester hours required: 4 hours from History 251, 252, 253: History 460: 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 460; and 8 hours from economics, political science, and sociology. Ed. 448 to meet professional education requirement.

Elementary Teaching Major: 24 semester hours required: 4 hours from llistory 251, 252, 253: History 460; 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. Ed. 412 to meet professional education requirement.

## SOCIOLOGY

Senior High Teaching Major: 44 semester hours required: Sociology 101; 24 hours of sociology; History 460; 12 semester hours distributed over three areas of other social sciences. 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. Sccondary Teaching Minor: 16 semester hours above 200 level.

Elementary Teaching Major: 6 courses required: 5 approved Spanish courses and 1 additional selected in consultation with department and School of Education.

## SPECIAL EDUCATION

The screening process for the teaching major in special education must be completed in addition to the screening procedure in the regular education program. Students should make application for admission to the special education program during the first semester of the training sequence. This should occur during matriculation in Ed. 490 or 492. Application forms may be obtained from the School of Education.

Prerequisites: Elementary - Ed. 251, 325 326: 322, 323, or 324; Math 323; Psychology 101. Secondary - Ed. 251, 325, 326; 423 or 425; Math 323; Psychology 101.

Elementary Major - 30 semester hours total. 22 semester hours required: Ed. 473 , $490,492,493,494$, and 499. 8 semester hours of electives from Ed. 479, 495, or 498.

Secondary Major - 30 semester hours total. 26 semester hours required: Ed. 473, $490,492,493,494,498$, and 499.4 semester hours of electives from Ed. 479 or 495.

Minor - 16 semester hours total. 4 semester hours required from Ed. 490 or 492. 12 semester hours of electives from Ed. 473, $479,490,492,493,494,495,498$, and Ed.Psy. 578.

## FIFTH-YEAR AND STANDARD CERTIFICATION

The fifth-year of teacher education is to follow a period of one year of initial teaching experience. Students must complete a minimum of eight semester hours applicable toward the fif th year, before the beginning of the fourth year of teaching. Thirty semester hours in an approved program must be completed before the beginning of the seventh year of teaching. Students may choose the institution in which they wish to take advanced work as follows:

1. If they choose to work at PLU or any other of the teacher education institutions in the State of Washington, that institution shall be responsible for recommending them for the Standard Certificate upon completion of the fifth-year program.
2. If PLU gaduates wish to undertake the fifth year in an out-of-state institution, PLL; will be responsible for recommending them for the Standard Certificate. Students must secure general approval of their plan from the University in advance. There are four provisions governing the fif th-year pattern of work, according to State Board Regulations:
3. 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.
4. No more than three semester hours of correspondence study may be approved as a part of the 30 semester hours in the student's fifth-year program.
5. PLU graduates must take 15 semester hours of the fifth year in residence at PLU. A non-PLU' student who wishes to be recommended by PLU must take a minimum of 20 semester hours in residence at PLC.
6. Students 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 PLE:
7. Specific course requirements are:

Elementary
a. Required course: Ed 467. Evaluation (2 hours)
b. One required from the following ( 4 hours): EdPsy 535, Foundations of Guidance; EdPsy 578, Behavioral Problems of Students: EdPsy 575, Mental Health.
c. 2 hours from the iollowing suggested courses: Ed 473, Parent-Teacher Conference: Ed 501, Sex Role Stercotyping in Education; EdPsy 475, Reality Discussion Techniques; EdPsy 474, Affective Classroom Techniques; 501 Workshops, for example, Discipline in the Classroom, Encouraging Process.
Secondary
a. Required courses (4 hours): Ed 420, Problems of Reading in the Secondary School; Ed 467, Evaluation.
1). Electives ( 4 hours): Ciroup) 2 hours - courses in a theoretical or interpersonal framework - Ed 473, ParentTeacher Conference; Ed 501, Sex Role Stcreotyping in Education; EuPsy 475, Reality Discussion Techniques; or appropriate substitutions: (iroup) $B-2$ hours - courses in a methodological or instructional framework - Simulation, Film, Interaction Analysis, Program Ideas in the Junior High School, Plants of the Pacific Northwest, etc.
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. Any course work required by the undergraduate institution and/or the employing school district must be completed.
4. 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 students with the guidance of those who have worked with them during their period of initial teaching and the advisers at the recommending institutions.
5. Students secure approval of the recomnending institution for work taken elsewhere before the work is begun.
Some of the work taken during the fifth year may also apply toward a naster's degree. Graduate students may undertake a program coordinating requirements for standard certification and the master's degree upon the approval of their committec chairman and the coordinator of fifth-year programs.

## PRINCIPAL'S CREDENTIALS*

Candidates for the principal's credentials will be guided by the following:

1. They must meet graduate standards for the master's degree.
2. They must complete course and internship requirements for the provisional principal's credentials at their chosen level. To receive this they must have completed work for their Standard Teaching Certificate plus six semester hours.
3. They must complete experience and study requirements for the Standard Principal's Credential at their chosen level. To receive this they need to have (1) had administrative experience, (2) earned a minimum of eight more semester hours
since issuance of the Provisional
Certificate, and (3) earned their 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 Catalog.**
*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 COUNSELORS AND SCHOOL NURSES

(Subject to new certification requirements as of October 1973)

Educational Staff Associate certification for school counselors or school nurses is individually designed through a 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.

## 251 LEARNER AND SOCIETY GROWTH AND <br> DEVELOPMENT

Orientation to contemporary schools: human development in relation to individuals and groups in an educational setting. Public school observation required weekly with students responsible for their own transportation. Prerequisite: Psychology 101 or Sociology 101.

## 321 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: 251 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: 251 or 321.

## 324 GENERAL METHODS - <br> ELEMENTARY MODEL

Competencies will be developed for teaching in grades K-6. Extended experience and participation in public school classrooms will be provided. Prerequisites: 251 or 321 , Math 323, and concurrent enrollment in EEM block courses, 325, 326, 408, 410, 412.

## 325 READING IN THE

ELEMENTARY SCHOOL
Teaching reading in elementary grades, including modern approaches, materials,
methods, techniques, procedures and some diagnosis of reading difficulties. Prerequisite: 251 or 321.

## 326 M^THEMATICS IN THE <br> ELEMENTARY SCHOOL

Basic mathematical skills and abilities needed by elementary school teacher: recent developments and materials. Prerequisite: Math 323,324 , or equivalent. (2)
340 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 28 I or equivalent.

## 401 WORKSHOPS

Workshops in special fields for varying periods of time. (1-6)

## 408 LANGUAGE ARTS IN <br> THE ELEMENTARY SCHOOL

The functional teaching of communication skills, grades 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. (2)

## 410 SCIENCE IN THE

ELEMENTARY SCHIOOL
The objectives, materials and methods of teaching science. (2)

## 412 SOCIAL STUDIES IN

THE ELEMENTARY SCHOOL
Objectives, materials and methods of teaching the social studies; recommended to student teachers and experienced teachers. (2)

## 420 PROBLEMS OF READING IN THE SECONDARY SCHOOL

Teaching secondary reading in content areas; attention to developmental reading problems; materials, methods, techniques, procedures and some observation and diagnosis of reading difficulties. Prerequisite: 251; taken concurrently with 423 and 434. (2)

## 423 GENERAL

METHODS - SECONDARY
Curriculum, materials and methods of secondary teaching; observation and discussion. Prerequisite: 251 or 321 ; taken concurrently with 420 and 434.

## 430 STUDENT

## TEACHING - PRIMARY

Teaching in the public schools under the direction and supervision of classroom and university teachers. Prcrequisites: 251 or 321 , 322 or 324 , and 325: concurrent enrollment in 435. (10)

## 432 STUDENT TEACHING -UPPER ELEMENTARY

Same course description as 430 except 323 should be taken in place of 322 ; concurrent enrollment in 435. (10)

## 434 STUI)ENT

TEACHING - SECONDARY
Same course description as 430 except Prerequisites: 251 or 321 , taken concurrently with 420 and 423 . (8)

## 435 PROFESSIONAL SEMINAR

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 .) (2)

## 436 ALTERNATE <br> LEVEL STUDENT <br> TEACHING - ELEMENTARY

A course designed to give some knowledge, understanding, and study of children, subject matter fields, and materials in the student's alternate teaching level plus student teaching on that level. Students who have completed secondary preferred level student teaching should enroll in this course.

## 437 ALTERNATE <br> LEVEL STUDENT

TEACHING - SECONDARY
A course designed to give some knowledge, understanding, and study of children, subject matter fields, and materials in the student's alternate teaching level plus student teaching on that level. Students who have completed elementary preferred level student teaching should enroll in this course.

## 440-448 SPECIAL METHODS IN <br> TEACHING SECONDARY <br> 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
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. (2)

## 442 TEACHING GENERAL <br> BUSINESS SUBJECTS

The application of research findings and psychological principles to the teaching of general business, consumer economics, economics, business law, business mathematics, and business communications subjects in secondary schouls. Prerequisites: BA 241, 243, 290 or 495, 350, Economics 150, or consent of the instructor. (2)

## 443 CHEMISTRY IN <br> THE SECONDARY SCHOOL (2)

## 444 ENGLISH IN

THE SECONDARY SCHOOL
Development of teaching aids and methods; demonstrations of method and strategy of master teachers. (2)

## 445 METHODS IN TEACHING FOREIGN LANGUAGES

Theory and techniques of foreign language teaching; special problems in the student's major language, emphasis on audiolingual techniques. G (2)

## 446 MATHEMATICS IN

THE SECONDARY SCHOOL (2)

447 SCIENCE IN
THE SECONDARY SCHOOL (2)

448 SOCIAL STUDIES IN THE SECONDARY SCHOOL (2)

451 ADMINISTRATION
OF THE SCHOOL LIBRARY
Library organization and administration in the elementary school. G (2)

## 452 BASIC

REFERENCE MATERIALS
Those services of a school librarian related to the preservation of all materials which form the sources of reference. G (2)

## 453 PROCESSING SCHOOL <br> LIBRARY MATERIALS

Classification, cataloging and technical processing of materials. G (2)

## 454 SELECTION

## OF LEARNING

RESOURCE MATERIALS
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 (2)
455 INSTRUCTIONAL MATERIALS Audio and visual materials and aids, their use, organization and administration. G' (2)

## 456 STORYTELLING

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 off-campus practice. Demonstrations and joint storytelling by and with instructor. (2)

## 457 PRFPARATION AND

UTILIZATION OF

## INSTRUCTIONAL

## MATERIALS

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. $\$ 10.00$ lab fee is charged. G (3 or 4)

467 EVALUATION
Evaluation of school 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. $G$ (2)

## 473 PARENT-TEACHER CONFERENCE

An examination of the philosophy and implementation of parent-teacher conferencing. Related issues such as the parental role in education, home visits, and the role of the student in the conferencing process are also considered. Listening and communication skills useful in conferencing are studied and practiced. Provisions for the needs of parents of the handicapped will be studied by students in the special education program. (2)

## 479 SPECIAL TECHNIQUES IN READING

Individual diagnostic assessment of reading problems using both furmal and informal testing techniques. Special instructional methods for remediation for both Title I and Special Education children. Practicum required. Prerequisite: Ed 325 or equivalent.

## 482 CURRICULUM ENRICHMENT IN EARLY CHILDHOOD EDUCATION

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. (3)

## 483 PRIMARY READING

Materials and methods of the primary reading program and its relation to other activities. Prerequisite: teaching experience. G (2)

## 485 THE GIFTED CHILD

The gifted child, his characteristics and problems and procedures; designed to further development. G (2)

## 487 THEORIES OF EARLY <br> CHILDHOOD EDUCATION

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. (3)

## 488 READING

## CENTER WORKSHOP

Clinical study of reading problems and suggested corrective measures; to be taken concurren tly with 489 . Prerequisite: teaching experience. S G (2)

## 489 DIRECTED TEACHING <br> 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

## 490 INTRODUCTION TO

SPECIAL EDUCATION
Definitions, characteristics and psychological aspects of all categories of exceptionality. Federal and state legislation. Current issues and practices in delivering services to handicapped people. The classroom teacher's role in mainstreaming. Practicum required. Prerequisites: Ed 251, 325, 326, and General Methods.

## 492- CHARACTERISTICS OF LEARNING DISABILITIES

Cursent issues, practices and research in learning disabilities. Emphasis will be on special instructional techniques to accommodate this type of child's special needs. Practicun required. Prerequisites: Ed 251, 325, 326, and General Methods.

## 493 LEARNINGI)ISABILITIES:

 DIAGNOSTIC PROCEDURES A broad range of screcning and diagnostic procedures will be studied. Data from other professionals such as the school psychologist, communication disorder specialist, oceupational therapist and medical doctor will be used to prepare a hypothesis regarding the child's disabilities. Various educational tests, formal and teacher-made, will be used to determine where a child is functioning academically. Practicum required. Prerequisite: Ed 490, or 492, or concurrent enrollment, or permission of instructor.
## 494 LEARNING DISABILITIES: PROGRAMMING

Diagnostic information is used as the basis for writing an IEP (individualized educational plan). Course includes behavioral objectives, task analysis, learning sequences, behavior modification, and evaluation of learning using precision teaching techniques. Practicum required. Prerequisite: Ed 493 or permission of instructor.

## 495 LANGUAGE PROB LEMS OF

 EXCEPTIONAL CHILDRENPrinciples of receptive and expressive language development including speech, word meaning, dialect and reading. Assessment and remediation strategies from early childhood through adolescent. Course is designed for regular and special education teachers. l'rerequisite: Ed 251.

## 496 LABORATORY WORKSIIOP

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 er the Dean of the School of Education. G

## 497 SPECIAL PROJECT

Individual study and research on educational problems or additional laboratory experience in public school classrooms. Prerequisite: consent of the Dean. G (1-4)

## 498 CURRICULUM FOR EXCEPTIONAL STUDENTS IN THE SECONDARY SCHOOL

Curriculum content and planning including academic subjects. life adjustments, and career counseling for exceptional adolescents and adults. Focus of the course will be for the learning disabled and othér mildly handicapping conditions. Prerequisites: Ed. 490 or F.J. 492. 92.

## 499 SPICIAL EDUCATION: STUDENT TEACHING

Teaching in public schools Special Education clas\$rooms under the direction and supervision of classroom and university te achers. Prerequisite: Ed. 494.

501 WORKSHOPS
Graduate workshops in special fields for varying lengths of time. (1-4)

## 545 METHODS AND

TECHNIQUES OF RESEARCH
Seminar in research methods and techniques in education with emphasis on designing a research project in the student's area of interest. Required for M.A. Prerequisite: Consultation with student's adviser and adinittance to the graduate program. (2)

## 550 SCHOOL FINANCE

Local, state and federal con tribu tors to school finance, its philosoply and development; the development and administration of a school budget. (2)

## 552 PUBLIC

## SCHOOL ADMINISTRATION

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. (3)
554 HIGH
SCHOOL ORGANIZATION AND ADMINISTRATION
Planning and organizing the high school curriculum, scheduling, extra-curricular activities, teachers' meetings, public accounting and control, finance and reports. Prerequisite: 552. (2)

## 555 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. (3)

## 558 ADMINISTRATIVE

## INTERNSHIP

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. (2)

## 571 HISTORY AND PIHLLOSOPHY OF IIIGIER EDUCATION

Historical perspective and current status; development of functions and structures: issues in curriculum; philosophy of administration: case studies.

## 573 STUDENT <br> 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
Causative factors relating to reading difficulties; some opportunity to apply remediation techniques; open to those with teaching ex perience. (2)

580 CURRICULUM DEVELOPMENT Types of curriculum organizations, programs and techniques of curriculum development. (2)

## 583 EDUCATIONAL

ISSUES AND PROBLEMS
Individual reading, investigation, research and/or a practicum experience in school or agencies. (1-4)
585 COMPARATIVE EDUCATION
Comparison and investigation of certain material and cultural systems of education throughout the world. (2)

## 586 SOCIOLOGY OF EDUCATION

The nature of functioning of the educational system will be examined from a sociological perspective. Topics will include: education, stratification, and social change; school as a complex organization; the school as a social institution; and the sociology of learning.

## 587 HISTORY OF EDUCATION

Great educators, educational theories and educational systems from antiquity to the present. (2)

## 589 PHILOSOPHY OF EDUCATION

 Philosophical and theoretical foundations of education. (3)
## 590 GRADUATE SEMINAR

A workshop for all Master of Arts candidates in the School of Education 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. (0)

## 596 RESEARCH

## STUDIES IN EDUCATION

For Master of Arts candidates who elect to write two research papers instead of a thesis. (One paper may 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 (see Graduate Catalog). (1)

## 597 RESEARCII

STUDIES IN EDUCATION
See Education 596 (2)

## 599 THESIS

For Master of Arts candidates who elect to write a thesis instead of two research papers. The thesis problem will be chosen from the candidate'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. (3-4)

## EDUCATIONAL PSYCHOLOGY <br> 461 GROUP PROCESS <br> AND THE INDIVIDUAL

A human interaction laboratory to facilitate the exploration of the self concept through the mechanisms of interpersonal interactions and fecdback. Emphasis placed on the acquisition of skill in self-exploration, role identification and climate-making. G (2)

## 463 GUIDANCE IN

THE ELEMENTARY SCHOOL
Major orientation to guidance and how they translate into operational programs in the school setting. Prerequisite: Student teaching or graduate status. Laboratory experience as arranged. (2)

## 465 GUIDANCE IN

THE SECONDARY SCHOOL
Major orientations to guidance and how they translate into operational programs in the school setting. G (2)

## 466 INTRODUCTION TO STUDENT PERSONNEL SERVICES

Student personnel services offered by colleges and universities; familiarization with literature in the field; exposure to local service agencies and student government. G (2)

468 EDUCATIONAL PSYCHOLOGY Principles and research in human learning and their implications for curriculum and instruction. Prerequisite: 251. G

## 469 CAREER GUIDANCE

A study of careers, theories of choice and guidance techniques.

## 474 AFFECTIVE <br> CLASSROOM TECHNIQUES

This course will explore various techniques designed to facilitate understanding of self and others; methods for working with students. Prerequisite: student teaching or gaduate status. Laboratory experience as arranged. (2)

## 475 REALITY

DISCUSSION TECHNIQUES
The use of Reality Therapy in a helping relationship - schools, social agencies, inental health clinics, University residences, etc. Laburatory experience as arranged.
490 INTRODUCTION TO
SPECIAL EDUCATION
(Same as Education 490)

## 501 WORKSHOPS

Graduate workshops in special fields for vary ing lengths of time. (1-4)

## 560A CONTINUING PRACTICUM

A beginning experience in the techniques of counseling: enrollment limited to students begioning the Master's Program in Counseling and Guidance, and is a prerequisite to admission to the program: practicum inakes use of counseling sessions with clients utilizing verbal and nonverbal attending behavior. (1)

560B CONTINUING PRACTICUM A practicum experience in individual counseling to assist students to integrate cognitive and affective learnings. Opportunity for problem identification, contract and decision making. Prerequisite: 560A (1)
560C CONTINUING PRACTICUM Experience in individual counseling with emphasis on Gestalt therapy techniques. Prerequisites: 560B and Ed Psy 561. (1)

560D CONTINUING PRACTICUM
Experience in small group settings, following Adlerian psychology consultation model. Prerequisites: 560C and 578. (1)

## 561 BASIC RELATIONSHIPS <br> IN COUNSELING

A study of the theory process, techniques and characteristics of the counseling relationship. A basic course for M.A. students in the Counseling and Guidance program. (Formerly Counseling Theory).

## 563 PRACTICUM IN GROUP PROCESS AND LEADERSHIP

A human interaction laboratory which explores interpersonal operations in groups and facilitates the development of self-insight; emphasis on leadership and development of skill in diagnosing individual, group and organizational behavior patterns and influences. Prerequisite: 461. (2)

## 565 SEMINAR:

NON-TEST APPRAISAL
Assessment of personal characteristics and behavioral patterns to better understand the individual; use of non-test data (sociometric scales, case studics, autobiographies, interviews, interaction analysis). Prerequisites: student teaching, graduate status.

## 570 PRACTICUM AND FIELDWORK IN

COUNSELING AND GUIDANCE A culminating practicum of field experience in schools or agencies using theory, skills and techniques previously learned: a variety of work experiences with individual groups. Seminar included. Prerequisites: 560C, 469. Psychology 450.

## 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 EDUCATIONStudent 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. Focus upon sclf understanding. Laboratory experience as arranged.

## 578 BEHA VIORAL PROBLEMS OF STUDENTS

Adlerian concepts provide basis for observation, motivation, modification and life style assessment. Skills for assisting students develop responsibility for their own behavior is tocus. Laboratory experience as arranged.

## SCHOOL OF FINE ARTS <br> ART DEPARTMENT COMMUNICATION <br> ARTS DEPARTMENT MUSIC DEPARTMENT

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 creative activity:
to operate in the vanguard of artistic understanding and to assume an additive rather than imitative position relative to that understanding;
to pursue study of both the historical and theoretical aspects of our creative legacy:
to recognize change in artistic criteria without devaluing the traditional concepts of discipline, craftsmanship, and acadenic professionalism;
to foster activity free from the caprice of the marketplace but, by virtue of its substance, not aloof from nor incompatible with practical 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 "chenistry" of the creative process.

Degrees offered by the School of Fine Arts include the B.F.A. - Bachelor of Fine Arts in Art or in Communication Arts, the B.M. - Bachelor of Music, and the M.M. Master of Music. Students may also earn the B.A. - Bachelor of Arts, but this degree is awarded through the College of Arts and Sciences. Candidates for the B.F.A. and B.M. as well as for the B.A. in Art, Communication Arts or Music must meet U'niversity requirements and the specific requirements of the Departments of Art, Communication Arts, or Music.

## Art

The department has sought to minimize prerequisites, enabling students to elect courses relating to their interests as carly as possible. It is recommended that students interested in majoring in art declare their major early to insure proper advising. Transfer students' status shall be determined at their time of entrance.

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 twenty-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.

BACIIELOR OF FINE ARTS: Minimum of 56 semester hours including 110,160 and 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, 335, 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 Mcdia (sculpture, ceramics, fibers, 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 school. 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 Education.
## STUDIO

Basic media courses may be repeated for credit as noted, for two or three semesters or as approved.

## 160 DRAWING

A course dealing with the basic pictorial concerns of form, composition and color as well as techniques and media of drawing. I II

## 215 CRAFTS

A studio survey of contemporary craft techniques. Assigned problems in a variety of media including fused and leaded glass, enamel on metal and textiles. May be repeated for credit.

## 216 JEWELRY

$\Lambda$ study of form and technique in the design and execution of jewelry objects. Includes stonc setting, fabrication, and casting. May be repeated for credit.

## 230 CERAMICS I

Ceramic materials and techniques including Jand-built and wheel-thrown methods, clay 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-media exploration of human form. May be repeated for credit. Prercquisite: 160 or consent. III

## 296 DESIGN

Introduction to design through the study of such basic concerns as color, form, kinetics, tactility and light as applied to various areas within the field including illustration, graphics and industrial design. II

## 326 FILM ARTS

Theory and practice of photography as an art form. Alternating sections in still photography and cinematography. May be tegeated for credit. I II

330 CERAMICS II
Advanced techniques in ceramic construction and experiments in glaze formation. May be repeated for credit. Prerequisite: 230. I II

## 335 FIBERS

Exploration and development of fiber structures and soft art forms. Alternating sections in non-loom work and loom weaving. May be repeated for credit. II

## 338 GLASSBLOWING

Working techniques and individual expression in blown glass. May be repeated for credit.

## 341 ELEMENTARY <br> ART EDUCATION

Various projects and media suitable for the instruction of art in elementary school; emphasis on developmental theory. I II (2)
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 in oil or acrylics. May be repeated for credit. Prerequisite: I60. III

## 370 PRINTMAKING

Methods and media of fine art printmaking. Both hand and photo processes involving lithographic, intaglio and screen printing. May be repeated for credit. Prerequisite: 160 or consent. I II

## 394 DESIGN WORKSHOP

Projects in various design fields including illustration, package design, industrial design and interior architecture. Emphasis on techniques and procedures. May be repeated for credit. Prerequisites: 160 and 296. I

## 396 GRAPHICS WORKSHOP

Design and execution of printed materials; emphasis on. technical procedures and problems in mass communication. Prerequisite: 160. II

## 492 STUDIO PROJECTS

A tutorial course with individual investigation of a particular medium, for major students only. May be repeated for credit. Prerequisite: Senior status and consent of instructor and department chairman. Materials or use fee where necessary. 1 II

## 499 B.F.A.

## CANDIDACY KXHIBITION

Exhibition of undergraduate work by B.F.A. candidates in studio areas; students are responsible for scheduling installation, publicity and final disposition of work. I II (no credit)

## HISTORY AND THEORY

110 TIEE VISUAL ARTS
Western man's expression in the visual arts seen through the perspective of historical development. I II

## 280 TWENTIETH CENTURY ART

The visual arts in the twentieth century with an introduction to aesthetical theory. II

## 294

## 20th CENTURY

DI:SIGN AND ARCHITECTURE
A study principally concerned with developments in architecture and interiors in the twentieth century, but including references to industrial design and other related areas. I

## 382 ANCIENT ART

Art of the ancient Near East, Greece and Rome. 1 a/y
383 MLDIEVAL ART
Western European styles from the decline of Rome to the beginning of the Renaissance. II a/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 through the period of the Rococo. II a/y

## 440 SEMINAR IN <br> ART EDUCATION

A study of instruction in the secondary school including appropriate media and curriculum development. II (2)
487 NINETEENTH CENTURY ART Art of the nineteenth 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 <br> IN ART HISTORY

A tutorial course for major students with research into a particular period or area of art history. May be repeated for credit. Prerequisites: senior status and consent of instructor and department chairman. I II

597 RLSEARCH
For master of arts candidates who elect to write a research paper in art. I II

## Communication Arts

All students in Communication Arts will participate in some phase of dramatic, forensic and broadcasting 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, 171, 272, 275 or $374,283,384,475$, plus 14 semester hours selected in consultation with adviser.

Communication: Required courses: 123 , 24I, 333, plus 20 semester hours selected in consultation with adviser.

Drama: Required courses: 123, 151, 241 , 250, plus 16 semester hours selected in consultation with adviser.

In addition to requirements listed above, candidates for the B.A. degree must meet the Forcign Language requirement in the College of Arts and Sciences.

BACHEI OR OF FINE ARTS: At least 52 semester hours plus 2 practicums in one or a combination of the threc areas of concentration of which Communication Arts 123 is required.

Broadcast/Journalism: Required courses: 123, 171, 272, 275 or $374,283,384,475$, plus 24 semester hours selected in consultation with adviser.

Communication: Requirements same as Bachelor of Arts plus an additional 40 semester hours selected in consultation with adviser.

Drama: Required courses: 123, 151, 241, $250,363,452$ or 454 , plus 28 semester hours selected in consultation with adviser.

BACHELOR OF ARTS IN EDUCATION: See School of Education.

## MINORS PROCRAMS

Broadcast/Journalism: 18-I9 semester hours, including 171, 275, 283, 374, and one course from 378,384 , and 475.

Communication Theory and Rescarch: 20 semester hours, including 123, 333, and three courses from 128, 235, 326, and 336.

Theater: 20 semester hours, including I 51, $241,250,358$, and 454.

The Dance Minor is cross-referenced with the School of Physical Education. See the description of the Dance Minor in that school's section of this catalog.

Only the following courses from Communication Arts may be used to meet the General University Requirement in Finc Arts: 151, 162, 241, 250, 363, 364, 459. All Communication Arts majors should fulf ill the General University Requirement with a course from another department in the School of Fine Arts.

## 123 FUNDAMENTALS OF ORAL COMMUNICATION

Foundations course dealing with basic theories of oral communication. Emphasis on group activity with some platform work. I II

## I 28 ARGUMENTATION AND DEBATE

Argumentation, 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

## 151 STAGE TECHNOLOGY

Basic theory and procedure of technical aspects in set building, costume construction, basic drafting, scenery, the assembling, handling, management of the stage, and extensive shop work. I
162 HISTORY OF AMERICAN FILM Concentrates on the development and growth of the motion picture in the United States from 1895 to the present. Emphasis is placed on the film director, whose implementation of film technique and theory serves as the formative artistic force in the cinema. Societal influences such as economic factors, public attiludes and mores, and political positions reflected in the United States throughout the
past 75 years which provide the film media with shape and thematic focus will provide parallel points of reference.

## 171 MAN .

MEDI八 AND SOCIETY
Survey of the mass media, including newspapers, magazines, 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, joumalistic vocations and social and legal responsibilities of the media. I

## 225, 425 COMMUNICATION ARTS PRACTICUM

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 <br> ORGANIZATIONAL <br> 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

## 241 ORAL INTERPRETATION OF LITERATURE

The art 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 <br> OF ACTING

The actor, his work, his natural and learned skills; exercises in memory, imagination and observation; improvisations and scenes from modern plays; theory and practice of stage make-up. I

## 272 THE

BROADCASTER AND SOUND
The theory and structure of sound for the broadcaster; instruction and practice in the use of typical audio-control equipment in radio, TV and recording studios. I (2)

## 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

## 283 NEWS REPORTING

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 (3)

326 GROUP DISCUSSION
Principles of group discussion in
problem-solving and learning situations, development of individual skills in discussion, participation and leadership. Included is a limited emphasis on parliamentary law based on Roberts Rules of Order. II

## 333 FOUNDATIONS OF <br> COMMUNICATION THEORY

Communication principles, theories and research relevant to both the speaker and the listener. I

## 336 PERSUASION

The decision-making process in contemporary society; methods of appealing to human motivations and their application in platform experience. II

## 344 ADVANCED <br> INTERPRETATION <br> OF LITERATURE

Projects and exercises directed toward program planning. Advanced skills in the communication of the experience of a piece of literature through performance. Prerequisite: 241. II

## 356 STAGE LIGHTING

Stage lighting from the basic development of electricity and lighting instruments to the 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 acting. Prerequisite: 250. II a/y

## 363 HISTORY OF THE THEATRE: AESCHYLUS THROUGH TURGENIEV

Theatre as it evolved from its primitive origin through representative societies; Ancient Greece, Rome, Renaissance, modern European and American. Emphasis is upon religious philosophical, and political thought as reflected in the drama of each period.

## 364 HISTORY OF THE THEATRE: IBSEN THROUGH TO THE PRESENT

Theatre as it evolved from its primitive origin through representative societies; Ancient Greece, Rome, Renaissance, modern European and American. Emphasis is upon religious, philosophical, and political thought as reflected in the drama of each period.

## 374 TELEVISION PRODUCTION

Analysis of program design, writing and production tools and techniques, lecture and laboratory; extensive use of KPLU-TV studios. I

## 378 RADIO-TELEVISION NEWS REPORTING

Provides students with some of the basic techniques and problems of radio and television journalism. The course provides fundamentals upon which further study in Broadcast/Journalism can build. It is an advanced journalism course assuming prior proven ability in news writing and reporting. Prerequisite: CA 283.

## 384 ADVANCED

NEWS REPORTING
In-depth reporting, investigative news writ-
ing and practice in handling 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. Prerequisites: 271 and 283. II (3)

## 402 COMMUNICATION

ARTS IN THE
ELEMENTARY CLASSROOM
Communication Arts problems and opportunities which confront the teacher in grades one through eight. I (2)

## 404 COMMUNICATION ARTS

IN THE SECONDARY SCHOOL Curriculum construction, communication arts philosophy: co-curricular activities: administration of drama, radio and forensic activities. I (2)

## 452 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

454 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 all periods of theatre luistory. Prerequisites: 250, 251, and junior status. II a/y
459 SUMMER DRAMA WORKSHOP 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
Television as a teaching tool; general criteria for technology in teaching and specific criteria for the use of television in the classroom. II (2)

## 475 DIRECTING

FOR BROADCAST MEDIA
An analysis of the structure form and technique of directing for the Broadcast Media - extensive use of Radio and TV studio facilities. II

## 478 SUMMER

TELEVISION WORKSHOP
Creative and production techniques of television programming; extensive use of KPIUU-TV studios; for the mature student. S

## 490 SEMINAR IN

BROADCAST/JOURNALISM
Selected topics in Broadcast/Journalism. Prerequisite: Departmental permission. (2)
491, 492, 493 SPECIAL STUDIES IN COMMUNICATION ARTS
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 ior investigation has been approved by a departmental sponsor. (1-4)

## 596-598 RESEARCH

IN COMMUNICATION ARTS
For graduate students only. (1-4)

## 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 should 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, 125, 126 , 131, 132, 223, 224, 225, 226, 231, 232 plus 4 hours of ensemble; 6 hours of Literature/Theory Electives from 327-339, 426-438; 8 hours of private instruction, piano (minimum class level 2). In addition to requirements listed above, candidates for the B.A. degree must meet the Foreign Language requirement in the College of Arts and Sciences.

BACHELOR OF ARTS IN EDUCATION: Consult the School of Education, and the Department of Music Handbook.

The department of Music also offers the following degree programs:

1. Bachelor of Music in Piano Performance
2. Bachelor of Music in Organ Performance
3. Bachelor of Music in Vocal Performance
4. Bachelor of Music in Instrumental Performance
5. Bachelor of Music in Theory and Composition
6. Bachelor of Arts in Education Elementary Music Specialist
7. Bachelor of Arts in Education Secondary and Elementary Instrumental
8. Bachelor of Arts in Education Secondary Choral
9. Master of Music Education

Consult the Department of Music Handbook, available in the Music Office for complete details concerming required courses, recommended four-year programs by the semester, progress charts and other pertinent information.

Consult the Graduate Catalog for details of the Master of Music program.

## 101 INTRODUCTION <br> TO MUSIC

Introduction to music literature with emphasis on listening, structure, period and style. Designed to enhance the enjoyment and understanding of music. Not open to majors (4)

## 123 THEORY I

The study of musical terms, fundamentals, notation, melody writing, and harmonization through analysis and writing. (2)
124 THEORY II
A continuation of Music 123. (2)

125 EAR TRAINING I
Development of aural skills in simple rhythmic dictation, intervals, sight-singing using progressive exercises consisting of short melodies. (1)
126 EAR TRAINING II
Continued development of aural skills in sight-singing, melodic and rhythmic dictation. Elementary harmonic dictation. (1)

131 MUSIC HISTORY I
The evolution of Western music from the early Christian era through the Middle Ages and Renaissance. (2)
132 MUSIC HISTORY II
The evolution of music in the Baroque Era (1600-1750). (2)

## 202 PRIVATE AND CLASS INSTRUCTION: PIANO (1.4)

203 PRIVATE INSTRUCTION: ORGAN (1-4)

204 PRIVATE AND CLASS INSTRUCTION: VOICE (1-4)

205 PRIVATE INSTRUCTION: VIOLIN/VIOLA (1-4)
206 PRIVATE INSTRUCTION: CELLO/BASS (1-4)
207 PRIVATE INSTRUCTION: FLUTE (1-4)

208 PRIVATE INSTRUCTION: OBOE/ENGLISH HORN (1.4)
209 PRIVATE INSTRUCTION: BASSOON (1-4)
210 PRIVATE INSTRUCTION: CLARINET (1-4)
211 PRIVATE INSTRUCTION: SAXOPHONE (1-4)

212 PRIVATE INSTRUCTION: TRUMPET (1-4)

## 213 PRIVATE INSTRUCTION:

 FRENCH HORN (1-4)214 PRIVATE INSTRUCTION: TROMBONE/BARITONE (1-4)
215 PRIVATE INSTRUCTION: TUBA (1-4)
216 PRIVATE INSTRUCTION: PERCUSSION (1-4)

217 PRIVATE AND CLASS INSTRUCTION: GUITAR (1-4)
218 PRIVATE INSTRUCTION: HARP (1-4)
219 PRIVATE INSTRUCTION: HARPSICHORD (1-4)

One half-hour private, or two one-hour class lessons per week in addition to daily outside practice. Students receiving permission to register for two semester hours of credit will receive two one-half hour private lessons per week. Students in piano, voice and guitar may be assigned to class instruction at the discretion of the music faculty. Special fee in addition to tuition.

## 223 THEORY III

Systematic study of emergent theoretical constructs irom the 18 th and $19 i$ h century as represented in literature of that period. (2)

## 224 THEORY IV

Systematic study of emergent theoretical constructs from the 20th century as represented in literature of that period. (2)
225 EAR TRAINING III
Advanced aural skills through extended rhythms and melodies. Emphasis on harmonic dictation. (I)

226 EAR TRAINING IV
Sight-singing, including pan-tonal melodies. Harmonic dictation of modulatory chord progressions involving chromatic alteration. Advanced rhythmic dictation. (1)
231 MUSIC HISTORY III
The evolution of music in the Classic and Romantic Eras (1750-1910). (2)

## 232 MUSIC HISTORY IV

Literature of the 20th century: Early development and current trends. (2)

## 241-242 STRING <br> LABORATORY

Methods and materials of teaching and playing string instruments in the public schools. (1,1)

### 243.244 WOODWIND

LABORATORY
Methods and materials of teaching and playing woodwind instruments in the public schuols. (1,1)

## 245-246 BRASS LABORATORY

Methods and materials of teaching and playing brass instruments in the public schools. (1,1)

## 247 PERCUSSION <br> LABORATORY

Methods and materials of teaching and playing percussion instruments in the public schools. (1)

## 249 ELECTRONIC MUSIC LABORATORY

A laboratory experience dealing with materials and methods of elementary electronic music synthesis. Real-time experience in the Electronic Music Studio, as well as discussion of various popular synthesizers, electronic music aesthetics, and the use of electronic instruments in secondary education. (I)

323 LINEARITY I
Linear-structural analysis of literature of the 20th and 19th centuries; introduction to Schenkerian analysis; writing and periormance experience in the contrapuntal styles of these periods. Prerequisite: Music 323. a/y (2)

324 LINEARITY II
Linear-structural analysis of literature of the 18th and 16th centuries; further refinement of analytical techniques, writing and performance experience in the contrapuntal styles of these periods. Prerequisite: Music 323. a/y (2)

## 325 KEYBOARD HARMONY

Development of a functional use of harmony at the keyboard. Improvisation and score reading. $\mathrm{a} / \mathrm{y}$ (2)

## 326 ORCHESTRATION

The range, transposition, sound and technical characteristics of instruments. Notation, scoring and arranging for conventional and unique instrument groupings. Prerequisite: Music 224. a/y (3)

## 327 COMPOSITION

A systematic approach to contemporary musical composition; students create and notate works for solo, small and large ensembles. May be repeated for additional credit. (1-4)
All music literature courses numbered from 331 to 339 are open to all university enrollment without prerequisite.

## 331 MUSIC OF

JOHANN SEBASTIAN BACH
A study of selected works representing each of the primary areas of the creative genius of J.S. Bach. a/y (2)

## 332 ORNAMENTATION AND PERFORMANCE PRACTICES OF THE BAROQUE

A practical study of vocal and instrumental ornamentation as it evolved in the 17th and 18th centuries. a/y (2)

## 333 MUSIC OF

HAYDN AND MOZART
Score analysis and study of the historical significance of selected works of Haydn and Mozart. a/y (2)
334 MUSIC OF BEETHOVEN
A general survey with in-depth study of selected works. a/y (2)

## 335 LATE NINETEENTH

CENTURY MUSIC
A survey of selected music of Wagner, Bruckner, Mahler and Strauss. a/y (2)

## 336 CHAMBER MUSIC LITERATURE

A general survey with in-depth study of selected chamber works for representative genres. a/y (2)

## 337 THE NINETEENTH

CENTURY ART SONG
A study of selected art song literature of Schubert, Schumann, Brahms, Wolf, Strauss, Beethoven, Faure, Debussy, and DuParc. Style analysis and interpretation with performance in class. a/y (2)

## 338 HISTORY OF OPERA

A general survey with in-depth study of selected opera scores. a/y (2)
339 HISTORY OF JAZZ STYLES
A survey of the evolution of jazz from 1900
to present, including early development and trends. a/y (2)

## 341 MUSIC IN TIIE

ELEMENTARY SCHOOL
Methods and procedures for the classroom teacher in developing the various music activities in the elementary school. Offered in the Fall Semester for students preparing to become Music Specialists. Offered in the Spring Semester for those students preparing for elementary classroom teaching. (2)

## 343 VOCAL JAZZ TECHNIQUES

Methods, literature, style and technique for the vocal jazz ensemble. Emphasis on the acquisition of skills necessary for teaching vocal jazz in the secondary school. Prerequisite: Consent of the Instructor. (1)

## 344 JAZZ

LABORATORY ENSEMBLE
Rehearsal and study of repiesentative jazz literature, designed for students unfamiliar with jazz idioms. Prerequisite: Consent of the Instructor. (1)

## 345 B $A$ SIC CONDUCTING

Introduction to basic patterns, gestures and conducting techniques; application to appropriate vocal and instrumental scores. (2)

## 349 ELECTRONIC

## MUSIC PRACTICUM

Application of electronic techniques to compositional process. For non-composition majors only. Assigned studio time on a regular basis. Prerequisite: Music 249. (I)

## 351 ACCOMPANYING

Practice in accompanying: representative vocal and instrumental solo literature from all periods. (1)

## 352 ORGAN IMPROVISATION

Basic techniques of improvisation, particularly as related to hymn tunes. a/y (2)

353 SOLO VOCAL LITERATURE Survey of solo vocal literature. (2)

354 PERFORMER'S PRIMER
Techniques of stage presence and procedures for performing vocal and instrumental music. Includes the historical aspects of performance, program planning, wardrobe, stage poise and memorizing. a/y (1)

360 CHOIR OF THE WEST
A study of choral literature and technique through rehearsal and performance of both sacred and secular music. Auditions at the beginning of Fall Semester. (1)

## 361 UNIVERSITY CHORALE

^ study of choral literature and technique through rehearsal and performance of both sacred and secular music. Emphasis on individual vocal development through choral singing. Auditions at the beginning of Fall Semester. (1)

## 362 CONCERT CHOIR

A study of choral literature and technique through rehearsal and performance of both sacred and secular music. Emphasis on individual vocal development through choral singing. Auditions at the beginning of Fall Semester. (1)

363 UNIVERSITY SINGERS
A study of choral literature and technique through rehearsal and performance of both sacred and secular music. Emphasis on individual vocal development through choral singing. Open to all students in the University and interested community musicians regardless of previous musical experience. (1)

364 MADRIGAL
A study of secular part song through reading and performance. (1)
366 OPERA WORKSHOP
Stage production of opera, chamber opera and opera scenes. Participation in all facets of preduction. Prerequisite: Consent of the Instructor. (2)

370 UNIVERSITY BAND
Study of selected wind ensemble literature through rehearsal and performance. Membership by audition. (1)
372 UNIVERSITY
JAZZ ENSEMBLE
Study of selected jazz literature through rehearsal and performance. Membership by audition. (I)

## 380 UNIVERSITY

SYMPHONY ORCHESTRA
Study of selected orchestral literature through rehearsal and performance. Membership by audition. (I)

## 381 CHAMBER ENSEMBLE

Reading, rehearsal and performance of selected instrumental chamber music. Prerequisite: Consent of Chamber Music Coordinator. (1)
Section A - String; Section B - Brass; Section C - Woodwind

## 382 CONTEMPORARY

DIRECTIONS ENSEMBLE
Public and laboratory performance of contemporary music. (1)
383 TWO PIANO ENSEMBLE
Techniques and practice in the performance of two-piano and piano duet literature; includes sight reading and program planning. (1)

## 402 PRIVATE INSTRUCTION: PIANO (1-4)

403 PRIVATE INSTRUCTION: ORGAN (1-4)
404 PRIVATE INSTRUCTION: VOICE (1-4)
405 PRIVATE INSTRUCTION: VIOLIN/VIOLA (1-4)

406 PRIVATE INSTRUCTION: CELLO/BASS (1-4)

407 PRIVATE INSTRUCTION: FLUTE (1-4)
408 PRIVATE INSTRUCTION: OBOE/ENGLISH HORN (1-4)

409 PRIVATE INSTRUCTION: BASSOON (1-4)

410 PRIVATE INSTRUCTION: CLARINET (1-4)
411 PRIVATE INSTRUCTION: SAXOPHONE (1-4)
412 PRIVATE INSTRUCTION: TRUMPET (1-4)

413 PRIVATE INSTRUCTION: FRENCH HORN (1-4)

414 PRIVATE INSTRUCTION: TROMBONE/BARITONE (1-4)
415 PRIVATE INSTRUCTION: TUBA (1-4)
416 PRIVATE INSTRUCTION: PERCUSSION (1-4)

417 PRIVATE INSTRUCTION: GUITAR (1-4)
418 PRIVATE INSTRUCTION: HARP (1-4)
419 PRIVATE INSTRUCTION: HARPSICHORD (1-4)
One half-hour lesson per week. Students receiving permission to register for 2-4 semester hours of credit will receive two one-half hour private lessons per week. Special fee in addition to tuition. All 400 series private instruction requires permission from the Music Department before registration.

423 FORM I
Advanced analysis of literature from Classic, Early and Middle Romantic styles in representative genres and media. a/y (2)

## 424 FORM II

Advanced analysis of literature from late Romantic, Impressionist and Nationalistic styles in representative genres and media $\mathrm{a} / \mathrm{y}$ (2)

425 FORM III
Advanced analysis of literature from Modern and Contemporary styles in representative genres and media. a/y (2)
426 ADVANCED ORCIIESTRATION Directed study and scoring of selected piano works for large ensemble; independent study, may be repeated for additional credit. a/y (2)

All music literature courses numbered from 431 to 438 are open to all university enrollment without prerequisite.
431 HISTORY OF
PIANO LITERATURE
AND PERFORMANCE
A study of representative piano compositions of all periods. a/y (2)

433 MUSIC OF BELA BARTOK A study of representative works of various periods of Bartok. a/y (2)

## 434 SCANDINAVIAN MUSIC

A survey of selected music of various Scandinavian composers; folk music influences and nationalistic element. a/y (2)

435 MUSIC IN THE
UNITED STATES:
A HISTORICAL
INTRODUCTION
A survey from the Colonial period to the present covering both the cultivated and the vernacular traditions. a/y (2)

## 436 HISTORY

OF ORGAN BUILDING
A two-fold study, involving both the technical evolution of the pipe organ, (key-actions, windchest designs, pipework varietics and construction, the organ case) as well as the historical evolution of the various concepts of tonal design as these relate to the performance of organ literature. a/y (2)
437 SACRED MUSIC LITERATURE A survey of church music primarily through the study of representative major works. a? $\mathbf{y}$ (2)

## 438 HYMNOLOGY AND THE <br> MUSIC OF TIIE LITURGY

A survey of Christian Hymnody. considered from both a musical and poetic viewpoint. Also considered will be the concept and performance of music for the liturgy, both historic and contemporary, primarily from the Roman, Anglican and Lutheran traditions. a/y (2)

## 441 RECENT TECHNIQUES

## FOR ELEMENTARY MUSIC

The concern of the upper elementary and middle school music teacher, including Orff and Kodaly techniques. (2)

## 443 METHODS AND

MATERIALS FOR
SECONDARY CHORAL MUSIC The organization and administration of the secondary school music curriculum with particular attention to the needs of the choral program. Organization, management, teaching methods, rehearsal techniques and choral literature appropriate for the various age and experience levels of students in grades 7-12. (2)

## 444 METHODS AND

MATERIALS FOR SCHOOL
INSTRUMENTAL MUSIC
The organization and administration of the secondary school music curriculum with particular attention to the needs of the instrumental program. Organization, management, teaching methods, rehearsal techniques and instrumental literature appropriate for the various age and ex perience levels of students in grades 4-12.
445 ADVANCED CONDUCTING
Refinement of patterns, gestures and conducting techniques; application to appropriate vocal and instrumental scores. Prerequisite: Music 345. (2)

## 451 PIANO PEDAGOGY

Teaching techniques for prospective teachers of piano, including techniques of private and class piano instruction. Methods and materials from beginning through advanced levels. (2) Section A - Basic; Section B - Lower Elementary; Section C - Upper Elementary; Section D - Advanced

## 452 ORGAN PEDAGOGY AND REPERTOIRE

Methods and techniques of private organ instruction ${ }_{7}$ including supervised practical experience. A survey of organ literature representative of all major composers and style periods. a/y (2)

## 453 VOCAL PEDAGOGY

Physiological, psychological and pedagogical aspects of singing. (2)

## 454 STRING PEDAGOGY

The physiological and psychulogical approach to string playing and teaching. Includes discussion and demonstration of instrument and bow techniques, private lesson approach and materials, general and specific string problems. a/y (2)

491-492 INDEPENDENT STUDY
Prerequisite: Consent of the Instructor. May be repeated for additional credit. ( 1-4)
502 PRIVATE INSTRUCTION: PIANO (1-4)

503 PRIVATE INSTRUCTION: ORGAN (1-4)

504 PRIVATE INSTRUCTION: VOICE (1-4)

505 PRIVATE INSTRUCTION: VIOLIN/VIOLA (1-4)
506 PRIVATE INSTRUCTION:
CELLO/BASS (1-4)
507 PRIVATE INSTRUCTION: FLUTE (1-4)

508 PRIVATE INSTRUCTION: OBOE/ENGLISH HORN (1-4)

509 PRIVATE INSTRUCTION: BASSOON (1-4)

510 PRIVATE INSTRUCTION: CLARINET (1-4)

5II PRIVATE INSTRUCTION: SAXOPHONE (1-4)
512 PRIVATE INSTRUCTION: TRUMPET (1-4)

513 PRIVATE INSTRUCTION: FRENCH IIORN (1-4)

514 PRIVATE INSTRUCTION: TROMBONE/BARITONE (1-4)

515 PRIVATE INSTRUCTIOn TUBA (1-4)

516 PRIVATE INSTRUCTION: PERCUSSION (1-4)
517 PRIVATE INSTRUCTION: GUITAR (1-4)

518 PRIVATE INSTRUCTION: HARP (1-4)

519 PRIVATE INSTRUCTION: HARPSICHORD (1-4)

One half-hour lesson per week. Students receiving permission to register for 2-4 semester hours of credit will receive two one-half hour private lessons per week. Special fee in addition to tuition. All 500 series private instruction requires permiossion from the Music Department before registration.

## 527 COMPOSITION

A systematic approach to contemporary musical composition; students create, notate and periorm works for solo, small and large ensembles. May be repeated for credit. (1-4)

## 532 MUSIC BIBLIOGRAPHY

AND RESEARCI TECHNIQUES Survey of the main research tools available for advanced work in music. Course content can be adapted to needs of students in music education, theory or performance. a/y (2)

545 SEMINAR IN ADVANCED CONDUCTING CONTEMPORARY LITERATURE
Directed study of selected contemporary scores containing conducting problems unique to recent compositions in a wide range of genres and media, including electronics, controlled improvisation, multimedia, and texture for large and small ensembles, vocal and instrumental. (2)

## 590 GRADUATE SEMINAR (1-4)

596-598 RESEARCH IN MUSIC (1-4)
599 THESIS (2-4)

## SCHOOL OF NURSING

## ADMISSION AND CONTINUATION POLICIES

Students seeking admission to the nursing major must make formal application to the School of Nursing. Application forms may be secured from the Nursing Office and are to be submitted between January 1 and February 15. Applications are considered during the Spring Semester for admission to the following Fall and Spring Semester classes.

When there are more qualitied applicants than the Schoot can accept, selection is made on a competitive basis. In making the selection, the School of Nursing Admissions Committee uses grades as the major means of evaluation, but also considers such relevant factors as prior experience in hursing, previous study at PLU, significant co-curricular activities (school, community, church, etc.) and other pertinent extenuating or extraordinary circumstances. Students are admitted to begin their nursing program in either the Fall or Spring Semester, and selection for both terms is made the previous Spring, generally by May 1. Insofar as possible, students are admitted for the term of their choice. When there are too many desiring a given term, determination of which students will be admitted for Fall and which for Spring is made by random selection. Time normally required to complete requirements for the Bachelor of

Science in Nursing is siv semesters from the time of enrolling in the first nursing course regardless of the number of college credits carned.

The School of Nursing reserves the right to request withdrawal of a nursing student who fails to demonstrate competency or who fails to maintain professional conduct.

Minimum criteria for admission to or contination in the School of Nursing are as follows:
I. Admission to the University. Applicants must have beell admitted to Pacific Lutheran University prior to March 1 of the year in which they wish to have their application processed. However, admission to the University does not guarantee admission to the School of Nursing.
2. Completion of or current enrollinent in Psychology 101 (Introduction to Psychology) and three of the tollowing: Biology III (Biology and Modern Man), Biology 163 (Functional Human Anatomy), Biology 201 (Introductory Microbiology), Clsemistry 103 (Chemistry of Life), and Sociology 101 (Introduction to Sociology). (The remaining courses will be completed after enrolling in the nursing program.)
3. Completion of a minimum of 26 semester credit hours. Some of these may be in progress at time of application.
4. $\Lambda$ 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.
5. A minimum cumulative g.p.a, of 2.00 .
6. Plyssical health and stamina necessary to withstand the demands of nursing.
7. Emotional stability sufficient to cope with the stresses inherent in learning 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. Liach student must carry personal health insurance.

## ADDITIONAL COSTS

In addition to regular University costs, students are to provide their own transportation between the Uiniversity c:ampus and the clinical labraratory areas beginning with the sophomore year. Available public transportation is limited, so provision for private transportation is essential. Students are required to carry professional liability insurance during all periods of clinical experience. This is available under a group plan at a nominal cost to the student. Health examination fees. student uniforms (approximalely $\$ 70.00$ ) and equipment (wristwatch, scissors, stethoscope) are also the responsibility of the student.

## BACHELOR OF SCIENCE IN NURSING

The curriculum plan and its implementation are designed to be growth-fostering and to encourage initiative and self-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 in the Bachelor of Science in Nursing degree should contact the School of Nursing and begin the course sequence upon entrance to the Lniversity.

For Spring Semester enrollment the curriculum generally follows the Fall Semester format with modifications as necessary to assure completion of all prerequisite courses by the time they are needed. A schedule of courses is developed individually with each student who begins the nursing courses in the Spring Semester. Nursing courses must be taken concurrently and in sequence as indicated in the sample curriculum, and normally extend over six semesters.

## CERTIFICATION FOR SCHOOL <br> NURSING

Educational Staff Associate Certification for school nurses is individually designed through a consortium consisting of a school district, related professional association and Pacific Lutheran University. Additional information on this prograns can be obtained by contacting the Dean of the School of Education or the Director of the School of Nursing.

A sample curriculum for the student accepted for Fall Semester enrollment is as follows:

| FIRST YEAR - Pre-Nursing |  |  |
| :---: | :---: | :---: |
|  |  |  |
| - Biology 111 | Biologr and Modern Man | 4 |
| * R Religion clective |  | 4 |
| - Psychology 101 | Introduction to Psychology | 4 |
| P.E. Activity |  | 1 |
|  |  | 13 |
| Interim |  |  |
| Elective |  | 4 |
|  |  | 4 |
| Spring Semester |  |  |
| Chemistry 103 | Chemistry of Life | 4 |
| +English 101 | Cullege linglish | 4 |
| *Sociology 101 | Introduction to Sociology | 4 |
| P.E. Activity |  | 1 |
|  |  | 13 |


| SECOND YEAR |  |  |
| :---: | :---: | :---: |
| Fall Semester |  |  |
| Biology 201 | Introductory Microbiology | 4 |
| *Psychology 335 | Development: Infancy to Maturity | 4 |
| or Education 321 | Human Development |  |
| +Philosophy |  | 4 |
| P.E. Activity | Nursing 1: Socialization to Nursing | 4 |
|  |  | 17 |

Interim
Elective
Spring Semester 4

Biology 163
Functional Human Anatomy 4
Biology 163
Nursing 1I: Health Assessment $\quad 4$
Nursing 228
P.E. Activity

THIRD YEAR $\quad \overline{17}$
Fall Semester
Biology $299 \quad$ Introductory Clinical Physiology 4
Nursing 334
Nursing Centrum

Nursing 344
Health Problems
4
4
Interim
Optional elective

| Spring Semester |  |
| :---: | :---: | :---: |
| Nursing 354 | Nursing Centrum It |

Nursing 354
$\begin{array}{ll}\text { Nursing 354 } & \text { Nursing Centrum It } \\ \text { Nursing } 384 & \text { Clinical Problems I } \\ \text { Nursing } 394 & \text { Nursing Practicum I }\end{array}$

+ Literature or History celective4

FOURTH YEAR
Fall Semester
Nursing 424
Nursing Centrum III
Nursing 434
Climical Problemisil

+ Religion elective
Nursing Practicum II


## Interim

Optional elective 0-4
$0-4$

| Spring Semester |  |
| :---: | :--- |
| Nursing 4h4 | Nursing Centrum IV |
| Nursing 478 | Senior Practicum |

Senior Practicurn
8
*May be taken either semester
** May be taken either freshman or sophomore year
+May be taken any time

## RESOURCES AND FACILITIES

Lnder the direct supervision of its faculty members, the School utilizes facilities of lospitals, 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, Washington (170) beds)
David $k$. Hamry', M.II.A. Executive Director
Mary Jane Troch, R.i.. Director of . Vursing
Lakewood General Hospital, Tacoma, Washington (I () ) beds)
James Ifelland, W.B.A., Administrator
Pegey Dawson, R.N., Director of Jursing
Madigan Army Medical Center, Tacoma, Washington $(5.36$ beds)
Brigadier (ieneral Spencer B. Reid, M.I)., Commanding Officer
Colonel Barbara costello, R.V.. B.S.V. W.S., (hief. Department of Vursing

Mary Bridge Children's Health Center, Tacoma, Washington ( 68 beds)
Frederick A. Pritchard, N. B.A.. Administrator
Karen Lynch, R.N., B.S.N., Assistamt Administrator for Patient Services
Puget Sound Hospital, Tacoma, Washington (145 beeds)
Cliff Gorak, M.II.A., Administrator
Regina Dickman, R.V., B.N.. M.N., Director of Nursing
St. Joscph Hospital, Tacoma, Washington 12.5() beds)
1)aniel Russell, B.S., M.II.A. Administrator
I tazel Ilurst, R.N., B.S., M.N:, Assistant Administrator for Viersing Service
St. Peter Hospital, Olympia, Washington (1.50) beds)
David L. Bjomson, M.II.A., A dministrator Amn Bertolin, R.N., B.S.V., Director of Nursing Service
Tacoma General Hospital, Tacoma, Washington ! 299 beds)
Fugene K. Prentice. B.S.. M.S.II.A.. Iresident
Betty Inofiman, R.N... B.S.N.. Director of Vursing Service
Tacoma-Pierce County Ilealth Department, Tacoma, Washington
larlan P. McNutt, M.D., M.I.IL., Director of lleallh
Nancy Cherry, R.N., M.P.II.. Director of Nursing
Tacoma Public Schools, Tacoma, Washington Roger Meyer, M.D., M. I.II. Administrative Director. Division of Healt!
Donna (; Ferguson, R.V., M.V.. Supervisor of Nursing Services. Division of Ilealth

The Doctors Hospital, Tacoma, Washington (7) beds)

Irederick A. Pritehard, M. B.A.. Administrator.
Harriet Iluftman, R.N.. Director of Nursing
Veterans Administration Hospital, American Lake, Washington 19()$\nrightarrow$ hecls)
Robert B. Rynearson, B.S., Director
Ioan B. Stout, RN., B.SN. M.VA., Chicfo Vursing Senvice

## 214 NURSING I:

SOCIALIZATION TO NURSING
Concepts regarding self and society, relations, communications, learning and levels of wellness. Introduces historical milestones of nursing and trends in nursing education. Prerequisites: Psychology 101, and prior or concurrent enrollment in Sociology 101 and Biology 111.

## 228 NURSING II: <br> HEALTH ASSESSMENT

Assessment of health status of individuals, families and communities. Attention is given to the utilization of health resources, the intluence of the eco-system, and the role of the health team in ntaintaining wellness. Includes selected clinical experiences with the newborn, well child, adolescent, and elderly. Emphasis is on beginning techniques and assessment as part of the nursing process. Prerequisites: Chemistry 103 and Nursing 214, and prior or concurrent registration in Psychology 335 (or Education 321 ), Biology 163 and 201. (8)

## 334 NURSING CENTRUM I

An introduction to the less complex medical-surgical situations of children and adults, the pregnant family, and preventive aspects of psychiatric nursing. Drug and diet therapy and theories of physical and psychosocial development are included. Prerequisites: Nursing 228, concurrent registration in Nursing 344 , and prior or concurrent registration in Biology 299.

## 344 IIENLTIIPROIBLEMS

Medical-surgical problems of a less stressful nature and appropriate nursing actions to facilitate adaptation. Includes experience with a pregnant family through the perinatal period, and application of principles of crisis intervention in dealing with health problems in selected elinical experiences. Prerequisites: Nursing 228, concurrent registration in Nursing 334, and prior or concurrent registration in Biology 299.

## 354 NURSINC; CENTRUM II

The more complex medical-surgical and psychiatric situations. Emphasis is placed on the pathophysiological and psychopathological aspects and their application to the nursing process in the care of children and adults. Prerequisites: Nursing 334 and 344 , and concurrent registration in Nursing 384 and 394.
384 CIINIC AL PROBLEMS I
Psychiatric and medical-surgical problems of a stressful nature with the appropriate nursing actions to facilitate adaptation or restoration to a higher level of wellness. Prerequisites: Concurrent registration in Nursing 354 and 394.

## 394 NURSING PRACTICUM I

Clinical application of Nursing 354 and 384.
The student is expected to apply theoretical principles based on pathophysiological and psychopathological concepts in the clinical setting utilizing interpersonal and technical skills. Prercquisites: Concurrent registration in Nursing 354 and 384.

## 424 NURSING CENTRUM III

Introduction to acute deviant behavior patterns and to life threatening medical-surgical problems of children and adults. Emphasis is placed on complex pathophysiological and psychopathological aspects and their implications for the nursing process. Prerequisites: Nursing 354, 384, 394 and concurrent registration in Nursing 434 and 444.

## 434 CLINICAL PROBLEMS II

Introduction to nursing actions appropriate to stressful medical, surgical and psychiatric problems and to the newer parameters of nursing. Issues in nursing and changes in health care systems are examined. Prerequisites: Concurrent registration in Nursing 424 and 444.

## 444 NURSING PRACTICUM II

Clinical application of pathophysiological and psychopathological concepts in critical care nursing, including utilization of interpersonal and sophisticated technical skills. Prerequisites: Concurrent registration in Nursing 424 and 434.

## 464 NURSING CENTRUM IV

Preparation for future professional roles of the nurse in the health delivery system. Emphasis is on leadership and management skills, professional judgment, decision making, and the nurse as a change agent. Students evamine legislation, economic security, professional growth and the utilization of health and welfare resources. Prerequisites: Nursing 424,434 , and 444 and concurrent registration in Nursing 478.

## 478 SENIOR PRACTICUM

Clinical application of professional and technical skills in primary or secondary nursing settings. Each student is expected to function in a staff nurse role and progress to a leadership role. Prerequisite: Concurrent registration in Nursing 464. (8)
491,492 INDEPENDENT STUDY
Prerequisite: Permission of the Director. (1-4)

## SCHOOL OF PHYSICAL EDUCATION

UNIVERSITY REQLIREMENT: 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 activity courses may be counted toward graduation. Students are encouraged to select a variety of activities at appropriate skill levels. 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. Psychology 335: 4 semester hours of PE 481, 482, 485, 284-288: 10 hours of: Art 230-330, 250 or 350,326 , 341. 365, 370, Music 341, PE 292, 322, 365: 8 hours of: BA 230, 281, 350, Political Science 356, 457, Psychology 243, 340, 410. Sociology 260, 342, 343, 344, 444.

BACHELOR OF ARTS (Corrective Therapy Concentration): 48 semester hours including PE 277, 292, 360, 391, 392, 478, 481, 482, 484, 485, 497; Biology 163; Psychology 101, 221, plus two hours of a psychology elective.

HEALTH MINOR: (18 semester hours) The following courses are required: Biology 163, PE 292, 295, 324, 326, and 2 hours of electives (with approval of Health Coordinator).

COACHING MINOR (Men and Women) 18 semester hours including: PE 277, 281, 334. 485, participation on a varsity or club sport, and a minimum of 10 hours selected from among the following: PL 331, 361, 370, 371, 372, 373, 374, and 478. Interim and summer courses may be included as electives with the approval of the department chairperson.

DANCE MINOR: 20 hours required: PE 362, 282 or 491, four hours from the following: PE 240, 242, 243 (may be repeated), 244 , and eight hours from the following: PE 308, 360. Music 131-132, Art 110,280 , and Biology 163. The dance minor is cross-referenced with Communication Arts.

## BACHELOR OF ARTS IN EDUCATION:

B.A. IN EDUCATION - SECONDARY SCHOOL PHYSICAL EDUCATION TEACHING MAJOR (44 hours): Required ( 24 hours): PE 277, 328, 478, 481, 482, and 485, Biology 163 and participation in a varsity or club sport. Electives: 20 hours from among the tollowing: PE 275, 282, 283, 284, $285,287,288,332,360,362,484$, and 491 . Students desiring K-12 Certification must complete PE 283, 322, 362, and 284 or 288 in addition to meeting requirements as set forth by the School of Education.
B.A. IN EDUCATION - ELEMENTARY SCHOOL PIIYSICAL FDUCATION IEACHING MAJOR ( 24 hours): The following courses are required: PE 277, 284 or $288,283,322,334,362$ and 4 hours electives in physical education with approval of department chairperson.

ELLMENTARY SCHOOL TEACHING MINOR ( 12 hours): PE 322 and 8 hours from among the following: 284 or 288,283 and 362.

SECONDARY SCHOOL TEACHING MINOR ( 18 hours): The following courses are required: PE 277,334 and 485 and 12 hours of electives from among the following: PE $282,283,284,285,287$, and 328.

K-6 PHYSICAL EDUCATION SPECIALIST AND K-6 CLASSROOM TEACHER ( 32 hours): The following courses are required: PE 277, 283, 284 or 288,322 , $481,482,485$ and Biology 163.

## 100 ORIENTATION

TO PHYSICAL EDUCATION
To stimulate student interest in functional personally-designed programs of physical activity; assessment of physical condition and skills; recommendation of speeific programs for maintaining and improving physical health. Should be taken as a freshman. I II (1)

## 200-299 INDIVIDUAL

## AND DUAL ACTIVITIES

201 (Beginning Golf), 202 (Intermediate and Advanced (iolf), 203 (Archery), 204 (Bowling), 207 (Beginning (iymnastics), 208 (Skiing), 209 (Intermediate Gymnastics), $210 W^{(S l i m n a s t i c s), ~} 211$ (Beginning Badminton), 212 (Intermediate Badminton), 213 (Personal Defense), 214 (Bcginning Tennis), 215 (Intermediate Tennis), 216 (Beginning lce Skating), 218 (Backpacking), 219 (Canoeing), 222 (Handball, Squash, and Rackethall), 223 (Squash and Racketball), 225 (Aerobies), 227 (Weight Training), 228 (Basic Mountaineering), 229 (Equitation). (I)

## 230-239 AQUATICS

230 (Beginning Swimming), 231 (Intermediate Swimming). 232 (Advanced Swimming), 234 (Advanced Life Saving), 236 (Synchronized Swimming), 237 (Skin and Scuba Diving). (1)

## 240-249 RIIYTIIMS

240 (Beginning Modern Dance), 242 (Intermediate Modern Dance), 243 (Advanced Modern Dance), 244 (Folk and Social Dance). (1)

## 250-259 TEAM ACIIVITIES

251W (Volleyball and Field Hockey), 252W
(Basketball and Softball), 253M (Soccer and Volleyball), 254 M (Basketball and Sof tball). (1)

## 275 WATER

SAFETY INSTRUCTION
The American Red Cross Water Safety Instructor's Course. Prerequisite: 234. I II (2)

## 277 FOUNDATIONS

OF PHYSICAL EDUCATION
The relationship of physical education to education; the biological, sociological, psychological and mechanical principles underlying physical education and athletics. Should be the initial professional course taken in the School of Physical Education. II (2)

## 281 INJURY PREVENTION

AND THERAPEUTIC CARE
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 (2)

## 282 PROFESSIONAL

ACTIVITIES: DANCE
Planning, teaching and evaluating dance. Encompasses specific movement education activities, conditioning exercises, and the development of modern, social and folk dance skill for elementary school age and older. Prerequisite: Intermediate skill level or completion of a beginning activity course, PE 277. II a/y

## 283 PROFESSIONAL

ACTIVITIES: GYMN^STICS
Includes skill development, teaching expertise, course planning, and safety techniques in gymnastics. The course is designed for both elementary and high school ages. Prerequisite: Intermediate skill level or completion of a beginning activity course, PE 277.1

## 284 PROFESSIONAL ACTIVITIES: TEAM SPORTS FOR MEN

Planning, teaching and evaluating team activities: basketball, volleyball, soccer, speedball, wrestling, touch football, softball. Prerequisite: PE 277. II

## 285 PROFESSIONAL

ACTIVITIES: INDIVIDUAL
AND DUAL SPORTS
Planning, teaching and evaluating these activities: tennis, badminton, track and field. Prerequisite: intermediate skill level or completion of a beginning activity course, PE 277. I

## 287 PROFESSIONAL ACTIVITIES: RECREATION ACTIVITIES

Planning, teaching and evaluating the following: archery, bowling, golf, outdoor education and various recreational sports. Prerequisite: PE 277. II

## 288 PROFESSIONAL ACTIVITIES: TEAM SPORTS FOR WOMEN

Planning, teaching and evaluating these activities: basketball, field hockey, soccer, specdball, volleyball, sof tball. Prerequisite: PE 277. II

292 FIRST AID
This course meets requirements for the American Red Cross Standard First Aid and - Personal Safety. II (2)

295 SCHOOL HEALTH
Health concepts which relate to the total school health program, including instruction, services and environment: the relationship between health and all levels of education. Not recommended for freshmen. I II (2)

## 322 PHYSICAL EDUCATION IN <br> THE ELEMENTARY SCHOOL

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 (2-4)

## 324 PERSSONAL HEALTH

Practical application of health knowledge to daily living; a foundation for understanding health behavior. Primarily designed for health minor students. II a/y

## 326 COMMUNITY HEALTH

Organizations associated with public health and their implications to community health problems. Primarily designed for hea th minor students. I

## 328 CURRICULUM DEVELOPMENT AND AIDMINISTRATION

Organization and administration of physical education and athletics (7-I2); curriculum development implementation. Prercquisite: 277.1

330 RECREATION PROGRAMMING Supervising and administering recreational programs for the school or community. I

## 331 THE WOMAN <br> AS A COMPETITOR

The psychology of coaching, coaching technique and methodology; training; sociological implications of athletic competition for women; designed for those interested in coaching womens competitive teams. Not recommended for freshmen. I (2)

332 OIFICIATING
Rules and officiating techniques of volleyball, basketball; designed to train qualified officials. Recommended as an elective for majors and minors. I (2)

## 334 SCIENTIFIC

## BASIS FOR TRAINING

Presents physiologic and kinesiologic applications to pliysical training. Topics include the development of muscular strength and endurance, and the relationship of nutrition, environment, sex, age and ergogenic aids to athletic performance. Prerequisite: PE 277. (2)

## 360, 361 PROFESSIONAL <br> PR^CTICUM, COACHING PRACTICUM

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 activities, departmental approval. I II (2)

362 RHYTHMS AND DANCE
Historical background, establishment and conduct of dance program, teaching techniques and accompaniment, planning and presentation of dances; medern dance techniques. $1 \mathrm{a} / \mathrm{y}$

## 370-375 COACHING THEORY

Techniques, systems, training methods, strategy and psychology of coaching; 370 (Basketball), 371 (Football), 372 (Track and Field), 373 (Baseball), 374 (Wrestling). I II (2)

## 391, 392 THERAPEUTIC EXERCISE, AMBULATION TECHNIQUES

A corrective therapy, clinical-training program including lecture, laboratory experiences and clinical practices. Prerequisite: departmenta approval (maximum errollment 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. Prerequisite: PE 277. II a/y

## 481 EXERCISE PHYSIOLOGY

Scientific basis for training and the physiological effect of exercise on the human body. Prerequisite: Biology 163. I

## 482 KINESIOLOGY

Deals with the structural and mechanical function of the musculoskeletal system. The kinesiological applications of anatomical information is given prime consideration. Prerequisite: Biology 163. II

## 483 RECREATION

## ADMINISTRATION

The organization, management and direction of recreational services: legal basis, administrative procedures, financial aspects, personnel management, facilities and internal - organization. Il

## 484 MEASUREMENT

 AND EVALUATION IN PHYSICAL EDUCATIONThe selection, construction and interpretation of evaluatory techniques related to the physical education program. II a/y (2)

## 485 BIOMECHANICS

An application of physical laws to sports activities. Principles of motion, force. and equilibrium are stressed. Analyses of various sports skills are made. II (2)

## 491 INDEPENDENT STUDY

Prerequisite: consent of the director. I II S (1-4)
597 GRADUATE RESEARCH
Open to graduate students whose minor is in the field of physical education. Prerequisite: consent of the director. I II S (2-4)


## 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

I. Education
a. Elementary or Secondary School Administration: A program intended for teachers who desire to enter the field of school administration. The student who wishes to qualify for the provisional or standard principal's credential (elementary or secondary or general) will take a major in this field and complete courses in a supporting academic area of the University. Students may major in this field without qualifying for a principal's credential.
b. Counseling and Guidance: A program designed primarily for students who wish to qualify as public school counselors (elementary and secondary) or student personnel workers in higher education.
c. Elementary Classroom Teaching: A program for elementary teachers who desire advanced work in elementary classroom teaching or who wish to qualify as elementary school supervisors or consultants. Along with the major field, the student is required to complete courses in a supporting academic area.
d. Secondary Classroom Teaching: A program for junior high and high school teachers who wish to increase their preparation for teaching in an academic area taught in the secondary school.
2. Humanities

A degree program designed for librarians, clergy, 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, workers in the broad area of corrections, librarians, clergy, teachers, and others who wish to extend and broaden their understanding and appreciation of the various fields of the social sciences. It includes the Human Relations Program offered at Ft. Lewis and McChord AFB.

## MASTER OF

## BUSINESS ADMINISTRATION

This degree program is designed to provide, through education, a foundation for responsible leadership in business.

## MASTER OF

## PUBLIC ADMINISTRATION

This degree program is intended to provide, through education, a foundation for responsible leadership in the management of public agencies.

## MASTER OF MUSIC

A degree program intended for qualified students who desire a concentration in music education.
*Details of these programs, including admission requirements, procedures, degree and research requirements, are contained in the Craduate catalog which is available from the office of the Dean of Graduate Studies.



## The Board of Regents <br> OWNERSHIP, SUPPORT, GOVERNMENT

The University is owned and operated by Pacific Lutheran Eniversity, Inc., a Washington 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 located in Idaho and Montana, west of the Continental Divide. The annual meeting of the corporation is held in conjunction with the annual convention of the North Pacific District.

Voting members include the nembers 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 $\Lambda$ merican 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 receives 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 recommendations 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 corporation's constitution provides for not more than 30 regents elected for three-year terms. Fifteen regents represent the North Pacific and Rocky Mountain Districts of the American Lutheran Church, sis are chosen by the Pacific Northwest Synod of the Lutheran Church in America, 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. MELVIN R. KNUDSON, Chairman MR. GEORGE L. DAVIS, JR., Vice Chairman MR. LAWRENCE HAUGLE, Secretary

## EX-OFFICIO

BISIIOP CLARENCE SOLBERG, 2007 Third Avenue, Seattle, Washington 98121, Al.C
BISIIOP A.G. FJELLMAN, 5519 Phinney Avenuc North, Seattle, Washington 98103 , L.C. 1

DR. WILLIAM O. RIEKE, President, PLC, Tacoma, Washington 98447, PIUU

## 1974-1977 TERM

MR. THEODORE C. CARLSTROM. 1556 Webster Street, Palo Allo, California 94301, Aluınhi
MR. ROBERT HADLAND, 255 Naple lill Road, Hopkins, Minnesota 55343, Regent-at-Large
MR. EMERY HILDEBRANDT, 3655 N.W. Ifghland Drive, Corvallis. Oregon 97330 , I.CA

MR. MELVIN R. KNLDSON, 6928 .. 100th Street S.W., Tacoma, Washington 98499 , ALC'
MR. JERROLD KOESTER, 4105 North Morning Street, Corvallis, Oregun 97330 , L( ${ }^{\prime} 1$
MRS. DOROTHY SCHNAIBLE, 1111 last lirst, Moscow, Idaho 83843, ALC
MR. RICIIARD NEILS, 11921 Gravelly Lake Drive S.W., Tacoma, Washington 98499 , Regent-at-large
MR. STERLING RYGG, Box 429, Kalispell, Vontana 59901, ALC'
MR. GERALD SCHIMKE, 2247 Prescott Avenue S.W., Seattle, Washington 98126, ALC'
DR. ROY SCIIWARZ, 10039 4lst N.I:., Seattle, Washington 98125, ALC

## 1975-1978 TERM

MR. GEORGE L. DAVIS, JR., 4713 Peterson Drive N.W., (ig larbor, Washington 98335, Regent-at-Large
MR. R. GENE GRANT, P.O. Box 1936. Tacoma, Washington 98401 , Regent-at-larse
MR. LAWRENCE IIAUGE, ISIS No. 167. Court House, Wenatehee, Washington 98801, Alımmi
MR. GALVEN IRBY, 14343 N.E. Alton, Portland, Oregon 97220, AlC
MRS. RLTH JEFFRIES, 1811 North Bennett, Tacoma, Washington 98406, I. A A
MR. ROGER C. LARSON, 205 S.W. Skylinc Drive, Pullman, Washington 99163, ALC

MISS FLORENCE ORVIK, 4712 South Nap: Street, Spokane, Washington 99203, I.C:A MR. CLATTON B. PETERSON, 1400 112 th S.E., Suite 100, Bellevae, Washington 98004, A1.C
DR. CHRISTY ULLELAND, 15424 - 9th Avenue S.W., Seattle, Washington 98166, ALC:
REV. DAVID WOLD, 3719 - 21st Strect N.E., Puyallup, Washington 98371, ALC

## 1976-1979 TERM

MR. THOMAS W. ANDERSON, 7525 Hegra Road, Tacoma, Washington 98465, Regent-at-large
DR. RONALD LERCH, 561 I West Victoria, Kennewick, Washington 99336, Alumni
MR. PAUL IIOGLUND, P.O. Box 1869, Scattle, Washington 98111, I.CA
DR. RICHARD KI.EIN, 9618-59th Avenue S.W., Tacoma, Washington 98499, ALC'

DR. JESSE PFLUEGER, 608 West Division, Ephrata, Washington 98823, ALC'
REV. ROBERT QUELLO; P.O. Box 465, Pullman, Washington 99163, ALC
REV. CHARI.ES BOMGREN, 9625 N.E. 8 th Street, Bellevae, Washington 98004, I,C.A
REV. F. WARREN STRAIN, 6720 last Grecnlake Waly N., Scattle, Washington 981(13, $1 / C^{\prime}$
MR. MARTIN PIHL, 2720 - 7th Avenue, Ketchikian, Alaska 99901, Al.
Dr. GEORGE A. WADE, 1910 Fairview E., Seattle, Washington 98103, Regent-at-Large

## ADVISORY

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MR. JOHN KNOX, ASPLU I:xecutive Vice President, S'tudent
MR. JOHN GLASSMAN, Resident Hadl Counctl Chairman, Student

## CHURCH OFFICIALS

## AMERICAN LUTHERAN CHURCH

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DR. DAVID W. PREUS, President, 422 South I:ifth Street. Minncapolis, Minnesota 55415 MR. N. BURDETTE NELSON, Treasurer, 422 South lifth Street, Minneapolis, Minnesota 55415
MR. ARNOLD MICKELSON, Secretary, 422 South Fifth Street, Minneapolis. Minnesota 55415

## North Pacific District

DR. CLARENCE SOLBERG; President (Bishop), 2007 Third Avenue, Seattle, Washington 98121

## DIVISION FOR COLLEGE AND UNIVERSITY SERVICES

REV. ROBERT G. BORGWARDT, 312 Wisconsin Avenuc, Madison, Wisconsin 53703 (term expires 1982)
MRS. SYLVIA I. BOSSE, 8656 Bayberry Drive N.L., Warren, Ohio 44484 (1980)
MR. CHARLES R. BRUNING, 2500 Scabury Avenue, Minneapolis, Minnesota 55406 (1978)

MRS. FAITH (JOSEPH) BURCESS, 38 West Broadway, Ciettysburg, Pennsylvania 17325 (1978)

MR. OTIS J. GRANDE, $1111-14$ th Avenue, Fiox Island, Washington 98333 (1980)
REV. DENNIS V. GRIFFIN, 324 South Dakota Avenue, Siorr Falls, South Dakota 57102 (1978)
MR. EDWIN W. GUNBERG, 7701 Winterberry Place, Bethesda, Maryland 20034 (1982)
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MRS. MERLINE (THOMAS) MCCLOUD, 19955 Lauder, Detroit, Michigan 48235 (1978)

## LUTHERAN CHURCH IN AMERICA. PACIFIC NORTHWEST SYNOD

DR. A.G. FJELLMAN, President, 5519 Phinney Avenuc North, Seattle, Washington 98103
The Pacific Northwest Synod of the Iutheran 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 <br> OF COLLEGE EDUCATION

DR. RONALD F. MATTHIAS, 422 South IFifth Street, Minneapolis, Minnesota 55415, Division for College and University Serviess, The American Lutheran Chureh
DR. RICHARD SOLBERG, 231 Madison Avenue, New York, New York 10016, Executive Secretary, Board of College Education and Church Vocations, Lutheran Church in America

## REPRESENTING COMMITTEES ON HIGHER EDUCATION

KEV. WALTON BERTON, 5800 N.E. 112 th Avente, Vancouver, Washington 98662. The American Lutheran Chuch
REV. LLANO TIELIN, 3133 N.E. 32nd Place, Portland, Oreqon 97212, I.utheran Church in America

## Administrative Offices

## OFFICE OF THE PRESIDENT

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Assistant to President. University Relations
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Marvin Swenson Director, University Center


# The Faculty 

WILLIAM O. RIEKE, 1975-, President; B.A., Pacific Lutheran University, 1953: M.D., University of Washington School of Medicine, 1958.

NILS-ERIK AABY, 1977-, Assistant Professor of Business Administration; B.B.A., M.B.A., University of Wyoming, 1973, 1974; Ph.D., University of Nebraska, 1976.

MATHILDA S. ACUFF, 1974-, Assistant Professor of Nursing: B.S.N., Medical College of Virginia, 1965; M.S., Virginia Commonwealth University, 1974.
SEIICHI ADACHI, 1967-, Associate Professor of Psychology, Counselor. Counseling and Testing Service; B.A., Jamestown College, 1946; B.I).. McCormick Seminary, 1951 ; M. 1. . Columbia University - Union Theological Seminary, New York, 1957; Ed.I)., Teachers College. Columbia University, 1960.

HARRY S. ADAMS, 1947-1951, 1962-, Professor of Physics; B.S., M.S., Kansas State University, 1945, 1947; Ph.I)., University of Minnesota, 1962.
SHIRLEY E. AIKIN, 1974-, Instructor of Nursing; B.S.N., B.A., Pacific Lutheran University, 1971.
ANGELIA G. ALEXANDER, 1971-, Assistant Professor of Biology; B.S., Juniata College, 1962; M.A., University of California, Davis, 1966.
CHARLES D. ANDERSON, 1959-, Professor of Chemistry, Regency Professor. 1974-75; B.A., St. Olaf College, 1952; A.M.. Ph.D., Harvard University, 1954, 1959.

EDWARD W. ANDERSON, 1975-, Assistant Professor of Physical Education: B.A., University of Montana, 1954; M.S., University of Utah, 1964.
ERNEST M. ANKRIM, 197()-, Assistant Professor of Economics; B.S.. Willamette University, 1972; M.S., Ph.D., University of Oregon. 1975, 1976.
GEORGE E. ARBAUGH, 1959-, Professor of Philosophy; B.A., Augustana College, Rock Island, 1955; M.A. Ph.D.. University of lowa, 1958, 1959.
DAVID M. ATKINSON, 1976-, Associate Professor of Political Science: B.A., University of Puget Sound, 1965 : Ph.D., University of Maryland, 1972.
CAROL A. AUPING, 1974-, Assistant Professor of Physical Education; B.A., Valparaiso University, 1969 ; M.Ed., Kent State University, 1974.
*D. STUART BANCROFT, 1967-08. 1971-, Associate Professor of Business Administration: B.S., M.B.A.. Arizona State University, 1963,1965 : M.A., Ph.I)., University of Pennsylvania, 1971, 1973.
J. THADDEUS BARNOWE, 1977-. Assistant Professor of Business Administration: B.A., University of San Francisco. 1966: M.A., Ph.I)., University of Michigan, 1971, 1973.
KENNETH F. BATKER, 19(6-, Associate Professor of Mathematics; B.A., Wartburg College, 1957: M.A., Ph.D., University of Colorado, 1961, 1971.
MYRA J. BAUGHMAN, 1970-, Associate Professor of Education: B.A., Pacific Lutheran University, 1962: M.Ed., Western Washington State College, 1969: E(d.D). University of Nebraska, Lincoln, 1975.
PHILIP E. BEAL, 1908 -. Vice President and Dean for Student Life: A.B., Cornell College. 1957; M.A.. Northwestern University, 1961 ; Ph.D., University of Oregon, 1965.
$=$ KATHERINE D. BECKMAN, 1972-, Assistant Protessor of Physical Education; A.B.. Stanford University, 1907; M.A., University of Southern California, 1970.

WILLIAM BECVAR, 1973-, Associate Professor of Communication Arts: B.A., University of Northern Lowa, 1961: M.A., State University of South Dakota, 19(64; Ph.D.. Kansas University, 1975.
LUTHER W. BEKEMEIER, 197(o- Vice President for Development: B.A.. M.Div.. Concordia Seminary, St. Louis, 1949, 1973.
†PAUL F. BENTON, 1969-, Associate Professor of English; B.A., Whitworth College, 1965; Ph.I)., Princeton University. 1970.
LOIS M. BERGERSON. 1970-77. Associate Professor of Nursing: B.S., Loyola University, 1946; M.N.. University of Washington, 1952.

CHARLES A. BERGMAN, 1977-, Assistant Professor of English; B.A. (Economics), B.A. (English), University of Washington, 1969, 1970; M.A., Ph.I)., University of Minnesota, 1973, 1977.
GAYLE BARNES BLOMME, 1975-, Assistant Professor of English; B.A., Oakland University, 1907; M.A., Ph.I)., University of Michigan, 1968, 1973.
+RANDOLPH F. BOHANNON, 1969-77, Associate Professor of Biology: B.A., St. Olaf College, 1965 ; Ph.I)., Purdue University, 1969.
FLORENCE K. BOWEN, 1976-77, Instructor of Nursing; A.A., Monterey Peninsula College, 1962; B.S.N., San Diego State College. 1963; M.S.N., Catholic University of America, 1973.
KATHARINE H. BRIAR, 1976-, Assistant Professor of Social Welfare; B.A., Connecticut College for Women, 1966: M.S.W.. Columbia University, 1968; D.S.W.. University of California, Berkeley, 1976.

JAMESE. BRINK, 1970-, Assistant Professor of Mathematics; A.B., Hope College, 1965 : M.S., Ph. D., Iowa State University, 1967, 1970.
WILLIAM A. BROCHTRUP, 1975-, Assistant Professor of Education; B.A., University of California, Los Angeles, 1962; M.A., California State University, 1970; Ph.D., University of Washington, 1974.
*H. JOSEPH BROEKER, JR., 1966-, Associate Professor of Physical Education; B.A., M.S., Washington State University, 1965, 1967: Ph.D., University of Oregon, 1975.
CHRISTOPHER BROWNING, 1974-, Assistant Professor of History: A.B., Oberlin College, 1967; M.A., Ph.D., University of Wisconsin, Madison, 1968, 1975.
STANLEY L. BRUE, 1971-, Associate Professor of Economics; B.A., Augustana College, Sioux Falls, 1967 ; Ph.D., University of Nebraska, 1971.
CHARLES E. BRUNNER, 1977-, Assistant Professor of Business Administration: B.A. Pacific Lutheran University, 1966; M.B.A.. Ph.D., University of Oregon, 1967, 1973.
ROBERT J. EURK, 1973-77, Instructor of Nursing: B.S.N., Pacific Lutheran Liniversity, 1973.
SAMUEL B.B. CARLETON, 1969-, Assistant Professor of Modern and Classical Languages Greek and Latin); B.A., University of the South, 1959; M.A., Johns Hopkins University, 1961 ; Ph.D., University of Texas, Austin, 1973.
JOHN T. CARLSON, 1975-, Assistant Professor of Biology; B.A., Carleton College, 1966: Ph.D., University of Minnesota, Minneapolis, 1976.
ROBERT E.CARLSON, 1976-77, Assistant Professor of Chemistry; B.A., Gustavus Adolphus College, 1966: Ph.D., University of lowa, 1971.
ROY E. CARLSON, 1962-, Associate Professor of Physical Education; B.S., University of Washington, 1948: M.S., Washington State University, 1962.
MARYIVA CARPENTER, 1974-. Assistant Professor of Nursing; B.S., Whitworth College, 1956; M.S., Syracuse University, 1960.
CLARA L. CARPER, 1972-, Assistant Professor of Nursing; B.S.N., Washington State University, 1957; M.N., University of Washington, 1959.
BARBARA J. CARTER, 1977-, Instructor of Nursing; B.S., Northeast Missouri State Teachers College, 1968;M.N., University of Washington, 1976.
DAVIS W. CARVEY, 1971-, Associate Professor of Business Administration; B.B.A., M.B.A., Pacific Lutheran University, 1965, 1968; D.B.A.. Texas Tech University, 1972
GARY A. CHASE, 1970-, Assistant Professor of Physical Education; B.S., M.S., Washington State University, $1962,1964$.
STEFAN C. CHRISTOPHER, 1975-77, Associate Protessor of Sociology; B.A.. University of Washington, 1961 : M.S.S., Institute of Social Studies, The Hague, 1960; Ph.D., University of Washington, 1966.
KENNETH E. CHRISTOPHERSON, 1958-, Professor of Religion; B.A. Augustana College, Sioux Falls, 1946; B.Th., Luther Theological Seminary, 1950; Ph.D)., University of Minnesota, 1972.
SHARON K. CHRISTOPHERSON, 1976-77, Assistant Professor of Biology; B.A., Pacific Lutheran University, 1970; M.S, University of Southern California, 1972.

MARIE CHURNEY, 1974-, Assistant Professor of Education; B.A., B.S., Western Washington State College, 1961, 1964; M.Ed.. Ed.D., University of Florida, 1966.1970

ANTHONY CLARKE, 1973- Assistant Professor of Sociology and Fducation, Coordinator of Ethnic Studies; B.A.. M.E.L., University of Oregon, 1969, 1971: Ph.D., University of Nebraska, 1973.


DIANE E. COMSIA, 1976-, Instructor of Mathematics; B.A.E., Pacific Lutheran University, 1974.
MICHAEL COMTE, 1973-77, Assistant Professor of Sociology: B.A.. The University of Portland, 1966; M.S.W., Portland State University, 1970.
DOROTHY M. CONE, 1961 -. Associate Professor of Nursing; B.S.N., M.Ed., University of Minnesota, 1956, 1959.
DENNIS L. COX, 1972-. Artist in Residence; B.A., Pacific Lutheran University, 1967: M.F.A., Washington State University, 1972.
LINDA S. COX, 1975-, Assistant Professor of Education; B.A., Kansas Wesleyan College, 1965; M.S., Ph.I)., University of Kansas, 1968, 1970.
MICHELE A. CRAYTON, 1977-, Assistant Professor of Biology; B.S., M.S. University of Missouri, Kansas City, 1967, 1969; Ph.D.. Oregon State University, 1974
WILLIAM M. CROOKS, 1976-, Adjunct Professor of Business Administration: B.A.. University of Washington, 1949; M.A., George Washington University. 1967.

$\dagger$ DAVID P. DAHL, 1969-, Associate Professor of Music; B.A., Pacific Lutheran University, 1960; Associateship, American Guild of Otganists, 1961; M.A., University of Washington, 1962.
CARROL E. DE BOWER, 1964-68, 1970-, Associate Professor of Education; B.S. Midland College, 1952; M.Ed., Ed.D., University of Nebraska, Lincoln, 1959, 1964.

WILLIAM A. DITTRICH, 1976-77, Instructor of Physics; B.A., Western Washington State College, 1968; M.S., University of Colorado, 1973
JOHN W. DOBBIE, 1973-77, Assistant Professor of Business Administration: B.^.Sc., M.B.A., University of British Columbia, 1951, 1965; Ph.D., University of California, Los Angeles, 1972.
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.
ROBERT A. DUNN, 1975-, Assistant Professor of Business Administration; B.S., Oregon State University, 1963; M.B.A., Ph.D., University of Oregon, 1970, 1974.

EMMET E. EKLUND, 1964-, Professor of Religion: B.A., Bethany College, 1941 ; B.D., Augustana Seminary, 1945; M.A., University of Chicago, 1958; Ph.D., Boston University, 1964.
$\dagger$ GEORGE R. ELWELL, 1959 -, Associate Protessor of Art; B.S., Youngstown University, 1949: M.A., New York University, 1955.
+VIRGINIA ANN EMAN, 1971-, Assistant Professor of Communication Arts; B.A., Kearney State College, 1969; M.A., Colorado State University, 1971.
DONALD R. FARMER, 1955-, Professor of Political Science, Regency Professor, 1971-72: B.S.Ed., Ph.D., University of Minnesota, 1944, 1954.
RICHARD A. FARNER, 1976-, Assistant Professor of Music: B.M., Oberlin College, 1968; M.M.. University of Michigan, 1974.
$\dagger$ LOUISE SAND FAYE, 1969-, Associate Professor of Modern and Classical Languages (Spanish): B.A., M.A., Florida State University, 1949, 1951; Ph.D., University of North Carolina, 1958.
PHYLLIS E. FIEDLER, 1976-, Assistant Professor of Psychology: B.A., Knox College, 1970; Ph.D., University of Washington, 1976.
$\dagger$ ROBERT S. FISK, 1968-, Assistant Professor of Mathematics: B.S., M.S.. Ph.D., University of Wyoming, 1960, 1962, 1977.
M. JOSEPHINE FLETCHER, 1963-, 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.
SCOTT A. FREEMAN, 1975-, Assistant Professor of Business Administration: B.A., Hiram College, 1967; M.B.A., Wright State University, 1970: D.B.A., Kent State University, 1975.
ROGER GARD, 1974- Assistant Professor of Music; B.A., Luther College, 1962; M.M., University of Wisconsin, Milwaukee, 1972.

ARTHUR GEE, 1968-, Associate Protessor of Biology: B.S., M.S., Ph.D., Purdue University, 1962, 1964, 1970.
RALPH D. GEHRKE, 1975-, Associate Professor of Religion; B.A., Northwestern College, 1941; B.D., Wisconsin Lutheran Seminary, 1944; Ph.D., University of (hicage, 1959.

WILLIAM P. GIDDINGS, 1962-, Professor of Chemistry; B.A. DePauw University, 1954: A.M., Ph.I). Harvard University, 1956, 1959.
†GORDON O. GILBERTSON, 1954, Associate Professor of Music; B.A., Concordia College, Moorhead, 1937, M.M., Northwestern University, 1942.
WILLIAM H. GILBERTSON, 1968-, Associate Professor of Social Welfare; B.A., Liniversity of Puget Sound, 1954: M.S.W., University of Washington, 1956.
FERN A. GOUGH, 1971-, Assistant Professor of Nursing; B.S.N., Wheaton College, 1956; M.N. University of Washington, 1961.
STEWART D. GOVIG, 1958-60, 1961-, Protessor of Religion; B.A., St. Olaf College. 1948: M.Div., Luther Theological Seminary, 1952: M.Th., Princeton Theological Seminary, 1954; Ph.D., New York University, 1966.
JAMES A. HALSETH, 1960-68, 1970-, Assochate Professor of History; B.A., Concordia College, Moorhead, 1962; M.A., Eastern New Mexico University, 1963 Ph. D., Texas Tech University, 1973.
DAVID H. HANSEN, 1974-, Assistant Professor of Biology; B. S.. Oregon State University, 1968: M.S., University of Utah, 1970; Ph.D., University of California, Irvine, 1974.
MARLIS M. HANSON, 1971-, Instructor of Education; B.S., University of Minnesota, 1953; M.A., Pacific Lutheran University, 1975.
VERNON R. HANSON, 1970-. Assistant Professor of Social Welfare; B.A., Pacific Lutheran University, 1955; B.D., Luther Theological Seminary, 1902; A.M., University of Chicago, 1970.
EDWARD R. HARMIC, 1971-, Assistant Professor of Music; B. A., Pacific Lutheran University, 1962 , M.M.. University of Arizona, 1969.
DONALD C. HAUEISEN, 1977-. Assistant Protessor of Physics; B. A., College of Wooster, 1967; Ph.D., Cormell University, 1972.
WILLIAM D. HAUEISEN, 1977-, Assistant Professor of Business Administration; B.A., Capital University, 1966: M.A., Ph.D., Ohio State University, 1974, 1977.

ROBERT G. HEEREN, 1973-, Associate Professor of Engineering; B.S.E.E., Purdue University, 1960; M.S., Ph.D., University of Illinois, Urbana, 1962, 1968.
LUELLA V. HEFTY, 1973-. Assistant Professor of Nursing; B.S.N., Pacific Lutheran University, 1969 ; M.A.. University of Washington, 1973.
PERRY B. HENDRICKS, JR., 1973-, Vice President - Finance \& Operations; B.S., Iowa State University, 1945; M.B.A., University of Denver, 1966; Certified Administrative Manager, 1973.
JOHN O. HERZOG, 1967-, Professor of Mathematics; B. A. Concordia College, Moorhead, 1957: M.A., Ph.D., University of Nebraska, $1959,1963$.
D. SHARON HILL, 1976-, Assistant Professor of Education; B.A., Arizona State University, 1966 : M.S., Southern Illinois University, Carbondale, 1970.
ALVIN ARLAN HINCHEE, 1977-, Assistant Professor of Biology: A.B., California State University at Chico, 1964: Ph.D. University of Washington, 1976.
DAVID L. HOFFMAN, 1975-, Assistant Professor of Music; B.M., Northwestern University, 1967; M.M.A., Yale University School of Music, 1971.
+PAUL E. HOSETH, 1968-, Assistant Professor of Health and Physical Education; B.A., Concordia College, Moorhead, 1966; M.S., South Dakota State University, 1967.

THELMA M. HOSTETTER, 1971-, Associate Professor of Nursing; B.S.N.. University of California, Berkeley, 1957; M.S.N., University of Illinois, Chicago, 1969.
*CURTIS E. HUBER, 1964-, Professor of Philosophy, Dixector, Integrated Studies Program; B.A.. M.Div.. Concordia Seminary, St. Louis, 1950, 1953; M.A., Ph.D., University of Wisconsin, Madison, 1958, 1962.
LAURENCE D. HUESTIS, 1901-, Professor of Chemistry; B.S., University of Calitornia, Berkeley, 1956 ; Ph.D.., University of California, Davis, 1960.
WILLIAM R. HUTCHEON, JR., 1967-. Adiunct Professor of Business Administration, Director, Human Relations Program; B.S. University of Rhode Island, 1953:M.B.A. Ph.D., University of Washington, 1963, 1969.
PAUL O. INGRAM, 1975-, Assistant Professor of Religion; B.A. Chapmani College, 1961; Th.M., School of Theology at Claremont, 1964; Ph.D., Claremont Graduate School, 1968.
MARGARET IRWIN-BRANDON, 1976-, Assistant Professor of Music; B.A., Pacific Lutheran University, 1960; M.M., New England Conservatory, Boston, 1965.


$\dagger$ CLARENCE G. JACOBS, 1969-77, Associate Professor of Physics; B.A., Concordia College, Moorhead, 1964; M.S., University of Minnesota, 1968; Ph.D., University of lowa, 1969.
LOIS E. JACOBSON, 1966-, Assistant Professor of Nursing; B.S., M.S.N., University of Washington, 1959, 1969.
†JO ANN S. JENSEN, 1967-, 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, 1957-, Assistant Prof essor of Sociology; B.A., University of San Francisco, 1964; M.A., University of California, Davis, 1967.
*DAVID W. JOHNSON, 1970-, Associate Professor of History; B.A., Hamline University, 1961 ; M.A., Stanford University, 1963; Ph.D., University of Kansas, 1972.

EDITH E. JOHNSON, 1974-, Assistant Professor of Nursing; B.S.N., University of Pennsylvania, 1951; M.A., Teachers College, Columbia University, 1959.
LUCILLE M. JOHNSON, 1953-, Professor of English; B.A., Concordia College, Moorhead, 1940; M.A., Washington State University, 1943; Ed.D., University of Montana, 1967.
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 University, 1964: M.A., M.F.A., University of Massachusetts, 1969.
RICHARD P. JUNGKUNTZ, 1970-, Professor of Religion, Provost; B.A., Northwestern College, 1939; B.D., Wisconsin Lutheran Seminary, 1942; M.A., Ph.D., University of Wisconsin, Madison, 1955, 1961.
THEODORE O.H. KARL, 1940-42, 1948-, Professor of Communication Arts; B.A., M.A., Gustavus Adolphus College, 1934, 1936.

KATHRYN J. KELLER, 1977-, Instructor of English; B.A., M.A., University of Puget Sound, 1972, 1974.
*DAVID .T. KEYES, 1969-, Associate Professor of Art; B.F.A., University of Arizona, 1964 ; M.A., Ohio State University, 1966.
GUNDAR J. KING, 1960-, Professor of Business Administration, Dean of the School of Business Administration; B.B.A., University of Oregon, 1956; M.B.A., Ph.D., Stanford University, 1958, 1964.
LARS E. KITTLESON, 1956-, Associate Professor of Art; B.S., University of Wisconsin. Milwaukee, 1950; M.A., University of Wisconsin, Madison, 1951; M.F.A., University of Southern Calitornia, 1955.

ALAN M. KLEIN, 1975-77. Assistant Professor of Anthropology; B.A., M.A., Ph.D., State University of New York, Buffalo, 1970, 1972, 1975.
RAYMOND A. KLOPSCH, 1953-, Professor of English; B.S., Illinois Institute of Technology, 1949; M.A., Ph.D., University of Illinois, Urbana, 1950, 1962.
CALVIN H. KNAPP, 1959-, Associate Professor of Music; B.S., M.S., Juilliard School of Music, 1949, 1950; Ed.D., Teachers College, Columbia University, 1973.

JENS W. KNUDSEN, 1957-, Professor of Biology, Regency Professor, 1973-74; B.A., Pacific Lutheran University, 1952; M.S., Ph.D., University of Southern Califormia, 1954, 1957.
+DAVID R. KNUTSON, 1969-. Assistant Professor of Religion: B.A., Pacific Lutheran University, 1958; B.D., Luther Theological Seminary, 1962; M.A., University of Chicago Divinity School, 1966.
JERRY KRACHT, 1967-68, 1969-, Associate Professor of Music; B.M., M.A.. M.F.A.. D.M.A., University of Iowa, Iowa City, 1963, 1965, 1967, 1974.

JOHN O. LARSGAARD, 1970-, Assistant Professor of Psychology; B.A., Pacific Lutheran University, 1944; B.Th.. Luther Theological Seminary, 1947; S.T.M.. Pacitic School of Rcligion, 1965; Ph.D., University of Washington, 1971
DALE A. LARSON, 1971-77, Instructor of English; B.A., Pacific Lutheran University, 1960.

ANTHONY J. LAUER, 1969-, Assistant Professor of Business Administration; J.D., Loyola University, Los Angeles, 1955; M.B.A., Pacific Lutheran University. 1969.

CORA LAWRENCE, 1973-, Assistant Professor of Nursing; A. A. Stephens College, 1945; B.S., University of Chicago, 1947; B.S.N., Johns Hopkins University, 1950; M.A., Ph.D., University of Washington, 1959, 1972.
LAWRENCE R. LAYMAN, 1974-, Assistant Professor of Chemistry; A.B., Occidental College, 1970; Ph.D., Indiana University, 1974,
JEROME P. LE JEUNE, 1972-, Assistant Professor of Psychology; B. A., Gonzaga University, 1964; M.A., Ph.D., University of Victoria, 1970, 1974.
JER ROLD LERUM, 1973-, Assistant Professor of Biology; B.A., Luther College, 1963; M.S., University of Wisconsin, Madison, 1965; Ph.D., Northwestern University, 1973.
PAUL L. LEVY, 1975-77, Assistant Professor of Biology; B.S., Ph.D., City University of New York, 1963, 1972.
PAUL B. LIEBELT, 1970, Associate Professor of Mathematics; B.A., Concordia College, Moorhead, 1955; M.A., University of Nebraska, 1957.
DAVID G. LOVELL, 1974-77, Assistant Professor of Philosophy; B.A., Carleton College, 1968 ; Ph. D., University of Wisconsin, Madison, 1975.
†BRIAN E. LOWES, 1968- Associate Professor of Earth Sciences; B.S., University of London, 1957; M.S., Queens University, 1963; Ph.D., University of Washington, 1972.
GENE C. LUNDGAARD, 1958-, Assistant Professor of Physical Education; B.Ed., Pacific Lutheran University, 1951 ; M.S., University of Washington, 1964.
*JOHN L. MAIN, 1971 -, Associate Professor of Biology; B.S.Ed., M.S.Ed., Chadron State College, 1965, 1966; Ph.D., University of Washington, 1970.
JOHN A. MARTILLA, 1969-77. Professor of Business Administration; B.B.A., Pacif ic Lutheran University, 1963; M.B.A., Ph.D., University of Oregon, 1966, 1969.

DENNIS J. MARTIN, 1975-, Assistant Professor of Biology; B.S., Illinois State University, 1969; M.S., University of New Mexico, 1971; Ph.D., Utah State University, 1975.
DENNIS M. MARTIN, 1976-, Assistant Professor of English; B.S., Edinboro State College. 1964; M.A., Purdue University, 1966; Ph.D., University of California, Los Angeles, 1973.
ARTHUR D. MARTINSON, 1966-, Associate Professor of History: B.A., Pacific Lutheran University, 1957; M.A., Ph.D., Washington State University, 1961, 1966.

CELESTINE B. MASON, 1973-, Instructor of Nursing; B.S.N., Catholic University of America, 1958; M.A., Pacific Lutheran University, 1976.
*MARJORIE 1. MATHERS, 1964-66, 1968-, Associate Professor of Education; B.A., M.A., Central Washington State College, 1953, 1961; M.A., Pacific Lutheran University, 1974.
DIXIE MATTHIAS, 1975-, Instructor of Biology; B.S., Pacific Lutheran University, 1962; M.S., University of Washington, 1965.
=FRANKLIN L. MC CARTHY, 1975-, Associate Professor of Business Administration: A.B., Hope College, 1959; M.B.A., University of Chicago, 1962; Ph.D., University of Himnesota, 1971; C.P.A.. State of Idaho.
RICHARD MC GINNIS, 1972-, Associate Professor of Biology; B.S., Pacific Lutheran University, $1963 ; \mathrm{Ph} . \mathrm{D}$., University of Southern California, 1974.
PAUL T. MENZEL, 1971 , Assistant Professor of Philosophy; B.A., College of Wooster, 1964; B.1., Yale University, 1967; Ph.D., Vanderbilt University, 1971.
†LAWRENCE J. MEYER, 1969-, Professor of Music; B.A., Ed.D., University of Northern Colorado, 1954, 1964; M.M., University of Oregon, 1955.
*N. CHRISTIAN MEYER, JR., 1970-, Associate Professor of Mathematics; B.A., Reed College, 1966; M.A.. Ph.D., University of Oregon, 1967, 1970.
*MARLEN F. MILLER, 1970-, Professor of Economics; B.S., M.S., Ph.D., University of Minnesota, 1962, 1965, 1967.
GARY L. MINETTI, 1970-. Assistant Prolessor of Fducation, Director of Courrseling and Health Services; B.S., Washington State University, 1960; M.A. Pacific Lutheran University, 1967; Ph.D., University of Washington, 1976.
RICHARD D. MOE, 1965-, Professor of Education. Dean of Graduate and Summer Studies, Dean of the School of Fine Arts; B.A., Concordia College, Moorhead, 1951: M.Ed., Ed.D., University of Colorado, 1953, 1962.


JOHN N. MORITSUGU, 1975-, Assistant Professor of Psychology; B.A., University of Hawaii, 1971 : M.A., Ph.D., University of Rochester, 1974, 1977.
JESSICA D. MYRABO, 1975-, Instructor of Nursing; B.S.N., University of Maryland, WRAIN Extension, 1970.
GUNNULF MYRBO, 1970- Assistant Professor of Philosophy; B.A., University of British Columbia, 1962; Ph.D).. University of Cambridge, England, 1972.
CHARLES T. NELSON, 19(77-, Registrar; B.S., Dakiota State College, 1963; M.A., Adams State College: 1904.
BURTON L. NESSET, 1967-, Associate Professor of Chemistry: B.A., St. Olat College, 1957: M.S., Ph.I)., Purdue University, 1900, 1962.
MILTON L. NESVIG, 1947-51, 1953-, Assistant Professor of English, Assistant to the President: B.A., St. Olat College, 1937; Cand. Theol., Luther Theological Seminary, 1942: M.A., University of Aimnesota, 1947.
HARVEY J. NEUFELD, : $905^{-}$, Executive Director of The Collegium: B.A., Pacific Lutheran University, 1954; M.Div., Luther Seminary, Saskatoon, 1957; Certificate of Graduate Studies, Vancouver School of Theology, 1974.
= ROGER G. NIBLER, 1974-, Assistant Professor of Business Administration; B.S., M.B.A., Oregon State University, 1963, 1908; D.B.A., University of Oklahoma, 1974.
*JESSE D. NOLPH, 1968-, Associate Professor of Psychology: B.A., George Washington University, 1964 ; Ph.D., Cornell University, 1971.
JON J. NORDBY, 1977-A Assistant Professor of Philosophy; B.A. St. Olaf College, 1970, M.A. Ph.1)., University of Massachusetts, 1975, 1077.
*ERIC NORDHOLM, 1955-, Associate Professor of Communication Arts; B.F.A., Art Institute of Chicago, 1951.
PHILIP A. NORDQUIST, 1963-, Professor of History: B.A. Pacitic Lutheran University, 1956; M.A., Ph.I)., University of Washington, 1960, 1964.
BYRON J. NORDSTROM, 1976-77, Visiting Assistant Professor of Foreign Languages; B.A., Lawrence University, 1965; M.A., Ph.D., University of Minnesota, 1908, 1972.
SHERMAN B. NORNES, 195()-61, 1965-, Associate Professor of Physics; B.A. Concordia College, Moorhead, 1951; M.A., University of North Dakota, 1956: Ph. I). Washington State University, I 965 .
*W. DWIGHT OBERHOLTZER, 19())-, Associate Professor of Sociology: A.B. Wittenberg University. 19(01; M. Div., Lutheran School of Theology at (hicago), 1965; Ph.D., Graduate Theological Union, Berkeley, 1969.
SARA A. OFFICER, 1967-, Associate Professor of Physical Education: B.S., Oregon State University, 1958; M.S., Indiana University, 1965.
DAVID M. OLSON, 1968-, Professor of Physical Education, Director of the School of Physical Education, Athletic Director; B.A. Concordia College, Moorhead, 1956: M.A., University of Mimnesota, 1957: Ph.D)., University of Iowa, 1966.
FRANKLIN C. OLSON, 1071-, Associate Professor of Education; B.S., University of South Dakota, 1958; M.S., Oregon State Liniversity, 1904; Ed.I)., University of Nebraska, Lincoln, 1971

- LINDA N. OLSON, 1967-, Associate Protessor of Nursing; B.S.N.. M.N., University of Washington, 1959, 1904.
MICHAEL P. O'NEILL, 1975-, Adjunct Professor of Business Administration: B.A. University of Washington, 1970; M.B.A., Pacific Lutheran University, 1974.
BURTON T. OSTENSON, 1947-77, Protessor of Earth Sciences; B.A., Luther College, 1932: M.S., Ph.1)., University of Michigan, 1934. 1947.
PHYLLIS A. PAGE, 1970-, Instructor of Nursing: B.S.N., Eniversity of Maryland, 1971; M.N., University of Washington, 1976.
WILLIAM E. PARKER, 1970-, Associate Professor of Communication Arts: B. S. Memphis State University, 1966; M.S., Ph.D.. Southern Illinois University. Carbondale, 1968.1974.
BEVERLY J. PAYNE, 1975-, Assistant Professor of Modern and Classical Languages (French): B. A. M.A., University of Washington, 1903. 1966.
†ARNE K. PEDERSON, 1956-, Associate Protessor of Education; B.A.. B.Ed., M.A. Pacific Lutheran University, 1949, 1953, 1956.

JOHN E. PETERSEN, 1007-. Associate Professor of Religion: B.A. St. Olat Collece, 1958: B.D), Luther Theological Semmary, 1963; M.A., Ph.D., New York University, 1965. 1970.
CHARLES A. PETERSON, 1959-. Protessor of Busimess Administration: B.S. Kansas State Tcachers College 1951 , M.S.. University of Temnessee, 1952 ; Ph.D.. University of Minnesota, 1966 (C.P.A. State of Washington.

GARY D. PETERSON, 1967-, Associate Professor of Mathematics, B.S. Iowa State University, 1900: M.S. Western Washington State College. 1967: Ph.I)., University of Kansas, 1973.
DOUGLASR. PIERCE, 1976-77, Visiting Professor of Business Administration, B.S.. M.fd.. University of Illinois, (itbana, 1955, 1959; Ed.1).. University of Floridia. 1963.
WALTER E. PILGRIM, 1971-, Assoctate Professor of Religion, Director of Latheran Institute of Theological Education: B.A. Wartburg college. 1956; B.I)., Wartburg Theological Seminary, 1960; Th.M., Ph.I).. Princeton Seminary. 1906, 1971.
BARBARA POULSHOCK, 197()-, Instructor of Music: B.M. Cand. Pacific Lutheran University. 1977.
JAMES R. PREDMORE, 1977- Assistant Professor of Modern and classical Languages (Spanish): B.A. Swarthmore (ollege. 1967: M.A.. Middlebury College, 190): Ph.D.. University of Washington, 1977.
JANET E. RASMUSSEN. 1977 - Assistant Professor of Modern and Classical Larguages (Norwegian): B.A.. University of Illinois, Urbana, 1970; A.M., Ph.I).. Harvard University, 1972, 1975.
PaUl M. REIGSTAD, 1947-48, 1958-, Professor of English, Regency Professor. 1977-78; B.A. St. ()laf (ollege, 1943: M.A. Ph.I)., University of New Mexico, $1956,1958$.
KARLR. RICKABAUGH, 1975-, Assistant Professor of Education; B.S., Montana State ( $n$ niversity, 19(o3. M.S., Ph.D)., University of Utah, 1970, 1975.
DAVID P. ROBBINS, 19(9), Assistant Professor of Music; B.M., M.M.. University (1) Michigan, 1968, 1969.
G.A. ST. JOHN ROBINSON, 1970-77. Assistant Professor of Foreign Languages (Spanish): B.A., M.A., Louisiana State Lniversity, 1966, 1970.
Jeanette roediger, 1975-. Assistant Professor of Nursing: B.S.N.. Seattle University, 1905: M.N.. University of Washington, 1971.
GEORGE ROSKOS, 1950-Associate Professor of Art; B.S. Art Ed., Youngstown University, 1949: M.A.. (iniversity of Iowa. 1950.
MORDECHAI ROZANSKI, 1970-, Assistant Professor of History; B.A.. Me(iall University. 1908, Ph.I)., University of Pennsylvania, 1974
EldON L. SCllafer, 1974-. Professor of Business Administration. B.S., M.A.. Ph.I). University of Nebraska, 1953. 1957, 1903; (CP.A., State of Nehraska.
WILLIAM M. SCHARNBERG, 1975-77. Instructor of Music: B.M., M.A., M.F.A., Lniversity of lowa. 1971, 1973, 1975.
IOHANNES A. SCHILLER, 1458 . Professor of Sociology and Social Welfare. Regency Professor, 1976-77: B.A.. Capital University, 1945: Cand. Theol., Fvangelical Lutheran Theological Seminary, 1947: M.A.. University of Missouri, Kansals ('ity, 1959; Plo.I)., University of Washington, 1967.
CAROLYN W. SCHULTZ, 1974-. Assistant Professor of Nursing: B.S.N.. University of Illinois. 1968: M A. Pacific Lutheran University, 1974.
ERNST C. SCHWIDDER, 1967-. Professor of Art. B.A., M.F.A.. Eniversity of Washington, 1953. 1955.
DAVID O. SEAL, 1977-, Asisistant Professor of English: B.A.. St. Olaf College, 1908 . A.M., Ph.D.. University of (Chicago, 1969. 1977.
RICHARD SEEGER, 1973-, 1)irector, Lcarning Skills Service: B.A., M.A.. Ph.D. ., University of Washington, 1906.1908, 1974.
S. ERVING SEVERTSON, 1960 -, Professor of Psychology: B.A., Pactic Lutheran University, 1955;13.1).. Luther Theological Seminary, 1959; M. A., Univer sity of
 Psychology, American Board of Professional Psychology. 1977.
MAURICE H. SKONES, 1964- Professor of Music. Director of (horal Music, B A. Concordia College. Moorhead, 1948: M.M.I.d.. Montana State tniversity. 1957; 1). M.A. University of Arizona, Tucson, 1976.

JUDY SMITH, 1971-, Instructor of Education: B.A.. Pacific Lutheran University, 1904
DALE E SODEN, 1977. Instructor of llistory: B.A. Pacific Lutheran Einiversity. 1973: M.A. University of Washington. 1976.
CARL D. SPANGLER, 19(01-022. 1903-, Associate Professor of Modern and Classical Languages (French): A.B., Cirove (ity College 1958; M.A.. Pennsylvania State University. 1961.



WALLACE H. SPENCER, 1974-, Assistant Professor of Political Science; B.A., M.A., University of Arizona, 1963,1968 ; Ph.D., University of Washington, 1977.

LYNN S. STEIN, 1961-, Professor of Education; B.A., Dickinson State College, 1937; M.A., University of Montana, 1952; Ed.D., Montana State University, 1961.

JOAN D. STIGGELBOUT, 1973-, Instructor of Nursing; B.S.N., Wagner College. 1954; M.N., University of Washington, 1972.
+VERNON L. STINTZI, 1964-77, Professor of Business Administration; B.A., Coe College, 1937: M.B.A., Arizona State University, 1964; Ph.D., University of Washington, 1970.
ROBERT L. STIVERS, 1973-, Associate Professor of Religion; B.A., Yale University, 1962; M. Div., Union Theological Seminary, New York, 1969 ; Ph.D., Columbia University, 1973.
GERALD R. STOFFER, 1973-, Assistant Professor of Psychology: B.S., Washington State University, 1969; M.A. Ph.D., University of Montana, 1971, 1973.

JEREMY STRINGER, 1973-, Associate Dean for Student Life and Director for Residential Life; B.A.. Southern Methodist University, 1966; M.A., Ph.D., University of Wisconsin, Madison, 1968, 1973.
MILES E. STRUXNESS, 1977-. Instructor of Art; B.A., University of Redlands, 1973 : M.F.A., University of Puget Sound, 1975.
DORIS G. STUCKE, 1967-. Professor of Nursing, Director of the School of Nursing; B.S., American University, 1949; M.Ed., University of Minnesota, 1956; Ed.D., Teachers College, Columbia University, 1967.
DAVID P. SUDERMANN, 1973-, Assistant Professor of Modern and Classical Languages (German); A.B., Indiana University, 1965; A.M., Ph.D., University of Chicago, 1967, 1973.
ROGER SUNDBERG, 1975-, Assistant Professor of Modern and Classical Languages (Norwegian); B.A., St. Olaf College, 1964; M.A., University of Washington, 1973.
DUANE D. SWANK, 1970-, Associate Professor of Chemistry; B.S., Washington State University, $1964 ;$ Ph.D., Montana State University, 1969 .
MARVIN SWENSON, 1969-, Director of the University Center and Campus Activities; B.S. Montana State University, 1950; M.S.. University of Minnesota, 1954: Ed. D., Washington State University, 1972.
RODNEY N. SWENSON, 1968-, Associate Professor of Modern and Classical Languages (Cerman); B. A.. Bemidji State College, 1952 : M.A.. Ph.D., University of Minnesota, 1956, 1967.
KWONG-TIN TANG. 1967-, Professor of Physics: B.S.,. M.A., University of Washington, 1958, 1959; Ph.D., Columbia University, 1965 :
$\dagger$ FREDERICK L. TOBIASON, 1966-, Protessor of Chemistry, Regency Professor, 1975-76; B.A., Pacific Lutheran University, 1958; Ph.D., Michigan State University, 1963.
WALTER L. TOMSIC, 1970-, Assistant Professor of Art; B.S.E., Arkansas State University, 1965:M.F.A University of Colorado, 1967.
THOMAS N. TORRENS, 1974-, Artist in Residence: B.S., Indiana State University, 1971 ; M.F.A. Washington University, 1974.
*AUDUN T. TOVEN, 1967-, Associate Professor of Modern and Classical Languages (Norwegian); B.A., University of Oslo, 1964; M.A. University of Washington, 1967.
ANN K. TREMAINE, 1972-, Assistant Professor of Music; B.M., University of Oregon, 1951: M.M., University of Washington, 1974.
ANDREW L. TURNER, 1976-, Assistant Professor of Business Administration; B.B.A., Pacific Lutheran University. 1973.
$\dagger$ PAUL W. ULBRICHT, 1967-, Associate Professor of Political Science; B.A., M.A., Ph.D., University of Washington. 1959, 1960, 1965.
M. JAMES VAN BEEK, 1963-. Director of Admissions; B.A.E., M.A., Pacific Lutheran University, 1960, 1969.
*DANIEL E. VAN TASSEL, 1970-, Associate Professor of English; B.A., St. Olaf College, 1962; M.A., Ph.D., University of lowa, 1964, 1970.
DAVID L. VINJE, 1970-, Associate Professor of Fconomics; B.S.. North Dakota State University, 1962: M.S., Ph.D., University of Wisconsin, 1964. 1970.
+GEORGE F. WALTER, 1970-, Assistant Professor of Anthropology; B.A., M.A., Ohio State University, 1967, 1970.
ANN H. WALTON, 1977-, Visiting Assistant Professor of Business Administration; B.A., M.B.A., Pacific Lutheran University, 1969, 1973.
*PAUL M. WEBSTER, 1969-, Assistant Professor of Modern and Classical Languages (German); B.A., M.A., University of California, Los Angeles, 1964 , 1967.

LENORA B. WEIRICK, 1973-, Assistant Professor of Nursing; B.S.N., Liniversity of San Francisco, 1958: M.S.N., Washington University, 1962.
RICHARD K. WELLS, 1975-, Instructor of Communication Arts; B.A.E., Central Washington State College, 1970; M.A., University of Wisconsin, Madison, 1974.
DONALD R. WENTWORTH, 1972-, Associate Professor of Economics and Education; B.S., M.A., Ph.D., University of Minnesota, 1965, 1970, 1972; M.A., University of Illinois, 1971.
FORREST WESTERING, 1972-, Associate Professor of Physical Education; B.S., University of Nehraska. Omaha, 1952; A.M.. Ed.D., University of Northern Colorado, 1960, 1966.
MARGARET WICKSTROM, 1951-, Assistant Professor of Religion, Director, Foreign Students and Special Programs; B.A., Augustana College, 1937; M.R.E., Biblical Seminary of New York, 1951.
JEFF WILES, 197 5-77, Instructor of Communication Arts; B.A., M.A., University of Oregon, 1974, 1975.
JANE WILLIAMSON, 1964-, Professor of Education; B.S.Ed., University of Maryland, 1943; M.A., New York University, 1947; Ed.D., Northwestern Colorado University, 1959.
MARGARET WILLIS, 1973-, Assistant Professor of Sociology: B.A., M.A., Ph.D.. University of Washington, 1967, 1971, 1976.
GARY B. WILSON, 1975-, Associate Professor of Communication Arts: B.S., Central Michigan University, 1960; M.A. California State University, Long Beach, 1966; Ph.I)., Michigan State University, 1971.
KENNETH WOOLLEY, 1974-, Assistant Professor of Business Administration; B.S., University of Colorado, 1942; M.B.A., Pacific Lutheran University, 1974.

CHANG-LI YIU, 1973-, Assistant Professor of Mathematics: B.S., Cunghai University, 1962; M.S., Tsinghua University, 1965; Ph.D., Columbia University, 1972.

WALTER L. YOUNGQUIST, 1976-, Visiting Professur of Earth Sciences; B.A.. Gustavus Adolphus College, 1942: M.S., Ph.D., University of lowa, 1943, 1948.
JOYCE V. ZERWEKH. 1974-77, Assistant Professor of Nursing: B.S., St. Olaf College, 1966; M.A. New York University, 1969.
DWIGHT J. ZULAUF 1949-53, 1959-, Professor of Business Administration, Regency Professor, 1972-73; B.S., University of Oregon, 1948: M.S., Columbia University, 1949: Ph.D., University of Minnesota, 1965; C.P.A., State of Washington.

## LIBRARY

RICHARD WARREN GREFRATH, 1973-, Reference Librarian; B.A., New York University, 1968: M.A.. Temple University. 1972; M.L.S., University of Maryland, 1972.
JOHN W. HEUSSMAN, 1976-. Director of the Library: B.S. in Ed., Concordia Teachers College, Seward, 1950; M.A.L.S., University of Denver, 1953; Ph.D., University of Illinois, Urbana, 1970.
SUSAN J. MC DONALD, 1975-, Assistant to the Director of the Library; B.A., M.L.S., University of Washington, 1969, 1970.


## FACULTY ASSOCIATES

SUE K. CLARKE, 1966-, Administrative Assistant to the Provost; B.A., University of Puget Sound, 1962: M.A., Pacific Lutheran University, 1971.
RICHARD C. FRENCH, 1974-, Director of Career Planning and Placement; B.A., Washington State University, 1954; Dip. Theol., University of Oxford, 1957: M.Div.. Church Divinity School of the Pacific, 1959; M.Ed., Gonzaga University, 1969.

HAROLD M. GAMBLE, 1972-, Director of Minority Affairs; B. $\AA$., University of Washington. 1972.
ROBERT K. MENZEL, 1964-, Director of CHOICE: B.A., M.Div., Concordia Seminary, St. Louis, 1941, 1944; M.S.T., Pacific Lutheran Theological Seminary, 1963.
NAN NOKLEBERG, 1964-, Director of Teacher Placement and Fifth Year Studies; B.A.. M.A., Pacific Lutheran University, 1953, 1977; Fifth Year Program Standard Certitication, University of Washington, 1957.
EDRICE A. REYNOLDS, 1972-. Director of Computer Center and Institutional Research; B.A., Agnes Scott College, 1949: B.A. Georgia State University, 1964: M.Ed. University of Georgia, 196 ): Ed D.. East Texas State University, 1972.

DAVID C. YAGOW, $1976-$ Executive Assistant to the Provost; B.A. Concordia Senior College, Fort Wayne, 1965 : M.Div., Concordia Seminary, St. Luouis, 1969.
YAT YAN YUNG, 1977-. Faculty Associate in Department of Physics and Engineering; B.S., The Chinese University of Hong Kong, 1969; Ph. D)., Southern lllinois University. Carbondale, 1976.

+ Sabbatical Leave. 1976-77
+ Special Leave, 1976-77
* Sabbatical Leave, 1977-78
$=$ Special Leave. 1977-78


## PART TIME INSTRUCTORS

(1976-77)
DIVISION OF HUMANITIES
ENGLISH
Grace Blomquist
T. Lestie Elliott

Sharon L. Jansen Jaech
Kathryn Keller
FOREIGN LANGUAGES
Ruberta Brown
Katharine Monroe
PHILOSOPHY
Melinda Andrews
RELIGION
William Braswell
Vernon Elgin
Ray Petry
DIVISION OF SOCIAL SCIENCES
HISTORY
Dale E. Soden
PO LITICAL SCIENCE
J. Arnold Bricker

Rubert P. Hallamer
Erling Mork
Lester Wollers
PSYCHOLOGY
Henry Bertness
David Kantofsky
Herbert Marra
Michael Quirk

## SOCIOLOGY, ANTHROPOLOGY \& SOCIAL WELFARE

Carolyn Brown
M. Barbara Hoggart

Dunald Johns
Jeremy Kunz
Joe Lehman
Robert Menzel
Raul O'Baya
Lyle Quasim
Mary Ellen Walsh
Livne Wink lebleck
Robert Yamashita
SCHOOL OF BUSINESS

## ADMINISTRATION

Paul F. Brantner
Daniel Harris
Michael Hawkins
John C. James
Paul Kusche
Roland Malan
Kemneth Morken
Douglas Pearson William Riley
Vernon Utzinger
Joseph Werner
William Wilkerson


## SCHOOL OF EDUCATION

## Gary Barbour

Amatte Barton Clem
Wayne Ehlers
Harold Gray
Addison Johnson
Lucille Larson
George T．Leslie
Athyleen Nicholson
Jemry Ramsey
Catloy Yetter

## SCHOOL OF FINE ARTS

ART
Nancy Dolbs
Stanley Price

## COMMUNICATION ARTS

James N．Adams
Clifford Ruwe
John Welsis
MUSIC
Lymn Bartlett
Robert Beryeson
Laura Carter
Kenneth Cloud
Russell Cruckett
James De Busman
Daniel Dube
Paul M．Edwards
Joyce Eilers
Laila Storch Freidmann
Mira Frolunmayer
Irene Hopp
Linda Fern Housh
Demis L．Keller
Pegey Sears Keller
Sindra Kilapp
Donald Knuth
Jorgen Kruse
Jon Lackey
Randall J．McCarty
Jane Moore
Richard Nace
Robert Northrup
Charles Pendleton
Normand G．Poulsiock
Karen Robbins
Marian Schellloerg
Bernard Shapiro
Mark Sjostrom
Sam S．Smith
Sylvia Storaasli
Richard Sundquist
Kathryn Taylor
James Thomas
Mary Helen Thompson
Emanuel Zetlin
Doris Ziegenfelder
SCHOOL OF NURSING
Marjorie Crowl
Fayette Lundblad

SCHOOL OF PHYSICAL EDUCATION
David Asher
Mike Benson
Susan Charles
Wayne Jarvis
Janet S．Migaki
Betty Mobley
Carolyn Phillips
Paul Templin
Jon Thieman

## INTEGRATED STUIIIES PROGRAM

Thomas McPartland

## PROFESSORS EMERITI

 MIRIAM RLTH BECKMAN， $1904: 1973$. Reforerer lihaiaian
W．IIAROLD BEXTON，1905． 1970. Psuchologe
GRACL BLOMQUIST，1939，l970，I：nglis／1
IRENE O．CRESO， 1955,1971, Biology
J．E：．DANIELSON， 1900 ） 1909 ，Dircctor of Adinissions：
ARNOLD JASPER HAGEN， $1955: 1971$. liducation
PIILIP ENOCH HALG（；$\quad 19.2(): 1908$. lichucution
OIAF：MELVIN JORDAIIL， 19 f（）． 1909 phosics
ERICH CARL KNORR，19．49，Iり0り， Sociology
ANNL ELISE KNUDSON，19\＆（\％．1リ70． linglish
HAROLD J．LERAAS，1947，1974，Biology
OTIILIE LLISE LITTLE，ノリチか． 1966.
（ic：man
GUNNAR JOIIANNES MALMIN，I937．
lyo）Music：latin and vorwegian
KATHARTNE MONROF， $1907: 1975$ ，lirench
ROBERT A．L．MORTVEDT． $19(2)$ ； 1909.
Presiclent
ALICE J．N＾PJUS， 1903,1975 ，I：lucation
FREDRICK LAURENCE NEWNHAM，195（）： 190り，リルざに
ROBFRT C．OISEN．1947：197．），（hemistry
BURTON T．OSIENSON， 1977 ： 1977 ．larth Scienses
ANDERS WILI．IAM RAMSTAD， 1925.1901. Chemistry
II：RBERT ROBERT RANSON，1940． 1968 ．
linglish
KELMER NELSON ROE，19チ7：リりか7． Religion and（ircek
JOSEF［：MIL RUNNING， $1948 ; \quad 1901$ Mathematica
VERNON ALFRED UTZINGER，$l 9.5()$ ． 1969．Speecth
PAUL（；VIGNESS，Iリ50： 1905 ，Religion alld llistorv
RHOIAA HOKENSTAD YOUNG，1り．39． 190．8．Plusical lichucation

FACULTY STANDING COMMITTEES AND OTHER UNIVERSITY COMMISSIONS， BOARDS，1976－77
The Presidemt is an advison？member of all committees．
ARTAST SERIES： 3 latculty， 3 advisory members．
ATHLETIC： 3 faculty． 3 advisory members．
COMMITTEE ON ADMISSION AND RETENTION OF STUDENTS： 4 faculty， 5 advisory members．
COMMITTEE ON COMMITEES： 3 laculty members．
COMMITTEE ON STUDENT STANDARDS： 3 iaculty， 1 advisory members．
EDUCATIONAL POLICIES： 8 faculty， 1 advisory． 2 student advisory members．
FACULTY AFFAIRS： 6 laculty， 4 advisory， 3 faculty representatives to Board of Reqents．
INTERIM： 4 faculty， 2 students，Interim Coordinator（non－voting）members．
JUDICIARY： 3 faculty members．
LECTURE AND CONVOCATION： 3 faculty， 3 students， 3 advisory members．
PLBLICATIONS： 3 faculty， 3 advisory members．
RUNK AND TENURE： 7 fatculty（4 tenured， 3 non－tenured）， 1 advisory， 2 student advisory members．
RELIGIOUS LIFF： 3 faculty， 3 advisory members．
STLDENT ACTIVITIES AND WELFARE： 3 faculty， 3 students， 3 evonfficio members．
UNIVERSIFY COMMITTEF：ON ADMISSIONS AND RETENTION OF STLDENTS： 4 laculty， 3 students， 5 advisory members．
UNIVERSITY RELICIOUS LIFE COUNCIL： 3 laculty， 6 students， 2 administrators．
UNIVERSITY STUDENT PUBLICATION： 3 faculty， 4 stadents， 6 advisory members．
UNIVERSITY CENTER BOARD：Eniversity （ Center Director， 4 students， 2 faculty． 1 advisory members．


# Campus Guide 



## PACIFIC LUTHERAN UNIVERSITY <br> Buildings

1) Philip E. Hauge Administration Building: Administration offices, faculty offices, classrooms.
2) Robert A.L. Murtvedt Library University stacks, archives, suludy carrels, phote lab, (omputer (enter and officees.
3) Main Entrance and Bus Stop
4) Xavier Hall: Classrooms, faculty officess, central services, campus post office.
5) Rune Stones Sculpture: dedicated to homor visit of Nomway King Olav in 1975.
6) Eastvold Auditorium: Auditoriuin seating $1,2.38$ persons for cultural prograins. conterts and plays; classroons: studios for speech and music departments, Tower Chapel.
7) Ramstad Hall: Science laborutories, classrooms, offices, technical library and muscum.
8) Harstad Hall: Residence unit for 254 women
9) University Center: Houses University information booth, ticket office. Commons: private dining rooms: Chris Kinutzen Fellowship Ilall: coffee shop); bookstorc; student gonernmemt offices: recreationai faciitites: bowling and billiards.
(10) U.C. Loading Dock
10) Alumni House: Religious Life Office. Alumni offices.
11) Evergreen Court: Married student housing.
12) Deltar Hall: Co-ed residence unit for 4) men and wemen.
13) Tingelstad Hall: Co-ed residence unit for 390 men and women.
14) Pflueger Hall: Residence unit for 2()) women.
15) Columbia Center: Cafeteria, ooffece shop, bakery, golf pro shop for the University's minc-hole golf course.
16) Ivy Hall: Faculty offices.
17) Foss Hall: Co-cel residence unit for 188 men ard women.
18) Memorial Gymnasium: Sports arena, sama and women's locker rooms.
19) Swimming Pool: Incloor swimming pool, locker und shower rooms.
20) Clifford Olson Auditorium: Scauing for $3,5()()$ in auditorium und for athletic contests: I85-font stage: scpuash and hamdball conurts; weight truining room: Astro-turf fichlluouse; wrestling gymuasium; classrooms and offices for the Schoolof Physical Eiducation.
21) Security
22) Maintenance Building

23a) Warehouse
24) Hinderlie Hall: Residence unit for 130 mch .
25) Hong Hall: Co-ed residence unit for 115 men and women.
26) Kreidler Hall: Residence unit for 122 women.
27) Stuen Hall: Co-ed residence unit for 110 men and women.
28) Ordal Hall: Co-ed residence unit for 185 men and women.
29) Aida Ingram Hall: I.ecture hall, classroombs and offices for School of Nursing and Department of Art.
30) Ramsey House: Nursing offices.
31) Haavik House
32) Music Annex
33) University Scholars Association (faculty owned)
34) Student Health Center
35) Park Avenue House

Parking Lots are designated by letters on this Campus Guide.

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## Section I Beginning Freshman $\square$ <br> Transter <br> $\square$

Uniform Undergraduate Application for Admission to Four Year Colleges and Universities in the S :ate of Washington

Please voe or print

23. List your significant school and community activities and awards
24. Describe any ipecial circumstances which you believe should be considered in connection with thits upplication iathach ath additional foge if neederd
25. Do you plan to apply for cellege residence hall accommodations? Yes $\square$ No $\square$ If ves, you should comtact the Huasmes Office of the specified college of university

 information meguest catd can be othaned form Whathingon high sehool counselurs or college financial ald officers




Washington public and private four-year colleges and universities are equal educational opportunity institutions.


